



**APPLICATION ACCEPTED:** January 26, 2015  
**2232 APPLICATION ACCEPTED:** May 18, 2015  
**PLANNING COMMISSION:** June 17, 2015  
**BOARD OF SUPERVISORS:** June 23, 2015 @ 3:30 P.M.

# County of Fairfax, Virginia

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June 3, 2015

**WS**

## STAFF REPORT

**SPECIAL EXCEPTION AMENDMENT SEA 91-S-031  
AND 2232-S14-9**



## SPRINGFIELD DISTRICT

**APPLICANTS:** Milestone Tower Limited Partnership III, Cellco Partnership  
d/b/a Verizon Wireless & Virginia Electric and Power Company  
d/b/a Dominion Virginia Power

**ZONING:** R-C, Residential-Conservation District  
WS, Water Supply Protection Overlay District

**PARCEL:** 75-3 ((1)) 10

**ACREAGE:** 95.11 acres

**PLAN MAP:** Public Facilities, Governmental and Institutional

**SE CATEGORY:** Light Public Utility Uses (Category 1)

**PROPOSAL:** The applicants request an amendment of a special exception for an electric substation to permit the addition of a 140-foot tall monopole (telecommunications facility) and a modification in land area and have filed for a review by the Planning Commission to determine whether the proposed 140-foot monopole and related equipment compound satisfies the criteria of location, character, and extent pursuant to Section 15.2-2232 of the Code of Virginia, as amended.

## STAFF RECOMMENDATIONS:

Staff recommends that the Planning Commission find that the telecommunications facility proposed under 2232-S14-9 satisfies the criteria of location, character, and extent, as specified

Mary Ann Tsai, AICP

in Section 15-2.2232 of the Code of Virginia, as amended, and therefore, is substantially in accord with the Comprehensive Plan.

Staff recommends approval of SEA 91-S-031, subject to the approval of the proposed developments contained in Appendix 1 of the staff report.

Staff recommends approval of a modification of Sect. 13-303 of the Zoning Ordinance for the transitional screening requirement in favor of the existing vegetation on the site, the landscape plantings shown on the Special Exception Amendment Plat and the development conditions.

Staff recommends approval of a waiver of Sect. 13-304 of the Zoning Ordinance for the barrier requirement along all property lines.

It should be noted that it is not the intent of staff to recommend that the Board of Supervisors, in adopting any conditions, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

The approval of this application does not interfere with, abrogate or annul any easement, covenants, or other agreements between parties, as they may apply to the property subject to this application.

For information, contact the Zoning Evaluation Division, Department of Planning and Zoning, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035-5505, (703) 324-1290.



Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

# Special Exception Amendment

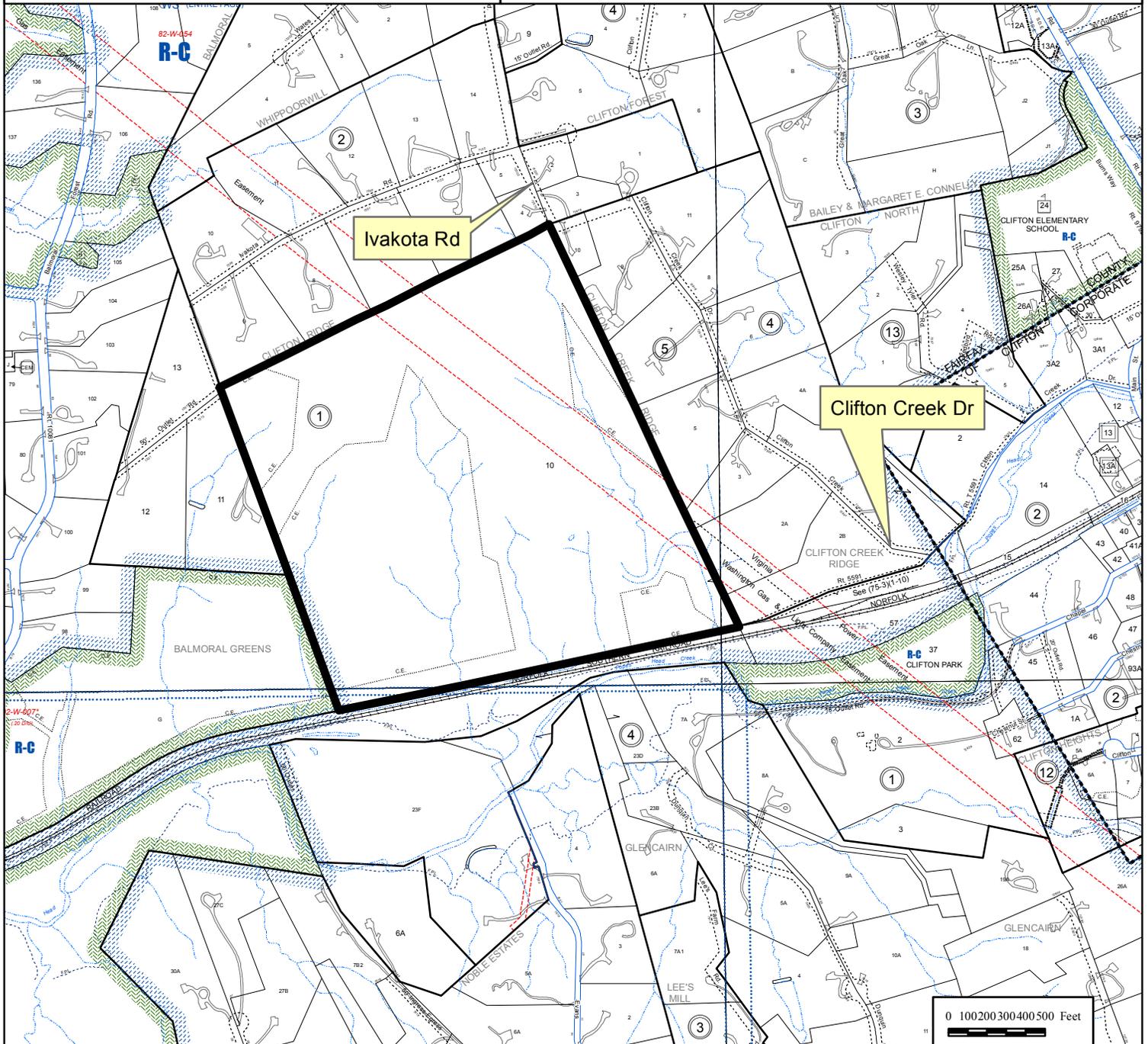
SEA 91-S -031

**Applicant:** MILESTONE TOWER LIMITED PARTNERHIP III, CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS & VIRGINIA ELECTRIC AND POWER COMPANY D/B/A DOMINION VIRGINIA POWER

**Accepted:** 01/26/2015  
**Proposed:** AMEND SE 91-S-031 PERVIOUSLY APPROVED FOR ELECTRIC SUBSTATION TO PERMIT A TELECOMMUNICATIONS FACILITY AND CHANGE IN LAND AREA

**Area:** 95.11 AC OF LAND; DISTRICT - SPRINGFIELD

**Zoning Dist Sect:** 03-0C0403-0C04  
**Located:** 12895 CLIFTON CREEK DRIVE, CLIFTON VA 20124  
**Zoning:** R- C  
**Plan Area:** 3,  
**Overlay Dist:** WS  
**Map Ref Num:** 075-3- /01/ /0010



PRIOR SPECIAL EXCEPTION APPROVALS

SE 91-S-031 APPROVED 3/9/92



**SITE NAME: CLIFTON CREEK SUBSTATION**  
**12895 CLIFTON CREEK DRIVE**  
**CLIFTON, VA 20124**  
**FAIRFAX COUNTY**



**Know what's below.**  
**Call before you dig.**

ENGINEER



APPLICANT



SITE INFORMATION

CLIFTON CREEK SUBSTATION  
 12895 CLIFTON CREEK DRIVE  
 CLIFTON, VA 20124  
 FAIRFAX COUNTY

DESIGN RECORD

**REVISIONS**

REV	DATE	DESCRIPTION	BY
4	05/18/15	REVISED LANDSCAPE PLAN	RNC
3	05/07/15	REVISED	RNC
2	03/24/15	SWM COMMENTS	RNC
1	1/14/15	EVM PLAN	RNC
0	12/15/14	FINAL	RNC

PROFESSIONAL STAMP



ENGINEER

TRENT SNARR, P.E.  
 VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE

**TITLE SHEET**

SHEET NUMBER

**T-1**

**SITE INFORMATION**

**SCOPE OF WORK:** MILESTONE COMMUNICATIONS PROPOSES TO BUILD A TELECOMMUNICATIONS FACILITY ON THE PROPERTY LISTED BELOW. THE FACILITY CONSISTS OF A 140' MONOPOLE AND SPACE FOR MULTIPLE CARRIERS IN A FENCED-IN COMPOUND.

**SITE ADDRESS:** 12895 CLIFTON CREEK DRIVE  
 CLIFTON, VA 20124

**PROPERTY OWNER:** ELECTRIC AND POWER, CO VIRGINIA  
**ADDRESS:** PO BOX 27007 FLR 12TH DOMINION RESOURCES INC  
 C/O BLAINE GARRETT RICHMOND, VA 23261

**MAP #:** 0753 01 0010  
**PARCEL AREA:** 95.11± ACRES

**LATITUDE (NAD 83):** 38° 46' 47.36" NAD 83  
**LONGITUDE (NAD 83):** -77° 23' 55.44" NAD 83

**JURISDICTION:** FAIRFAX COUNTY

**ZONING:** RC (WS)  
**ZONING AREA:** 95.11± ACRES

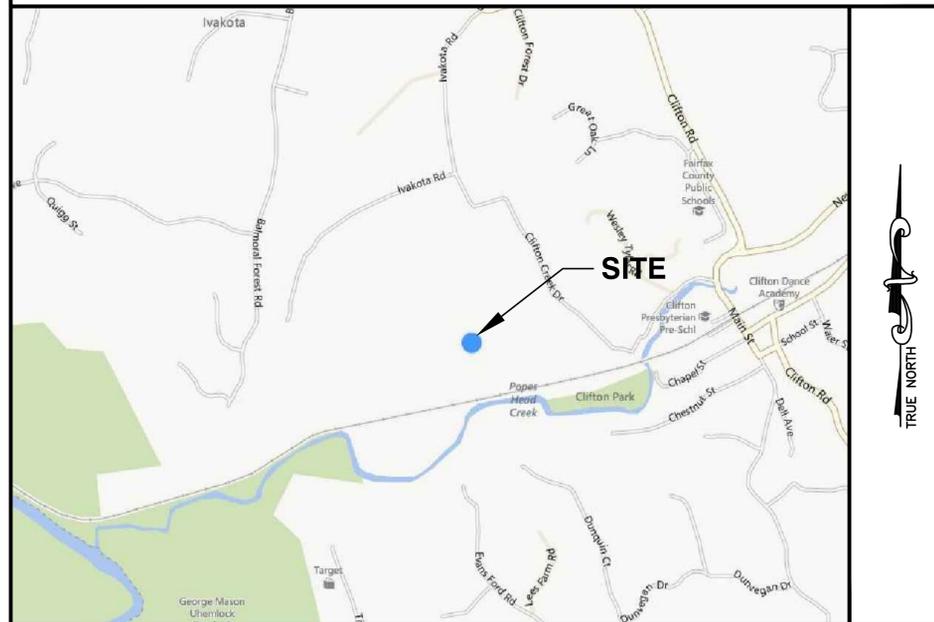
**GROUND ELEVATION:** 269.7' (AMSL) NAVD 88

**STRUCTURE TYPE:** MONOPOLE

**STRUCTURE HEIGHT:** 140.0' (AGL)

**HANDICAP REQUIREMENTS:** FACILITY IS UN-MANNED AND NOT FOR HUMAN HABITATION. DISABLED ACCESS NOT REQUIRED

**VICINITY MAP**



**DIRECTIONS**

FROM MILESTONE OFFICE:  
 HEAD WEST ON VA-675/SUNSET HILLS RD. CONTINUE TO FOLLOW VA-675. SLIGHT RIGHT ONTO THE RAMP TO VA-286 S/FAIRFAX COUNTY PKWY. SHARP RIGHT ONTO VA-286 S/FAIRFAX COUNTY PKWY. SLIGHT RIGHT ONTO THE US 29 N RAM. TURN RIGHT ONTO VA-608 S. TAKE THE RAMP ONTO US-29 S/LEE HW. TURN LEFT ONTO VA-645/CLIFTON RD. CONTINUE TO FOLLOW VA-645. TURN RIGHT ONTO MAIN ST. TAKE THE 1ST RIGHT ONTO CLIFTON CREEK DR. SITE WILL BE LOCATED ON THE LEFT.

**CODE COMPLIANCE**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2009 INTERNATIONAL BUILDING CODE
- 2008 NATIONAL ELECTRICAL CODE
- 2009 NFPA 101, LIFE SAFETY CODE
- 2009 IFC
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- VIRGINIA UNIFORM BUILDING CODE (USBC 2009)
- ANSI/TIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311

**DRAWING INDEX**

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Z-3	PARTIAL SITE PLAN	SE-4	SPECIAL EXCEPTION PLAT
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Z-5	LANDSCAPE PLAN		
A-1	COMPOUND PLAN & ELEVATION		
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A-4	ANTENNA DETAILS		
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ES-2	EROSION & SEDIMENT CONTROL DETAILS		

**DO NOT SCALE DRAWINGS**

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 24"X36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

**SIGNATURE BLOCK**

PROJECT MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

LEASING \_\_\_\_\_ DATE \_\_\_\_\_

**PROJECT TEAM**

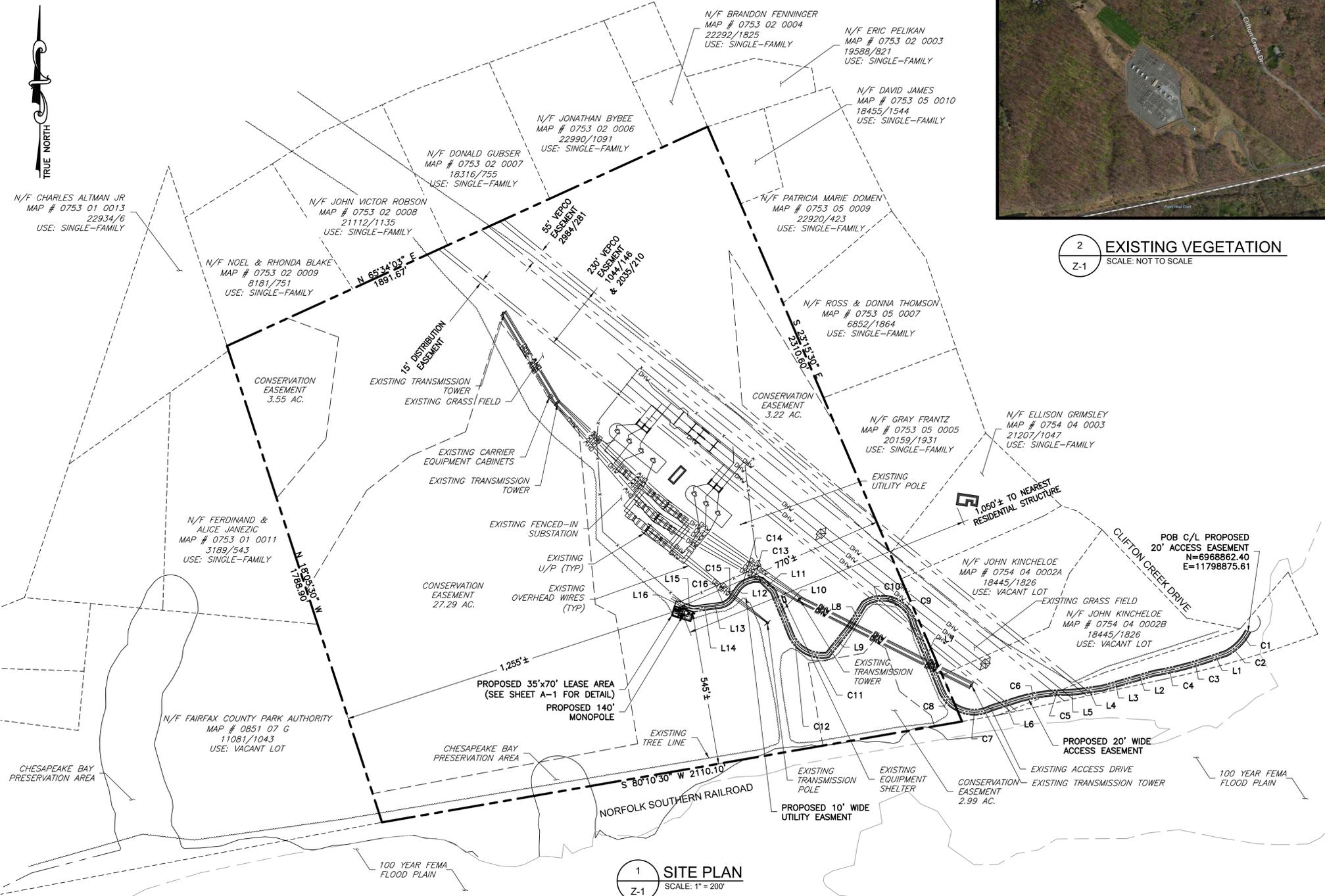
**APPLICANT:** MILESTONE COMMUNICATIONS  
 12110 SUNSET HILLS ROAD, SUITE 100  
 RESTON, VA 20190  
 (703) 620-2555

**PROJECT MANAGEMENT FIRM:** NETWORK BUILDING + CONSULTING, LLC.  
 6095 MARSHALEE DRIVE, SUITE 300  
 ELKCRIDGE, MD 21075  
 (410) 712-7092

**ENGINEERING FIRM:** NB+C ENGINEERING SERVICES, LLC.  
 6095 MARSHALEE DRIVE, SUITE 300  
 ELKCRIDGE, MD 21075  
 (410) 712-7092

PRIOR SPECIAL EXCEPTION APPROVALS

SE 91-S-031 APPROVED 3/9/92



**1 SITE PLAN**  
SCALE: 1" = 200'



**2 EXISTING VEGETATION**  
SCALE: NOT TO SCALE

**ZONING INFORMATION**

JURISDICTION: FAIRFAX COUNTY	
ZONING: RC (WS)	
DIMENSION	PROPOSED ±
FRONT YARD SETBACK:	680'
SIDE YARD SETBACK:	590'
REAR YARD SETBACK:	1340'
LOT AREA: 95.11± ACRES	
(ALL MEASUREMENTS ARE IN FEET ± UNLESS OTHERWISE NOTED)	

- NOTES:
1. THE SITE PLAN IS BASED ON A FIELD RUN SURVEY COMPLETED BY POINT TO POINT LAND SURVEYORS DATED 9/26/13.
  2. ALL SETBACKS SHOWN ARE FROM PROPOSED TOWER TO EXISTING PROPERTY LINES.
  3. THIS EASEMENT SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF MILESTONE COMMUNICATIONS AND EXCLUSIVELY FOR THE TRANSFER OF THE LEASEHOLD AND THE RIGHTS OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFER OF THE SUBJECT PROPERTY NOR ANY PORTION OR PORTIONS THEREOF. NO BOUNDARY SURVEY WAS PERFORMED.
  4. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS, OR RIGHTS-OF-WAY NOT SHOWN HEREON.
  5. EQUIPMENT USED FOR ANGULAR & LINEAR MEASUREMENTS: LEICA TCRA 1103 ROBOTIC.
  6. THE FIELD DATA UPON WHICH THIS AS-BUILT SURVEY IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 20,000± FEET AND AN ANGULAR ERROR OF 5.0" PER ANGLE POINT AND WAS ADJUSTED USING LEAST SQUARES.
  7. THE PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE TO WITHIN ONE FOOT IN 995,107 FEET.
  8. THE 2' CONTOURS SHOWN ON THIS EASEMENT SURVEY ARE ADJUSTED TO NAVD 88 DATUM AND HAVE A VERTICAL ACCURACY OF ±1'. CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.
  9. BEARINGS SHOWN ON THIS EASEMENT SURVEY ARE BASED ON MD GRID NORTH (NAD 83).
  10. NO PORTION OF THIS EXISTING LEASE AREA AND ACCESS EASEMENT IS LOCATED IN A SPECIAL FLOOD AREA AS PER F.I.R.M. COMMUNITY PANEL NO. 421891 0005 B DATED 09/02/1988.
  11. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM ABOVE GROUND FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
  12. NO BURIAL SITE IS PRESENT ON THE PROPERTY.
  13. THE PROPOSED SITE DOES NOT ALTER THE EXISTING DRAINAGE DIVERSION.
  14. THE PROPOSED BMP WILL BE PRIVATELY MAINTAINED.

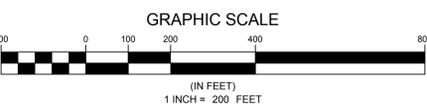
**LEGEND**

	PROPERTY LINE - SUBJECT PARCEL
	PROPERTY LINE - ABUTTERS
	EXISTING ROAD
	EXISTING TREE LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	PROPOSED E OF EASEMENT
	EXISTING BUILDING

ELECTRIC AND POWER, CO VIRGINIA  
PO BOX 27007 FLR 12TH DOMINION RESOURCES INC  
C/O BLAINE GARRETT RICHMOND, VA 23261  
MAP # 0753 01 0010  
ZONING: RC  
AREA: 95.11± ACRES  
DEED BOOK 3955 PAGE 369

EXISTING VEGETATION DESCRIPTION:  
EXISTING VEGETATION ON THE PROPERTY CONSISTS OF HEAVILY WOODED AREAS WITH MATURE TALL TREES AND OPEN GRASS FIELDS.

TOTAL AREA OF:	
PROPERTY	95.11 ACRES
ZONING (RC)	95.11 ACRES
CONSERVATION EASEMENTS	37.05 ACRES



**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
6095 MARSHALEE DRIVE, SUITE 300  
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(410) 712-7092

**Milestone COMMUNICATIONS**  
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RESTON, VA 20190  
TEL. (703) 620-2555  
FAX. (703) 620-8889

**CLIFTON CREEK SUBSTATION**  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
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3	05/07/15	REVISED	RNC
2	03/24/15	SWM COMMENTS	RNC
1	1/14/15	EVM PLAN	RNC
0	12/15/14	FINAL	RNC

PROFESSIONAL STAMP  
TRENT TRAVIS SNARR, P.E.  
Lic. No. 049978

ENGINEER  
TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE  
**SPECIAL EXCEPTION PLAT**

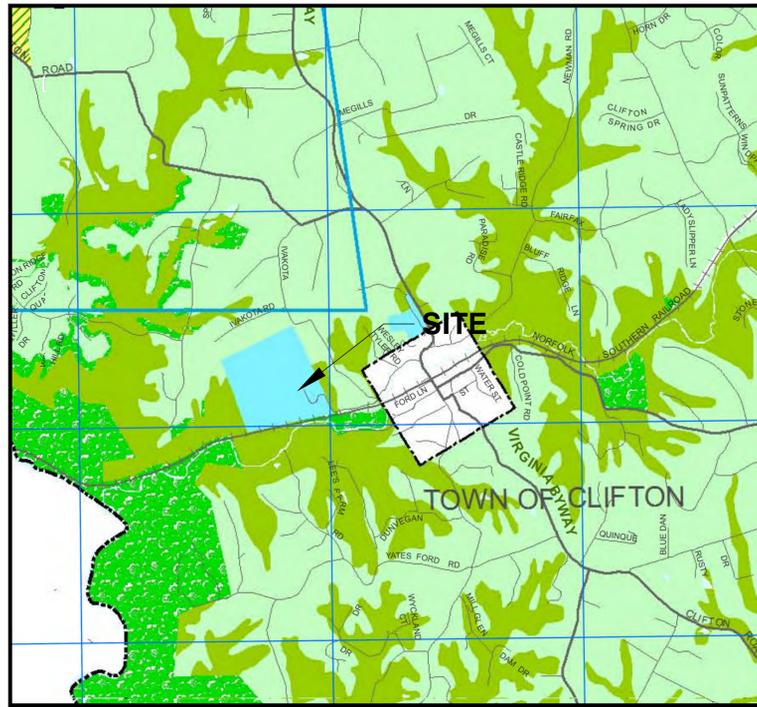
SHEET NUMBER  
**Z-1**

**LINE CHART**

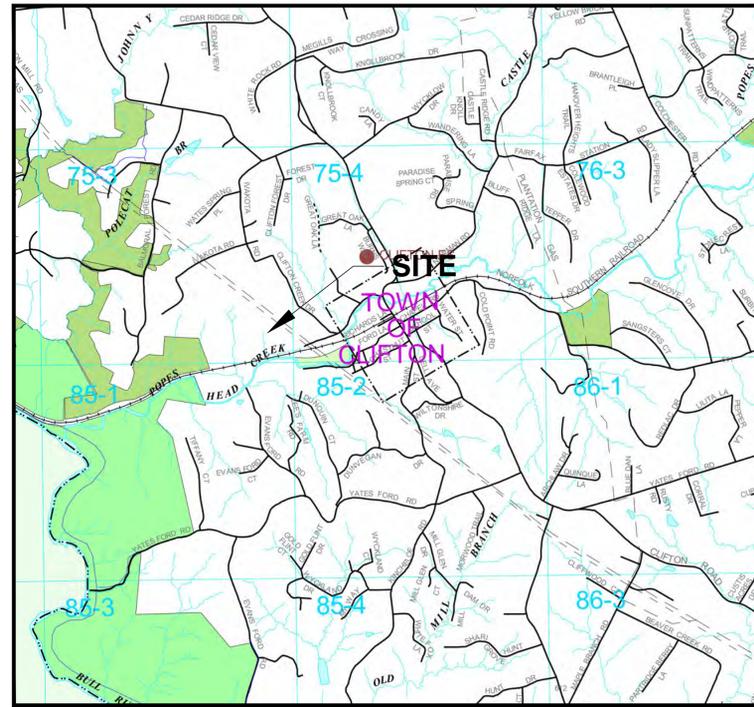
LINE	BEARING	DISTANCE
L1	S71°13'40"W	79.85'
L2	S73°54'38"W	90.43'
L3	S73°58'54"W	103.01'
L4	S82°09'11"W	94.13'
L5	S85°51'56"W	29.55'
L6	S72°31'48"W	111.18'
L7	N22°43'40"W	245.18'
L8	S32°09'53"W	102.83'
L9	S38°33'58"W	122.95'
L10	N22°28'02"W	153.77'
L11	N44°57'35"W	56.76'
L12	S33°56'30"W	35.89'
L13	S82°44'34"W	38.82'
L14	S82°10'58"W	60.97'
L15	N73°05'37"W	32.81'
L16	S16°54'23"W	10.00'

**CURVE DATA CHART**

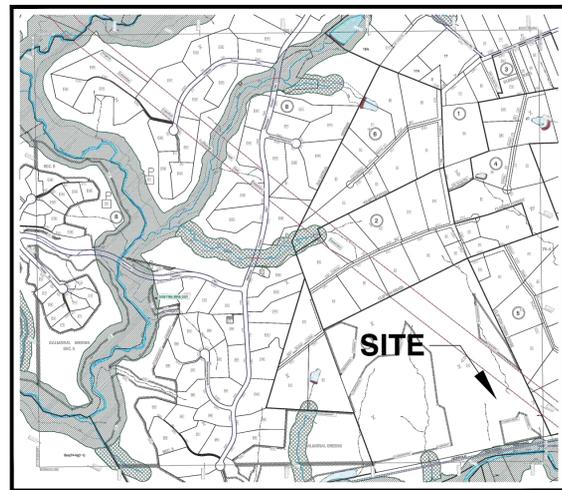
LINE	RADIUS	LENGTH	CHORD	CHD BEARING
C1	181.80'	51.44'	51.27'	S35°08'28"W
C2	181.80'	60.08'	59.81'	S52°42'55"W
C3	1157.39'	74.41'	74.39'	S73°10'34"W
C4	1157.39'	115.44'	115.39'	S77°52'30"W
C5	625.54'	79.52'	79.47'	S86°38'16"W
C6	625.54'	93.69'	93.61'	S78°42'18"W
C7	128.27'	122.26'	117.68'	S89°50'42"W
C8	128.27'	99.14'	96.69'	N40°42'29"W
C9	115.39'	123.35'	117.56'	N41°26'54"W
C10	115.39'	104.38'	100.86'	S82°00'40"W
C11	122.28'	87.27'	85.43'	N78°43'03"W
C12	122.28'	87.40'	85.55'	N37°47'43"W
C13	82.18'	52.70'	51.80'	S85°54'08"W
C14	82.18'	39.33'	38.96'	S53°49'10"W
C15	67.56'	37.13'	36.67'	S44°59'55"W
C16	67.56'	18.77'	18.71'	S68°42'24"W



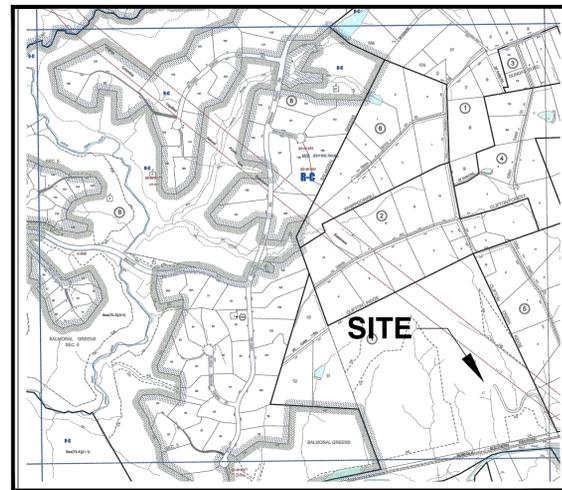
1 LAND USE MAP  
Z-2 SCALE: 1"=2000'



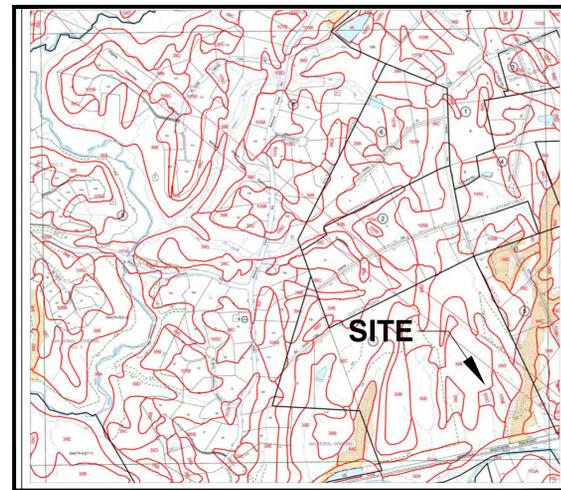
2 TRAIL MAP  
Z-2 SCALE: 1"=2000'



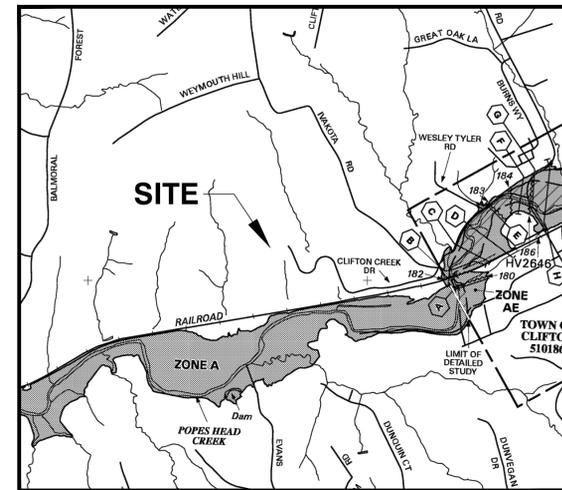
3 RESOURCE MANAGEMENT MAP  
Z-2 SCALE: 1"=1000'



4 ZONING MAP  
Z-2 SCALE: 1"=1000'



5 SOILS MAP  
Z-2 SCALE: 1"=1000'



6 FLOOD ZONE MAP  
Z-2 SCALE: 1"=1000'

ENGINEER



NB+C ENGINEERING SERVICES, LLC.  
6065 MARSHALLEE DRIVE, SUITE 300  
ELK RIDGE, MD 21075  
(410) 712-7062

APPLICANT



12110 SUNSET HILLS ROAD, SUITE 100  
RESTON, VA 20190  
TEL. (703) 620-2555  
FAX. (703) 620-8889

SITE INFORMATION

CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

DESIGN RECORD

REVISIONS

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PROFESSIONAL STAMP



ENGINEER

TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE

CIVIL MAPS

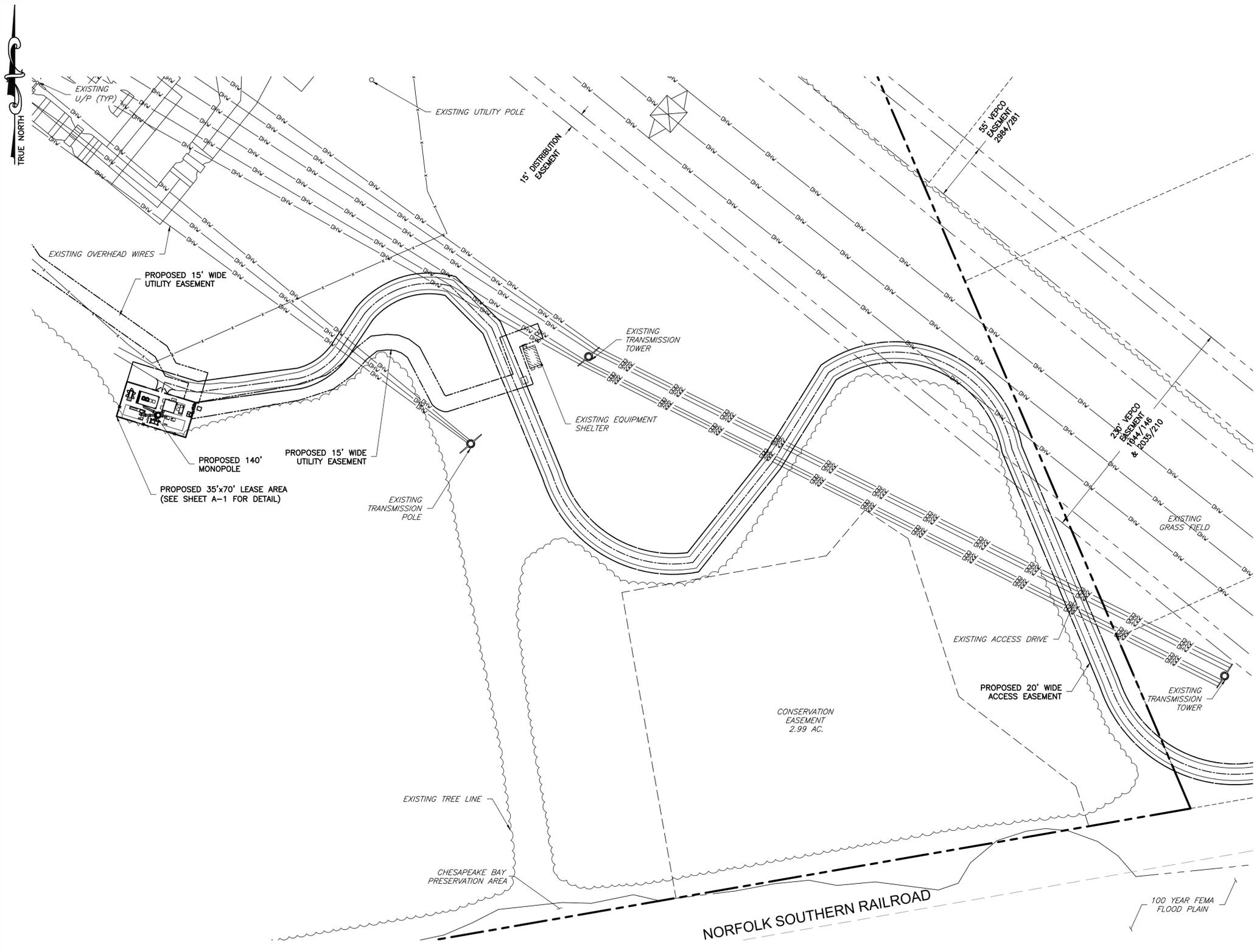
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Z-2

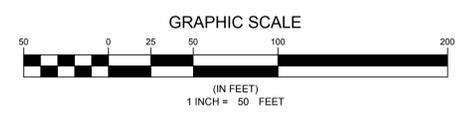
PRIOR SPECIAL EXCEPTION APPROVALS

SE 91-S-031 APPROVED 3/9/92

LEGEND	
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	PROPERTY LINE - ABUTTERS
	EXISTING ROAD
	EXISTING TREE LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	PROPOSED C OF EASEMENT
	EXISTING BUILDING



1 SITE PLAN  
Z-3 SCALE: 1" = 50'



ENGINEER



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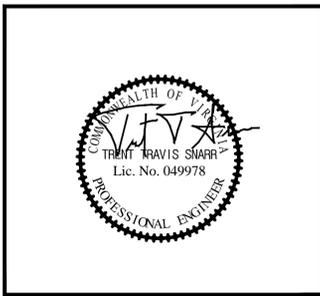
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PROFESSIONAL STAMP



ENGINEER

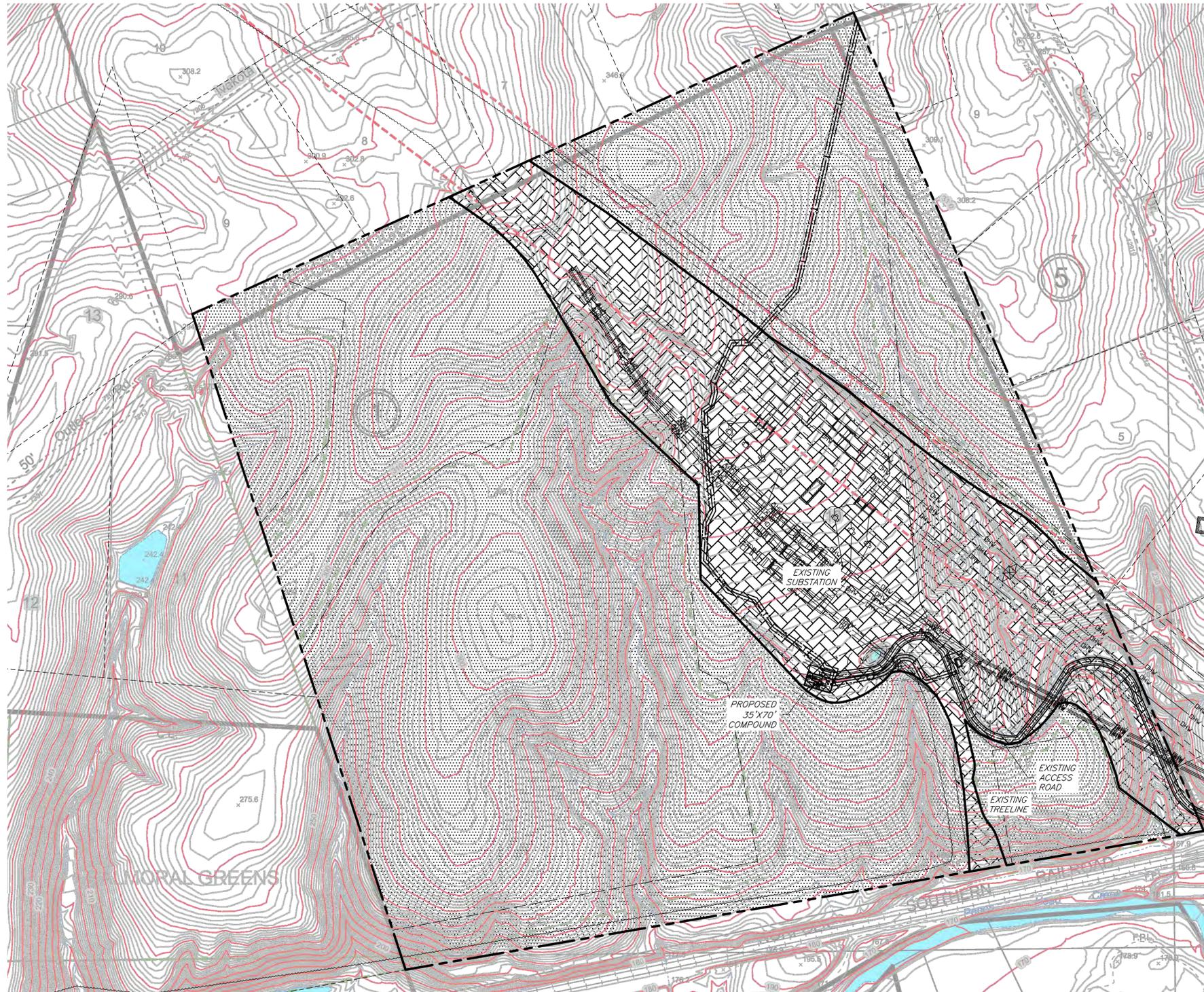
TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE

**PARTIAL SITE PLAN**

SHEET NUMBER

**Z-3**

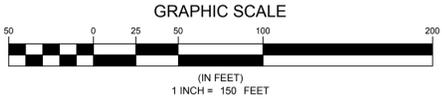


LEGEND	
	PROPERTY LINE - SUBJECT PARCEL
	PROPERTY LINE - ABUTTERS
	EXISTING ROAD
	EXISTING TREE LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	PROPOSED $\phi$ OF EASEMENT
	COVER TYPE "A"
	COVER TYPE "B"

NOTE:  
FIELD WORK AND MAPPING DATA PREPARED BY:  
ED MILHOUS  
703-927-2048  
REGISTERED CONSULTING ARBORIST® #350  
CERTIFIED ARBORIST #MA-0004A  
HAYMARKET, VA  
[HTTP://WWW.TREESPLEASE.COM](http://www.treesplease.com)

NOTE:  
THE SITE PLAN IS BASED ON A FIELD RUN  
SURVEY COMPLETED BY POINT TO POINT LAND  
SURVEYORS DATED 9/26/13.

1 PRE-DEVELOPMENT EVM PLAN  
Z-4 SCALE: 1" = 150'



COVER TYPE	PRIMARY SPECIES	UNDERSTORY SPECIES	COMMENTS	SUCCESSIONAL STAGE	CONDITIONAL	AREA
A	QUERCUS ALBA, QUERCUS RUBRA, CARYA SPP., LIRIODENDRON TULIPIFERA QUERCUS PRINUS	FAGUS GRANDIFOLIA, ACER RUBRUM, NYSSA SYLVATICA, ILEX OPACA, CARPINUS CAROLINIANA, ASIMINA TRILOBA, POLYSTICHUM ACROSTICHOIDES, APLECTRUM HYEMALE	VERY HIGH QUALITY DEER BROWSED OPEN WOODLAND	SUB-CLIMAX	GOOD	69.83 ACRES
B	N/A	ANDROPOGON VIRGINICUS ELAEAGNUS UMBELLATA	INDUSTRIAL: SUBSTATION, SERVICE ROADWAY, AND UTILITY TRANSMISSION ROW	N/A	N/A	23.16 ACRES

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
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ELK RIDGE, MD 21075  
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**Milestone**  
COMMUNICATIONS  
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FAIRFAX COUNTY

**DESIGN RECORD**

REV	DATE	DESCRIPTION	BY
4	05/18/15	REVISED LANDSCAPE PLAN	RNC
3	05/07/15	REVISED	RNC
2	03/24/15	SWM COMMENTS	RNC
1	1/14/15	EVM PLAN	RNC
0	12/15/14	FINAL	RNC

**PROFESSIONAL STAMP**

**ENGINEER**  
TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

**SHEET TITLE**  
EXISTING VEGETATION PLAN

**SHEET NUMBER**  
Z-4

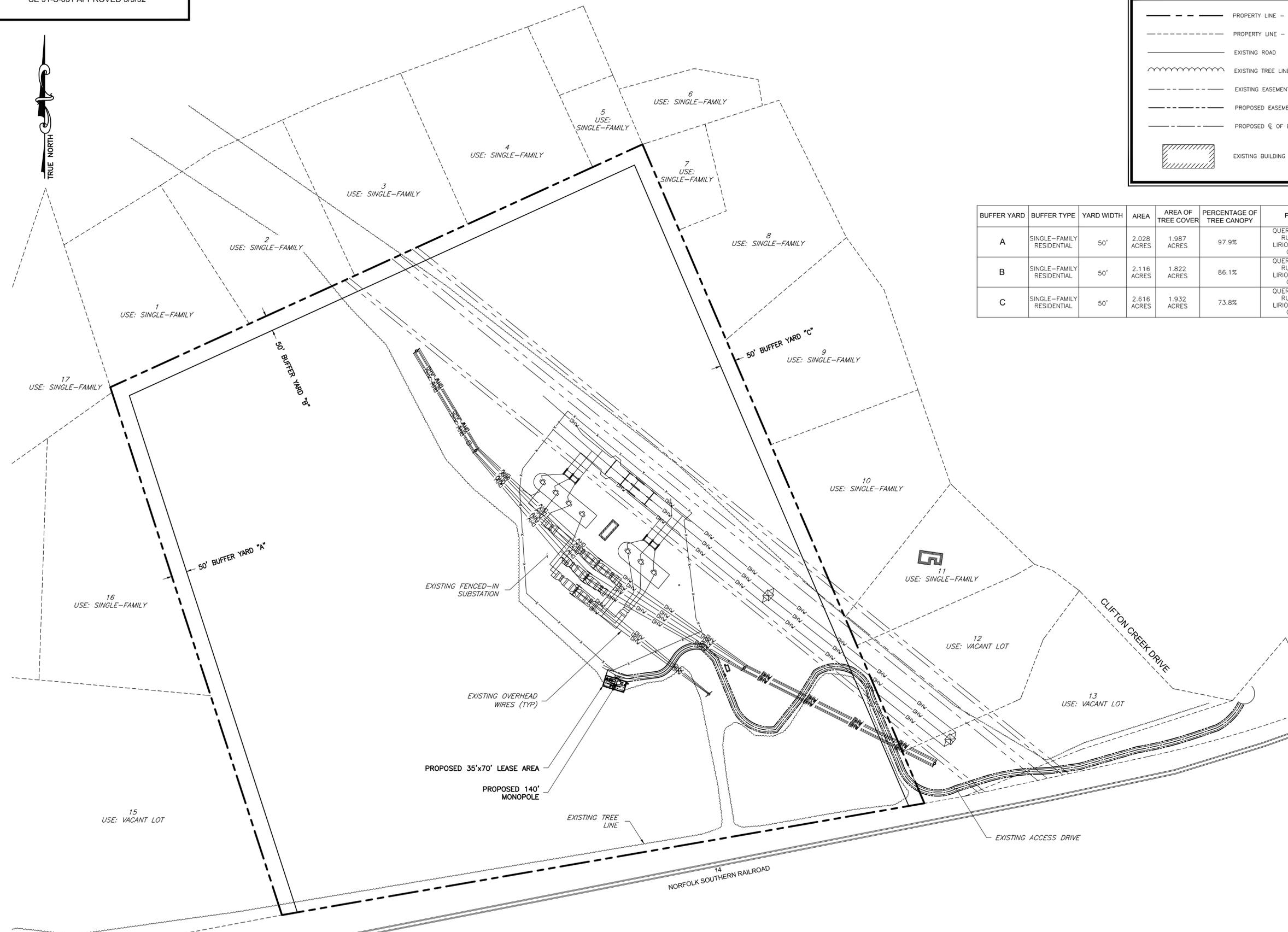
PRIOR SPECIAL EXCEPTION APPROVALS

SE 91-S-031 APPROVED 3/9/92

LEGEND

	PROPERTY LINE - SUBJECT PARCEL
	PROPERTY LINE - ABUTTERS
	EXISTING ROAD
	EXISTING TREE LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	PROPOSED Q OF EASEMENT
	EXISTING BUILDING

BUFFER YARD	BUFFER TYPE	YARD WIDTH	AREA	AREA OF TREE COVER	PERCENTAGE OF TREE CANOPY	PRIMARY SPECIES
A	SINGLE-FAMILY RESIDENTIAL	50'	2.028 ACRES	1.987 ACRES	97.9%	QUERCUS ALBA, QUERCUS RUBRA, CARYA SPP., LIRIODENDRON TULIPIFERA, QUERCUS PRINUS
B	SINGLE-FAMILY RESIDENTIAL	50'	2.116 ACRES	1.822 ACRES	86.1%	QUERCUS ALBA, QUERCUS RUBRA, CARYA SPP., LIRIODENDRON TULIPIFERA, QUERCUS PRINUS
C	SINGLE-FAMILY RESIDENTIAL	50'	2.616 ACRES	1.932 ACRES	73.8%	QUERCUS ALBA, QUERCUS RUBRA, CARYA SPP., LIRIODENDRON TULIPIFERA, QUERCUS PRINUS



ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
6066 MARSHALEE DRIVE, SUITE 300  
ELK RIDGE, MD 21075  
(410) 712-7062

**Milestone**  
COMMUNICATIONS

12110 SUNSET HILLS ROAD, SUITE 100  
RESTON, VA 20190  
TEL. (703) 620-2555  
FAX. (703) 620-8889

CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

REVISIONS

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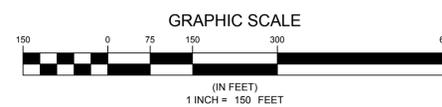


TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

**LANDSCAPE PLAN**

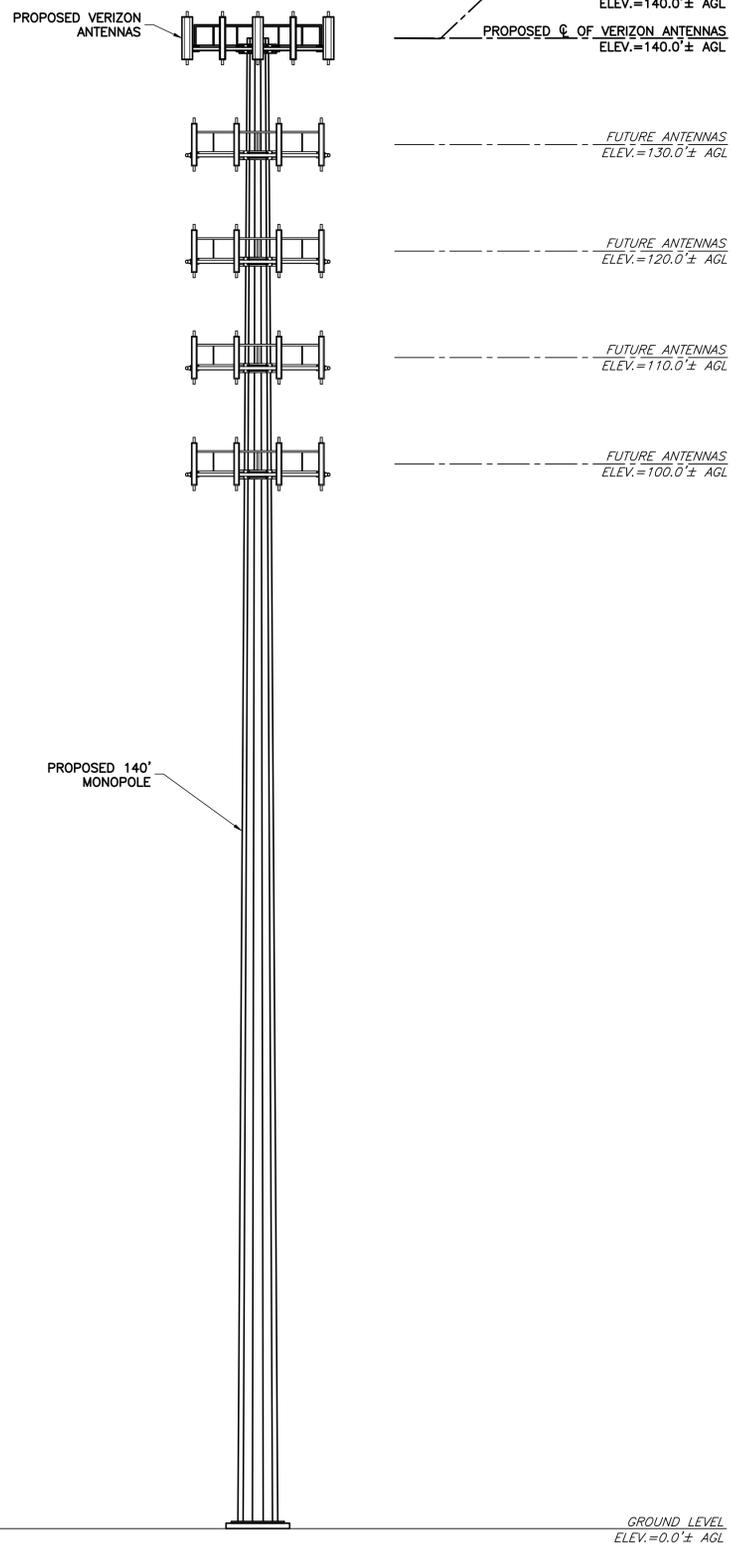
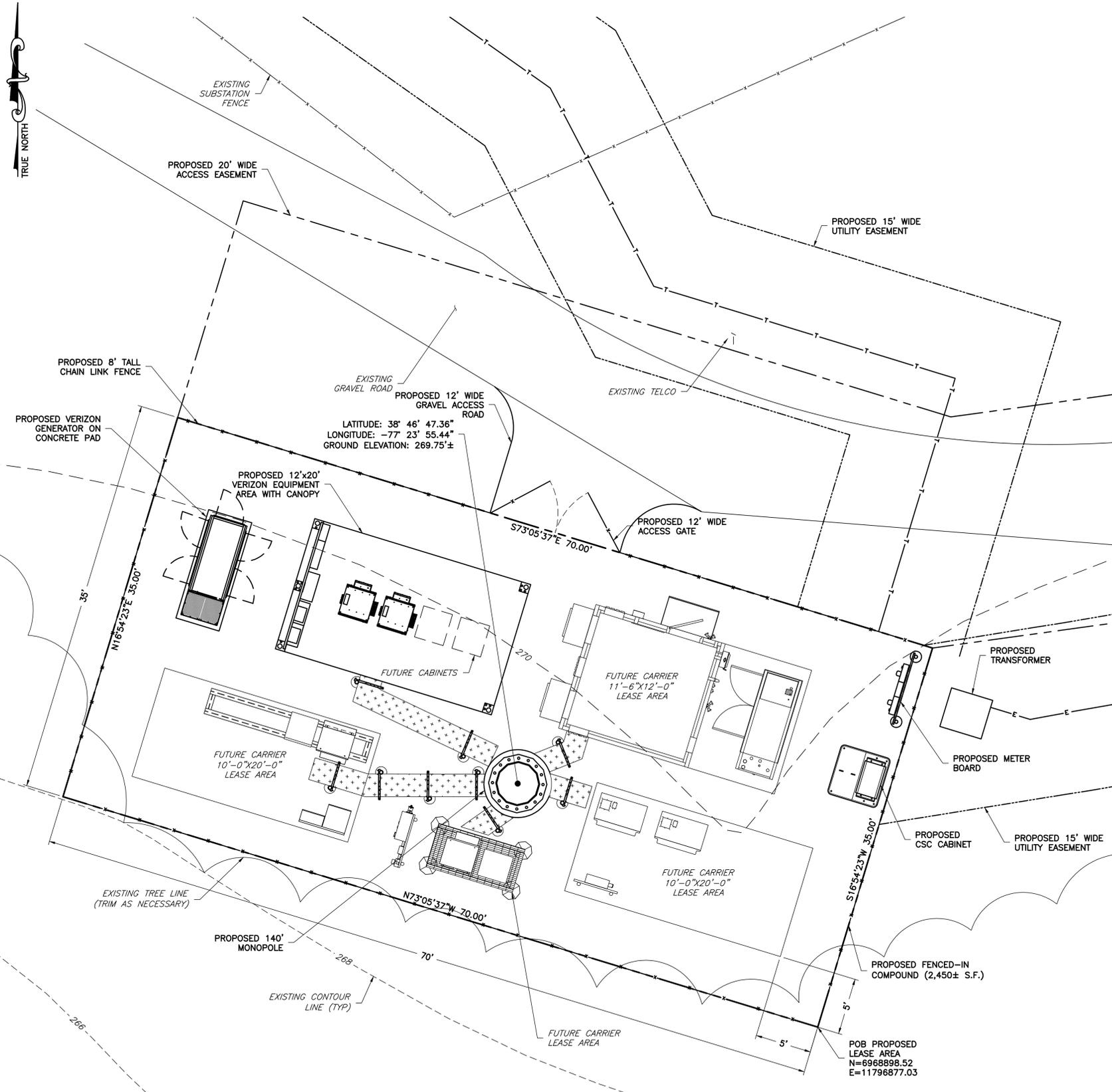
**Z-5**

1 LANDSCAPE PLAN  
SCALE: 1" = 150'  
Z-5



PRIOR SPECIAL EXCEPTION APPROVALS

SE 91-S-031 APPROVED 3/9/92



ENGINEER



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0	12/15/14	FINAL	RNC

PROFESSIONAL STAMP



ENGINEER

TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE

COMPOUND PLAN & ELEVATION

SHEET NUMBER

A-1

PRIOR SPECIAL EXCEPTION APPROVALS

SE 91-S-031 APPROVED 3/9/92

ENGINEER



NB+C ENGINEERING SERVICES, LLC.  
6095 MARSHLEE DRIVE, SUITE 300  
ELKBRIDGE, MD 21075  
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APPLICANT



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PROFESSIONAL STAMP



ENGINEER

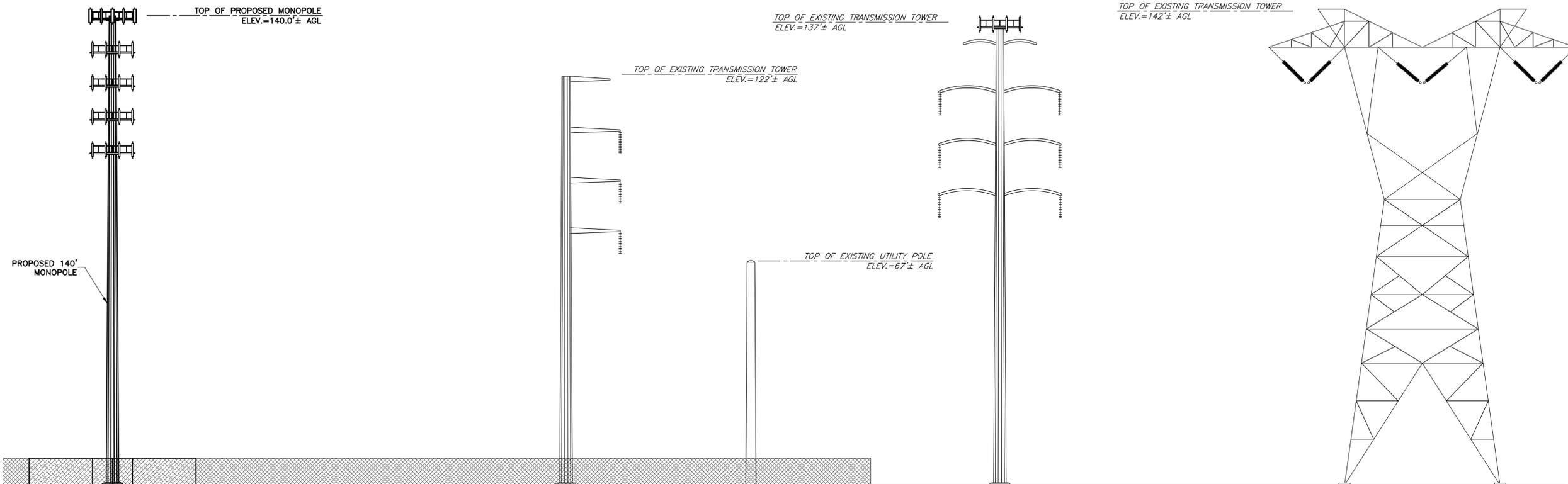
TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE

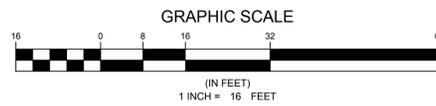
TOWER ELEVATION  
DETAILS

SHEET NUMBER

A-2

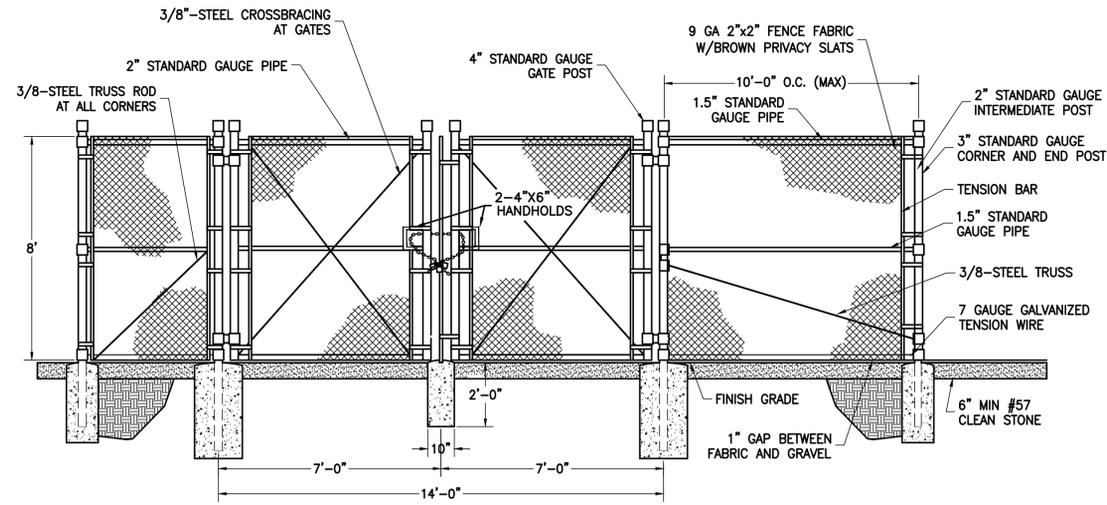


1 ELEVATION  
A-2 SCALE: 1/16"=1'-0"

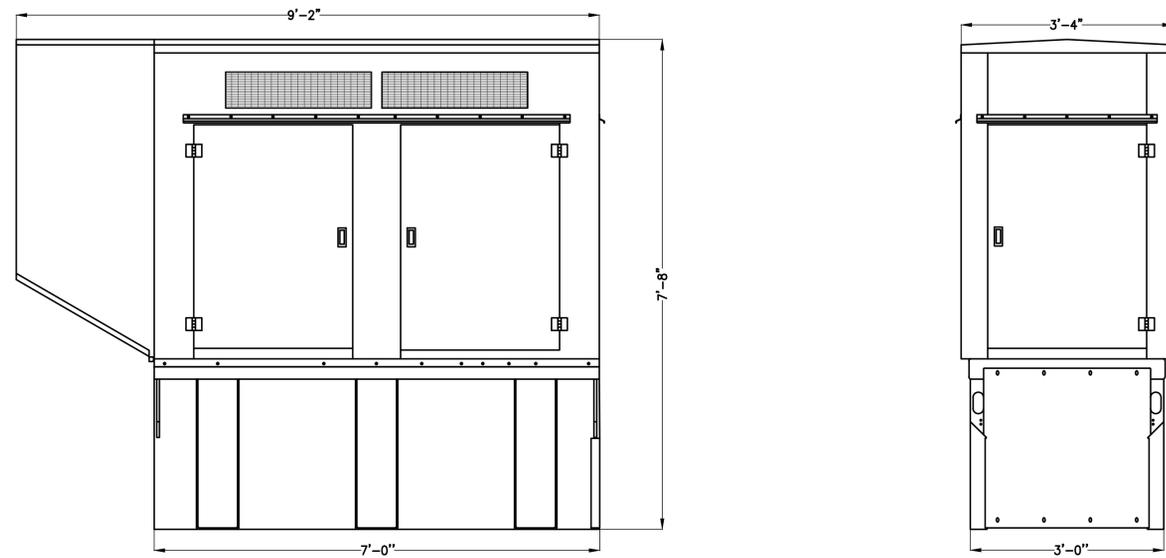


PRIOR SPECIAL EXCEPTION APPROVALS

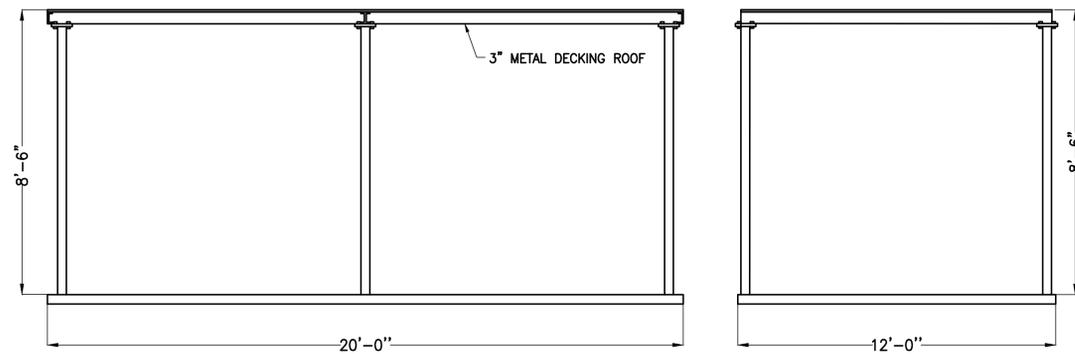
SE 91-S-031 APPROVED 3/9/92



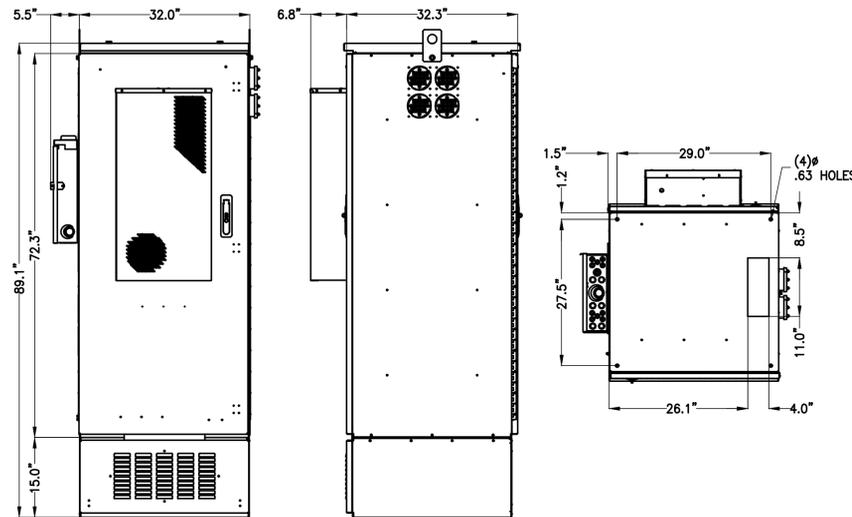
1 TYPICAL FENCE AND GATE DETAILS  
SCALE: 3/8"=1"



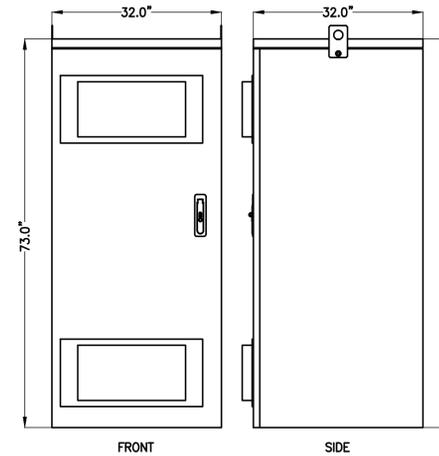
3 GENERATOR ELEVATIONS  
SCALE: 3/4"=1"



4 METAL CANOPY DETAIL  
SCALE: NOT TO SCALE



2 CHARLES LT-PM63922RF2 OUTDOOR PRIMARY CABINET  
SCALE: 3/4"=1"



CONFIGURATION	THERMAL	BATTERY STRINGS	TRAYS	# OF BUSSES	WEIGHT (EMPTY)	WEIGHT (FULLY LOADED)
24 OR 48V NI-CD	DAC	10	5	2	900 LBS	3450 LBS

5 CHARLES CUBE-BBDLJ2HN1 BATTERY CABINET  
SCALE: 3/4"=1"

ENGINEER

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PROFESSIONAL STAMP



ENGINEER

TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE

EQUIPMENT  
DETAILS

SHEET NUMBER

**A-3**

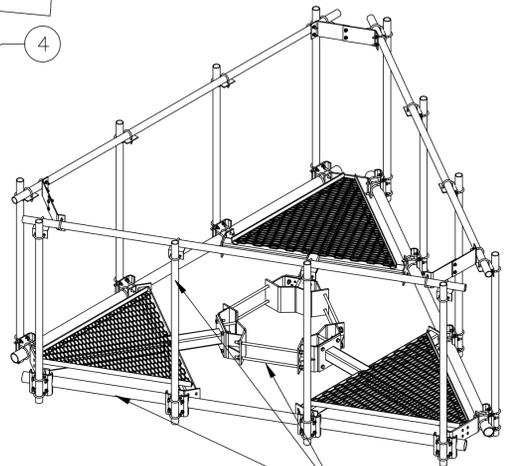
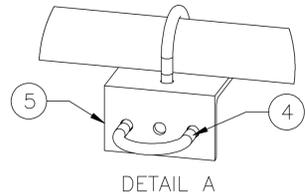
### ANTENNA INFORMATION CHART

SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER	AZIMUTH	MECHANICAL DOWN TILT	RRH QUANTITY & MODEL	COAX/HYBRID CABLE QUANTITY & SIZE	CABLE LENGTH
ALPHA	PROPOSED	ANTEL	BXA-70063-BCF-750MHZ	140'-0"	315'	0'	-	-	UNKNOWN
ALPHA	PROPOSED	ANTEL	BXA-171063-12BF-EDIN-0	140'-0"	315'	0'	-	-	UNKNOWN
ALPHA	PROPOSED	ANTEL	BXA-70063-BCF-750MHZ	140'-0"	315'	0'	(1) ALCATEL-LUCENT RRH2x40-AWS	HYBRID CABLE	UNKNOWN
ALPHA	PROPOSED	ANTEL	BXA-171063-12BF-EDIN-0	140'-0"	315'	0'	(1) ALCATEL-LUCENT RRH2x40-AWS	HYBRID CABLE	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-70063-BCF-750MHZ	140'-0"	80'	0'	-	-	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-171063-12BF-EDIN-0	140'-0"	80'	0'	-	-	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-70063-BCF-750MHZ	140'-0"	80'	0'	(1) ALCATEL-LUCENT RRH2x40-AWS	HYBRID CABLE FROM ALAPHA	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-171063-12BF-EDIN-0	140'-0"	80'	0'	(1) ALCATEL-LUCENT RRH2x40-AWS	HYBRID CABLE FROM ALAPHA	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-70063-BCF-750MHZ	140'-0"	215'	0'	-	-	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-171063-12BF-EDIN-0	140'-0"	215'	0'	-	-	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-70063-BCF-750MHZ	140'-0"	215'	0'	(1) ALCATEL-LUCENT RRH2x40-AWS	HYBRID CABLE FROM ALAPHA	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-171063-12BF-EDIN-0	140'-0"	215'	0'	(1) ALCATEL-LUCENT RRH2x40-AWS	HYBRID CABLE FROM ALAPHA	UNKNOWN

- NOTES:**  
 1. CONTRACTOR TO VERIFY PROPOSED ANTENNA INFORMATION IS THE MOST CURRENT DATA AT TIME OF CONSTRUCTION.  
 2. CONTRACTOR TO CONFIRM CABLE LENGTHS PRIOR TO CONSTRUCTION.  
 3. CONTRACTOR TO VERIFY ALL PROPOSED AND EXISTING ANTENNA AND CABLES WERE CONSIDERED AND PASSED A STRUCTURAL ANALYSIS PERFORMED BY A LICENSED ENGINEER PRIOR TO INSTALLATION.

1 ANTENNA SCHEDULE  
A-4 NOT TO SCALE

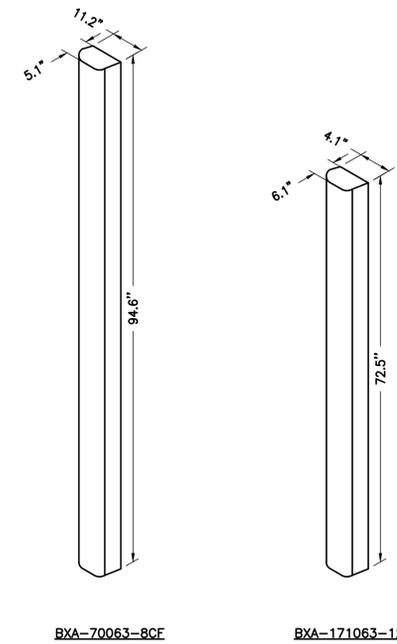
ITEM	PART No.	PART DESCRIPTION	QTY	WEIGHT
1	MT-XXX	2 3/8" O.D. PIPE (SEE TABLE)	3	-
2	MT195HK	HARDWARE KIT (ITEMS 3-7)	1	-
3	MT195.03	END PLATE	6	5.63 LBS
4	GUB-4240	1/2" x 2 1/2" x 4" GALV. U-BOLT KIT	30	0.56 LBS
5	XA2020.01	CROSSOVER ANGLE	12	2.66 LBS
6	GB-04145	1/2" x 1 1/2" GALV. BOLT KIT	6	0.13 LBS
7	GW-04	1/2" GALV. FLAT WASHER	12	0.02 LBS



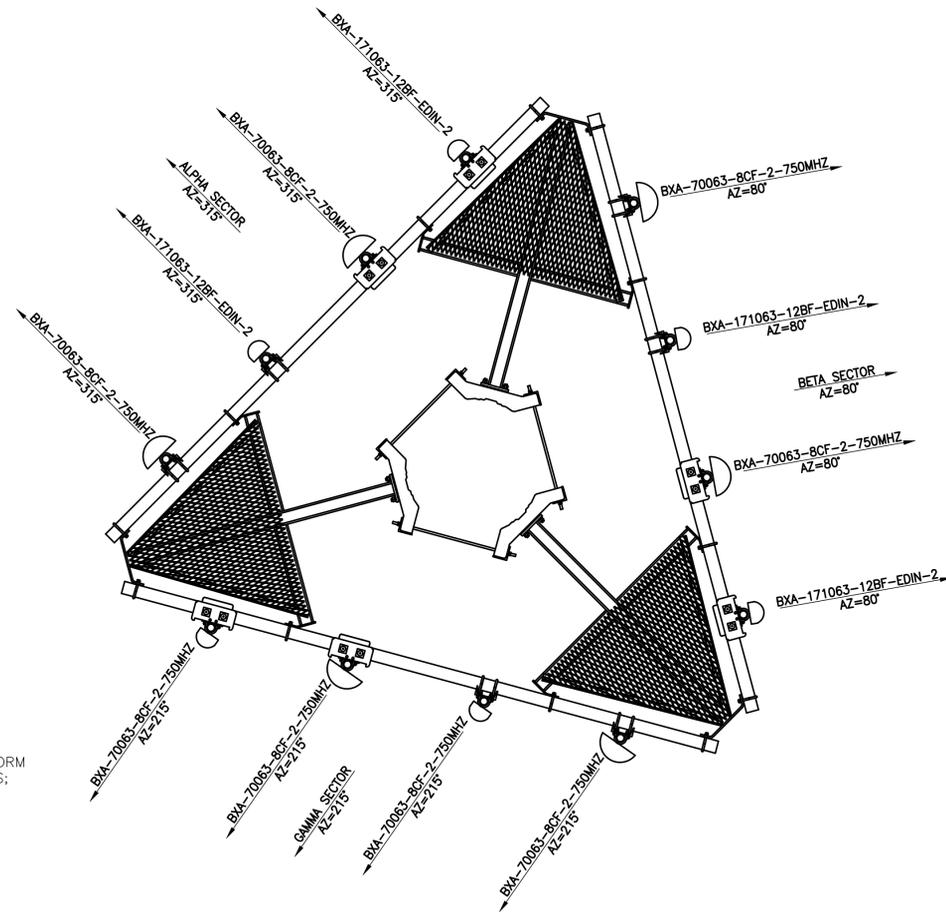
SITE PRO LOW PROFILE PLATFORM RMQLP-496 AND PIPE MOUNTS; SOLD SEPARATELY

3 LOW PROFILE PLATFORM  
A-4 NOT TO SCALE

PRODUCT	PIPE #	PRODUCT DESCRIPTION	WEIGHT
MT19512	MT 651 150	2 3/8" O.D. x 150" STIFF ARM PIPE	225.1 LBS
MT19514	MT 537 174	2 3/8" O.D. x 174" STIFF ARM PIPE	247.0 LBS



2 ANTENNA DETAILS  
A-4 NOT TO SCALE



4 ANTENNA PLAN  
SCALE: 1/2"=1'

**NB+C**  
TOTALLY COMMITTED.  
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CLIFTON CREEK SUBSTATION  
 12895 CLIFTON CREEK DRIVE  
 CLIFTON, VA 20124  
 FAIRFAX COUNTY

**REVISIONS**

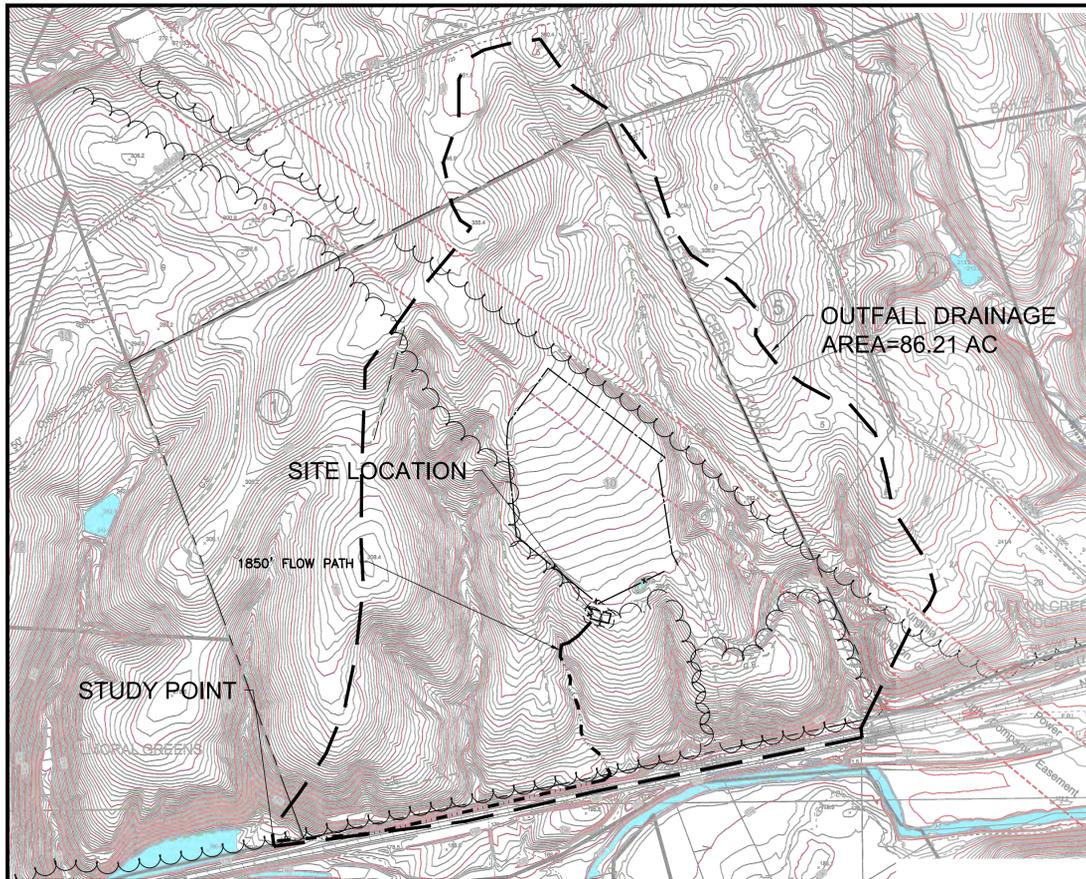
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PROFESSIONAL STAMP

ENGINEER  
 TRENT SNARR, P.E.  
 VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE  
**ANTENNA DETAILS**

SHEET NUMBER  
**A-4**



1  
SWM1  
OUTFALL DRAINAGE AREA MAP  
SCALE: 1"=200'

**ADEQUATE OUTFALL NARRATIVE**

THE RUNOFF FROM THE PROPOSED DEVELOPMENT WILL BE TREATED BY AN ON-SITE GRASS SWALE. THE GRASS SWALE WILL DETAIN THE WQ, 1, AND RELEASE 2, 10, AND 100 YEAR STORM EVENTS AT RATES LESS THAN EXISTING CONDITIONS. THE RELEASE RATE FROM THE GRASS SWALE WITH BROAD CREST WEIR WILL BE LESS THAN THE EXISTING RATES. THE DISCHARGE FROM THE GRASS SWALE WILL ENTER THE EXISTING WOODS AND ENTER A NATURAL CONVEYANCE SYSTEM IN ACCORDANCE WITH 124-4-4.8.3. SINCE THE GRASS SWALE STORES THE ENTIRE 1 YEAR STORM EVENT THERE IS NO RELEASE RATE, THEREFORE CHANNEL PROTECTION CALCULATIONS ARE NOT PROVIDED. BASED ON 124-4-4.8.6c TO A POINT THAT IS AT LEAST 150 FEET DOWNSTREAM WHERE THE RECEIVING CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90 PERCENT OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE. THE NATURAL WOODED SWALE IS APPROX. 23 FEET WIDE, 8 FEET DEEP, 550 FEET LONG AND DISCHARGES TO A MAN MADE SWALE ALONG THE RAILROAD TRACK, WHICH DISCHARGES TO A LARGE POND ALONG THE RAILROAD TRACK. THE POND DISCHARGES BENEATH THE RAILROAD TRACKS AND ULTIMATELY TO POPES HEAD CREEK. A VISUAL INSPECTION WAS PERFORMED AND THERE IS NO VISIBLE EROSION OR SIGNS OF DEGRADATION. THE TOTAL DRAINAGE AREA AT THE POINT OF CONFLUENCE AT POPES HEAD CREEK IS OVER 10,800 ACRES. A FULL ANALYSIS AND COMPUTATIONS WILL BE PROVIDED AT SITE PLAN SUBMISSION.

**MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS**

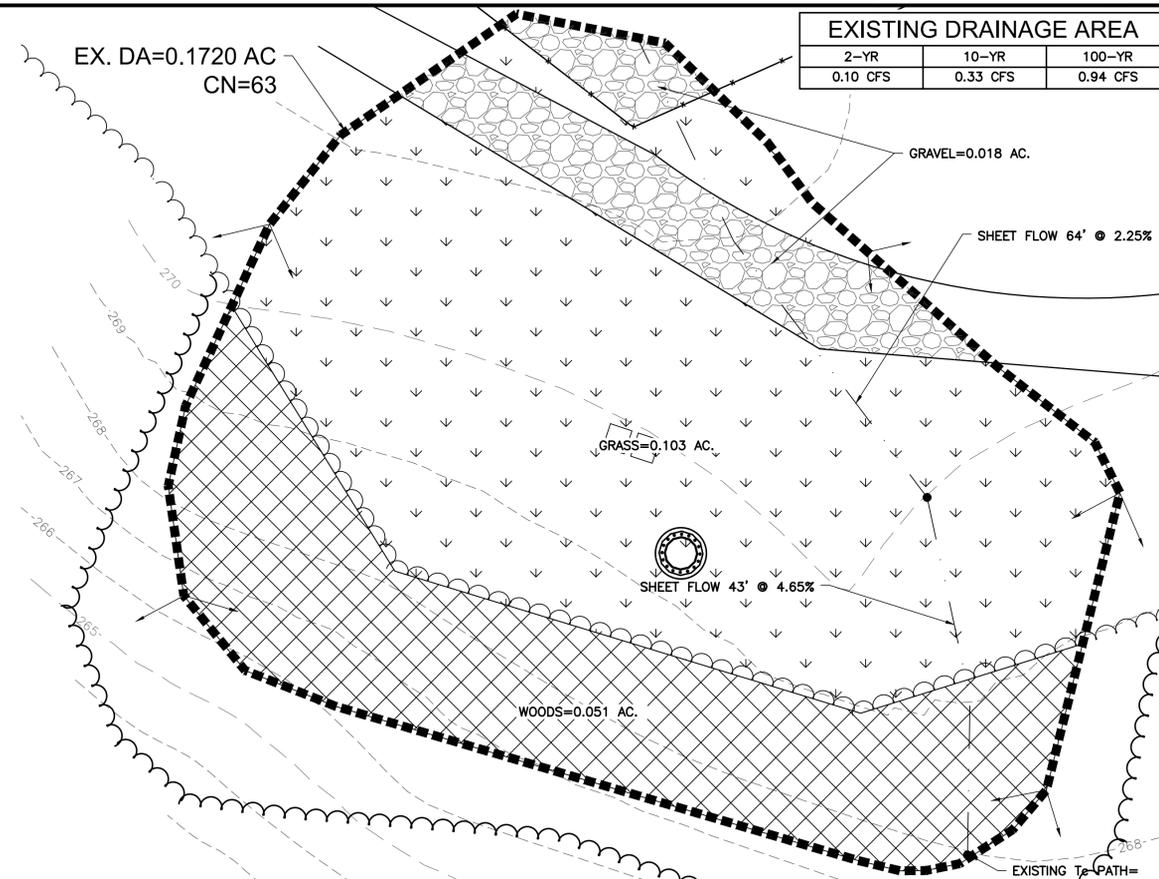
The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application.

This information is required under the following Zoning Ordinance paragraphs:

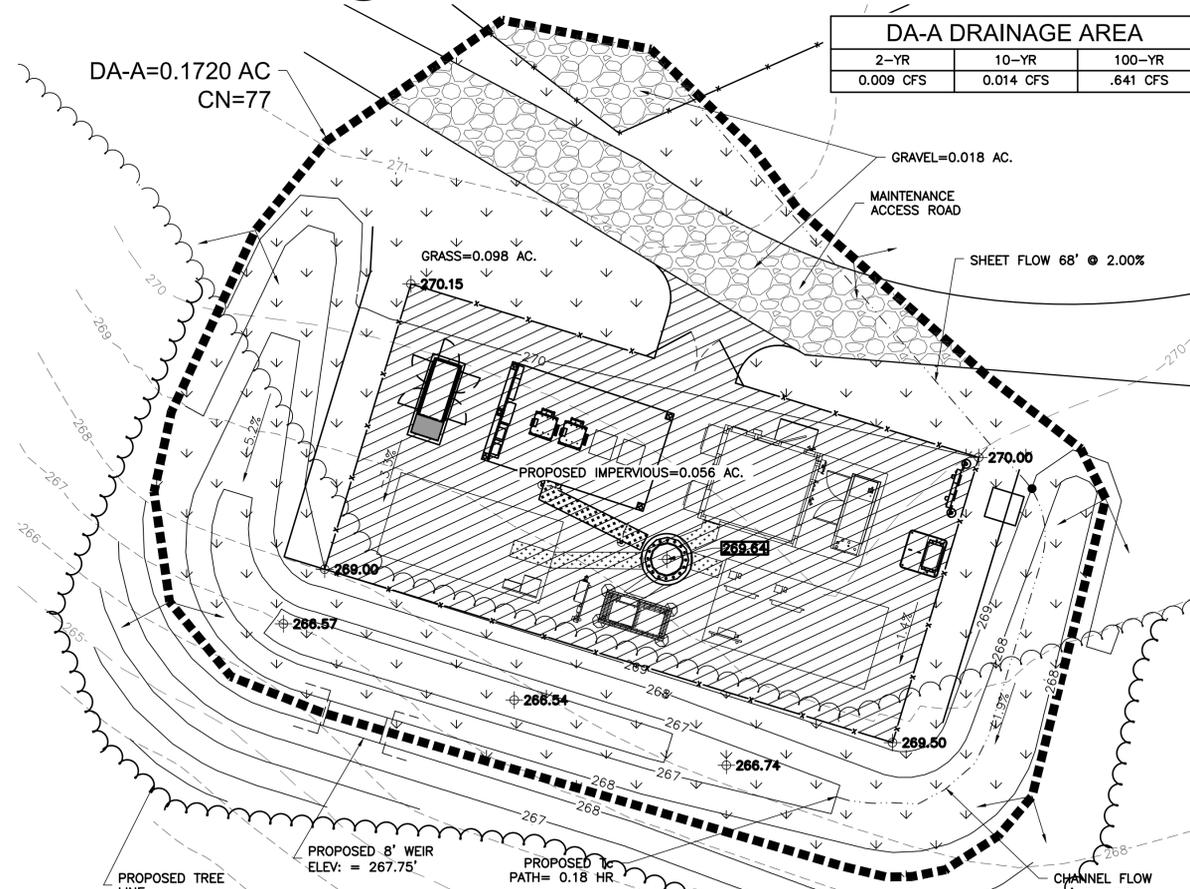
- |                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| Special Permits (8-011 2J & 2L)                | Special Exceptions (9-011 2J & 2L)                       |
| Cluster Subdivision (9-615 1G & 1N)            | Commercial Revitalization Districts (9-622 2A (12)&(14)) |
| Development Plans PRC District (16-302 2 & 4L) | PRC Plan (16-303 1E & 10)                                |
| FDP P Districts (except PRC) 916-502 1F & 1Q)  | Amendments (18-202 10F & 10I)                            |

- 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100).
- 2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet **SWM1**.
- 3. Provide:
 

Facility Name/ Type & No.	On-Site area served (acres)	Off-Site area served (acres)	Drainage area (acres)	Footprint area (sf.)	Storage Volume (cf.)	If pond, dam height (ft.)
GRASS SWALE	0.17 AC	N/A	0.17 AC	3100	1082	N/A
Totals						
- 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet **SWM1&2**.
- 5. Maintenance accesses (road) to stormwater management facility(ies) are shown on Sheet **SWM2**.
- 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet.
- 7. A "stormwater management narrative" which contains a description of how detention and best management practices requirements will be met is provided on Sheet **SWM2**.
- 8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet **SWM1**.
- 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet **SWM2**.
- 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets.
- 11. A submission waiver is requested for **N/A**.
- 12. Stormwater management is not required because **N/A**.



1  
SWM1  
EXISTING DRAINAGE AREA MAP  
SCALE: 1"=20'



1  
SWM1  
PROPOSED DRAINAGE AREA MAP  
SCALE: 1"=20'

EXISTING DRAINAGE AREA		
2-YR	10-YR	100-YR
0.10 CFS	0.33 CFS	0.94 CFS

DA-A DRAINAGE AREA		
2-YR	10-YR	100-YR
0.009 CFS	0.014 CFS	.641 CFS

ENGINEER

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SITE INFORMATION

CLIFTON CREEK SUBSTATION  
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PROFESSIONAL STAMP

ENGINEER

TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

SHEET TITLE

DRAINAGE AREA MAPS

SHEET NUMBER

SWM-1

**STORMWATER MANAGEMENT NARRATIVE**

**GENERAL INFORMATION:**

THE PROPOSED WORK IS TO CONSTRUCT A 10' WIDE GRAVEL ACCESS DRIVEWAY TO A NEW 35'X70' FENCED GRAVEL COMPOUND. WITHIN THE FENCED COMPOUND WILL BE A NEW 140' MONOPOLE TOWER, ELECTRICAL BACKBOARD WITH 6 GANG METER PANEL, AND FUTURE CARRIER EQUIPMENT. THE TOTAL LIMIT OF DISTURBANCE IS 7,100 SQUARE FEET WHICH IS GREATER THAN 2,500 SQUARE FEET; THEREFORE STORMWATER QUALITY MANAGEMENT IS REQUIRED. DURING THE DEVELOPMENT THE NATURAL DRAINAGE DIVIDE WILL BE MAINTAINED AND THE RELEASE RATES WILL BE LESS THAN THE EXISTING AND WILL NOT HAVE AN ADVERSE DOWNSTREAM IMPACT

**STORMWATER QUALITY MANAGEMENT (1" OF RUNOFF):**

THE STORMWATER QUALITY MANAGEMENT WILL BE MET THROUGH THE USE OF A GRASS SWALE THAT WILL CAPTURE AND TREAT THE FIRST ONE INCH OF RAINFALL FROM A 24-HOUR STORM EVENT. THE SWALE WILL HAVE A BOTTOM WIDTH OF 3', 3:1 SIDE SLOPES, AND BE 1'-6" DEEP. IT WILL WRAP AROUND THE COMPOUND. THE RUNOFF FROM THE IMPERVIOUS AREA WILL BE CAPTURED AND TREATED BY THE SWALE AND RELEASED BY A BROAD CREST WEIR. THE RELEASE RATES ARE MINIMAL AND NON-EROSIVE SO THE WEIR WILL BE EARTHEN. THE INVERT OF THE WEIR IS SET AT THE WATER QUALITY ELEVATION AND THE NON-EROSIVE RUNOFF WILL BE RELEASED TO THE EXISTING DENSE WOODS. CALCULATIONS FOR WATER QUALITY COMPLIANCE ARE BASED ON VIRGINIA RUNOFF REDUCTION METHOD NEW DEVELOPMENT WORKSHEET - V2.8 - JUNE 2014. THE TOTAL POST DEVELOPMENT TREATMENT VOLUME IS 488 CF. THIS IS ACCOMPLISHED AT APPROXIMATE ELEVATION 266.66'. THE BMP REQUIREMENTS HAVE BEEN MET BY THE USE OF A GRASS SWALE THAT DISCHARGES TO THE EXISTING ON-SITE CONSERVATION AREA.

**PFM DETENTION COMPLIANCE:**

BASED ON THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM), THE PEAK RELEASE RATES FOR THE POST-DEVELOPED 2-YEAR AND 10-YEAR STORMS SHALL BE REDUCED TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE EXISTING CONDITION PEAK FLOW RATES FOR THOSE SAME STORM EVENTS. THIS REDUCTION IN PEAK FLOW RATE SHALL BE ACCOMPLISHED THROUGH THE STORAGE AND DETENTION OF THE GRASS SWALE.

THE ADEQUATE OUTFALL REQUIREMENTS OF THE PFM SHALL BE ADDRESSED AT THE TIME OF FINAL ENGINEERING. AT THE TIME OF FINAL ENGINEERING AN ADEQUATE OUTFALL ANALYSIS WILL BE CONDUCTED FOR THE SUBJECT SITE TO BE INCLUDED IN A SITE PLAN, WHICH WILL DETERMINE THE ADEQUACY OF THE SITE'S OUTFALL THE DOWNSTREAM EXTENT OF ANALYSIS SHALL MOST LIKELY BE DETERMINED BY PFM SECTION 6-0203.2A, WHICH DEFINES THE EXTENT TO BE TO A POINT THAT IS AT LEAST 150' DOWNSTREAM OF A POINT WHERE THE RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90% OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE. THE 150' POINT OF CONFLUENCE IS WITHIN THE SYSTEM, OR FIELD MEASURED CROSS-SECTIONS SHALL BE ANALYZED 150' DOWNSTREAM FROM THE POINT OF CONFLUENCE, PER PFM SECTION 6-0203.3B(1).

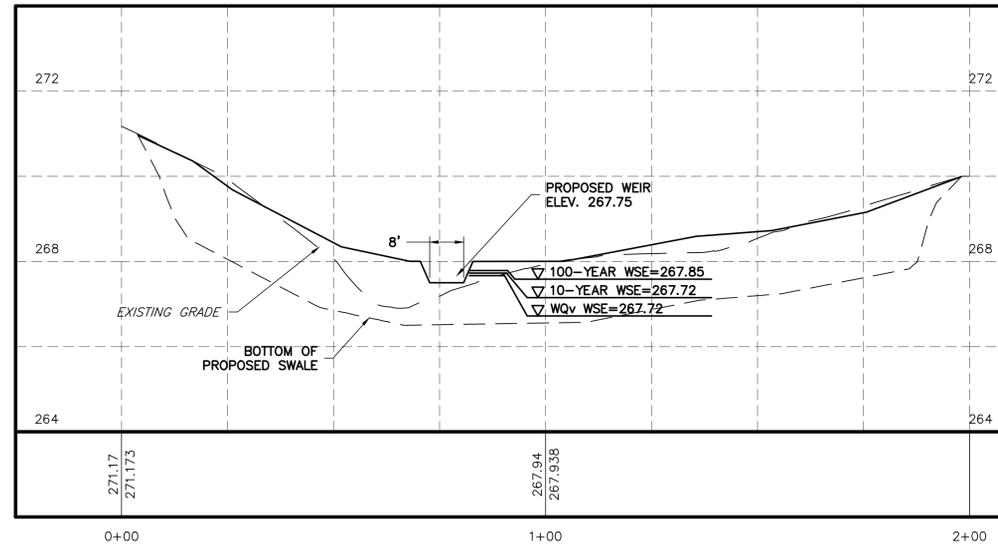
**WATER QUANTITY CONTROL:**

BASED ON CHAPTER 124 IT IS REQUIRED TO MEET THE WATER QUANTITY CONTROL AND THE SECTION THAT APPLIES IS 124.4.4B3. THE SITE IS DISCHARGING TO THE EXISTING ONSITE NATURAL CONVEYANCE SYSTEM. CALCULATIONS FOR THE METHODOLOGY WERE NOT PROVIDED BECAUSE THE SWALE DETAINS THE ENTIRE 1-YEAR STORM EVENT, THEREFORE THE Q (DEVELOPED) IS EQUAL TO 0 CFS.

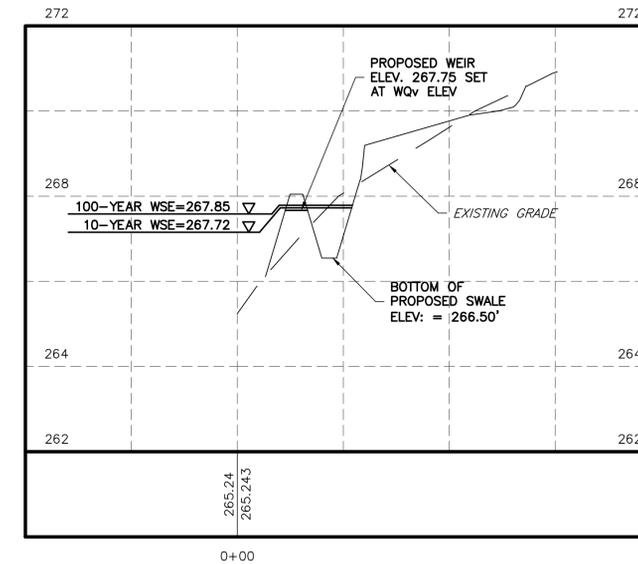
**NOTE:**

THE STORMWATER MANAGEMENT ANALYSIS, DESIGN, AND FACILITY ARE PRELIMINARY AND ARE SUBJECT TO CHANGE WITH THE FINAL SITE PLAN.

CUT AND FILL ANALYSIS				
CUT FACTOR	FILL FACTOR	CUT (CY)	FILL (CY)	NET (CY)
1.00	1.20	79.56	93.56	14.01



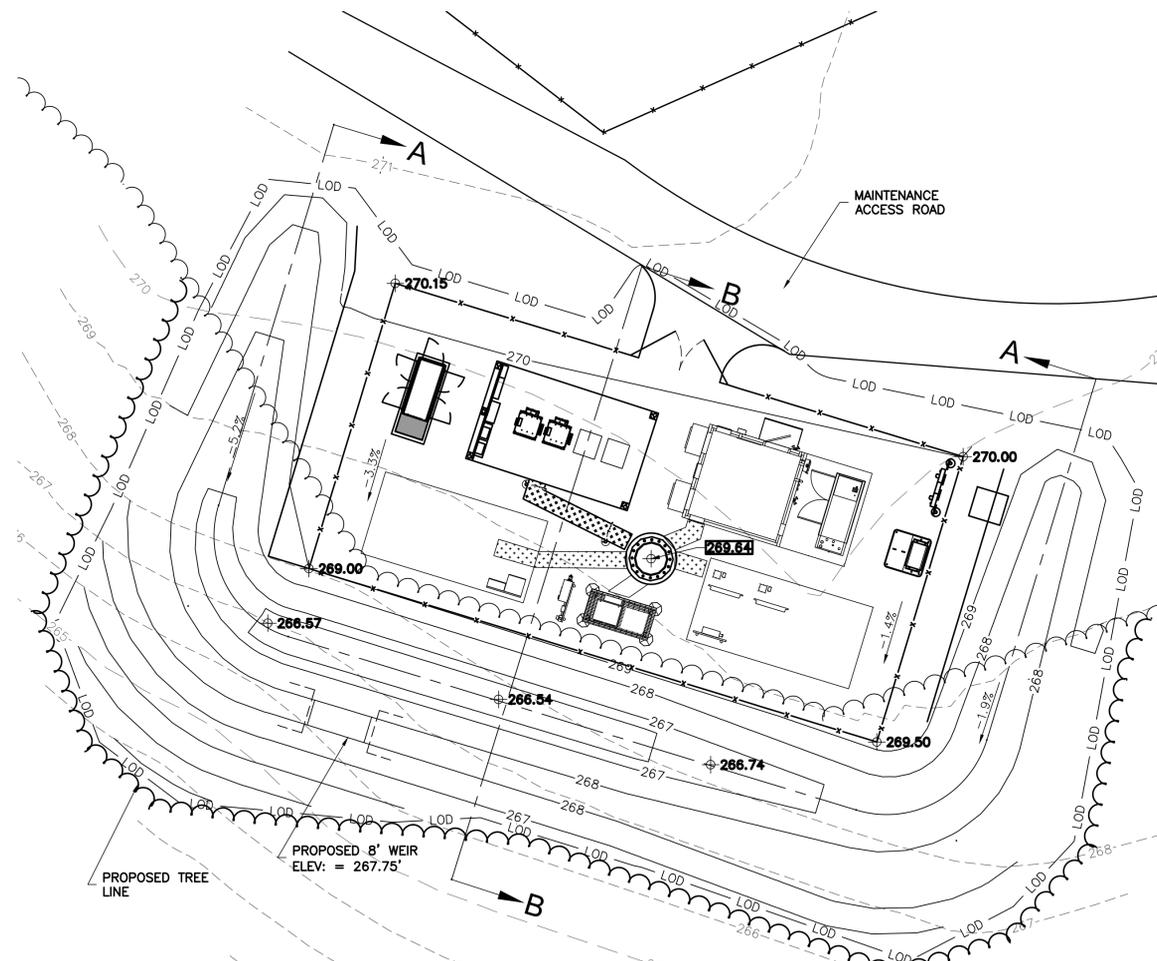
**1 GRASS SWALE CROSS SECTION A-A**  
VERT: 1"=2', HORIZ.: 1"=20'



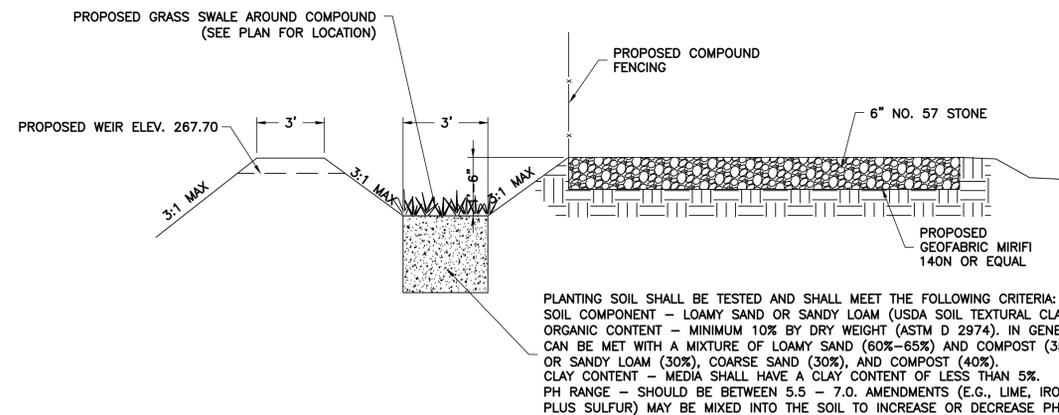
**2 GRASS SWALE CROSS SECTION B-B**  
VERT: 1"=2', HORIZ.: 1"=20'

STAGE STORAGE TABLE						
ELEV	AREA (sq. ft.)	DEPT H (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	CONIC INC. VOL. (cu. ft.)	CONIC TOTAL VOL. (cu. ft.)
266.50	189.56	N/A	N/A	0.00	N/A	0.00
266.75	283.61	0.25	59.15	59.15	58.75	58.75
267.00	475.71	0.25	94.91	154.06	93.89	152.64
267.25	726.47	0.25	150.27	304.33	149.17	301.81
267.50	974.93	0.25	212.67	517.01	211.91	513.72
267.75	1,249.91	0.25	278.11	795.11	277.39	791.12
268.00	1,522.57	0.25	346.56	1141.67	346.00	1137.12

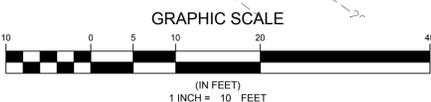
NOTE: WQv VOLUME IS ACHIEVED AT ELEV. 267.50. THE WEIR IS SET AT THAT ELEVATION.



**3 STORMWATER MANAGEMENT DETAIL**  
SCALE: 1"=10'



**4 GRAVEL COMPOUND GRASS SWALE TYPICAL**  
SCALE: 1"=10'



ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
6066 MARSHALEE DRIVE, SUITE 300  
ELK RIDGE, MD 21075  
(410) 712-7092

**Milestone**  
COMMUNICATIONS  
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CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

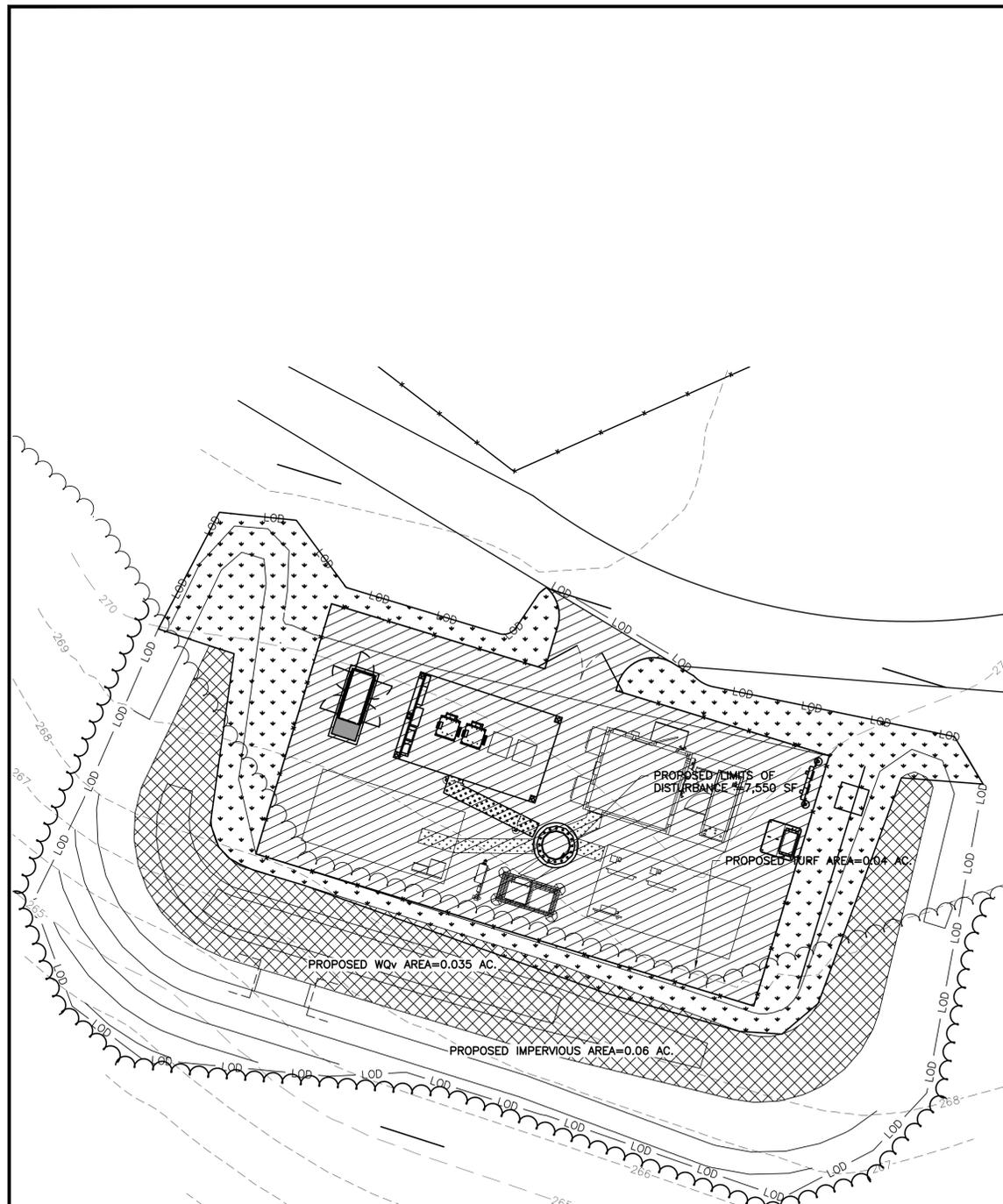
REVISIONS			
REV	DATE	DESCRIPTION	BY
4	05/18/15	REVISED LANDSCAPE PLAN	RNC
3	05/07/15	REVISED	RNC
2	03/24/15	SWM COMMENTS	RNC
1	1/14/15	EVM PLAN	RNC
0	12/15/14	FINAL	RNC

PROFESSIONAL ENGINEER  
TRENT TRAVIS SNARR  
Lic. No. 049978

TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

**STORMWATER  
MANAGEMENT  
PLAN**

**SWM-2**



1 SITE LAND COVER MAP  
SCALE: NONE

WinTR-55 Current Data Description  
--- Identification Data ---  
User: JJR Date: 9/8/2014  
Project: Clifton Creek Units: English  
SubTitle: Areal Units: Acres  
State: Virginia  
County: Fairfax NOAA\_C  
Filename: C:\Users\John Rupp.8570w-jrupp\AppData\Roaming\WinTR-55\Clifton Creek Existing.w55

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
DA-A	Outlet		0.17	63	.149

Total area: .17 (ac)

--- Storm Data ---

Rainfall Depth by Rainfall Return Period						
2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.1	4.0	4.8	6.0	7.0	8.2	2.6

Storm Data Source: Fairfax NOAA\_C County, VA (NRCS)  
Rainfall Distribution Type: Type II  
Dimensionless Unit Hydrograph: <standard>

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
DA-A	Open space; grass cover > 75%	(good) B	.103	61
	Paved parking lots, roofs, driveways	B	.018	98
	Woods	(good) B	.051	55
Total Area / Weighted Curve Number				.17 63

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
DA-A SHEET	85	0.0600	0.240				0.137
CHANNEL	95	0.0200	0.030	2.00	12.10	2.199	0.012
Time of Concentration							.149

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period		
	2-Yr (cfs)	10-Yr (cfs)	100-Yr (cfs)
SUBAREAS DA-A	0.10	0.33	0.94
REACHES			
OUTLET	0.10	0.33	0.94

2 EXISTING TR55 CALCULATIONS  
SCALE: NONE

**Hydrograph Report**  
Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3  
Wednesday, 03 / 25 / 2015

**Hyd. No. 2**  
<no description>

Hydrograph type = Reservoir  
Storm frequency = 2 yrs  
Time interval = 2 min  
Inflow hyd. No. = 1 - Grass Swale  
Reservoir name = Clifton Creek

Peak discharge = 0.058 cfs  
Time to peak = 27.37 hrs  
Hyd. volume = 585 cuft  
Max. Elevation = 267.72 ft  
Max. Storage = 329 cuft

Storage Indication method used. Outflow includes exfiltration.

**Hydrograph Report**  
Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3  
Wednesday, 03 / 25 / 2015

**Hyd. No. 2**  
<no description>

Hydrograph type = Reservoir  
Storm frequency = 10 yrs  
Time interval = 2 min  
Inflow hyd. No. = 1 - Grass Swale  
Reservoir name = Clifton Creek

Peak discharge = 0.079 cfs  
Time to peak = 37.33 hrs  
Hyd. volume = 1,169 cuft  
Max. Elevation = 267.72 ft  
Max. Storage = 732 cuft

Storage Indication method used. Outflow includes exfiltration.

**Hydrograph Report**  
Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3  
Wednesday, 03 / 25 / 2015

**Hyd. No. 2**  
<no description>

Hydrograph type = Reservoir  
Storm frequency = 100 yrs  
Time interval = 2 min  
Inflow hyd. No. = 1 - Grass Swale  
Reservoir name = Clifton Creek

Peak discharge = 0.665 cfs  
Time to peak = 12.10 hrs  
Hyd. volume = 2,397 cuft  
Max. Elevation = 267.80 ft  
Max. Storage = 868 cuft

Storage Indication method used. Outflow includes exfiltration.

4 GRASS SWALE ROUTING CALCULATIONS  
SCALE: NONE

WinTR-55 Current Data Description  
--- Identification Data ---  
User: JJR Date: 9/8/2014  
Project: Clifton Creek Units: English  
SubTitle: Areal Units: Acres  
State: Virginia  
County: Fairfax NOAA\_C  
Filename: C:\Users\John Rupp.8570w-jrupp\AppData\Roaming\WinTR-55\Clifton Creek Proposed.w55

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
DA-A	Outlet		0.17	77	.18

Total area: .17 (ac)

--- Storm Data ---

Rainfall Depth by Rainfall Return Period						
2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.1	4.0	4.8	6.0	7.0	8.2	2.6

Storm Data Source: Fairfax NOAA\_C County, VA (NRCS)  
Rainfall Distribution Type: Type II  
Dimensionless Unit Hydrograph: <standard>

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
DA-A	Open space; grass cover > 75%	(good) B	.103	61
	Paved parking lots, roofs, driveways	B	.018	98
	Woods	(good) B	.051	55
Total Area / Weighted Curve Number				.17 63

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
DA-A SHEET	68	0.0200	0.240				0.177
CHANNEL	52	0.0560	0.025	2.00	12.10	4.815	0.003
Time of Concentration							.18

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period		
	2-Yr (cfs)	10-Yr (cfs)	100-Yr (cfs)
SUBAREAS DA-A	0.27	0.58	1.27
REACHES			
OUTLET	0.27	0.58	1.27

3 PROPOSED TR55 CALCULATIONS  
SCALE: NONE

**Pond Report**  
Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3  
Wednesday, 03 / 25 / 2015

**Pond No. 1 - Clifton Creek**  
Pond Data  
Contours - User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 266.50 ft

**Stage / Storage Table**

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	266.50	225	0	0
0.25	267.50	283	64	64
0.50	267.00	476	95	158
0.75	267.25	727	150	309
1.00	267.50	975	213	522
1.25	267.75	1,250	278	800
1.50	268.00	1,523	347	1,146

**Culvert / Orifice Structures**

[A]	[B]	[C]	[PrfRsr]	[A]	[B]	[C]	[D]
Rise (in) = 0.00	0.00	0.00	0.00	Crest Len (ft) = 8.00	0.00	0.00	0.00
Span (in) = 0.00	0.00	0.00	0.00	Crest El. (ft) = 267.75	0.00	0.00	0.00
No. Barrels = 0	0	0	0	Weir Coeff. = 2.60	3.33	3.33	3.33
Invert El. (ft) = 0.00	0.00	0.00	0.00	Weir Type = Broad			
Length (ft) = 0.00	0.00	0.00	0.00	Multi-Stage = No	No	No	No
Slope (%) = 0.00	0.00	0.00	n/a				
NValue = 0.13	0.13	0.13	n/a				
Orifice Coeff. = 0.60	0.60	0.60	0.60	Exfil.(in/hr) = 0.520 (by Contour)			
Multi-Stage = n/a	No	No	No	TW Elev. (ft) = 0.00			

**Stage / Storage / Discharge Table**

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	266.50	--	--	--	--	0.00	--	--	--	0.000	--	0.000
0.25	64	267.50	--	--	--	--	0.00	--	--	--	0.003	--	0.003
0.50	158	267.00	--	--	--	--	0.00	--	--	--	0.006	--	0.006
0.75	309	267.25	--	--	--	--	0.00	--	--	--	0.009	--	0.009
1.00	522	267.50	--	--	--	--	0.00	--	--	--	0.012	--	0.012
1.25	800	267.75	--	--	--	--	0.35	--	--	--	0.015	--	0.366
1.50	1,146	268.00	--	--	--	--	2.58	--	--	--	0.016	--	2.596

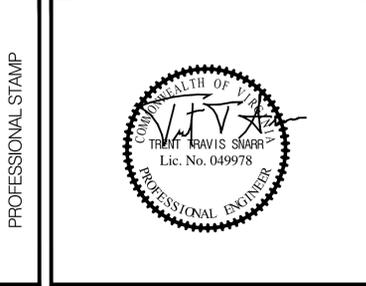
**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
6066 MARSHALEE DRIVE, SUITE 300  
ELK RIDGE, MD 21075  
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**Milestone**  
COMMUNICATIONS  
12110 SUNSET HILLS ROAD, SUITE 100  
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FAX. (703) 620-8889

CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
4	05/18/15	REVISED LANDSCAPE PLAN	RNC
3	05/07/15	REVISED	RNC
2	03/24/15	SWM COMMENTS	RNC
1	1/14/15	EVM PLAN	RNC
0	12/15/14	FINAL	RNC



TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

**STORMWATER  
MANAGEMENT  
CALCULATIONS**

**SWM-3**

ENGINEER  
APPLICANT  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
ENGINEER  
SHEET TITLE  
SHEET NUMBER

Virginia Runoff Reduction Method New Development Worksheet - v2.8 - June 2014

<b>To be used w/ 2011 BMP Standards and Specifications</b>	
<b>Site Data</b>	
Project Name: Clifton Creek	
Date: 9/4/2014	
data input cells	
calculation cells	
constant values	
<b>1. Post-Development Project &amp; Land Cover Information</b>	
<b>Constants</b>	
Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Phosphorus EMC (mg/L)	0.26
Target Phosphorus Target Load (lb/acre/yr)	0.41
P	0.90
<b>Land Cover (acres)</b>	
A soils	B Soils
C Soils	D Soils
Totals	
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.04
Impervious Cover (acres)	0.06
Total	
0.10	
<b>Rv Coefficients</b>	
A soils	B Soils
C Soils	D Soils
Forest/Open Space	0.02
Managed Turf	0.15
Impervious Cover	0.95
<b>Land Cover Summary</b>	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.04
Weighted Rv(turf)	0.20
% Managed Turf	40%
Impervious Cover (acres)	0.06
Rv(impervious)	0.95
% Impervious	60%
Total Site Area (acres)	0.10
Site Rv	0.65
Post-Development Treatment Volume (acre-ft)	0.01
Post-Development Treatment Volume (cubic feet)	236
Post-Development Load (TP) (lb/yr)	0.15
Post-Development Load (TN) (lb/yr)	1.06
Total Load (TP) Reduction Required (lb/yr)	0.11

**1 SITE DATA**  
SCALE: NONE  
SWM-4

<b>Site Results</b>						
	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
IMPERVIOUS COVER	0.06	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED	0.06	0.00	0.00	0.00	0.00	OK.
TURF AREA	0.04	0.00	0.00	0.00	0.00	OK.
TURF AREA TREATED	0.04	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	
<b>Phosphorus</b>						
TOTAL TREATMENT VOLUME (cf)	236					
TOTAL PHOSPHORUS LOAD REDUCTION REQUIRED (LB/YEAR)	0.11					
RUNOFF REDUCTION (cf)	189					
PHOSPHORUS LOAD REDUCTION ACHIEVED (LB/YR)	0.12					
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (lb/yr)	0.03					
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED	CONGRATULATIONS!! YOU EXCEEDED THE TARGET REDUCTION BY 0 LB/YEAR!!					
<b>Nitrogen (for information purposes)</b>						
TOTAL TREATMENT VOLUME (cf)	236					
RUNOFF REDUCTION (cf)	189					
NITROGEN LOAD REDUCTION ACHIEVED (LB/YR)	1.06					
ADJUSTED POST-DEVELOPMENT NITROGEN LOAD (TN) (lb/yr)	0.00					

**3 WATER QUALITY COMPLIANCE**  
SCALE: NONE  
SWM-4

Target Rainfall Event (in)	1-year storm	2-year storm	10-year storm
	2.70	3.20	5.20
<b>Drainage Area A</b>			
Drainage Area (acres)	0.10		
Runoff Reduction Volume (cf)	189		
Based on the use of Runoff Reduction practices in the selected drainage areas, the spreadsheet calculates an adjusted RvDeveloped and adjusted Curve Number.			
<b>Drainage Area A Summary</b>			
Area (acres)	A soils	B Soils	C Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.04	0.00
Impervious Cover	0.00	0.06	0.00
Weighted CN	83		
<b>Channel and Flood Protection</b>			
RVDeveloped (in) with no Runoff Reduction	1-year storm	2-year storm	10-year storm
	1.21	1.61	3.36
RVDeveloped (in) with Runoff Reduction	0.69	1.09	2.84
Adjusted CN	73	75	77

**4 CHANNEL AND FLOOD PROTECTION**  
SCALE: NONE  
SWM-4

<b>Drainage Area A</b>						
<b>Drainage Area A Land Cover (acres)</b>						
A soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv	
0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.04	0.00	0.00	0.04	0.20	
0.00	0.06	0.00	0.00	0.06	0.95	
Total				0.10		
Post Development Treatment Volume (cf)				236		

Practice	Unit	Description of Credit	Credit	Credit Area (acres)	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus Efficiency (%)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed	Nitrogen Efficiency (%)	Nitrogen Load from Upstream RR Practices (lbs)	Untreated Nitrogen Load to Practice (lbs.)	Nitrogen Removed By Practice (lbs.)	Remaining Nitrogen Load (lbs.)	
<b>4. Grass Channel</b>																			
4 a. Grass Channel A/B Soils (Spec #3)	impervious acres draining to grass channels	20% runoff volume reduction	0.20	0.06	0	41	166	15	0.00	0.13	0.04	0.09	9.a. Sheetflow to Conservation Area with A/B Soils	20	0.00	0.93	0.33	0.59	
	turf acres draining to grass channels	20% runoff volume reduction	0.20	0.04	0	6	23	15	0.00	0.02	0.01	0.01	9.a. Sheetflow to Conservation Area with A/B Soils	20	0.00	0.13	0.05	0.08	
4 b. Grass Channel C/D Soils (Spec #3)	impervious acres draining to grass channels	10% runoff volume reduction	0.10	0.00	0	0	0	15	0.00	0.00	0.00	0.00		20	0.00	0.00	0.00	0.00	
	turf acres draining to grass channels	10% runoff volume reduction	0.10	0.00	0	0	0	15	0.00	0.00	0.00	0.00		20	0.00	0.00	0.00	0.00	
4 c. Grass Channel with Compost Amended Soils as per specs (see Spec #4)	impervious acres draining to grass channels	30% runoff volume reduction	0.30	0.00	0	0	0	15	0.00	0.00	0.00	0.00		20	0.00	0.00	0.00	0.00	
	turf acres draining to grass channels	30% runoff volume reduction	0.30	0.00	0	0	0	15	0.00	0.00	0.00	0.00		20	0.00	0.00	0.00	0.00	
TOTAL IMPERVIOUS COVER TREATED (ac)				0.06															
TOTAL TURF AREA TREATED (ac)				0.04															
AREA CHECK				OK.															
TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr)				0.11															
TOTAL RUNOFF REDUCTION IN D.A. A (cf)				189															
PHOSPHORUS REMOVAL FROM RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)				0.12															

**2 DRAINAGE AREA A**  
SCALE: NONE  
SWM-4

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS	
-------------------------------------------------------------------	--

<b>Site Data Summary</b>						
Total Rainfall = 43 inches						
<b>Site Land Cover Summary</b>						
	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Turf (acres)	0.00	0.04	0.00	0.00	0.04	40.00
Impervious (acres)	0.00	0.06	0.00	0.00	0.06	60.00
					0.10	100.00
<b>Site Rv</b>						
Site Rv	0.65					
Post Development Treatment Volume (ft3)	236					
Post Development TP Load (lb/yr)	0.15					
Post Development TN Load (lb/yr)	1.06					
Total TP Load Reduction Required (lb/yr)	0.11					
<b>Total Runoff Volume Reduction (ft3)</b>						
Total Runoff Volume Reduction (ft3)	189					
Total TP Load Reduction Achieved (lb/yr)	0					
Total TN Load Reduction Achieved (lb/yr)	1.06					
Adjusted Post Development TP Load (lb/yr)	0.03					
Remaining Phosphorus Load Reduction (lb/yr) Required	0.00					

Site Rv	0.65
Post Development Treatment Volume (ft3)	236
Post Development TP Load (lb/yr)	0.15
Post Development TN Load (lb/yr)	1.06
Total TP Load Reduction Required (lb/yr)	0.11
<b>Total Runoff Volume Reduction (ft3)</b>	
Total Runoff Volume Reduction (ft3)	189
Total TP Load Reduction Achieved (lb/yr)	0
Total TN Load Reduction Achieved (lb/yr)	1.06
Adjusted Post Development TP Load (lb/yr)	0.03
Remaining Phosphorus Load Reduction (lb/yr) Required	0.00

<b>Drainage Area Summary</b>						
	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Turf (acres)	0.04	0.00	0.00	0.00	0.00	0.04
Impervious (acres)	0.06	0.00	0.00	0.00	0.00	0.06
						0.10
<b>Drainage Area Compliance Summary</b>						
	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Red. (lb/yr)	0.12	0.00	0.00	0.00	0.00	0.12
TN Load Red. (lb/yr)	1.06	0.00	0.00	0.00	0.00	1.06
<b>Drainage Area A Summary</b>						
<b>Land Cover Summary</b>						
	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Turf (acres)	0.00	0.04	0.00	0.00	0.04	40.00
Impervious (acres)	0.00	0.06	0.00	0.00	0.06	60.00

<b>Channel and Flood Protection</b>				
	Weighted CN	1-year storm Adjusted CN	2-year storm Adjusted CN	10-year storm Adjusted CN
Target Rainfall Event (in)		2.70	3.20	5.20
D.A. A CN	83	73	75	77
D.A. B CN	0	#N/A	#N/A	#N/A
D.A. C CN	0	#N/A	#N/A	#N/A
D.A. D CN	0	#N/A	#N/A	#N/A
D.A. E CN	0	#N/A	#N/A	#N/A

<b>BMP Selections</b>		
Practice	Credit Area (acres)	Downstream Practice
4.a. Grass Channel A/B Soils (Spec #3)	Impervious: 0.06	9.a. Sheetflow to Conservation Area with A/B Soils
	Turf (Pervious): 0.04	9.a. Sheetflow to Conservation Area with A/B Soils
9.a. Sheetflow to Conservation Area with A/B Soils (Spec #2)	Impervious: 0	
	Turf (Pervious): 0	
Total Impervious Cover Treated (acres)	0.06	
Total Turf Area Treated (acres)	0.04	
Total TP Load Reduction Achieved in D.A. A (lb/yr)	0.12	
Total TN Load Reduction Achieved in D.A. A (lb/yr)	1.06	

**5 SUMMARY**  
SCALE: NONE  
SWM-4

TOTAL RUNOFF REDUCTION IN D.A. A (cf)	189
NITROGEN REMOVAL FROM RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)	1.06

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TOTALLY COMMITTED.  
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FAX. (703) 620-8889

CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

REVISIONS				
REV	DATE	DESCRIPTION	BY	
4	05/18/15	REVISED LANDSCAPE PLAN	RNC	
3	05/07/15	REVISED	RNC	
2	03/24/15	SWM COMMENTS	RNC	
1	1/14/15	EVM PLAN	RNC	
0	12/15/14	FINAL	RNC	

PROFESSIONAL STAMP  
TRENT SNARR, P.E.  
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**WATER QUALITY CALCULATIONS**

**SWM-4**

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

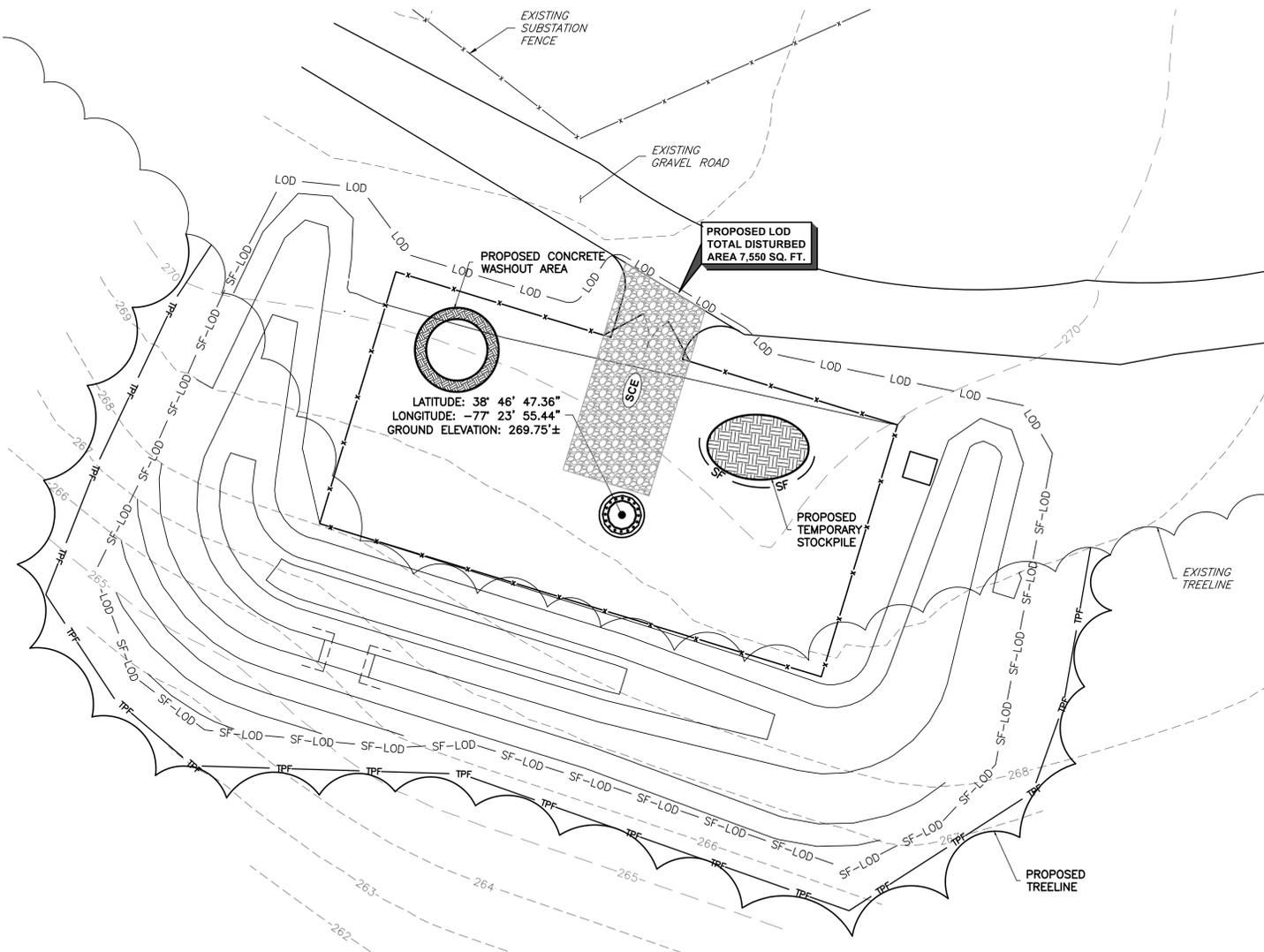
PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

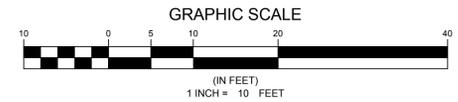
SHEET NUMBER

TRUE NORTH



LATITUDE: 38° 46' 47.36"  
LONGITUDE: -77° 23' 55.44"  
GROUND ELEVATION: 269.75'±

**1 EROSION & SEDIMENT CONTROL PLAN**  
ES-1  
SCALE: 1" = 10'-0"



LEGEND	
---	PROPERTY LINE - SUBJECT PARCEL
---	EXISTING CONTOUR LINE
SF	PROPOSED SILT FENCE
SSF	PROPOSED SUPER SILT FENCE
LOD	PROPOSED LIMITS OF DISTURBANCE
---	PROPOSED CONTOUR LINE
x-x	PROPOSED FENCE
---	PROPOSED EASEMENT
SF-LOD	PROPOSED LIMITS OF DISTURBANCE AND SILT FENCE
TPF	PROPOSED TREE PROTECTION FENCE
IP	IRON PIPE
TP	TOP OF PIER
BP	BOTTOM OF PIER
TW	TOP OF WALL
BW	BOTTOM OF WALL

**GENERAL EROSION & SEDIMENT CONTROL PROCEDURES**

1. THE OPERATOR/RESPONSIBLE PERSON (O/RP) SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
2. THE EROSION AND SEDIMENT CONTROL PLAN IS TO BE USED FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY. IT SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION RELATED ITEMS.
3. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
4. UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.
5. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
6. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CONSERVATION DISTRICT.
7. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
8. DURING ANY STAGE OF THE REGULATED EARTH DISTURBANCE ACTIVITIES, IF THE MUNICIPALITY OR ITS DESIGNEE DETERMINES THAT ANY BMPS ARE NOT BEING IMPLEMENTED IN ACCORDANCE WITH THIS ORDINANCE, THE MUNICIPALITY MAY SUSPEND OR REVOKE ANY EXISTING PERMITS OR OTHER APPROVALS UNTIL THE DEFICIENCIES ARE CORRECTED.
9. WHEN REQUIRED, ADEQUATE PROVISIONS SHALL BE MADE FOR DUST CONTROL MEASURES AS ARE DEEMED ACCEPTABLE BY THE MUNICIPAL ENGINEER.
10. ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS. NO SEDIMENT OR SEDIMENT LADEN WATER IS ALLOWED TO LEAVE THE SITE WITHOUT FIRST BEING PROPERLY FILTERED.
11. DISTURBED AREAS ON WHICH EARTH MOVING ACTIVITIES HAVE CEASED AND WHICH WILL REMAIN EXPOSED SHALL BE STABILIZED IMMEDIATELY, EITHER TEMPORARILY OR PERMANENTLY, INCLUDING THE RESTORATION OF DRIVEWAYS, STOCKPILES, OFF-SITE UNDERGROUND UTILITY LINES AND GRADED PERIMETER AREAS. DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUBGRADES IS CONSIDERED ADEQUATE PROTECTION.
12. WHERE DISTURBED AREAS ARE DIFFICULT TO STABILIZE, NETTING SHOULD BE USED TO HOLD SEED AND MULCH IN PLACE; THIS IS ESPECIALLY IMPORTANT AROUND WATERCOURSES, IN SWALES AND AREAS OF CONCENTRATED FLOWS AND STEEP SLOPES.
13. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS, AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.
14. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED. ALL SPOILS ARE TO BE REMOVED OFF SITE IMMEDIATELY.



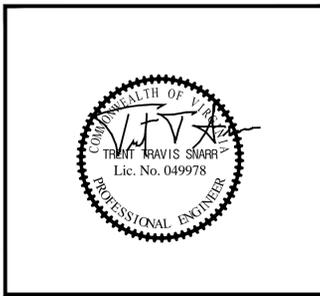
ENGINEER  
APPLICANT  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
ENGINEER  
SHEET TITLE  
SHEET NUMBER

**NB+C**  
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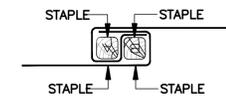
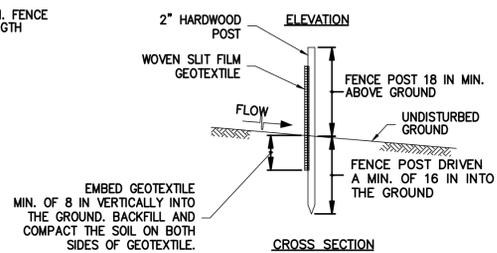
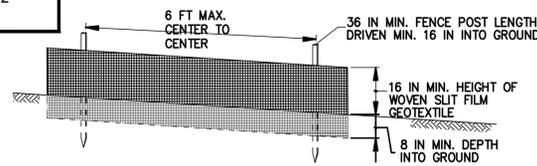
**EROSION & SEDIMENT CONTROL PLAN**

**ES-1**

**CONSTRUCTION SEQUENCE**

- AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE CONSERVATION DISTRICT TO AN ON-SITE MEETING. ALSO, AT LEAST 3 WORKING DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE VIRGINIA ONE CALL SYSTEM INCORPORATED AT 1-800-245-4848 FOR BURIED UTILITIES LOCATIONS.
- EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
1. MOBILIZATION
  2. INSTALL SILT FENCE AROUND COMPOUND AREA.
  3. COMMENCE CLEARING AND GRUBBING. SOIL STOCKPILE AREA AND ROUGH GRADE SITE.
  4. EXCAVATE AND POUR TOWER FOUNDATION. BACKFILL AND COMPACT FOUNDATION AREA.
  5. CONSTRUCT AND MAINTAIN TEMPORARY COVER TO STABILIZE DISTURBED AREAS.
  6. INSTALL UTILITIES.

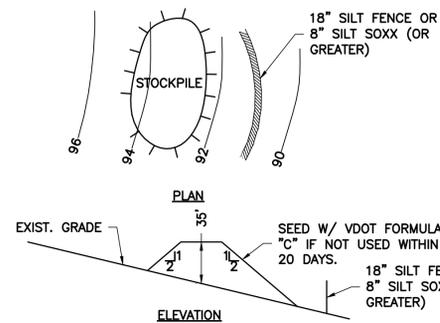
7. COLLECT SILT AND SEDIMENT AND PLACE BACK ON SITE
  8. ESTABLISH PERMANENT COVER
  9. REMOVE EROSION AND CONTROL MEASURES
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.



**CONSTRUCTION SPECIFICATIONS**

- USE WOOD POSTS 1 1/2 X 1 1/2 X 1/2 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

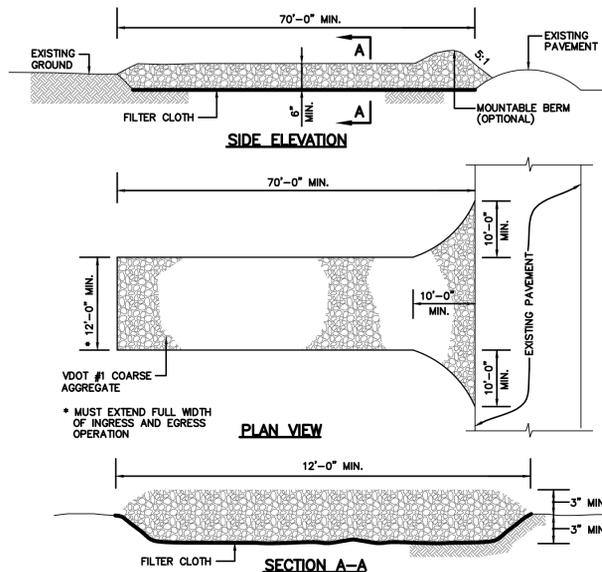
**1 STANDARD FILTER FABRIC FENCE**  
ES-2 NTS



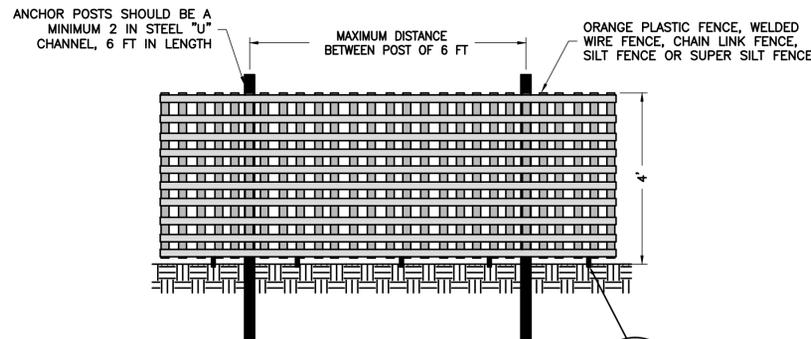
**NOTES:**

- INSTALL SILT FENCE DOWNSLOPE OF AREA OF STOCKPILE.
- PLACE STOCKPILE IN AREAS SHOWN ON EROSION CONTROL PLAN WITHOUT BLOCKING NATURAL DRAINAGE PATTERNS.
- FOLLOW DIMENSIONS SHOWN ABOVE. HEIGHT SHOULD NOT EXCEED 35 FT. SIDE SLOPES SHOULD NOT BE STEEPER THAN 2(H):1(V).
- SEED IMMEDIATELY IF MATERIAL IS NOT TO BE USED WITHIN 20 DAYS. FOLLOW "SEEDING, FERTILIZATION SCHEDULE & SPECIFICATIONS."
- LOCATION(S) AND SIZE(S) OF SOIL STOCKPILES ARE APPROXIMATE AND SHALL BE ADJUSTED PER FIELD AND CONSTRUCTION SEQUENCE CONDITIONS. CONTRACTOR SHALL VERIFY REQUIRED SIZE(S). REQUIREMENTS FROM THE STANDARDS DETAIL MUST BE FOLLOWED FOR STOCKPILES.

**4 TOPSOIL STOCKPILE AND MAINTENANCE**  
ES-2 NTS



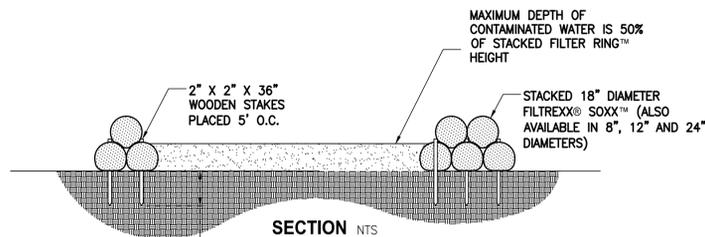
**2 ROCK CONSTRUCTION ENTRANCE**  
ES-2 NTS



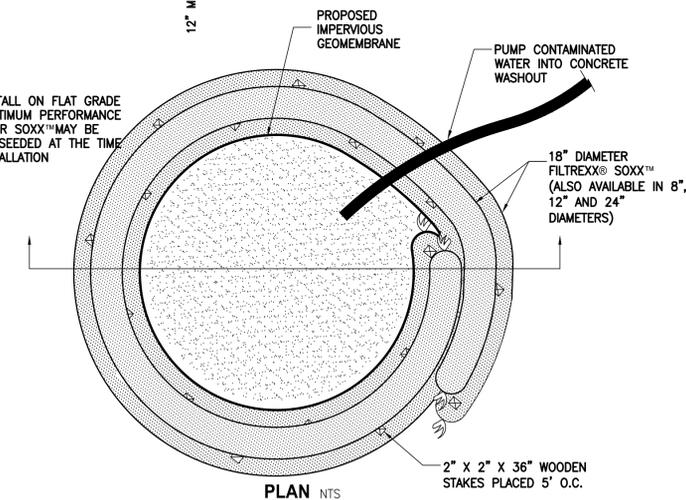
**5 TREE PROTECTION FENCE INSTALLATION**  
ES-2 NTS

**PRUNING AND DISPOSAL:**

- ALL PRUNING SHALL FOLLOW NATIONAL ARBORIST ASSOCIATION CLASS II PRUNING STANDARDS FOR SHADE TREES, AND OVERVIEW OF WHICH INCLUDES THE FOLLOWING:
  - TO REMOVE ALL DEAD, DYING, DISEASED, INTERFERING, OBJECTIONABLE, AND WEAK BRANCHES.
  - TO REMOVE ALL INTERIOR INTERFERING BRANCHES, AND ONE OF ALL CROSSED OR RUBBING BRANCHES WHERE PRACTICABLE SO THE REMOVAL THEREFORE WILL NOT HAVE LARGE HOLE IN THE GENERAL FORM OF THE TREE.
  - TO REMOVE ONE BRANCH OF ALL STRUCTURALLY WEAK "V" CROTCHES OCCURRING ALONG THE MAIN TRUNK OR DEVELOPING WITHIN THE TREE CROWN, PARTICULARLY IN SMALLER TREES. SPECIAL ATTENTION SHALL BE GIVEN TO THE EFFECT REMOVAL OF SUCH BRANCHES WILL HAVE ON THE ULTIMATE FORM OF THE TREE.
  - TO REMOVE TRUNK SUCKERS AND WATER SPROUTS ESPECIALLY WHERE THEY ARE PRESENT ABOVE THE UPPER HALF (1/2) OF THE TREE.
  - TO IMPROVE THE APPEARANCE OF THE TREES TRIMMED.
- ATTENTION IS TO BE GIVEN TO THE EVENTUAL SYMMETRICAL APPEARANCE OF THE TREES. APPROPRIATE PRUNING SHALL BE DONE IN ORDER TO MAINTAIN A TREE-LIKE FORM TYPICAL OF THE SPECIES OF THE TREE BEING TRIMMED.
- ALL FINAL CUTS SHALL BE MADE SUFFICIENTLY CLOSE TO THE TRUNK OR PARENT LIMB, WITHOUT CUTTING INTO THE BRANCH COLLAR OR LEAVING A PROTRUDING STUB, SO THAT CLOSURE CAN READILY BEGIN UNDER NORMAL CONDITIONS. EXCESSIVELY DEEP FLUSH CUTS WHICH PRODUCE LARGE WOUNDS OR WEAKEN THE TREE AT THE CUT SHALL NOT BE MADE. SHARP PRUNING TOOLS AND SAWS SHALL BE KEPT SHARPENED TO RESULT IN FINAL CUTS WITH SMOOTH WOOD SURFACE AND SECURE BARK REMAINING INTACT. ALL TREES SIX INCHES OR LESS IN DIAMETER SHALL BE PRUNED WITH HAND AND/OR HYDRAULIC PRUNING TOLL ONLY.
- IT IS NECESSARY TO PRECUT BRANCHES THAT ARE TOO HEAVY TO HANDLE TO PREVENT SPLITTING OR PEELING THE BARK. WHERE NECESSARY, TO PREVENT TREE OR PROPERLY DAMAGE, BRANCHES SHALL BE LOWERED TO THE GROUND BY PROPER ROPES OR EQUIPMENT.
- ON TREES KNOWN TO BE DISEASED, TOOLS ARE TO BE DISINFECTED WITH METHYL ALCOHOL AT 70% (DENATURED WOOD ALCOHOL DILUTED APPROPRIATELY WITH WATER) OR BLEACH SOLUTION AFTER EACH CUT AND BETWEEN TREES WHERE THERE IS KNOWN TO BE A DANGER OF TRANSMITTING THE DISEASE ON TOOLS.
- EQUIPMENT THAT WILL DAMAGE THE BARK AND CAMBIUM LAYER SHOULD NOT BE USED ON OR IN THE TREE. FOR EXAMPLE, THE USE OF CLIMBING SPURS IS NOT AN ACCEPTABLE WORK PRACTICE FOR TREE PRUNING OPERATIONS ON LIVE TREES.



- NOTES:**
- INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
  - FILTER SOXX™ MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION



**3 FILTERREXX CONCRETE WASHOUT DETAIL**  
ES-2 NTS

**SEEDING/ STABILIZATION SPECIFICATIONS**

- TEMPORARY STABILIZATION SPECIFICATIONS**
  - THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, MATERIAL (EXCEPT AS HEREIN PROVIDED), TOOLS EQUIPMENT, SUPPLIES, AND SERVICES; AND, SHALL PERFORM ALL WORK NECESSARY FOR PROVIDING AND APPLYING FERTILIZER, LIME, SEED AND MULCH IN THE QUANTITIES SPECIFIED FOR AREAS DESIGNATED ON THE DRAWING OR SELECTED BY THE OWNER.
  - SEEDING OPERATIONS SHALL NOT BE PERFORMED WHEN THE GROUND IS FROZEN OR WHEN SOIL OR WEATHER CONDITIONS WOULD PREVENT PROPER SOIL PREPARATION AND SUBSEQUENT OPERATIONS. WHEN HYDROSEEDING IS PERFORMED, NOZZLES OR SPRAYS SHALL NOT BE DIRECTED TOWARD THE GROUND IN A MANNER THAT WILL CAUSE EROSION OR RUNOFF. THE CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST 48 HOURS PRIOR TO BEGINNING SEEDING OPERATIONS.
  - LIME SHALL BE UNIFORMLY APPLIED TO AREAS TO BE SEEDED AT THE RATE OF 2 TONS PER ACRE (UNLESS SPECIFIED OTHERWISE BY SOIL TESTS). ANY APPROVED METHOD MAY BE USED.
  - AFTER LIME HAS BEEN APPLIED, AREAS TO BE SEEDED SHALL BE PREPARED AS FOLLOWS: SLOPES 3:1 OR FLATTER SHALL BE LOOSENEED TO A DEPTH OF APPROXIMATELY 3" BY DISKING, HARROWING, OR OTHER APPROVED METHODS. LOOSENING OF SOIL ON EXCAVATED SLOPES STEEPER THAN 3:1 WILL NOT BE REQUIRED EXCEPT TO ELIMINATE HARD OR CRUSTED SURFACES, SHOULDERS AND EMBANKMENT SLOPES STEEPER THAN 3:1 SHALL BE LOOSENEED TO A DEPTH OF APPROXIMATELY 1". CLODS, LOOSE STONES, AND OTHER FOREIGN MATERIAL LARGER THAN 1" IN ANY DIMENSION SHALL BE REMOVED AND PROPERLY DISPOSED OF AS APPROVED BY THE OWNER. GULLIES, WASHES, AND DISTURBED AREAS THAT DEVELOP SUBSEQUENT TO FINAL STABILIZATION SHALL BE REPAIRED BEFORE THEY ARE SEEDED.
  - WHEN DRY FERTILIZER IS USED, IT SHALL BE APPLIED UNIFORMLY TO THE SEEDING AREAS AT THE TIME OF SEEDING AT THE RATE OF 600 POUNDS OF 15-30-15 FERTILIZER, OR AN EQUIVALENT 1-2-1 FERTILIZER, PER ACRE (UNLESS SPECIFIED OTHERWISE BY SOIL TESTS). THE METHOD OF APPLICATION SHALL BE APPROVED BY THE OWNER BEFORE FERTILIZER IS APPLIED.
  - WHEN A LIQUID FORM OR MIXED WITH WATER, FERTILIZER SHALL PROVIDE THE SAME VALUE OF NUTRIENTS PER ACRE AS SPECIFIED FOR DRY FERTILIZER. FERTILIZER APPLIED IN LIQUID FORM SHALL BE AGITATED DURING APPLICATION.
  - SEED SHALL BE UNIFORMLY APPLIED ON PREPARED AREAS WITH FERTILIZER AND MULCH AND SHALL CONFORM TO THE FOLLOWING:
    - FOR HYDROSEEDING, SEED SHALL BE PUT IN THE MIXTURE SLOWLY TO RESULT IN A UNIFORM MIXTURE BEFORE APPLICATION. HYDROSEEDING MIXTURES SHALL BE CONSTANTLY AGITATED FROM THE TIME OF MIXING UNTIL APPLICATION ON THE SEED BED AND USED WITHIN 8 HOURS FROM THE BEGINNING OF MIXING.
    - OVERSEEDING SHALL CONSIST OF APPLYING SEED AND FERTILIZER ON AREAS PREPARED AS DIRECTED BY THE OWNER.
  - MULCH SHALL BE APPLIED WITHIN 48 HOURS AFTER COMPLETION OF THE SEEDING OPERATION. WHEN STRAW MULCH IS USED, IT SHALL BE APPLIED ON SEEDED AREAS AT THE RATE OF APPROXIMATELY 2 TONS PER ACRE. WHEN WOOD CELLULOSE FIBER MULCH IS USED, IT SHALL BE UNIFORMLY APPLIED AT THE RATE OF APPROXIMATELY 1,500 POUNDS (NET DRY WEIGHT) PER ACRE. MULCH WILL NOT BE REQUIRED ON OVERSEEDED AREAS.
  - STRAW MULCH SHALL BE APPLIED TO A UNIFORM THICKNESS IN SUCH A MANNER THAT NOT MORE THAN 10% OF THE SOIL SURFACE WILL BE EXPOSED. WET STRAW SHALL NOT BE USED. STRAW MULCH SHALL BE ANCHORED TO THE SEEDED SURFACE BY SPRAYING WITH WOOD CELLULOSE FIBER MULCH AT THE RATE OF 750 POUNDS PER ACRE; SPRAYING WITH AN EMULSIFIED ASPHALT AT THE RATE OF AT LEAST 100 GALLONS PER TON OF MULCH IN A MANNER THAT WILL PROTECT ADJACENT PROPERTY AND PEDESTRIAN TRAFFIC AREAS; DISKING OR PUNCHING THE MULCH PARTIALLY INTO THE SOIL; USING APPROVED NETTING; OR, USING OTHER MATERIALS OR METHODS APPROVED BY THE OWNER. THE CONTRACTOR MAY USE MORE THAN ONE METHOD ON THE SAME PROJECT.
  - AREAS NOT SHOWING SIGNS OF GRASS GROWTH SHALL IMMEDIATELY BE RESEED. PROTECTION SHALL BE PROVIDED AGAINST TRAFFIC OR OTHER USE BY ERECTING BARRICADES IMMEDIATELY AFTER TREATMENT IS COMPLETED, AND BY PLACING WARNING SIGNS, AS DIRECTED. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROPER CARE OF SEEDED AREAS WHILE GRASS IS BECOMING ESTABLISHED FOR 3 MONTHS AFTER COMPLETION OF TREATMENT ON THE ENTIRE PROJECT, UNLESS DESIRED COVER IS ESTABLISHED IN A SHORTER PERIOD OF TIME. WHEN ANY PORTION OF THE SURFACE BECOMES GULLIED OR OTHERWISE DAMAGED OR TREATMENT IS DESTROYED, THE AFFECTED PORTION SHALL BE REPAIRED TO RE-ESTABLISH CONDITION AND GRADE OF SOIL AND TREATMENT PRIOR TO INJURY, AS DIRECTED. REPAIR WORK REQUIRED BECAUSE OF FAULTY OPERATIONS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR SHALL BE PERFORMED WITHOUT ADDITIONAL COST.
  - MULCHED AREAS SHALL BE MAINTAINED UNTIL ALL WORK OR DESIGNATED PORTIONS THEREOF HAVE BEEN COMPLETED AND ACCEPTED. ANY DAMAGE SHALL BE REPAIRED, AND MULCH MATERIAL THAT HAS BEEN REMOVED BY WIND OR OTHER CAUSES SHALL BE REPLACED AND SECURED.
- PERMANENT STABILIZATION SPECIFICATIONS**
  - APPLY TOPSOIL TO A DEPTH OF 5 INCHES (UNSETTLED)
  - APPLY GROUND Limestone AT A RATE OF 184 LBS. PER 1000 SQ.FT. AND WORK FOUR INCHES INTO SOIL.
  - APPLY FERTILIZER (10-20-10) AT A RATE 11 LBS. PER 1000 SQ.FT.
  - APPLY HARD FESCUE SEED AT 20 LBS. PER 1 ACRE, AND CREEPING RED FESCUE SEED AT 20 LBS. PER 1 ACRE, AND PERENNIAL RYEGRASS SEED AT 20 LBS. PER ACRE.
  - MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 138 LBS. PER 1000 SQ.FT.
  - APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER



NB+C ENGINEERING SERVICES, LLC.  
6095 MARSHLEE DRIVE, SUITE 300  
ELK RIDGE, MD 21075  
(410) 712-7062



12110 SUNSET HILLS ROAD, SUITE 100  
RESTON, VA 20190  
TEL. (703) 620-2555  
FAX. (703) 620-8889

CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
4	05/18/15	REVISED LANDSCAPE PLAN	RNC
3	05/07/15	REVISED	RNC
2	03/24/15	SWM COMMENTS	RNC
1	1/14/15	EVM PLAN	RNC
0	12/15/14	FINAL	RNC



TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #049978

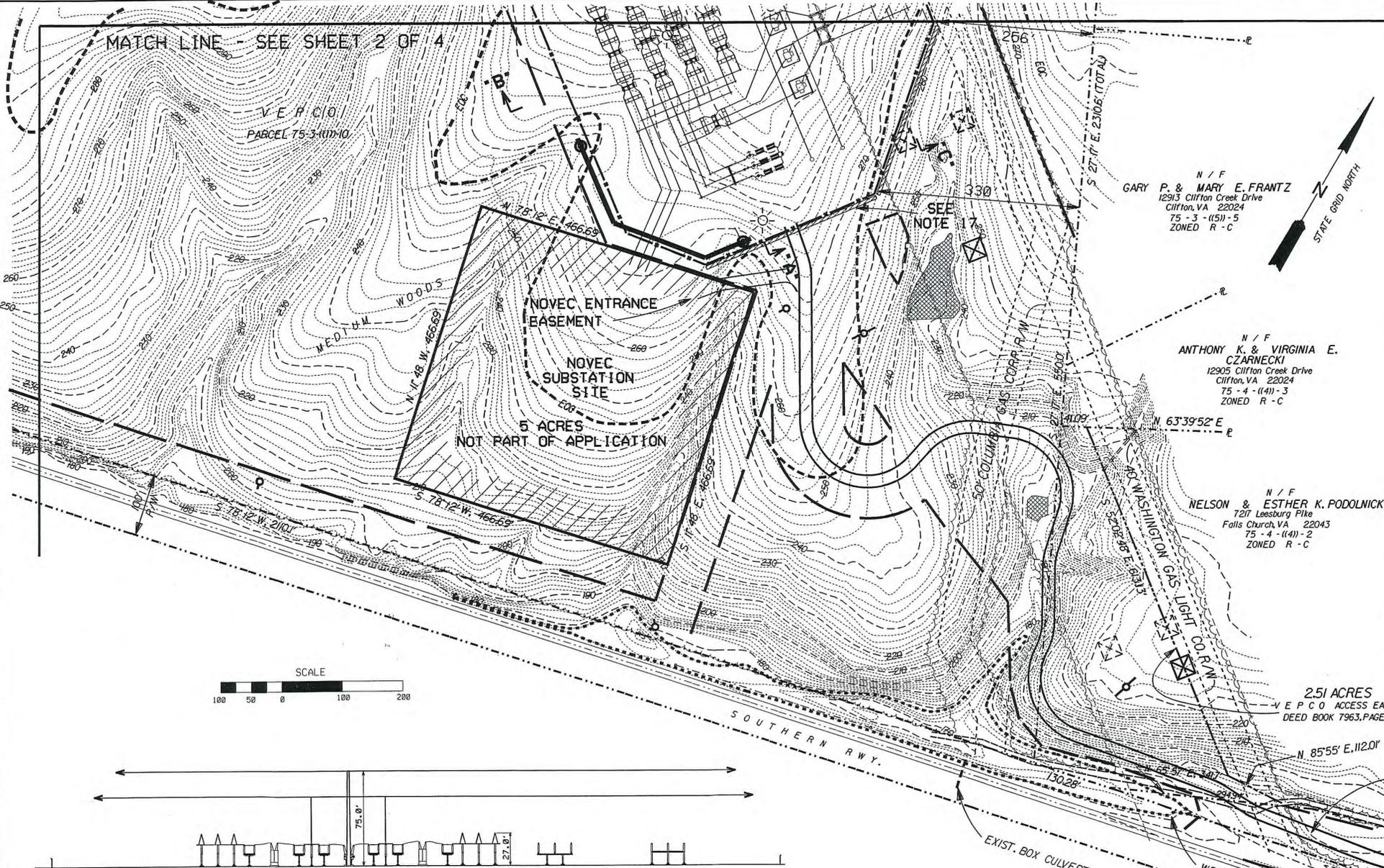
**EROSION & SEDIMENTATION CONTROL DETAILS**

**ES-2**



**GENERAL NOTES**

1. THE PROPERTY THAT IS THE SUBJECT OF THIS APPLICATION IS IDENTIFIED AS THE FAIRFAX COUNTY TAX MAP PARCEL NUMBER 75-3 ((1)) 10 PART AND 75-4 ((4)) 2 PART.
2. STORMWATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICES (BMP) FACILITIES WILL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, AS GENERALLY INDICATED HEREON, SUBJECT TO FINAL ENGINEERING AND AS DETERMINED BY DEM.
3. MINOR MODIFICATIONS IN THE LOCATION OF THE ACCESS ROAD AND FACILITIES DEPICTED ON THE SE PLAT MAY OCCUR BASED UPON FINAL ENGINEERING. THE LIMITS OF CLEARING AND GRADING SHOWN ARE SUBJECT TO CHANGE AT THE TIME OF FINAL ENGINEERING. HOWEVER, IF IT IS DETERMINED THAT ANY PORTION OF THE LIMITS SHOWN HEREON CANNOT BE PRESERVED, THEN AN AREA OF COMMENSURATE SIZE MAY BE SUBSTITUTED ON THE SITE OR IF NECESSARY ADDITIONAL LANDSCAPING SHALL BE PROVIDED, SUBJECT TO APPROVAL BY THE COUNTY URBAN FORESTER.
4. THERE ARE NO PERMANENT PERSONNEL OR VEHICLES ASSIGNED TO THIS FACILITY. WATER AND SANITARY FACILITIES ARE NOT REQUIRED.
5. ACCESS TO THE SITE WILL BE OFF OLD CLIFTON ROAD (ROUTE 5591) VIA CLIFTON CREEK DRIVE WHICH CONNECTS WITH CLIFTON ROAD (ROUTE 645) IN THE TOWN OF CLIFTON. THE ENTRANCE DEPICTED HEREON IS SUBJECT TO CHANGE AT THE TIME OF FINAL DESIGN AS DETERMINED BY VDOT.
6. THE FAIRFAX COUNTY COMPREHENSIVE PLAN DOES NOT INDICATE TRAIL DEVELOPMENT NOR ROAD IMPROVEMENTS ASSOCIATED WITH THIS SITE.
7. EASEMENTS WILL BE REQUIRED ON COLUMBIA AND WASHINGTON GAS LINES, AND SOUTHERN RAILWAY.
8. THE 2.51 ACRES IN THE TRIANGULAR PARCEL (WHICH IS PART OF MAP NUMBER 75-4 ((4)) 2 PART) HAS BEEN ACQUIRED BY EASEMENT DATED SEPTEMBER 3, 1991.
9. A SECURITY GATE SUPPLEMENTED WITH 6 X 6 TREATED WOODEN TIMBERS PLACED ON 10 FT. CENTERS WILL BE PLACED AT ENTRANCE. TIMBERS WILL BE JOINED TOGETHER WITH HEAVY DUTY CABLE.
10. FOR LANDSCAPE DETAILS AND NOTES REFERENCE SHEET 3 OF 4 (DWG. NO. 2-545-23) AND SHEET 4 OF 4 (DWG. NO. 2-545-24).
11. TOPO INFORMATION TAKEN FROM FIELD SURVEYS BY STONE AND WEBSTER DATED 5/73 AND 4/90.
12. 100 YEAR FLOOD PLAIN INFORMATION TAKEN FROM ANALYSIS PERFORMED BY GREENHORNE & O'MARA.
13. FILL FOR ROAD IN FLOOD PLAIN AREA WILL BE LESS THAN 278 CUBIC YARDS.
14. A WAIVER OF THE MINIMUM PAVEMENT RADIUS REQUIRED IN A CUL-DE-SAC IS REQUESTED AS REQUIRED BY VDOT.
15. YARD AND BULK PLANE RESTRICTIONS ARE NOT APPLICABLE PER SEC. 3-C07 (1) (B) AND SEC. 9-104(1).
16. THIS SITE HAS NO KNOWN GRAVES, OBJECTS, OR STRUCTURES MARKING A PLACE OF BURIAL.
17. HATCHED AREA DENOTES SLATS IN SOUTHEASTERN FENCE AS REQUIRED BY SPECIAL EXCEPTION 91-S-031.



ELEVATION "A-A"

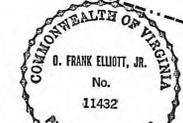
ELEVATION "B-B"

ELEVATION "C-C"

NOTE: ELEVATIONS INTENDED TO SHOW GENERAL ARRANGEMENT OF EQUIPMENT AND DO NOT SHOW ACTUAL GRADE OF STATION.

**LEGEND**

	EXISTING TREE LINE
	PROPOSED CLEARING LINE
	WETLANDS PERIMETER
	100 YEAR FLOOD PLAIN
	PROPOSED FENCE LINE
	ENVIRONMENTAL QUALITY CORRIDOR
	PROPERTY LINE
	EXIST. CONTOUR LINE (2' INTERVALS)
	EXISTING TOWER (TO BE REMOVED)
	PROPOSED 500KV TOWER LOCATION - (200' MAXIMUM HEIGHT)
	PROPOSED 230KV TOWER LOCATION - (200' MAXIMUM HEIGHT)
	PROPOSED LOW SPLASH LIGHTING - 30' MAXIMUM HEIGHT
	PROPOSED BMP FACILITY (WITH OUTFALL LOCATION)
	POSSIBLE STORMWATER MANAGEMENT/BEST MANAGEMENT PRACTICE ZONE AREAS



**SITE TABULATION**

USE - LIGHT UTILITY  
 PROP. ENCLOSURE GROSS FLOOR AREA - 1400 SQ.FT.  
 PERMITTED FLOOR AREA RATIO - 0.10  
 PROP. FLOOR AREA RATIO FOR ENCLOSURE - 0.0007  
 PROP. BUILDING HEIGHT - 12'-6"  
 TOTAL PARKING SPACES REQUIRED - 0  
 TOTAL PARKING SPACES PROVIDED - 0  
 OPEN SPACE REQUIRED - 0  
 TOTAL AREA IN APPLICATION - 92.91 ACRES

ZONED RC  
 PARCEL 75-3 ((1)) 10 - 95.40 ACRES  
 CONST. EASEMENT, PARCEL 75-4 ((4)) 2 - 2.51 ACRES  
 NOVEC SUBSTATION - 5.00 ACRES

SE 91-S-031

**VIRGINIA POWER  
 NORTH CAROLINA POWER**  
 ENGINEERING AND CONSTRUCTION

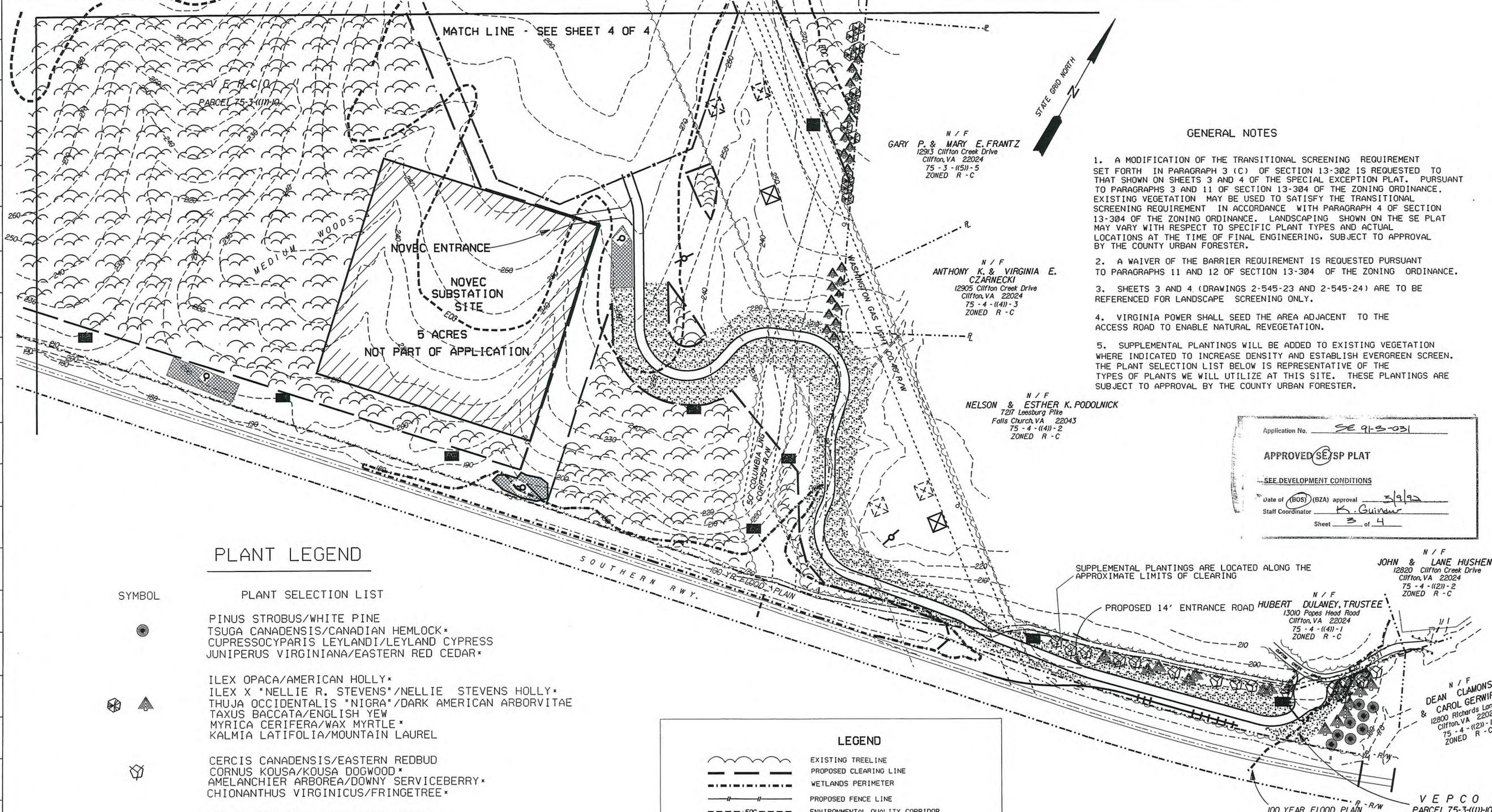
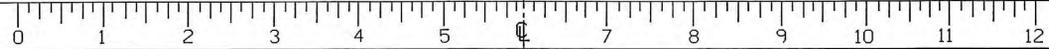
**SPECIAL EXCEPTION PLAT  
 CLIFTON SUBSTATION  
 CLIFTON, VIRGINIA**

DRAWN	NAME	DATE	PROJECT NO.	SHEET NO.
CHECKED	PHW	4-25-91	99-1492	1 OF 4
INSPECTED			SCALE	
CORRECT			AS SHOWN	
APPROVED	OFE, JR.	4-29-91	1 2 3 4 5 6 7 8 9	REVISIONS
WORK ORDER				DRAWING NO.
				2-545-21

SPECIAL EXCEPTION PLAT REVISION	
NOTES AND REVISIONS REQUIRED FOR ENTRANCE ROAD.	
LANDSCAPE NOTE AND TOTAL AREA NOTE REVISED	
DESCRIPTION	
WORK ORDER	B/M
P.N.	

DRAWING REFERENCE	TITLE	NUMBER





**GENERAL NOTES**

1. A MODIFICATION OF THE TRANSITIONAL SCREENING REQUIREMENT SET FORTH IN PARAGRAPH 3 (C) OF SECTION 13-302 IS REQUESTED TO THAT SHOWN ON SHEETS 3 AND 4 OF THE SPECIAL EXCEPTION PLAT. PURSUANT TO PARAGRAPHS 3 AND 11 OF SECTION 13-304 OF THE ZONING ORDINANCE. EXISTING VEGETATION MAY BE USED TO SATISFY THE TRANSITIONAL SCREENING REQUIREMENT IN ACCORDANCE WITH PARAGRAPH 4 OF SECTION 13-304 OF THE ZONING ORDINANCE. LANDSCAPING SHOWN ON THE SE PLAT MAY VARY WITH RESPECT TO SPECIFIC PLANT TYPES AND ACTUAL LOCATIONS AT THE TIME OF FINAL ENGINEERING, SUBJECT TO APPROVAL BY THE COUNTY URBAN FORESTER.
2. A WAIVER OF THE BARRIER REQUIREMENT IS REQUESTED PURSUANT TO PARAGRAPHS 11 AND 12 OF SECTION 13-304 OF THE ZONING ORDINANCE.
3. SHEETS 3 AND 4 (DRAWINGS 2-545-23 AND 2-545-24) ARE TO BE REFERENCED FOR LANDSCAPE SCREENING ONLY.
4. VIRGINIA POWER SHALL SEED THE AREA ADJACENT TO THE ACCESS ROAD TO ENABLE NATURAL REVEGETATION.
5. SUPPLEMENTAL PLANTINGS WILL BE ADDED TO EXISTING VEGETATION WHERE INDICATED TO INCREASE DENSITY AND ESTABLISH EVERGREEN SCREEN. THE PLANT SELECTION LIST BELOW IS REPRESENTATIVE OF THE TYPES OF PLANTS WE WILL UTILIZE AT THIS SITE. THESE PLANTINGS ARE SUBJECT TO APPROVAL BY THE COUNTY URBAN FORESTER.

Application No. SE 91-S-031

APPROVED (S) SP PLAT

SEE DEVELOPMENT CONDITIONS

Date of (BOS) (BZA) approval 3/9/92

Staff Coordinator K. Guindar

Sheet 3 of 4

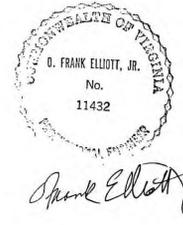
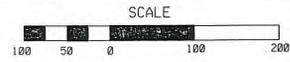
**PLANT LEGEND**

SYMBOL	PLANT SELECTION LIST
	PINUS STROBUS/WHITE PINE TSUGA CANADENSIS/CANADIAN HEMLOCK* CUPRESSOCYPARIS LEYLANDI/LEYLAND CYPRESS JUNIPERUS VIRGINIANA/EASTERN RED CEDAR*
	ILEX OPACA/AMERICAN HOLLY* ILEX X "NELLIE R. STEVENS"/NELLIE STEVENS HOLLY* THUJA OCCIDENTALIS "NIGRA"/DARK AMERICAN ARBORVITAE TAXUS BACCATA/ENGLISH YEW MYRICA CERIFERA/WAX MYRTLE* KALMIA LATIFOLIA/MOUNTAIN LAUREL
	CERCIS CANADENSIS/EASTERN REDBUD CORNUS KOUSA/KOUSA DOGWOOD* AMELANCHIER ARBOREA/DOWNY SERVICEBERRY* CHIONANTHUS VIRGINICUS/FRINGETREE*
	ABELIA GRANDIFOLIA/GLOSSY ABELIA ELAEAGNUS PUNGENS/THORNY ELAEAGNUS* VIBURNUM TRILOBUM/AMERICAN CRANBERRY BUSH VIBURNUM* WEIGELA "VANICEKII"/RED WEIGELA ELAEAGNUS ANGUSTIFOLIA/RUSSIAN OLIVE* CORNUS SERICEA/REDTWIG DOGWOOD*

\* PLANTS NOTED FOR THEIR WILDLIFE ENHANCEMENT CHARACTERISTICS.

**LEGEND**

- EXISTING TREELINE
- PROPOSED CLEARING LINE
- WETLANDS PERIMETER
- PROPOSED FENCE LINE
- ENVIRONMENTAL QUALITY CORRIDOR
- PROPERTY LINE
- EXIST. CONTOUR LINE (2' INTERVALS)
- EXISTING TRANS. LINE TOWER
- PRELIMINARY 500KV TOWER LOCATION
- PRELIMINARY 230KV TOWER LOCATION
- SEEDED AREA ADJACENT TO ACCESS ROAD
- EXISTING VEGETATION TO REMAIN
- PROPOSED BLUEBIRD BOXES
- PROPOSED GAME FOOD PLOTS



SE 91-S-031

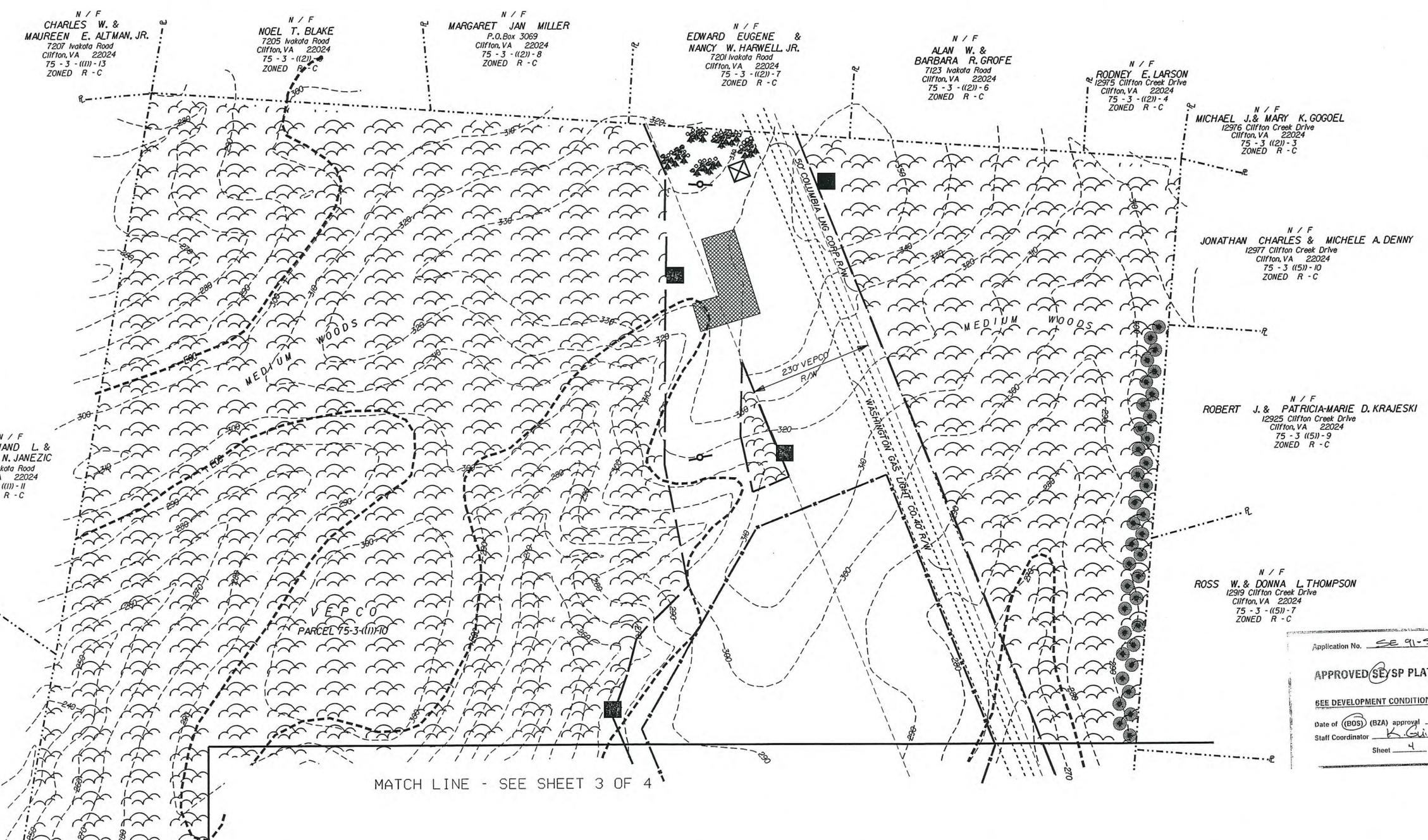
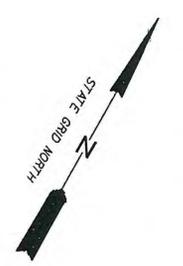
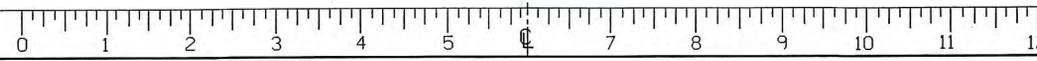
VIRGINIA POWER  
NORTH CAROLINA POWER  
ENGINEERING AND CONSTRUCTION

**SPECIAL EXCEPTION PLAT  
LANDSCAPE PLAN  
CLIFTON SUBSTATION  
CLIFTON, VIRGINIA**

NAME	DATE	PROJECT NO.	SHEET NO.
KNM	11-19-91	99-1492	3 OF 4
INSPECTED		SCALE	
CORRECT		AS SHOWN	
APPROVED	02/21/92	REVISIONS	
WORK ORDER	B/M NO.	DRAWING NO.	2-545-23

NO.	DATE	BY	DESCRIPTION
1	11-1-91	KNM	SPECIAL EXCEPTION PLAT REVISION
2	1-8-92	KNM	SPECIAL EXCEPTION PLAT REVISION
3	2-11-92	KNM	SPECIAL EXCEPTION PLAT REVISION
4	2-21-92	KNM	SPECIAL EXCEPTION PLAT REVISION

DRAWING REFERENCE	TITLE	NUMBER



Application No. SE 91-S-031

**APPROVED SE/SP PLAT**

SEE DEVELOPMENT CONDITIONS

Date of (BOS) (BZA) approval 3/9/92

Staff Coordinator K. Givens

Sheet 4 of 4



**SE 91-S-031**

**VIRGINIA POWER**  
**NORTH CAROLINA POWER**  
 ENGINEERING AND CONSTRUCTION

**SPECIAL EXCEPTION PLAT**  
**LANDSCAPE PLAN**  
**CLIFTON SUBSTATION**  
**CLIFTON, VIRGINIA**

NO.	DATE	NAME	DATE	PROJECT NO.	SHEET NO.
DRAWN		KNM	11-19-91	99-1492	4 OF 4
CHECKED				SCALE	
INSPECTED				AS SHOWN	
CORRECT				REVISIONS	
APPROVED				11231415	

WORK ORDER \_\_\_\_\_ B/H NO. \_\_\_\_\_ DRAWING NO. **2-545-24**



SHEETS 3 AND 4 (DRAWINGS 2-545-23 AND 2-545-24) ARE TO BE REFERENCED FOR LANDSCAPE SCREENING ONLY.

NO.	DATE	BY	DESCRIPTION
1	11-19-91	KNM	SPECIAL EXCEPTION PLAT REVISION
2	11-19-91	KNM	SPECIAL EXCEPTION PLAT REVISION
3	1-8-92	KNM	SPECIAL EXCEPTION PLAT REVISION
4	2-11-92	KNM	SPECIAL EXCEPTION PLAT REVISION
5	2-21-92	KNM	SPECIAL EXCEPTION PLAT REVISION

DRAWING REFERENCE	TITLE	NUMBER

Sheet of Total Sheets

## **DESCRIPTION OF THE APPLICATIONS**

The applicants, Milestone Tower Limited Partnership III, Cellco Partnership (Milestone Communications) d/b/a Verizon Wireless and Virginia Electric and Power Company d/b/a Dominion Virginia Power request an amendment of a special exception for an electric substation to permit the addition of a telecommunications facility and a modification in land area. The applicants also filed an application for a 2232 Public Facility Review Determination for review by the Planning Commission to determine whether the proposed telecommunications facility satisfies the criteria of location, character, and extent pursuant to Section 15-2.2232 of the Code of Virginia, as amended; and therefore, may be determined to be in substantial conformance with the Comprehensive Plan. The telecommunications facility consists of a 140-foot tall monopole and associated equipment for up to five carriers at heights of 140, 130, 120, 110, and 100 feet located in a 2,450-square foot leased area. Verizon Wireless will be the initial carrier at the facility and up to four additional carriers could collocate at the facility in the future.

The site currently is developed with an 8.1-acre unmanned fenced electric substation that consists of a series of electrical towers, power lines, transformers, circuits, and a control building. A 230-foot wide Virginia Electric and Power Company (VEPCO) easement also is located on the property and contains transmission towers and poles and overhead utility wires that run in an east-west direction across the property. Three of the transmission towers are used for collocation of telecommunication antennas with adjacent equipment cabinets. No changes are proposed to the substation or VEPCO easement.

The applicants also request a modification in land area from the 92.91-acre land area previously approved under SE 91-S-031 to reflect that the subject property now contains 95.11 acres.

## **MODIFICATION AND WAIVER**

The applicants request the following modification and waiver:

- Modification of Sect. 13-303 of the Zoning Ordinance for the transitional screening requirement in favor of the existing vegetation on the site, the landscape plantings shown on the Special Exception Amendment Plat, and the development conditions.
- Waiver of Sect. 13-304 of the Zoning Ordinance for the barrier requirement.

A reduction of the SEA Plat is provided at the front of this staff report. Staff's proposed development conditions, the applicant's statement of justification, and affidavit are provided as Appendices 1-3, respectively.

## LOCATION AND CHARACTER

The subject property is located north of the Norfolk Southern Railroad right-of-way corridor, south of Ivakota Road, and west of Clifton Creek Drive, as shown in Figure 1. All adjacent parcels are zoned Residential Conservation (R-C) and Water Supply Protection Overlay District (WS) and planned for low density residential uses at 0.1-0.2 dwelling units per acre. Properties to the north, east, and west of the subject property consist of five acres or more and are developed with single family detached dwellings with the exception of five lots adjacent to the northeast corner of the site, which contain approximately 1 to 1 ½-acres.

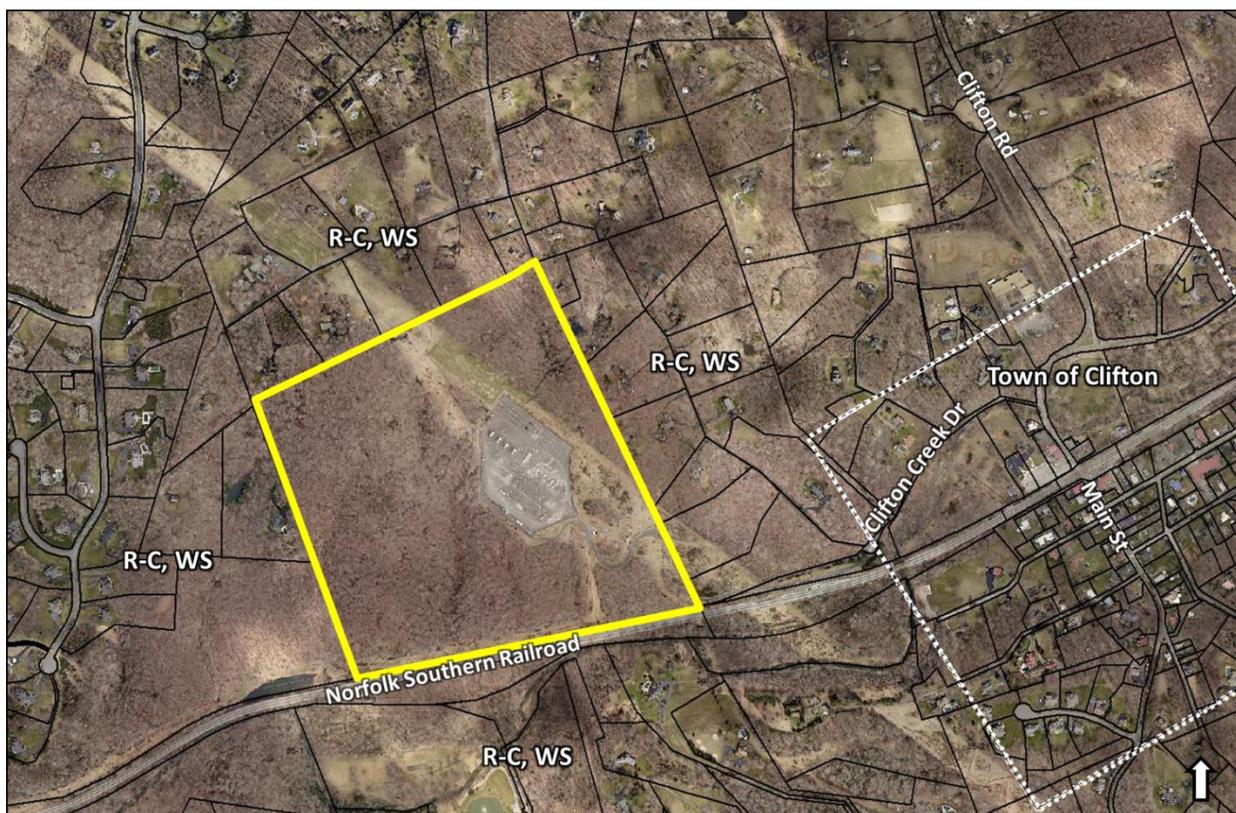


Figure 1: Subject property and surrounding area, Source: Fairfax County Aerial Photography, 2013

## BACKGROUND

On March 9, 1992, the Board of Supervisors approved Special Exception SE 91-S-031 and SE 91-S-046 to permit two electric substations on the subject property. Since the substation permitted under SE 91-S-046 was never established, the special exception approval has expired. The staff reports and development conditions are available in the Zoning Evaluation Division.

On March 29, 2001, the Planning Commission concurred with the staff determination for Feature Shown FS-S01-2 to permit nine panel antennas at a height of 120 feet on an

existing 115-foot high transmission tower on the subject property and a 240-square foot equipment shelter near the base of the tower with a landscape buffer.

On June 29, 2006, the Planning Commission concurred with the staff determination for FS-S06-22 to permit nine antennas at a height of 130 feet on an existing 130-foot high transmission tower on the subject property and a 120-square foot equipment shelter near the base of the tower with a chain link fence.

On June 10, 2009, the Planning Commission concurred with the staff determination for FS-S09-12 to permit six antennas and one microwave dish to be mounted at a maximum height of 117 feet on an existing 111-foot high transmission tower with two equipment cabinets near the base of the tower and an 8-foot high cedar fence.

Feature shown determinations are based on a public facility, public utility facility, or public service corporation facility use or area that is specifically identified on the Comprehensive Plan map or described in and supported by Comprehensive Plan text. The site specific Comprehensive Plan text describes and supports public utilities on the site. The feature shown determinations are available in the Planning Division in Suite 701 of the Herry Building, 12055 Government Center Parkway, Fairfax.

## COMPREHENSIVE PLAN

The Fairfax County Comprehensive Plan, 2013 Edition Area III, Pohick Planning District, amended through October 28, 2014, P3-Johnny Moore Community Planning Sector, page 48, provides the following recommendation for the property.

### *Public Facilities*

- 1. In order to meet the growing need for public utilities, transmission lines and two electrical substations will be required on Parcel 75-3((1))10 by Virginia Power and the Northern Virginia Electric Cooperative. The Fairfax County Zoning Ordinance requires that electric substation and distribution centers including transformer stations obtain special exception approval. Further, utility transmission facilities including but not limited to poles, structures, or other similar equipment for the transmission of electricity require special exception approval. Under the Zoning Ordinance, transmission lines approved by the State Corporation Commission (SCC) pursuant to Section 56.46.1 of the Code of Virginia, as amended, are not included as utility transmission facilities. Virginia Power and the Northern Virginia Electric Cooperative should participate in the Fairfax County public hearing process for any facilities to be constructed on this site.*

*There should be no transmission lines through the Town of Clifton. Special exception applications filed for the two electrical*





transitional screening width is required along the northern, eastern, and western property lines for the telecommunications facility. Tree canopy covers 86 percent (1.8 acres) of the northern property line; 74 percent (2.6 acres) along the eastern property line; and 98 percent (2 acres) along the western property line. No transitional screening is required adjacent to the southern property line, which is adjacent to the Norfolk Southern Railroad corridor. The applicants are requesting a modification of the transitional screening requirement and a waiver of the barrier requirement, which is discussed in the Modification and Waiver section of this report. Approximately 69 acres of the site contains upland forest vegetation that is in good condition, with 37 acres located in four conservation easements. A small portion of the site along the southwest boundary lies within the Chesapeake Bay Preservation area.

### **Stormwater Management**

Since the total area being disturbed is greater than 2,500 square feet, water quality management is required. The SEA Plat indicates that water quality management/best management practices will be met through a 7,405-square foot grass swale located around the equipment compound. The swale is intended to detain and treat the first inch of rainfall from a 24-hour storm event and released by a broad crest earthen weir (a structure used for stormwater discharge). The discharge from the grass swale will enter the existing woods and enter a natural conveyance system. Since the swale is able to detain the entire one-year storm event, there is no need to control the release rate, nor is channel protection needed. The peak release rates for the 2 and 10-year storms will be reduced to a level that is less than or equal to the existing peak flow rates for the same storm events through storage and detention with the grass swale. The natural drainage divide will be maintained and the release rates will be less than the existing and will not have an adverse downstream impact.

### **SE 91-S-031 Plat**

The Special Exception Plat for the electric substation is carried forward and included as part of the SEA Plat. There is no disturbance or changes proposed to the substation as part of this application.

## **ANALYSIS**

### **Land Use**

Since there is no proposed change to the existing electric substation or to the subject property other than the addition of the proposed telecommunications facility and a modification of land area, staff's analysis is focused on the proposed telecommunications facility.

The proposed telecommunications facility is a Category 1, Light Public Utility use, which is consistent with the site specific Comprehensive Plan recommendation for public utility

uses on the subject property. As previously discussed, the subject property is developed with an electric substation and contains an existing 230-foot wide VEPCO easement containing of transmission towers, poles, and overhead wires. Telecommunication antennas are collocated on three of the existing transmission towers. As indicated in the Background section of this report, these antennas were permitted through the Planning Commission's concurrence with staff's determination that the three telecommunication facilities (antennas and equipment cabinets) were determined to be a "feature shown" of the Comprehensive Plan pursuant to Section 15.2-2232 of the Code of Virginia, as amended.

In addition to the proposed telecommunications facility, the applicants are requesting a change in land area from the land area that was previously approved under SE 91-S-031, which currently governs the use of the site. SE 91-S-031 included the subject property with the exception of a five acre portion of the site located along the southern property line and included 2.8 acres of land that is now part of tax map parcels 75-4 ((4)) 2A and 2B. The five acre portion of the property was part of SE 91-S-046, a concurrent application to permit a second substation on the subject property. The second substation was never established and SE 91-S-046 has since expired. The applicants are proposing to add in the five acres from SE 91-S-046 and to delete the 2.8 acres for a total land area of 95.11 acres. Sect. 9-014, Amendment of a Special Exception, of the Zoning Ordinance permits a modification in land area when such modification does not: adversely affect the use of the property that is subject to the special exception but not incorporated into the amendment application; inhibit, adversely affect, or preclude in any manner the fulfillment of the special exception conditions that is applicable to the area not incorporated into the amendment application; and increase the overall approved density/intensity for the development. The proposed modification in land area satisfies these conditions.

#### **2232-S14-9 Review** (Appendix 4)

With this special exception amendment application, the applicants filed a concurrent application for a 2232 Public Facility Review Determination pursuant to Sect. 15.2-2232 of the Code of Virginia, as amended. Section 15.2-2232 of the Code of Virginia, as amended, requires the Planning Commission to determine whether the general or approximate location, character, and extent of the proposed telecommunications facility is substantially in accord with the adopted Comprehensive Plan. The proposed telecommunications facility was reviewed against the Mobile and Land-Based Telecommunication Services General Guidelines in the Public Facilities Element of the Policy Plan of the Comprehensive Plan, which provides objectives and policies (Objective 42, Policies a-q and Objective 43, Policies a-c) for telecommunication facilities and services. Staff's evaluation is provided below and a copy of the staff review memorandum for 2232-S14-9, the Mobile and Land-Based Telecommunication Services General Guidelines contained within the staff memorandum, and the 2232 application are provided as Appendix 4.

*Location:* The subject property is located off Clifton Creek Drive and setback approximately 2,000 feet from Clifton Creek Drive. The site contains 95.11 acres and is planned for public utilities and developed with an existing electric substation. There is a 230-foot wide VEPCO easement in the eastern portion of the site. The site contains existing mature tree cover that provides a natural buffer to the surrounding residential properties to the north and west of the site.

The proposed telecommunications facility is located approximately 40 feet south of the nearest point to the substation fence. The telecommunications facility is set back 1,450 feet from northern property line; 770 feet from the eastern property line; 545 feet from the southern property line, which is adjacent to the Norfolk Southern Railroad corridor; and 1,255 feet from the western property line, which is adjacent to an 83-acre vacant Park Authority property located along the southwest property line. The nearest residence is approximately 1,050 feet east of the proposed telecommunications facility.

While Objective 42, Policy a, states “[a]void the construction of new structures by locating proposed telecommunication facilities on available existing structures such as...electrical utility poles and towers,” Milestone Communications determined that collocation on existing transmission structures on the subject property is not feasible. According to Milestone Communications, while the existing transmission poles and towers are of sufficient height, the transmission poles and towers that are structurally capable of accommodating telecommunication antennas already are occupied by other telecommunication carriers and are not able to support Milestone Communications’ proposed antennas. It is staff’s understanding that the proposed antennas are 4G LTE antennas, which are heavier than the 3G antennas collocated on the existing transmission towers. Milestone Communications reviewed alternative locations and determined that the buildings in the immediate vicinity are not tall enough to collocate and the non-residential uses in the area (an elementary school, a place of worship, and commercial properties in the Town of Clifton), are not in a location to fulfill the applicant’s service area needs. Milestone Communications indicated that a new telecommunications structure on these non-residential properties would be more prominent and would have little context or compatibility with the existing uses compared with the subject property.

In accordance with Objective 12, Policy b and c, the subject location provides the best opportunity to conceal a new telecommunications structure based on the site’s expansive area, topography, existing tree cover, and existing pattern of 122-142-foot tall transmission towers, poles, and overhead wires that are comparable in height and material to the proposed monopole. In this setting, the 140-foot tall monopole blends into the surrounding area to reduce the visual impact of the tower and antennas. The proposed location is consistent with the Comprehensive Plan objective and policies to locate new facilities on properties that provide the greatest opportunity to conceal the facility and to minimize its visual impact on the surrounding area.

*Character:* The character of the 95.11-acre site predominately consists of heavily wooded open space. Approximately 70 acres is upland forest with 37 acres located in

four conservation easements. The site is developed with an 8.1-acre electric substation and contains a 230-foot wide VEPCO easement. The VEPCO easement contains two rows of large transmission structures in the form of lattice towers and steel tower poles that are between 122 and 142 feet in height, which is comparable in height to the proposed 140-foot tall monopole. Eight transmission poles and towers are located in the VEPCO easement and another five utility poles are used to connect the substation with the transmission line to distribute power off the property. Three of the transmission towers are used for collocation of telecommunication antennas. The character of the surrounding area consists of wooded low density, mainly large acre residential lots served by overhead electrical wires and poles.

In accordance with Objective 42, Policies g through i, the applicants are proposing to collocate up to five carriers on the proposed monopole. Such collocation ensures that the proposed 140-foot tall monopole is not greater in height than necessary to allow for collocation based on service area requirements while still mitigating the visual impact of the facility and remaining in character with the surrounding area, in accordance with Policies h and i. Milestone Communications indicated that the proposed 140-foot height is the minimum extent feasible to meet wireless coverage objective. The proposed height is consistent with surrounding transmission towers that are 142 feet in height.

Objective 42, Policies j and k recommend minimizing impacts on the character of the property and surrounding areas and to analyze potential impacts from vantage points in the area and Objective 43, Policies a through c recommend designing proposed telecommunication facilities to mitigate their visual presence and prominence, particularly when located in residential areas, by concealing their intended purpose in a way that is consistent with the character of the surrounding area.

To address Objective 42, Policies j and k and Objective 43, Policies a through c, Milestone Communications provided photographic (photo) simulations of the monopole without camouflage and camouflaged as a tree (tree pole) from different vantage points in the area to demonstrate the height, design, relationship, and visual impact with other structures and to the surrounding area. The photo simulations of the monopole are provided as Appendix 2A and the tree pole simulations are provided as Appendix 2B.

Staff believes that the character of the existing development on the subject property does not warrant a need to camouflage the monopole as a tree. Camouflage, in staff's opinion, appears to have the opposite effect by making the monopole more visible. The monopole is proposed to be constructed of galvanized steel, silver in color, which is compatible with the surrounding utility towers, poles, and overhead wires that are similar in color. As previously discussed, telecommunication antennas are collocated on three existing 122 and 137-foot tall transmission towers, comparable in height to the proposed 140-foot tall monopole. In staff's opinion, the monopole without camouflage would blend into the existing pattern of tall utility structures, overhead wires, and antennas and the existing tree canopy reduces the visual impact of the monopole. The proposed height and design is in accordance with the Comprehensive Plan guidance to blend

proposed telecommunication facilities with an existing pattern of tall structures. The proposed 140-foot height does not adversely impact the character of the area.

A tree pole, in staff's opinion, would have a greater visual impact than a monopole without such camouflage as it would have to be designed with an additional 15 feet of height for the branches used to disguise the antennas and tower. Based on the photo simulations in Appendix 2B, the tree pole appears taller than the surrounding trees and utility structures. In staff's opinion, the additional 15 feet of height needed to achieve a concealed design makes the concealment more visible and prominent than a monopole and meets the applicant's service area requirements. A monopole without camouflage better addresses Objective 43 than a tree pole to design a proposed telecommunications facility to mitigate its visual presence and prominence.

At the base of the monopole is the equipment cabinet compound, which is proposed to be screened by an 8-foot high chain link fence with privacy slats. The equipment compound will not be visible from surrounding property and is in character with the existing equipment cabinets.

It is important to note that while a 140-foot tall monopole is proposed, Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 states "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station."<sup>1</sup>

It is staff's understanding that since the monopole is outside of public rights-of-way and not proposed to be camouflaged, a modification, such as an increase in height to the monopole tower by not more than 10 percent, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed 20 feet, whichever is greater, could be administratively permitted under Section 6409(a) without a public hearing because it would not be considered a substantial change to the physical dimensions of the tower.

While the applicants have not expressed a desire in the future to increase the height of the tower, staff does not believe a monopole taller than 140 feet would be appropriate. A monopole higher than 140 feet in height would be taller than the existing 142-foot tall transmission towers, overhead utility lines, and tree canopy, and in staff's opinion, would appear out of character with the surrounding area, be more noticeable, and have a bigger profile. A monopole up to 140 feet is concealed by the site's setting, which reduces its visual presence and is more compatible with the surrounding area than a monopole taller than 140 feet.

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<sup>1</sup> Federal Register, Volume 80, Number 5, Part IV, Federal Communications Commission, "Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies; Final Rule," page 1248, <http://www.gpo.gov/fdsys/pkg/FR-2015-01-08/pdf/2014-28897.pdf>

In recognition that the visual impact of the monopole is mitigated by the site's setting and character and that a tower taller than 140 feet would have a greater visual presence, staff proposes a development condition to limit the height of the monopole to 130 feet. If the application is approved, under Section 6409(a), Milestone Communications could then submit a request to the County for a modification to increase the tower height from 130 feet to 140 feet, which is the height of one additional antenna array. Section 6409(a) permits local governments a 60-day administrative review period and a public hearing is not required. However, staff anticipates that if a request is submitted to increase the height to 140 feet, the request could quickly be reviewed in less than 60 days since staff has already evaluated the monopole at such height. Staff feels that the proposed development condition is appropriate at this location since the existing character and setting of the site contributes to the concealment of a 140-foot tall monopole and helps to reduce its visual impact. In staff's opinion, a monopole tower taller than 140 feet would be more visible and would have a greater visual impact on the surrounding area.

*Extent:* To address Objective 42, Policy i to ensure that a new structure is necessary to meet service area requirements, the applicant provided radio frequency coverage maps as part of the Statement of Justification in Appendix 2 to show the existing coverage and coverage with the proposed telecommunications facility. Milestone Communications' objective with the proposed telecommunications facility is to be able to provide coverage and capacity in the Clifton area, specifically along Main Street in the Town of Clifton and to Clifton Creek Drive. The telecommunications facility will resolve the need for adequate coverage in the area surrounding the subject property and will ensure adequate overlapping coverage between and among the carrier's existing sites in the area and for other telecommunication carriers in the future. Ultimately, the facility will provide residents and commuters with better quality service and diminished dropped calls. In addition to the applicants' antennas, as shown in Figure 2B, collocation of up to four additional wireless carriers are feasible on the monopole in an integrated placement of antennas at 10-foot intervals, in accordance with Objective 42, Policies g, k, and o, which recommend collocating facilities operated by different service providers on single sites and/or structures. Milestone Communications indicated that 140 feet is the minimum extent feasible to meet wireless coverage objectives and accommodate up to five telecommunication carriers. The height is comparable with adjacent and nearby transmission structures.

A Section 106 Review under the National Historic Preservation Act of 1966 was required to determine whether the proposed telecommunications facility will have an impact on the Clifton National Register Historic District, the Clifton Historic District, and the Bristoe Station Battlefield/Bull Run Bridge/Kettle Run Battlefield/Manassas Station Operations Battlefield/Union Mills. Milestone Communications submitted a Section 106 Review, which concluded that the proposed telecommunications facility has no direct or visual effect on the Clifton National Register Historic District, the Clifton Historic District, and the Bristoe Station Battlefield/Bull Run Bridge/Kettle Run Battlefield/Manassas Station Operations Battlefield/Union Mills. This determination addresses Objective 42, Policy m to ensure the protection of historically significant landscapes and cultural

resources and to not impair or diminish the views of and vistas from historically significant structures.

A total of 37 acres of the subject property is located in four conservation easements and the proposed telecommunications facility is not located on any environmentally sensitive area pursuant to Objective 42, Policy n. No adverse impacts on stream valleys, watersheds, natural or scenic areas, or agricultural lands are anticipated with this application. Likewise, no adverse impact is anticipated to existing traffic since the proposed facility will be unmanned and may be visited once or twice a month for routine maintenance or inspection.

### **Transportation** (Appendix 5)

Staff raised concern on the impact from semi-trucks and large vehicles used to deliver construction materials for the monopole and equipment compound to traffic on Clifton Road and Clifton Creek Drive during the morning and afternoon peak hours. Staff has proposed a development condition to prohibit semi-trucks and large delivery vehicles on Clifton Road and on Clifton Creek Drive during the morning and afternoon peak hours (6:00-9:00 a.m. and 3:00-7:00 p.m.). As previously discussed, the proposed facility will be unmanned and may be visited once or twice a month for routine maintenance with available on-site parking. No adverse traffic impact is anticipated with the proposed use. The Virginia Department of Transportation (VDOT) indicated that since the facility does not connect to a VDOT maintained road, VDOT has no comments.

### **Heritage and Cultural Resources** (Appendix 6)

A cultural resources review was previously completed as part of the original special exception application. There are no additional cultural resources issues and no archaeological work is warranted. As previously discussed, a review under Section 106 of the National Historic Preservation Act was required and concluded that the proposed telecommunications facility has no direct or visual effect on the Clifton National Register Historic District, the Clifton Historic District, or Bristoe Station Battlefield/Bull Run Bridge/Kettle Run Battlefield/Manassas Station Operations Battlefield/Union Mills.

### **Urban Forest Management** (Appendix 7)

The applicants addressed staff's comment to delineate and label the required 50-foot wide transitional screening yards along all property lines on the SEA Plat and provided how the existing vegetation meets the intent of the transitional screening requirements, as shown on Sheet Z-5. The applicants are requesting a modification for transitional screening and a waiver of the barrier requirement, which are discussed in more detail in the Modification and Waiver section of this report.

## **Stormwater Management** (Appendix 8)

The applicants addressed staff comments to depict the Chesapeake Bay Preservation area on the SEA Plat and indicated that no land disturbance is proposed in the resource protection area or in the floodplain. The natural drainage divide is not proposed to be altered and stormwater discharge is not anticipated to have an impact on adjacent or downstream properties. A vegetated swale around the equipment compound is proposed to meet best management practices (BMP) and detention requirements. The BMP will be privately maintained and the BMP sizing computations were provided on the SEA Plat. The applicants also addressed staff comments to provide a narrative and computations on how the concentrated stormwater flow will be released into a natural swale; to provide a narrative and summary of computation on the concentrated stormwater flow; and to provide a description of the adequacy and stability of the outfall. All issues have been addressed.

## **ZONING ORDINANCE PROVISIONS**

Staff review of the applicable Zoning Ordinance provisions is based on Sect. 9-006 of the Zoning Ordinance, General Standards, which provides that all such uses shall satisfy the general standards for special exception uses. In addition to the general special exception standards, special exception uses have to satisfy specific use standards. The proposed telecommunications facility is a Category 1 special exception use and the following is an analysis of the use standards.

### **Standards for all Category 1 Uses** (Sect. 9-104)

In addition to the general standards set forth in Sect. 006, all Category 1 special exception uses shall satisfy the following standards:

*Standard 1: Category 1 special exception uses shall not have to comply with the lot size requirements or the bulk regulations set forth for the zoning district in which located.*

As indicted in the standard, the proposed telecommunications facility is not required to comply with the lot size requirements or bulk regulations of the R-C District.

*Standard 2: No land or building in any district other than the I-5 and I-6 District shall be used for the storage of materials or equipment, or for the repair or servicing of vehicles or equipment, or for the parking of vehicles except those needed by employees connected with the operation of the immediate facility.*

The applicants are not proposing to store materials or equipment, repair or service vehicles or equipment, or to use the site for the parking of vehicles.

*Standard 3: If the proposed location of a Category 1 use is in an R district, there shall be a finding that there is no alternative site available for such use in a C or I district within 500 feet of the proposed location; except that in the case of electric transformer stations and telecommunication central offices, there shall be a finding that there is no alternative site available in a C or I district within a distance of one (1) mile, unless there is a substantial showing that it is impossible for satisfactory service to be rendered from an available location in such C or I district.*

There is no alternative site available for the proposed telecommunications facility use in a C or I District that is within 500 feet of the proposed location. The surrounding zoning districts are residential.

*Standard 4: Before establishment, all uses, including modifications or alterations to existing uses, shall be subject to the provisions of Article 17, Site Plans.*

The application is subject to Article 17, Site Plans, of the Zoning Ordinance.

#### **Additional Standards for Mobile and Land Based Telecommunication Facilities** (Sect. 9-105)

*Additional Standard 1: Except for antennas completely enclosed within a structure, all antennas and their supporting mounts shall be of a material or color that closely matches and blends with the structure on which it is mounted.*

The monopole is proposed to be constructed of silver galvanized steel. The antennas and their supporting mounts will be a color that closely matches and blends with the monopole on which it is mounted. Staff has proposed a development condition to address this issue.

*Additional Standard 2: Except for a flag mounted on a flagpole as permitted under the provisions of Par. 2 of Sect. 12-203, no commercial advertising or signs shall be allowed on any monopole, tower, antenna, antenna support structure, or related equipment cabinet or structure.*

No commercial advertising or signs will be posted on the monopole, tower, antenna, antenna support structure, or related equipment cabinet or structure. Staff has proposed a development on signage.

*Additional Standard 3: If any additions, changes or modifications are to be made to monopoles or towers, the Director shall have the authority to require proof, through the submission of engineering and structural data, that the addition, change, or modifications conforms to structural wind load and all other requirements of the Virginia Uniform Statewide Building Code.*

The construction of any additions, changes, or modifications will be required to conform to structural wind load and all other requirements of the Virginia Uniform Statewide Building Code.

*Additional Standard 4: No signals, lights or illumination shall be permitted on an antenna unless required by the Federal Communications Commission, the Federal Aviation Administration or the County, provided, however, that on all antenna structures which exceed 100 feet in height, a steady red marker light shall be installed and operated at all times, unless the Zoning Administrator waives the red marker light requirement upon a determination by the Police Department that such marker light is not necessary for flight safety requirements for police and emergency helicopter operations. All such lights shall be shielded to prevent the downward transmission of light.*

No signals, lights, or illumination will be located on the monopole unless required by the Federal Communications Commission, the Federal Aviation Administration, or the County. The Zoning Administrator waived the requirement for a steady red light marker light in consultation with the Fairfax County Police Department. A copy of the Zoning Administrator's determination is provided as Appendix 9.

*Additional Standard 5: All antennas and related equipment cabinets or structures shall be removed within 120 days after such antennas or related equipment cabinets or structures are no longer in use.*

All antennas and related equipment cabinets or structures will be removed within 120 days after such antennas or related equipment cabinets or structures are no longer in use. Staff has proposed a development condition on the removal of antennas, equipment cabinets, or structures that are no longer in use.

### **General Standards (Sect. 9-006)**

In addition to the standards for all Category 1 uses, all proposed special exception uses also need to satisfy the following special exception general standards. The following provides an analysis of the general standards.

*General Standard 1: The proposed use at the specified location shall be in harmony with the adopted comprehensive plan.*

The site is planned for public facilities, governmental, and institutional uses and developed with public utilities, transmission lines, and an electric substation. The proposed telecommunications facility is a light public utility use and is in harmony with the Comprehensive Plan.

*General Standard 2: The proposed use shall be in harmony with the general purpose and intent of the applicable zoning district regulations.*

The purpose and intent of the R-C District is to protect water courses, stream valleys, marshes, forest cover in watersheds, aquifer recharge areas, rare ecological areas, and areas of natural scenic vistas; to minimize impervious surface and to protect the quality of water in public water supply watersheds; to promote open, rural areas for the growing of crops, pasturage, horticulture, dairying, floriculture, the raising of poultry and livestock, and for low density residential uses.

Light public utility uses are permitted in the R-C District by special exception approval. The proposed telecommunications facility is a low density, light public utility use proposed on a small portion (2,450 square feet) of the 95-acre site that already contains a substation and 230-foot wide VEPCO easement. Minimal vehicle trips are associated with the proposed use for routine maintenance or inspection once or twice a month. The telecommunications facility is not located in a conservation easement or in any environmentally sensitive areas and will not impact water courses, stream valleys, watersheds, or natural scenic vistas. The limits of disturbance are not anticipated to impact any environmentally sensitive areas. In staff's opinion, the proposed use is in harmony with the purpose and intent of the R-C District and compatible with the surrounding low density residential uses.

*General Standard 3: The proposed use shall be such that it will be harmonious with and will not adversely affect the use or development of neighboring properties in accordance with the applicable zoning district regulations and the adopted comprehensive plan. The location, size and height of buildings, structures, walls and fences, and the nature and extent of screening, buffering and landscaping shall be such that the use will not hinder or discourage the appropriate development and use of adjacent or nearby land and/or buildings or impair the value thereof.*

As previously discussed, the subject property is developed with existing transmission poles and towers that are comparable in height to the proposed 140-foot tall monopole. Telecommunication antennas are collocated on three existing transmission towers. The monopole is located in the southwest quadrant of the site and is over 500 feet from the closest property line and approximately 1,050 feet from the nearest dwelling. The equipment compound will be screened by an eight-foot high chain link fence with privacy slats. The site is heavily wooded and developed with mature tree canopy covering over 70 acres of the site with 37 acres located in four conservation easements. The visual impact of the proposed monopole on the surrounding area is reduced by existing tree cover, overhead utility lines, and transmission towers, which help to conceal the structure, as discussed in the 2232 Review and as shown in the photo simulations in Appendix 2A. The size of the site and existing tree cover provide a natural buffer between the proposed use and the surrounding residential dwellings and area. The proposed 140-foot tall monopole is anticipated to be harmonious with and is not anticipated to affect the use or development of neighboring properties.

As previously discussed in the 2232 Review, staff has proposed a development condition to limit the height of the monopole to 130 feet. If approved, under Section 6409(a), Milestone Communications could then submit a request to the County for a

modification to increase the tower height from 130 feet to 140 feet, which is the height of one additional antenna array. Staff anticipates that if a request is submitted to increase the height to 140 feet, the request could quickly be reviewed since staff has already evaluated the monopole at such height. In staff's opinion, a monopole higher than 140 feet in height would be taller than the existing 142-foot tall transmission towers, overhead utility lines, and tree canopy; out of character with the surrounding area; more noticeable; and have a bigger profile. A monopole up to 140 feet is better concealed by the site's setting, which reduces its visual presence and is more compatible with the surrounding area than a monopole taller than 140 feet. Therefore, staff feels that the development condition is appropriate.

*General Standard 4: The proposed use shall be such that pedestrian and vehicular traffic associated with such use will not be hazardous or conflict with the existing and anticipated traffic in the neighborhood.*

The proposed telecommunications facility is an unmanned facility. No pedestrian traffic is anticipated. Initially, vehicular traffic to the site will be for delivery of building materials for the telecommunications facility. Staff has proposed a development condition to prohibit the truck traffic associated with the delivery of construction materials for the telecommunications facility on Clifton Road and on Clifton Creek Drive during the morning and afternoon peak hours (6:00-9:00 a.m. and 3:00-7:00 p.m.). After the telecommunications facility is constructed, once or twice a month, vehicles may access the site for routine maintenance or inspection and parking is provided onsite. With the proposed development condition, the proposed use is not anticipated to be hazardous or conflict with the existing and anticipated traffic in the neighborhood.

*General Standard 5: In addition to the standards which may be set forth in this Article for a particular category or use, the Board shall require landscaping and screening in accordance with the provisions of Article 13.*

Milestone Communications is providing an 8-foot high chain link fence with privacy slats. The privacy slats will be compatible in color with the substation fence that may be replaced by the substation owner.

The telecommunications facility is located on property that is governed by an existing special exception approval in which the Board of Supervisors approved a modification of the transitional screening requirement and waived the barrier requirement. The applicants are requesting a similar modification and waiver, which is discussed in more detail in the Modification and Waiver section of this report.

*General Standard 6: Open space shall be provided in an amount equivalent to that specified for the zoning district in which the proposed use is located.*

In the R-C District, there is no open space requirement except for cluster development.

*General Standard 7: Adequate utility, drainage, parking, loading and other necessary facilities to serve the proposed use shall be provided. Parking and loading requirements shall be in accordance with the provisions of Article 11.*

As previously discussed, adequate utility and drainage are provided. On-site parking is available along the access road and in front of the substation.

*General Standard 8: Signs shall be regulated by the provisions of Article 12; however, the Board may impose more strict requirements for a given use than those set forth in this Ordinance.*

All other signage on the property is subject to Article 12, Signs, of the Zoning Ordinance.

## **MODIFICATION AND WAIVER**

The applicants request approval of the following modification and waiver of the Zoning Ordinance:

### ***Modification of Sect. 13-303 of the Zoning Ordinance on the transitional screening requirement***

In accordance with Sect. 13-303, Transitional Screening 3 is required between a Category 1 Light Public Utility use and the adjacent R-C District zoned properties to the north, east, and west. Transitional Screening 3 consists of an unbroken strip of open space a minimum of 50 feet wide planted with large and medium evergreen trees, large deciduous trees, or medium evergreen shrubs, as described in Sect. 13-303 of the Zoning Ordinance,

With the Board of Supervisors' approval of SE 91-S-031, the Board approved a modification of the Transitional Screening 3 requirement for the substation, which is also a Category 1 use in favor of the existing vegetation on the site, the landscape plantings shown on the SE Plat, and the development conditions. Likewise, the applicants are seeking a modification of the transitional screening requirement in favor of the existing vegetation on the site, the landscape plantings shown on the Special Exception Amendment Plat, and the development conditions. No land disturbance or clearing is proposed in the transitional screening yards by the applicants. Staff supports the modification request.

### ***Waiver of Sect. 13-304 of the Zoning Ordinance for the barrier requirement***

In accordance with Sect. 13-304, Barrier D (42-48 inch chain link fence), E (6-foot wall), or F (6-foot high solid wood fence) is required between a Category 1 Light Public Utility use and the adjacent R-C District zoned properties, which border the subject property on all sides.

With the Board of Supervisors' approval of SE 91-S-031, the Board approved a waiver of the barrier requirement. Likewise, the applicants are seeking a waiver of the barrier requirement. No land disturbance or clearing is proposed along the property lines by the applicants and an 8-foot high chain link fence with privacy slats is proposed around the equipment compound. Staff supports the waiver request.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Staff Conclusions**

In staff's opinion, a telecommunications facility is an appropriate use on the 95.11-acre subject property since it is planned for public utilities, developed with an existing electric substation, and contains a 230-foot wide VEPCO easement that runs across a portion of the property. A monopole up to 140 feet is better concealed by the site's setting, which reduces its visual presence and is more compatible with the surrounding area than a monopole taller than 140 feet. Staff has proposed a development condition to limit the height of the monopole to 130 feet. If approved, under Section 6409(a), Milestone Communications could then submit a request to the County for a modification to increase the tower height from 130 feet to 140 feet. Staff feels that the proposed development condition is appropriate at this location since the existing character and setting of the site contribute to the concealment of the 140-foot tall monopole and mitigates its visual impact.

Staff finds that the proposed telecommunications facility consisting of a monopole and associated equipment compound satisfies the criteria of location, character, and extent as specified in Section 15.2-2232 of the Code of Virginia, as amended. Staff concludes that the proposed use is in harmony with the Comprehensive Plan and in conformance with applicable Zoning Ordinance provisions with staff's proposed development conditions.

### **Recommendations**

Staff recommends that the Planning Commission find that the telecommunications facility proposed under 2232-S14-9 satisfies the criteria of location, character, and extent, as specified in Section 15-2.2232 of the Code of Virginia, as amended, and therefore, is substantially in accord with the Comprehensive Plan.

Staff recommends approval of SEA 91-S-031, subject to the approval of the proposed developments contained in Appendix 1 of the staff report.

Staff recommends approval of a modification of Sect. 13-303 of the Zoning Ordinance for the transitional screening requirement in favor of the existing vegetation on the site, the landscape plantings shown on the Special Exception Amendment Plat and the development conditions.

Staff recommends approval of a waiver of Sect. 13-304 of the Zoning Ordinance for the barrier requirement along all property lines.

It should be noted that it is not the intent of staff to recommend that the Board of Supervisors, in adopting any conditions, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendations of staff; it does not reflect the position of the Board of Supervisors.

## **APPENDICES**

1. Proposed Development Conditions
2. Statement of Justification
- 2A. Photographic Simulations
- 2B. Tree Pole Photographic Simulations
3. Affidavit
4. 2232-S14-9 Review and Application
5. Transportation Memo
6. Heritage Resources and Park Authority Memos
7. Urban Forest Management Memo
8. Stormwater Management Memo
9. Determination on Red Light Marker
10. Glossary

## PROPOSED DEVELOPMENT CONDITIONS

### SEA 91-S-031

June 3, 2015

If it is the intent of the Board of Supervisors to approve Special Exception Amendment SEA 91-S-031, located at Tax Map Parcel 75-3 ((1)) 10, to permit an electric substation and telecommunications facility consisting of a monopole and associated equipment pursuant to Sect. 3-C04 and 9-104 of the Zoning Ordinance, staff recommends that the Board of Supervisors condition its approval by requiring conformance with the following development conditions. These development conditions incorporate and supersede all previous development conditions on the electric substation, which will remain unchanged on the property, and are carried forward, some updated, are marked with an asterisk (\*). Changes from the previous approval are included as strike out and underlined.

1. This Special Exception Amendment (SEA) is granted for and runs with the land indicated in this application and is not transferable to other land.\*
2. This ~~Special Exception~~ SEA is granted only for the purpose(s), structure(s) and/or use(s) indicated on the Special Exception Amendment Plat approved with the application, as qualified by these development conditions.\*
3. This ~~Special Exception~~ SEA is subject to the provisions of Article 17, Site Plans. Any plan submitted pursuant to this ~~Special Exception~~ SEA shall be in conformance with the approved ~~Special Exception~~ SEA Plat entitled "Clifton Creek Substation," prepared by NB+C Engineering Services, LLC and consists of 20 sheets dated December 15, 2014, and revised through May 18, 2015 and these conditions. Since this SEA proposes no modifications to the existing Clifton Creek Electrical Substation Facility, the existing electrical substation facility, which is subject to the approved Special Exception Plat for SE 91-S-031, entitled Clifton Substation and prepared by Virginia Power/North Carolina Power, dated April 25, 1991 and revised through February 21, 1992, has been carried forward as Sheets SE-1 through SE-4 in this SEA Plat, and these conditions, except where specifically superseded.
4. Landscaping shall be installed and maintained as shown on the Landscape Plan prepared by Virginia/North Carolina Power and dated November 19, 1991, as revised through February 21, 1992, subject to final approval by the Urban ~~Forestry Branch~~ Forest Management Division (UFMD) ~~of in~~ the Department of ~~Environmental~~ Public Works and Environmental Services (DPWES) ~~Management (DEM)~~ and ~~modified~~ as follows:.\*

- A. Evergreen plantings shall be provided along the entire eastern boundary of the property adjacent to Lots 3, 5, 7, 9 and 10 in order to provide a continuous year-round screen between the substation property and the residential lots. The location, type and number of plantings shall be determined by ~~the Urban Forestry Branch of DEM~~ UFMD at the time of Site Plan review. The location of these supplemental plantings shall, to the maximum extent possible, minimize the disturbance of existing quality vegetation.\*

In several instances due to topography, the most strategic planting location for the mitigation of visual impacts along the eastern boundary may be on the adjacent residential lots. If the permission of the individual property owners can be obtained, the supplemental evergreen plantings may be provided on the respective residential properties instead of along the boundary of the application property as shown on the ~~Special Exception~~ SEA Plat.\*

- B. For the portion of the eastern property boundary which is adjacent to Lots 2A and 2B, supplemental evergreen plantings as defined in Paragraph A above shall be provided on the residential lot, if the permission of the property owner can be obtained.\*
- C. For the portion of the eastern property boundary which is adjacent to Lot 7, supplemental evergreen plantings as defined in Paragraph A above shall be provided on the residential lot, if the permission of the property owner can be obtained. Plantings on this lot shall at a minimum consist of seven (7) white pine trees (or equivalent), having a height of 16 to 18 feet at the time of planting, and additional evergreen trees to be planted on either side ranging from 6 to 12 feet in height at the time of planting.\*
- D. For the portion of the eastern property boundary which is adjacent to Lot 5, supplemental evergreen plantings as defined in Paragraph A above shall be provided on the residential lot, if the permission of the property owner can be obtained.\*

Plantings on this lot shall at a minimum consist of fourteen (14) evergreen trees (white pine or equivalent) having a height of 12 feet at the time of planting, and additional evergreen trees to be planted along the boundary of the application property having a minimum height of 6 feet at the time of planting.\*

- E. The permission of individual property owners to allow landscape plantings on the residential lots, as referenced in Paragraphs A, B ~~and C,~~ and D above, shall be in the form of an executed private agreement acceptable to the landowner and to Virginia Power and shall be provided prior to first Site Plan submission. For a period of two years from the time of planting, any plantings installed on the adjacent residential properties under the terms of this condition, which do not survive, shall be replaced at the expense of the

- applicant. Planting schemes for the individual residential properties shall be subject to final approval by ~~the Urban Forestry Branch of DEM~~UFMD at the time of Site Plan review.\*
- F. Landscape plantings to be provided on-site along the eastern boundary shall be installed at the beginning of the first planting season after the completion of construction of the access road. Landscape plantings, which may be planted on adjacent properties, shall be installed at the beginning of the planting season prior to the commencement of any construction on the site, or if not possible due to the fact that construction of the access road is commenced prior to the planting season, the plantings shall be installed at the beginning of the next possible planting season.\*
- G. Supplemental plantings shall be provided to the north and east of the entrance road, as determined by ~~the Urban Forestry Branch of DEM~~UFMD in order to provide a year round screen of the railroad siding as viewed from Clifton Creek Drive and the adjacent properties.\*
5. Slats (made of vinyl, plastic or other material) shall be provided in the southeastern section of the chain link fence around the substation platform to give it the appearance of a solid barrier. The slats shall be colored in earthen tones of green, brown or black. The chain link fence shall be seven (7) feet in height, with an additional possible extension of one (1) foot comprised of wire without slats for a total height of eight (8) feet.\*
- ~~6. Prior to construction and after the substation facility becomes operational, a noise survey shall be performed at the property line adjoining residential lots by the applicant to verify compliance with the County Noise Ordinance. The results of these surveys shall be made available to the County Zoning Enforcement Branch of the Office of Comprehensive Planning (OCP) and to the Town of Clifton. If the survey shows that the County Noise Ordinance is not being met, the applicant shall take appropriate actions to ensure compliance. Compliance with the County Noise Ordinance shall be specified as a condition in the construction contracts for the substation facility. Prior to any clearing and grading activity on the site, clearing limits shall be marked and a walking survey of these delineations shall be undertaken by the applicant with the representatives of the adjacent residential community associations and the Town of Clifton. This survey shall be coordinated by the applicant with the site inspection conducted by the Urban Forestry Branch of DEM during site plan review. After first site plan submission, the applicant shall contact the Urban Forestry Branch of DEM to request scheduling of the site inspection.~~
- 7.6. ~~Prior to Site Plan approval,~~ under Under the provisions of the Open Space Land Act (Section 10.1-1701 of the Virginia Code) an open space/conservation easement to the Board of Supervisors shall be recorded in the land records of Fairfax County for the area designated as an Environmental Quality Corridor (EQC) on the Special Exception Amendment Plat. The easement shall specify

that this area shall remain undisturbed, with the exception of the location of the existing and proposed transmission lines, access road and stormwater management ponds, as shown on the ~~Special Exception SEA~~ Plat, stormwater easements required by ~~DEM DPWES~~, the removal of "danger trees" which may be located too close to power lines, and an area fifty (50) feet east and sixty (60) feet north of the transmission line right-of-way running south from the substation and west along the property boundary which may be needed in the future for the addition of a second transmission line. With the exception of the above, the easement shall specify that there shall be no clearing of any vegetation within the preservation area, except for dead or dying vegetation, as determined by ~~the Urban Forestry Branch of DEM UFMD~~, and that no structures or utilities of any kind shall be located within this area. The easement shall be subject to the approval of the County Attorney.\*

- ~~8.7.~~ Limits of clearing and grading shown on the ~~Special Exception SEA~~ Plat shall be adhered to. Minor adjustments which may be necessary due to final engineering considerations may be approved subject to approval by ~~the Department of Environmental Management DPWES~~. Should any such adjustments be approved, revegetation of the additional cleared area and/or equivalent additional save areas shall be provided on the site as determined by ~~DEM DPWES~~.\*

Within the clearing areas shown for transmission lines running south of the substation facility and then west along the railroad right-of-way, the applicant shall, where possible, reduce the amount of clearing and grading on steep slopes from the limits shown on the ~~Special Exception SEA~~ Plat and allow the shrub layer to remain, as determined by ~~DEM DPWES~~, subject to the requirements of the National Electrical Safety Code and considering Virginia Power's normal maintenance cycle. The applicant shall also employ "tree topping" techniques rather than total removal of trees where possible, as determined by ~~DEM DPWES~~, subject to the requirements of the National Electrical Safety Code and considering Virginia Power's normal maintenance cycle.\*

- ~~9.8.~~ The County Archaeologist shall be notified five working days prior to any clearing and grading activity on the subject site and shall be permitted to inspect the site during and immediately after these operations are completed.\*

- ~~10.9.~~ To mitigate environmental impacts resulting from highly erosive soils on steep slopes, erosion and sedimentation controls shall be provided prior to and during construction activities, including oversized catchment basins or redundant perimeter controls if necessary, as determined by ~~DEM DPWES~~.\*

- ~~11.10.~~ Appropriate measures shall be taken during the construction process to protect existing trees designated for preservation within the limits of clearing and grading as shown on the ~~Special Exception SEA Plat~~, as determined by ~~DEM DPWES~~. Any tree designated for preservation, which fails to be preserved during

construction, shall be replaced as determined by ~~the Chief of the Urban Forestry Branch~~ UFDM, DEMDPWES.\*

~~12.~~11. In order to replace portions of the natural habitat disturbed by the development of this site, habitat mitigation areas shall be provided as shown on the Special Exception Amendment Landscape Plan, subject to final approval by ~~the Urban Forestry Branch of DEM~~ UFMD, DPWES at the time of Site Plan review.\*

~~13.~~12. Lighting of the substation shall be limited to four (4) lights at the locations shown on the ~~Special Exception~~ SEA Plat. The maximum height of the three lights within the substation fence shall be 30 feet. These lights shall be operated with a manual on/off switch and shall be used only when necessary for night inspections of the property or in case of emergency. The fourth light, located at the substation gate, shall have a maximum height of 14 feet and shall be operated by a photo cell control for the security of the facility. All lights shall be of a low splash design (e.g. shoe-box design as in model UCS Concourse III by McGraw Edison or its equivalent) and have a maximum illumination of 7000 lumens each, subject to the final approval ~~of~~ by DEMDPWES.\*

~~14.~~13. Transformers, breakers, transmission line structures and the control building shall have nonreflective finishes. Transformers and breakers shall be painted with ASA grey 70 paint, or its equivalent; transmission line structures shall be made of weathering steel; and the control building shall be painted in earthen tone.\*

~~15.~~ ~~In order to mitigate transportation impacts on the Town of Clifton during the construction of the substation facility, the following construction traffic management plan shall be implemented.~~

~~A. The construction work force at any one time shall not exceed 50 people. On-site parking shall be provided for all vehicles.~~

~~B. No construction traffic shall be routed through the Town of Clifton (Town). Contractors shall be directed to access the site using Clifton Road (Route 645) coming from the north, turning west on Clifton Creek Drive and entering the site using the existing access road until the new access road is constructed.~~

~~C. Notice shall be given to project personnel that Clifton Creek Drive north of the substation access road is a private road and no construction traffic is allowed. This notice shall be contained in and enforceable by Virginia Power's agreement with contract personnel. A copy of this portion of the contract shall be provided to the Town of Clifton, and the Presidents of the Clifton Ridge and the Clifton Creek Civic Associations. Signage indicating this construction traffic restriction shall be placed at the site entrance.~~

- ~~D. Contract personnel shall be instructed not to exceed 15 mph on Clifton Creek Drive.~~
- ~~E. While excess material (dirt/rock) is being trucked from the site, the contractor shall provide a flagman at the intersection of Clifton Creek Drive and Clifton Road during high traffic periods (generally 7-8 a.m. and 3-6 p.m.).~~
- ~~F. Any proposed road improvements to Clifton Creek Drive shall be submitted to the Virginia Department of Transportation (VDOT) and the Town of Clifton for approval. Should any damage to this road occur as a result of construction, Virginia Power shall provide for repairs. Should there be a conflict between VDOT and the Town approval referenced above, VDOT requirements shall take precedence.~~
- ~~G. No construction traffic shall block the fire department's designated access to Popes Head Creek from Clifton Creek Drive.~~
- ~~H. Transformers for the substation shall be transported to the site by railroad and unloaded on-site.~~
- ~~I. Prior to the commencement of construction, a local telephone number, which will allow communication with the construction operation, shall be provided to the Town of Clifton, and the Presidents of the Clifton Ridge and the Clifton Creek Civic Associations.~~

~~16.14.~~ The maximum height of the transformers shall not exceed forty-five (45) feet. The maximum height of the control building shall not exceed thirteen (13) feet.\*

~~17.15.~~ Best Management Practices (BMPs) for stormwater management shall be provided as shown on the SEA Plat in accordance with the Water Supply Protection Overlay District (WSPOD) requirements of the Public Facilities Manual subject to approval by ~~DEM DPWES~~.\*

~~18.16.~~ All requirements established by the U.S. Environmental Protection Agency and the Virginia Water Control Board for oil spill prevention, control and emergency response procedures shall be met. Copies of the emergency response procedures shall be provided to the Department of Fire and Rescue and the Town of Clifton.\*

In addition, given the environmental sensitivity of the site and its location within the ~~Water Supply Protection Overlay District~~ WSPOD, a self-contained oil containment system shall be installed for each transformer, as shown on the ~~SE~~ SEA Plat, to capture any oil that may leak in the event of a spill in order to prevent any adverse impacts on groundwater quality. The system shall encompass an area around the transformers of sufficient size to collect and contain the full volume of oil in a transformer. The system shall be constructed of

a material impervious to transformer oil in order to prevent penetration of oil into the ground surface. Final design of the containment system shall be subject to the approval by [DEM-DPWES](#) for conformance with this condition. Written documentation shall be provided which demonstrates the specific inclusion of this spill containment system in an emergency response spill containment plan to the satisfaction of the Department of Fire and Rescue.\*

In the event that any spill occurs on the property, notification shall be provided within twelve (12) hours to the County Department of Fire and Rescue, the Town of Clifton, and the Presidents of the Clifton Ridge and the Clifton Creek Civic Associations.\*

~~19.~~17. In order to mitigate the potential of a pipeline accident, Miss Utility shall be contacted to mark the location of existing gas pipelines clearly on the property. These lines shall be marked prior to the start of clearing and grading activity and shall remain identified during all construction work on the site.\*

~~20.~~ ~~An ingress/egress easement shall be provided to parcel 75-3 ((1)) 10 pt. located directly south of the Virginia Power electric substation as shown on the Special Exception Plat.~~

~~21.~~18. In the event any blasting occurs on the property, the applicant shall prior to blasting: (A) ensure that the Fairfax County Fire Marshal has reviewed the blasting plans and all safety recommendations of the Fire Marshal, including the use of blasting mats, shall be followed; and (B) provide independent, qualified inspectors approved by [DEM-DPWES](#) to inspect the wells on the adjacent properties. The inspector shall check the flow rate of the inspected wells before and after blasting. Any damage to the inspected wells, determined by the inspector to have resulted from blasting on the property, shall be repaired by the applicant.\*

~~22.~~19. Site access from Clifton Creek Drive shall be designed to allow access to parcel 75-4 ((4)) 2B subject to final approval by VDOT at the time of Site Plan review.\*

~~23.~~20. After construction of the facility is complete, there shall be no storage of materials or equipment, or repair or servicing of vehicles or equipment, or the parking of vehicles except those needed by employees connected with the operation of the facility on the site.\*

~~24.~~21. A security gate, supplemented by treated wood timbers placed on ten-foot centers and joined by heavy duty cable, shall be located at the site entrance.\*

~~22.~~ The direction and location of transmission lines exiting and running through the site shall be as shown on the ~~Special Exception-SEA~~ Plat, that is, no new transmission lines will be routed through the Town of Clifton.\*

23. The initial height of the monopole shall not exceed 130 feet inclusive of all antennas and other appurtenances. The maximum width of each platform shall be 15 feet measured from each end of the platform to the other end of the same face of the platform.
24. The equipment compound for the telecommunications facility shall be enclosed with a locked 8-foot tall chain link fence with privacy slats, as shown on the SEA Plat. The area of the compound shall not exceed 2,450 square feet.
25. The privacy slats shall be made of plastic, vinyl, or other material and the color of the slats shall be coordinated with the fence that surrounds the electric substation located on the subject property so that the two fences are compatible in color.
26. All antennas and supporting hardware mounted on the telecommunications monopole shall be of a material or color that closely matches and blends with the monopole structure.
27. All antennas and related equipment cabinets or structures shall be removed within 120 days after such antennas or related equipment cabinets or structures are no longer in use.
28. No commercial advertising or signs shall be allowed on the telecommunications monopole or equipment on the site.
29. There shall be no outdoor storage of materials, equipment, or vehicles.
30. If any additions, changes, or modifications are to be made to the proposed monopole, the Director of DPWES shall have the authority to require proof, through submission of engineering and structural data, that the addition, change, or modifications conform to structural wind load and all other requirements of the Virginia Statewide Building Code.
31. Prior to site plan approval, an emergency vehicle access easement shall be recorded and all necessary permissions received to ensure legal access to the site across the subject property and the neighboring property Tax Map 75-4 ((4))2B, as depicted on the Special Exception Amendment Plat.
32. Prior to installation of landscape material to meet the requirements of the approved Landscape Plan, the contractor/developer shall coordinate a pre-installation meeting on-site with the landscape contractor and a representative of UFMD. Any proposed changes to the location or planting, size of trees or shrubs, and any proposed plant substitutions for species specified on the approved plans shall be reviewed at this time and shall be approved prior to planting. The installation of plants not specified on the approved plan, and not previously approved by UFMD, may require submission of a revision to the

Landscape Plan and removal and replacement of approved material, prior to bond release. UFMD shall be contacted a minimum of a week prior to the meeting on the site.

25-33. Field location of planting material, when required by the approved plan, shall be reviewed at the pre-installation meeting. The landscape contractor shall stake proposed individual planting locations in consultation with the contractor/developer prior to the pre-installation meeting, for review by UFMD. Stakes shall be adjusted, as needed, during the course of the meeting as determined by UFMD based on discussions with the contractor/developer and the landscape contractor.

34. The applicant shall coordinate with the Fairfax County Department of Transportation and the Virginia Department of Transportation at the time of site plan review to assure that truck traffic will have minimal impact on the traffic flow through the Town of Clifton.

26-35. Clifton Road and Clifton Creek Drive shall not be used by trucks for the delivery of construction materials for the telecommunications facility during the morning and afternoon peak hours (6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 7:00 p.m.), Monday through Friday.

This approval, contingent on the above noted conditions, shall not relieve the applicant from compliance with the provisions of any applicable ordinances, regulations, or adopted standards. The applicant shall be himself responsible for obtaining the required Non-Residential Use Permit through established procedures, and this Special Exception Amendment shall not be valid until this has been accomplished.

Pursuant to Section 9-015 of the Zoning Ordinance, this Special Exception Amendment shall automatically expire, without notice, thirty (30) months after the date of approval unless the use has been established or construction has commenced and been diligently prosecuted. The Board of Supervisors may grant additional time to establish the use or to commence construction if a written request for additional time is filed with the Zoning Administrator prior to the date of expiration of the Special Exception Amendment. The request must specify the amount of additional time requested, the basis for the amount of time requested and an explanation of why additional time is required.

JAN 23 2015

Zoning Evaluation Division

**Statement of Justification**

**Applicants:** Milestone Communications, Cellco Partnership d/b/a Verizon Wireless, and Virginia Power and Electric Company  
**Site Name:** Clifton Substation  
**Property Address:** 12895 Clifton Creek Drive, Clifton, Virginia 20124 (the "Property")  
**Supervisor District:** Springfield  
**Parcel ID No:** 075 3 01 0010  
**Zoning Classification:** Residential-Conservation District, R-C (WS)  
**Property Owner:** Virginia Electric and Power Company

Applicants, Milestone Communications, Cellco Partnership d/b/a Verizon Wireless ("Verizon"), and Virginia Power and Electric Company, together as the "Applicants" request a Special Exception Amendment to allow for the modification of existing Special Exception SE 91-S-031 for the construction and operation of a wireless telecommunications facility. The facility will consist of a 140 feet tall monopole structure, and associated equipment located in a lease area measuring 35 feet by 70 feet (2,450 square feet) screened by an 8 feet tall chain link fence with brown privacy slats. The existing substation on the property owned and operated by Virginia Electric and Power Company will remain in its present substation use and no changes are proposed as part of this application.

**Current Improvements on and Description of Subject Property**

The subject parcel totals approximately 95.11 acres and is zoned RC (WS) and planned for Public Facilities, Governmental and Institutional Use. Adjoining properties are zoned RC (WS) and planned for .1 - .2 dwelling units per acre.

The Property is owned by the Virginia Electric and Power Company ("Owner") and is currently improved with an electric substation. It is adjacent to and connects with utility structures located in a major electrical transmission corridor with an easement width of two hundred thirty feet (230') that runs from east to west across the property. The existing substation use is located within a fenced area with two transformer banks consisting of seven transformers, circuits, and a seventy foot (70') by twenty feet (20') building that houses control and communications equipment. The existing substation facility occupies approximately 8.1 acres of the total site area. It operates continuously and is unmanned with only routine service visits. Access to the substation property is via a controlled access gravel driveway off of Clifton Creek Drive. The existing substation property is bordered by heavy vegetation in all directions except as cleared for the transmission easement and transmission lines.

The substation was originally approved by the Board of Supervisors under Special Exception SE 91-S-031 on March 9, 1992. This approval was granted to the Virginia Electric and Power Company for a 92.91 portion of the current parcel, 075-3 ((1)) 10 for the substation and an adjoining parcel, formerly 075-4 ((04)) 2 pt., for a portion of the access road. In addition to SE

91-S-031, the Board of Supervisors approved SE 91-S-046 for a smaller substation to be constructed by the Northern Virginia Electric Cooperative (NOVEC) on a five acre portion of parcel 075-3 ((1)) 10. This five acre portion of Parcel 10 was deleted from the application acreage of SE 91-S-031.

Although the recorded access easement that runs across a portion runs of 75-4 ((4)) 2B (formerly Parcel 75-4 ((4)) 2) was included in the acreage of the SE 91-S-031, it is requested by the applicant that this easement and the related acreage not be included in the current application. The existing easement and access road will not be changed in any way by the current proposal and will be used by the applicant only for routine monthly maintenance trips to the site (a copy of the recorded easement is included in the application package). Further, the five acre portion of parcel 75-3 ((1)) 10 that was subject to SE 91-S-046 was never transferred by Virginia Power and Electric Company or used by NOVEC for a separate sub-station and that SE was allowed to expire. Therefore the current SEA application will be located only on parcel 75-3 ((1)) 10 which is owned by Virginia Power and Electric Company and has a total acreage of 95.11 acres. There also are no changes proposed to the existing approved Special Exception uses on this property as a result of the current SEA application by the applicants Milestone Communications, Verizon Wireless and Virginia Power.

### **Statement Describing the Proposed Use**

The following section corresponds to the requirements contained in the Special Exception Application Information package and pursuant to Section 9-011, Paragraph 7, of the Fairfax County Zoning Ordinance, and fully describes the proposed use:

#### Type of operation.

The property is currently used for an unmanned electric substation that borders a major utility corridor containing two electrical transmission lines supported by a combination of lattice tower and pole structures, and an underground-liquefied natural gas pipeline. The existing transmission structures in this utility corridor are between approximately one hundred twenty two feet (122') and one hundred thirty seven feet (137') in height. The applicant requests a Special Exception to construct a one hundred forty feet (140') tall monopole structure and associated equipment to house a telecommunications use. The use will be designed to accommodate a minimum of five (5) wireless telecommunications carriers, including the applicant, Verizon. The use will be located in the southeast quadrant of the substation property, approximately 590 feet north of the Norfolk and Southern Railroad corridor and 1,700 feet west of Clifton Creek Drive.

Milestone will enter into a lease agreement with the Owner, pursuant to which Verizon Wireless will install and operate a wireless telecommunications facility on the Property. Verizon will install up to twelve (12) antennas in three sectors at a rad center elevation of one hundred forty feet (140'). Verizon will use two antenna models for the facility: one model will measure approximately ninety-four point six inches (94.6") high by eleven point two inches (11.2") wide and one model will measure approximately seventy-two point five inches (72.5") high by four

point one inches (4.1") wide. The antenna details are provided on Sheet A-4 of the Zoning Drawings.

The monopole is designed to accommodate four additional telecommunication carriers at rad center heights of one hundred thirty feet (130'), one hundred twenty feet (120'), one hundred ten (110') and one hundred feet (100'). An elevation of the monopole showing the location of all antenna platforms is provided on Sheet A-1 of the Zoning Drawings.

Verizon will install up to four equipment cabinets in a twelve feet (12') by twenty feet (20') equipment area with canopy within the overall thirty-five feet (35') by seventy feet (70') fenced compound area. Two cabinets will be installed initially, one measuring thirty-two inches (32") by thirty-two point three inches (32.3") by eighty-nine point one inches (89.1") tall and one measuring thirty two inches (32") by thirty two inches (32") by seventy three inches (73") tall. Two additional cabinets will be installed by Verizon in the future. Verizon will also locate a back-up generator measuring seven feet eight inches (7'8") tall by nine feet two inches (9'2") wide by three feet four inches (3'4") deep within the compound. The equipment compound will also house the equipment of all future telecommunication carriers locating at the site. Shown on the "Compound Plan and Elevation", Sheet A-1 of the Zoning Drawings, are the placement of the monopole and equipment and the limits of the use. Specific details of Verizon's cabinets and generator are shown on Sheet A-3, "Equipment Details".

Including areas for stormwater facilities, the total area of disturbance is 7,550 square feet. An "Erosion and Sediment Control Plan" is submitted with the Zoning Drawings on Sheet ES-1.

The installation proposed by Verizon will not interfere with radio, television or telephone reception and the radio frequency emissions will comply with all applicable EPA and FCC emission requirements. Furthermore, neither the antennas nor the related equipment will produce any noise, fumes, dust, odors, lights, glare or vibrations, except at such time as the generator is infrequently tested or used for emergency service.

#### Hours of operation.

The existing electrical sub-station is an unmanned use that operates continuously 24 hours per day, seven days per week. The proposed telecommunications use will not change the current hours of operation on the property and will operate 24 hours per day, 365 days per year.

#### Estimated number of patrons, clients, patients, pupils, etc.

There are no on-site patrons or clients associated with the existing or proposed uses. The existing substation serves the western Fairfax County area and is an integral part of Virginia Power's 500 Kv transmission lines serving the entire Northern Virginia region. The proposed telecommunications use will be a component of Verizon Wireless' network serving the western Fairfax County area.

Proposed number of employees, attendants, teachers, etc.

There are no on-site employees associated with the existing or proposed uses. With the exception of routine maintenance and repairs, no employees will work at the site. The proposed telecommunications use will be visited one to two times per month for maintenance purposes. In addition, electricians visit the existing substation use on the property for routine maintenance.

Estimate of the traffic impact of the proposed use.

The proposed telecommunications use will not change the traffic use on the property that is limited primarily to routine but infrequent maintenance and inspection. There will be no changes to the existing access drive or access point off Clifton Creek Drive approved for the substation use.

There are infrequent visits to the substation by personnel for routine maintenance and inspection no more than one to two times per month. The existing use and proposed telecommunications facility shall not be hazardous or conflict with the existing and anticipated traffic in the neighborhood.

Vicinity or general area to be served by the proposed use.

The area served by the proposed telecommunications is depicted on the attached Verizon radio frequency coverage maps. The map identified as "Ivatoka Neighbors Only" shows the current Verizon coverage in the general area as provided by existing or pending sites labeled on the map as "Manassas Park", "Stonewall Park", "Sudley", "Clifton", and "Clifton Creek." The map identified as "Ivatoka with Neighbors at 140'", shows the coverage from the existing and pending sites in the general area with the projected improvement in the coverage from a new 140 feet tall monopole on the subject application site identified on the map as "Ivatoka".

Verizon's objective for this site is to provide coverage and capacity in the Clifton area, specifically along Main Street and Clifton Creek Drive. The new Ivatoka site will resolve the need for adequate coverage in the area surrounding the proposed site and also ensure adequate overlapping coverage between and among existing Verizon sites in this general area. Ultimately, the proposed site will allow residents and commuters to experience better quality and diminished dropped calls.

Description of the building façade and architecture of proposed new buildings and addition

The telecommunications facility will consist of a self-supporting galvanized steel monopole structure, one hundred forty feet (140') in height. Verizon Wireless will have two steel equipment cabinets, one measuring thirty two inches (32") by thirty two point three inches (32.2") by eighty nine point one inches (89.1") tall and one measuring thirty two inches (32") by thirty two inches (32") by seventy three inches (73") tall, inside the cabinet area. The cabinet area will be covered by a metal canopy with a three inch (3") metal decking roof and measuring twenty feet (20') wide by eight feet six inches (8'6") tall. Verizon Wireless will also install a back-up generator measuring nine feet two inches (9'2") long by three feet four inches (3'4")

wide by seven feet eight inches (7'8") high on a concrete pad within the compound area. The monopole and the compound area will be designed to support Verizon's antennas and equipment and that of up to four (4) additional telecommunication carriers. The overall compound area will be enclosed by an eight feet (8') tall chain link fence with brown privacy slats and a 12 feet (12') wide access gate.

Listing, if known, of all hazardous or toxic substances to be generated, utilized stored, treated and/disposed of on-site and the size and contents of any existing or proposed storage tanks or containers.

There are no known hazardous or toxic substances as set forth in Title 40 of the Code of Federal Regulations parts 116.4, 304.4 and 355.

A statement that the proposed use conforms to the provisions of all applicable ordinances, regulations, adopted standards and any applicable conditions, or if any waiver, exception or variance is sought by the applicant from such ordinances, regulations, standards and conditions such shall be specifically noted with the justification for any such modification.

The telecommunications use will be constructed on a major electrical substation property owned by Virginia Power that is adjacent to and associated with a major transmission power easement two hundred thirty feet in width. As per Section 2-514, part 3A (2), of the Fairfax County Zoning Ordinance, "monopoles, with related unmanned equipment cabinets and/or structures" are a permitted use (subject to Paragraphs 3B through 3K) "in any zoning district in a utility transmission easement which is ninety (90) feet or more in width." The telecommunications use will be constructed on a major electrical substation property that is adjacent to and associated with a major transmission power easement greater than 90 feet in width. In similar instances, the Department's interpretation and administration of this Section consistently has included electrical substation property associated with an easement ninety feet or greater in width as part of that transmission easement. However, the substation property and use is under previous Special Exception SE 91-S-031 with conditions for that use.

The proposed telecommunication use will conform to the requirements of Sections 2-514 (3), 9-103, 9-104 and 9-105 of the Fairfax County Zoning Ordinance. The applicant will address transitional screening and a waiver will be requested as necessary. The applicant will also provide a written request for waiver of storm water management.

### **Compliance with Provisions of Section 9, Special Exceptions**

The proposed facility is in compliance with the Provisions, General Standards and Requirements contained in Section 9 of the Zoning Ordinance as presented in the following:

#### **General Standards (Section 9-006)**

***General Standard 1. The proposed use at the specified location shall be in harmony with the adopted Comprehensive Plan.***

*Applicants' Response:* The property on which the proposed monopole will be located is planned for Public Facilities, Governmental and Institutional use and is currently developed with an existing electrical power substation. The substation is adjacent to and associated with a major electrical transmission easement two hundred feet (230') in width that contains two existing lines of steel poles and towers approximately 122 to 137 feet in height. The overall substation property is ninety-five acres in size and surrounded in all directions by heavily wooded areas except where cleared for the transmission easement and substation. The size and surroundings of the property and the comparable structures in the area will minimize impacts and the proposed use will not adversely affect the existing or proposed uses envisioned for this area by the Comprehensive Plan. The use will also be in conformance with the provisions of the Mobile and Land Based Telecommunications section of the Public Facilities element of the Policy Plan.

**General Standard 2. The proposed use shall be in harmony with the general purpose and intent of the applicable zoning district regulations.**

*Applicants' Response:* The proposed property is within the R-C (WS) zoning district. The use will be consistent with the current use of the property and the adjacent existing utility transmission corridor and will be screened by existing vegetation and heavily wooded areas from most residential uses. The use will not impact watercourses, stream valleys or watersheds nor will degrade wooded, natural and scenic areas or agricultural lands. The overall addition of the monopole structure and equipment compound to the existing substation property will not increase the impact on the surrounding R-C (WS) zoned area.

**General Standard 3. The proposed use shall be such that it will be harmonious with and will not adversely affect the use or development of neighboring properties in accordance with the applicable zoning district regulations and the adopted comprehensive plan. The location, size and height of buildings, structures, walls and fences, and the nature and extent of screening, buffering and landscaping shall be such that the use will not hinder or discourage the appropriate development and use of adjacent or nearby land and/or buildings or impair the value thereof.**

*Applicants' Response:* The proposed telecommunications use will be sited on a large parcel with extensive wooded areas between the use and most residences. The use is in harmony with the surrounding area and will not affect the existing electrical substation use or development of neighboring properties. The facility will be unmanned, generate no traffic, blend with other tall structures in the utility corridor, and have minimal land disturbance.

**General Standard 4. The proposed use shall be such that pedestrian and vehicular traffic associated with such use will not be hazardous or conflict with the existing and anticipated traffic in the neighborhood.**

*Applicants' Response:* The proposed telecommunications facility will be unmanned with one (1) or (2) monthly maintenance visits. These additional visits will not be hazardous or conflict with the existing and anticipated traffic in the neighborhood or general area.

**General Standard 5.** In addition to the standards which may be set forth in this Article for a particular category or use, the Board shall require landscaping and screening in accordance with the provisions of Article 13.

*Applicants' Response:* The proposal will conform to the provisions of Article 13 of the Zoning Ordinance

**General Standard 6.** Open space shall be provided in an amount equivalent to that specified for the zoning district in which the proposed use is located.

*Applicants' Response:* The use will not require an open space provision.

**General Standard 7.** Adequate utility, drainage, parking, loading and other necessary facilities to serve the proposed use shall be provided. Parking and loading requirements shall be in accordance with the provisions of Article 11.

*Applicants' Response:* The design of the proposed facility will address all utility, drainage, parking, loading and other necessary facility as is necessary and required.

**General Standard 8.** Signs shall be regulated by the provisions of Article 12; however, the Board may impose more strict requirements for a given use than those set forth in this Ordinance.

*Applicants' Response:* The facility will not require signage.

#### **Additional Submission Requirements for Category 1 Uses (Section 9-103)**

In addition to the general standards set forth above, all applications for Category 1 uses shall be accompanied by the following items:

1. Four (4) copies of a map showing the utility system of which the proposed use will be an integral part, together with a written statement outlining the functional relationship of the proposed use to the utility system.

*Applicants' Response:* Attached are radio frequency propagation (coverage) maps that depict the relationship of the proposed telecommunications facility to the existing or proposed Verizon sites in the vicinity of which the proposed use will be an integral part. Verizon's objective for this site is to provide coverage and capacity in the Clifton area, specifically along Main Street and Clifton Creek Drive. The new site, identified as "Ivatoka" on the propagation maps, will resolve the need for adequate coverage in the area surrounding the proposed site and also ensure adequate overlapping coverage between and among existing Verizon sites in this area of Fairfax County. A written statement is included with propagation maps.

2. Four (4) copies of a statement, prepared by a certified engineer, giving the exact technical reasons for selecting the particular site as the location for the proposed facility and

certifying that the proposed use will meet the performance standards of the district in which located.

*Applicants' Response:* Statements prepared by certified engineers, giving the technical reasons for selecting the site and certifying that the telecommunications use will meet the performance standards of the RC (WS) zoning district are attached with the application.

### **Standards for All Category 1 Uses (Section 9-104)**

All Category 1 special exception uses shall satisfy the following standards:

1. Category 1 special exception uses shall not have to comply with the lot size requirements or the bulk regulations set forth for the zoning district in which located.

No response needed.

2. No land or building in any district other than the I-5 and I-6 District shall be used for the storage of materials or equipment, or for the repair or servicing of vehicles or equipment, or for the parking of vehicles except those needed by employees connected with the operation of the immediate facility.

*Applicants' Response:* The land and telecommunications use will not be used for the storage of materials or equipment, or for the repair or serving of vehicles or equipment, or for the parking of vehicles except those needed for employees on infrequent maintenance visits.

3. If the proposed location of a Category 1 use is in an R district, there shall be a finding that there is no alternative site available for such use in a C or I district within 500 feet of the proposed location; except that in the case of electric transformer stations and telecommunication central offices, there shall be a finding that there is no alternative site available in a C or I district within a distance of one (1) mile, unless there is a substantial showing that it is impossible for satisfactory service to be rendered from an available location in such C or I district.

*Applicants' Response:* There are no alternative sites in a commercial or industrial district within 500 feet of the proposed location suitable for the facility.

4. Before establishment, all uses, including modifications or alterations to existing uses, shall be subject to the provisions of Article 17, Site Plans, in the Zoning Ordinance.

*Applicants' Response:* Any future modifications or alterations will comply with the provisions of Article 17 of the Zoning Ordinance.

### **Additional Special Exception Requirements for Mobile & Land-based Telecommunications Facilities (Section 9-105)**

1. Except for antennas completely enclosed within a structure, all antennas and their supporting mounts shall be of a material or color that closely matches and blends with the structure on which it is mounted.

*Applicants' Response:* The antennas and their supporting mounts will be of a color that closely matches and blends with the monopole structure on which mounted.

2. Except for a flag mounted on a flagpole, as permitted under the provisions of Par. 2 of Sect. 12-203, no commercial advertising or signs shall be allowed on any monopole, tower, antenna, antenna support structure, or related equipment cabinet or structure.

*Applicants' Response:* There will be no commercial advertising or signs on the monopole structure.

3. If any additions, changes or modifications are to be made to monopoles or towers, the Director shall have the authority to require proof, through the submission of engineering and structural data, that the addition, change, or modification conforms to structural wind load and all other requirements of the Virginia Uniform Statewide Building Code.

*Applicants' Response:* The construction and any future modifications will conform to structural wind load and all requirements of the Virginia Uniform Statewide Building Code.

4. No signals, lights or illumination shall be permitted on an antenna unless required by the Federal Communications Commission, the Federal Aviation Administration or the County, provided, however, that on all antenna structures which exceed 100 feet in height, a steady red marker light shall be installed and operated at all times, unless the Zoning Administrator waives the red marker light requirement upon a determination by the Police Department that such marker light is not necessary for flight safety requirements for police and emergency helicopter operations. All such lights shall be shielded to prevent the downward transmission of light.

*Applicants' Response:* No signals, lights or illumination will be located on the monopole unless required by the County. The applicant will seek a waiver to the County's requirement as specified in Zoning Section 2-514, Paragraph 3H. A steady red light marker will be located on the monopole only if required by the Fairfax County Police Department or the FAA.

5. All antennas and related equipment cabinets or structures shall be removed within 120 days after such antennas or related equipment cabinets or structures are no longer in use.

*Applicants' Response:* All antennas and related equipment will be removed with 120 days in the event no longer in use.

## COMPLIANCE WITH THE FAIRFAX COUNTY COMPREHENSIVE PLAN

The property is located in the Johnny Moore Community Planning Sector (P3) of the Pohick Planning District in Planning Area III and is planned for Public Facilities, Governmental and Institutional use. On page 50 of the Pohick Planning District section of the Fairfax County Comprehensive Plan, as amended through 4-9-2013 the Plan states:

“1. In order to meet the growing need for public utilities, transmission lines and two electrical substations will be required on Parcel 75-3((1))10 by Virginia Power and the Northern Virginia Electric Cooperative. The Fairfax County Zoning Ordinance requires that electric substation and distribution centers including transformer stations obtain special exception approval. Further, utility transmission facilities including but not limited to poles, structures, or other similar equipment for the transmission of electricity require special exception approval. Under the Zoning Ordinance, transmission lines approved by the State Corporation Commission (SCC) pursuant to Section 56.46.1 of the Code of Virginia, as amended, are not included as utility transmission facilities. Virginia Power and the Northern Virginia Electric Cooperative should participate in the Fairfax County public hearing process for any facilities to be constructed on this site.

There should be no transmission lines through the Town of Clifton. Special exception applications filed for the two electrical substations/distribution centers shall include sufficient acreage surrounding the proposed facilities in order to ameliorate the visual and audio impacts on nearby properties. Additional buffering and screening in excess of minimum Zoning Ordinance provisions shall be required in those areas which do not contain existing substantial vegetation.”

The proposed meets the requirements of Policy Plan’s Public Facilities element for Mobile and Land Based Telecommunication uses as addressed in the following:

### **General Guidelines**

**Objective 42: In order to provide for the mobile and land-based telecommunication network for wireless telecommunication systems licensed by the Federal Communications Commission, and to achieve opportunities for the collocation of related facilities and the reduction or elimination of their visual impact, locate the network’s necessary support facilities which include antennas, support structures and equipment buildings or equipment boxes in accordance with the following policies.**

***Policy a.* Avoid the construction of new structures by locating proposed telecommunication facilities on available existing structures such as rooftops, telecommunication and broadcast support structures, electrical utility poles and towers, and water storage facilities when the telecommunication facilities can be placed inconspicuously to blend with such existing structures. (See Figures 8, 9, 10.)**

*Applicants’ Response:* The applicant identified existing structures of sufficient height in the existing electrical transmission corridor in the general area where the monopole is proposed to be

located. However, the existing Dominion Virginia Power (DVP) transmission towers in this corridor that are of sufficient height and structurally capable of accommodating a telecommunications use are already occupied by other telecommunications carriers. By adding the Verizon Wireless equipment to these towers, failure may likely occur. There are no other suitable structures for collocation in the immediate and surrounding areas that fulfill Verizon's service area objectives.

***Policy b.* When existing structures are not available for co-location, or co-location is not appropriate because of adverse visual impacts or service needs, locate new structures that are required to support telecommunication antennas on properties that provide the greatest opportunity to conceal the telecommunication facilities and minimize their visual impact on surrounding areas.**

*Applicants' Response:* The proposed monopole and compound will be located on a large 95-acre property developed with an electrical power substation that contains and is adjacent to an existing major electrical transmission corridor approximately 230 feet in width. The transmission easement that runs through the property and then to both the northwest and southeast contains two rows of large transmission structures in the form of lattice towers and steel poles approximately one hundred twenty two feet (122') to one hundred thirty seven feet (137') in height. Eight tall poles and towers are located on the easement through the property. Another five tall poles are used to connect the substation with the major transmission line and to distribute power off the property to the south and southwest. At least three poles on the property also are used for the collocation of other telecommunication facilities. The proposed monopole will be compatible and blend with the numerous existing tall structures on the property and those along the utility corridor. The site is also and buffered by wooded areas on and adjoining the 95-acre property. As such the proposed facility will have minimal visual impact on surrounding areas.

***Policy c.* When new structures or co-locations are required to serve residential neighborhoods, consider minimizing visual impacts on the surrounding area by utilizing camouflage structure design and/or micro-cell technologies or similar miniaturization technologies, such as distributed antenna systems (DAS), if feasible.**

*Applicants' Response:* The proposed structure will not have a camouflaged design but will be located on a large public utility site and will blend with existing tall structures, most approximately one hundred twenty two feet (122') to one hundred thirty seven feet (137') in height, used for electrical transmission purposes in the immediate area.

***Policy d.* When multiple sites provide similar or equal opportunity to minimize impacts, public lands shall be the preferred location.**

*Applicants Response:* There are no public sites in the immediate area with an equal opportunity to locate the structure and minimize impacts.

**Policy e. Locate mobile and land-based telecommunication facilities on public property only after a lease agreement between the County, or related board or authority, and the service provider has been established.**

*Applicants Response:* The structure will not be located on a public use site.

**Policy f. Ensure that the use of public property by mobile and land-based telecommunication facilities does not interfere with the existing or planned operational requirements of the public use and complies with adopted policies and plans to protect natural resources.**

*Applicants Response:* The proposed structure will not be located on a public use site.

**Policy g. Co-locate mobile and land-based telecommunication facilities operated by different service providers on single sites and/or structures whenever appropriate. Locate single-use structures on a property only when a co-location structure for multiple service providers is not desirable or feasible due to technological differences, site limitations or visual impact concerns.**

*Applicants' Response:* The proposed 140-foot tall monopole will accommodate up to a total of five telecommunication providers, including the co-applicant Verizon Wireless.

**Policy h. Ensure that the height of the proposed telecommunication facility is no greater than necessary to allow for co-location on the telecommunication facility based on its service area requirements while still mitigating the visual impact of the facility.**

*Applicants' Response:* The 140-foot height of the proposed monopole is the minimum extent feasible to meet wireless coverage objectives and accommodate up to five telecommunication carriers. The height is consistent with adjacent and nearby utility transmission structures and will not have a visual impact on surrounding areas.

**Policy i. When new structures, co-locations and/or technologies (such as distributed antenna systems, micro-cell technology or miniaturization technology) are necessary to meet the service area requirements for the residential neighborhood(s), ensure that the height and mass of any appropriate co-location on the telecommunication facility is in character with the surrounding residential area and mitigates the visual impact of the facility on the surrounding residential area.**

*Applicants' Response:* The proposed monopole structure is in keeping with other large poles and towers of comparable height on the property and in the power transmission that runs through the substation property. The monopole is designed to accommodate up to five telecommunication carriers in an integrated placement of antennas at ten-foot intervals.

**Policy j. Design, site and/or landscape proposed telecommunication facilities to minimize impacts on the character of the property and surrounding areas. Demonstrate the appropriateness of the design through facility schematics and plans which detail the type,**

**location, height, and material of the proposed structures and their relationship to other structures on the property and surrounding areas.**

*Applicants' Response:* The proposed monopole is of similar height and scale as the existing one hundred twenty feet two feet (122') to one hundred thirty seven feet (137') electrical transmission poles and towers on the property and in the adjacent transmission corridor. The facility is also consistent with the existing electrical substation facility use of the subject property and in context with its immediate surroundings. Extensive and well-established woodland areas on and adjoining the substation property, as well as the property's size and distance from most properties, will serve to screen the use from nearby residences and the Town of Clifton. The appropriateness of the design and site is demonstrated by the elevations of the proposed structure and its relationship to nearby structures and trees provided on the Zoning Drawings, Sheet A-1, and on the attached site photos and photo-simulations of the structure taken from different vantage points throughout the area.

**Policy k. Demonstrate that the selected site for a new telecommunication facility provides the least visual impact on residential areas and the public way, as compared with alternate sites. Analyze the potential impacts from other vantage points in the area, especially from residential properties, to show how the selected site provides the best opportunity to minimize its visual impact on the area and on properties near the proposed site.**

*Applicants' Response:* The selected site is located in a residentially zoned (RC) area and is used for non-residential / electrical substation purposes. The site's relationship to an existing pattern of large electrical transmission structures in the area mitigates visual impacts by providing context and the opportunity to visually blend the new structure with those existing on the property and in the surrounding area. Other non-residential properties in the immediate area are used for schools and places of worship or are located in the historic Clifton Town Center. As compared with the proposed site, a new structure on these properties would be more solitary and prominent and have little context or compatibility to the existing uses. The application contains a set of photo-simulations taken from eight vantage points in nearby residential areas that demonstrate the appropriateness of the design and any visual impacts on surrounding areas.

**Policy l. A key concept in assessing telecommunication facilities is mitigation which is defined as actions taken to reduce or eliminate negative visual impacts. Mitigate the visual impact of proposed telecommunication facilities and their equipment, by using effective design options appropriate to the site such as:**

- **Design, site and/or landscape the proposed facility to minimize impacts on the character of the area;**
- **Locate proposed telecommunication facilities near or within areas of mature vegetation and trees that effectively screen or provide an appropriate setting for the proposed structure provided such location does not adversely impact sensitive resources or cause fragmentation of forested communities. When viewed in context, consider perspective views, relative topography and other factors, to mitigate the visual presence and prominence of the structure;**
- **Blend proposed telecommunication facilities with an existing pattern of tall structures;**

- **Obscure or block the views of proposed telecommunication facilities with other existing structures, vegetation, tree cover, or topographic features to the maximum extent feasible; and**
- **Replace existing telecommunication facilities with taller structures or extend their overall height to reduce the need for another structure when such height increases or structure replacements are visually appropriate to the site, including the surrounding area and are consistent with the type, style and pattern of the existing structure.**

*Applicants' Response:* The structure is located on an established non-residential, public utility property that contains electrical transmission structures and equipment and is of an industrial character. The proposed monopole will blend with an existing pattern of tall structures on the property and in the existing transmission corridor that are of a comparable height and design. Three of these tall structures are currently equipped with collocated telecommunication antenna platforms. Views of the proposed structure from most residences in the area will be mitigated by the extensive areas of woodland on the substation property and the surrounding area. Distance and the proposed structure's relationship to other tall structures in the existing transmission corridor will also reduce the structure's visual presence and impact.

**Policy m. Locate proposed telecommunication facilities to ensure the protection of historically significant landscapes and cultural resources. The views of and vistas from architecturally and/or historically significant structures should not be impaired or diminished by the placement of telecommunication facilities.**

*Applicants' Response:* The proposed facility will not adversely impact historically significant landscapes and cultural resources nor impair or diminish views and vistas from such resources.

**Policy n. Site proposed telecommunication facilities to avoid areas of environmental sensitivity, such as steep slopes, floodplains, wetlands, environmental quality corridors, and resource protection areas.**

*Applicants' Response:* The facility will avoid areas of environmental sensitivity.

**Policy o. Site proposed telecommunication facilities to allow for future expansion and with corresponding levels of screening to accommodate expansion.**

*Applicants' Response:* Both the monopole and equipment compound area will be designed to accommodate up to a total of five telecommunication providers while maintaining current levels of screening.

**Policy p. Design and site proposed telecommunication facilities to preserve areas necessary for future right-of-way dedication and ancillary easements for construction of road improvements.**

*Applicants' Response:* The facility is far removed from all roadways and will not impede on any areas necessary for future right-of-way or road improvements

**Policy q. Locate and construct antennas used for purposes other than mobile and land-based telecommunication services in accordance with the same guidelines established in this “Mobile and Land-Based Telecommunications Services” section.**

*Applicants’ Response:* The proposed monopole is for mobile and land based purposes.

**Objective 43: Design proposed telecommunication facilities to mitigate their visual presence and prominence, particularly when located in residential areas, by concealing their intended purpose in a way that is consistent with the character of the surrounding area. (See Figures 11 and 12.)**

**Policy a. Disguise or camouflage the appearance of proposed telecommunication facilities to resemble other man-made structures and natural features (such as flagpoles, bell towers, and trees) that are typically found in a similar context and belong to the setting where placed.**

*Applicants’ Response:* The proposed structure will not be of a camouflaged design but will be consistent and in context with the other tall utility structures on the substation and adjoining electrical transmission line easement.

**Policy b. Design proposed telecommunication facilities that are disguised and camouflaged to be of a bulk, mass and height typical of and similar to the feature selected.**

*Applicants’ Response:* The proposed structure will be of a mass and height similar to other large towers and poles used for electric transmission purposes on the subject property and along the transmission power line that traverses the area in a generally north to south direction.

**Policy c. Use other new and existing structures and vegetation of comparable form and style to establish a grouping that complements a camouflaged telecommunication facility and supports its design, location and appearance.**

*Applicants’ Response:* The design, style and height of the proposed monopole are comparable with the other existing poles and towers in the electrical transmission corridor that traverses the property. The new monopole will be supported by and visually blend with these structures.

### Conclusion

In light of the foregoing, the Applicants respectfully submit that this Special Exception application is in compliance with the Fairfax County Zoning Ordinance and Comprehensive Plan. Granting the Applicants’ request will be appropriate and in the interest of the citizens of Fairfax County.

**ENGINEER'S STATEMENTS ON SITE SELECTION AND  
DISTRICT PERFORMANCE STANDARDS**

**RECEIVED**  
Department of Planning & Zoning

**JUL 18 2014**

**Zoning Evaluation Division**

**Statement of Certified Engineer for Performance Standards**

Site Name: Clifton Creek Sub-Station  
Parcel Number: 0753 01 0010  
Site Address: 15001 Lee Highway, Centreville, VA

Per Section 9-103 of the Fairfax County Zoning Ordinance, this is to certify that Verizon's proposed facility at the Clifton Creek Substation will meet all performance standards of the Residential Conservation (RC) Zoning District (Article 3, Part C) related to noise, vibration and glare.

Network Building + Consulting

Trent T. Snarr, PE  
Engineering Manager - South  
VA PE License No. 049978





April 29, 2014

**Statement of Certified Engineer  
Site Selection and Performance Standards**

Site Name: Ivatoka  
Site Address: 12895 Clifton Creek Drive, Clifton, VA 20124

The Dominion substation parcel located at 12895 Clifton Creek Drive was selected by Verizon Wireless to provide and improve wireless coverage along Clifton Creek Drive, and Main Street in historical Clifton. The site will also enhance in- building coverage to the neighboring residential communities.

The applicant identified existing structures of sufficient height in the area. However, each of the existing Dominion Virginia Power (DVP) transmission towers that were of sufficient height and structurally capable were already occupied by other carriers. By adding Verizon Wireless equipment, these transmission towers would fail structurally.

The proposed Milestone facility will resolve the need for adequate coverage in the area surrounding the proposed site and also ensure adequate overlapping coverage between and among existing Verizon sites. Ultimately, the proposed site will allow residents and commuters to experience better quality and diminished drop calls. The propagation maps attached to the application and prepared by an RF Engineer illustrate the improved coverage that will result with the addition of the new telecommunications site.

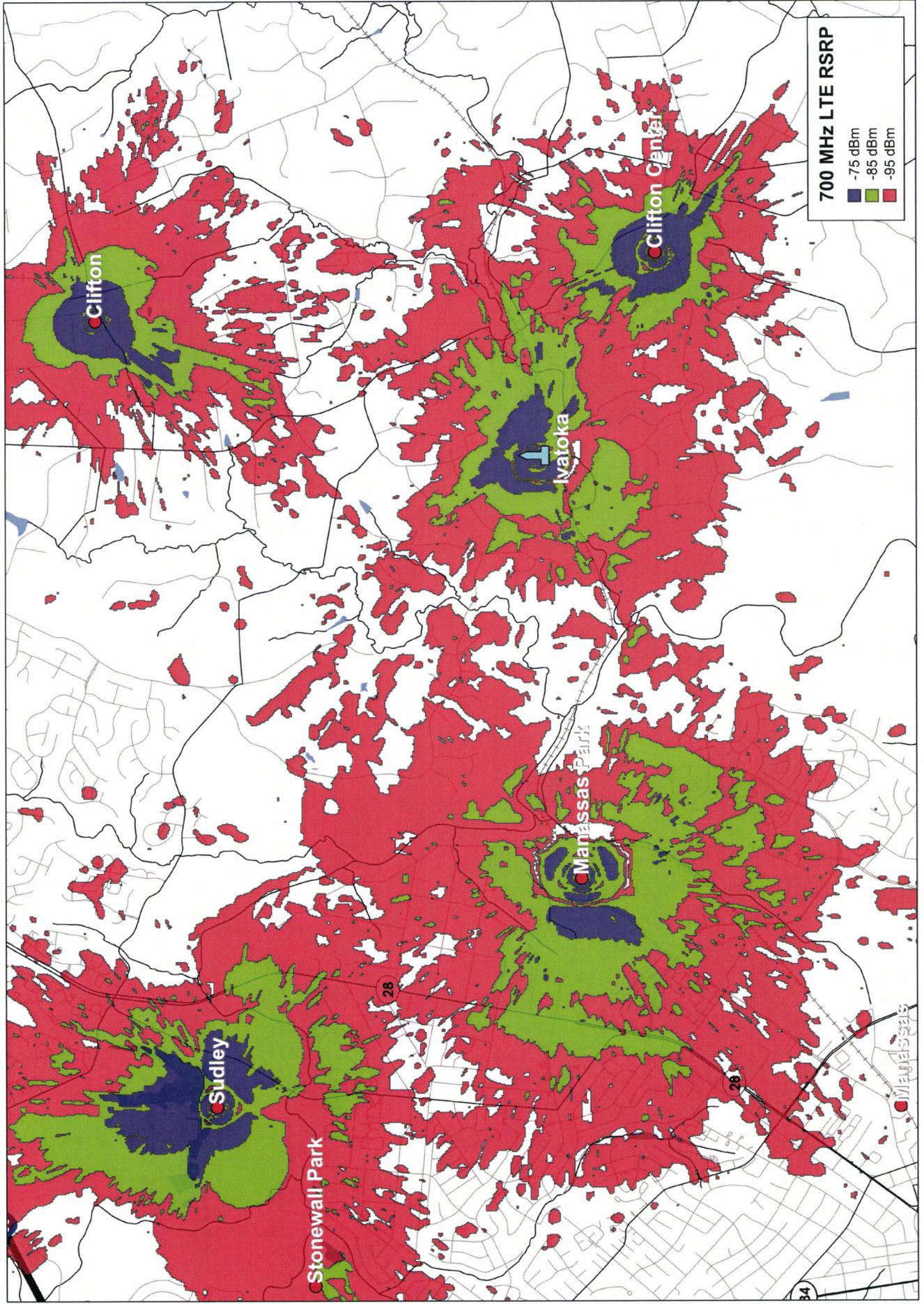
Shawn Boykins  
Radio Frequency Engineer  
9000 Junction Drive  
Annapolis Junction, MD 20701

RECEIVED  
Department of Planning & Zoning  
JUL 18 2014  
Zoning Evaluation Division

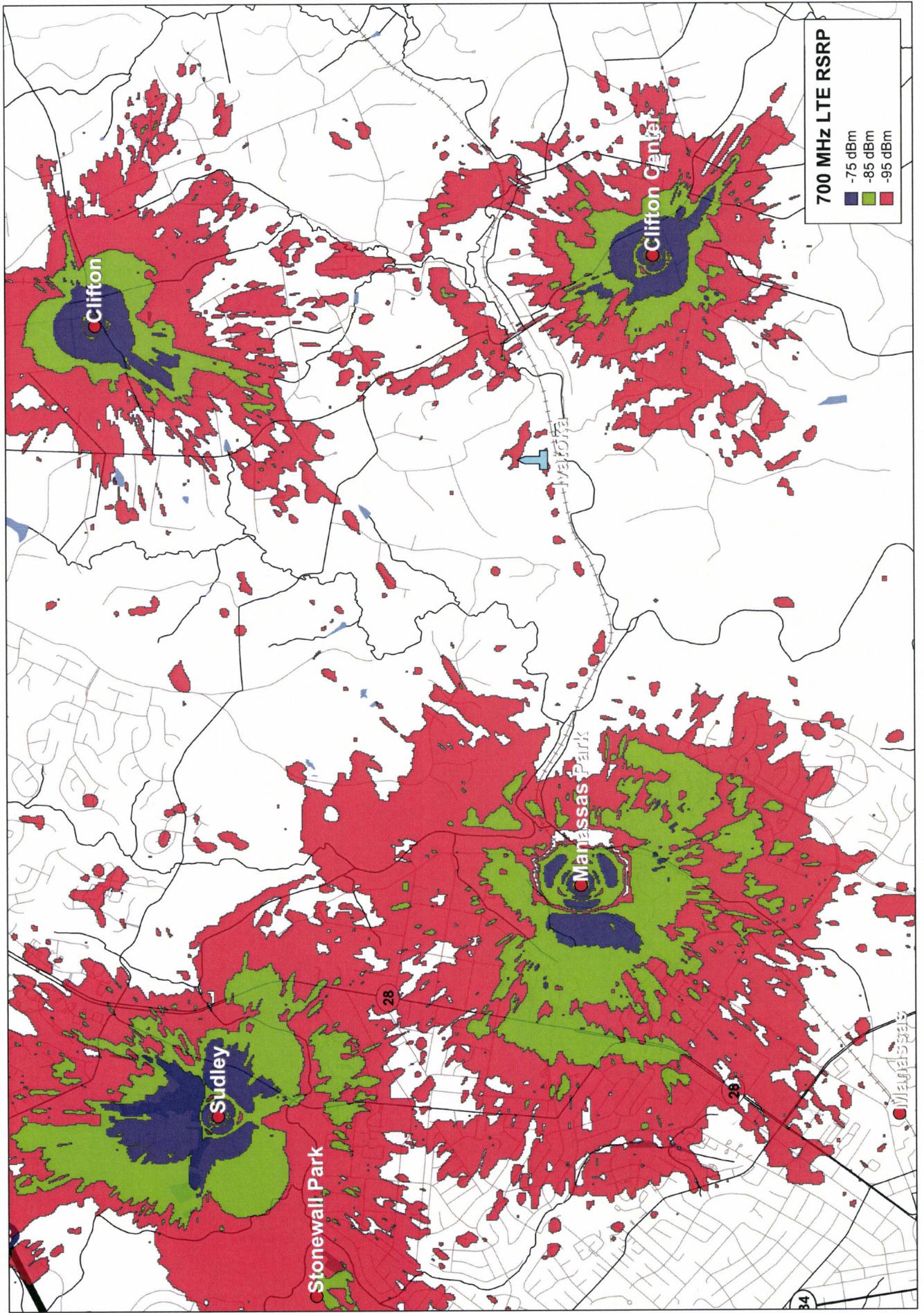
**RF JUSTIFICATION AND  
PROPAGATION MAPS**

**RECEIVED**  
Department of Planning & Zoning  
**JUL 18 2014**  
Zoning Evaluation Division

# Ivatoka with Neighbors at 140'



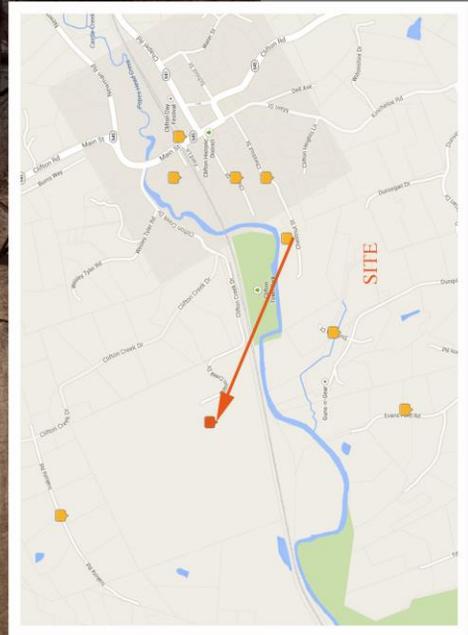
# Ivatoka Neighbors Only



View from Chestnut Street



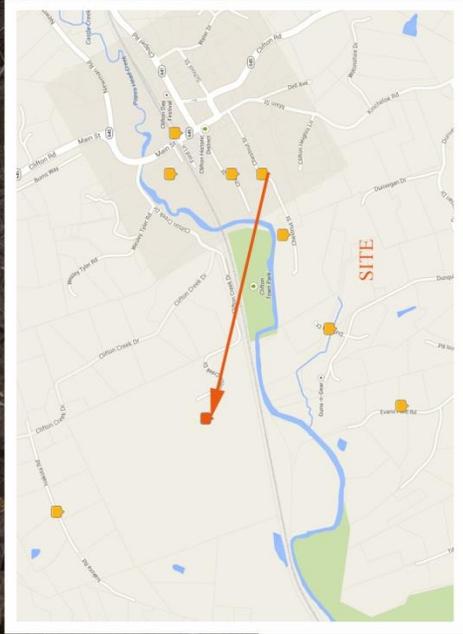
# CLIFTON CREEK SUBSTATION PROPOSED MONOPOLE



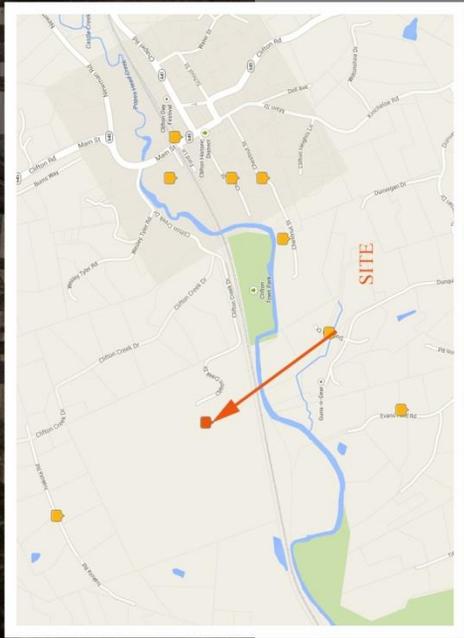
View from Chestnut Street



# CLIFTON CREEK SUBSTATION PROPOSED MONOPOLE

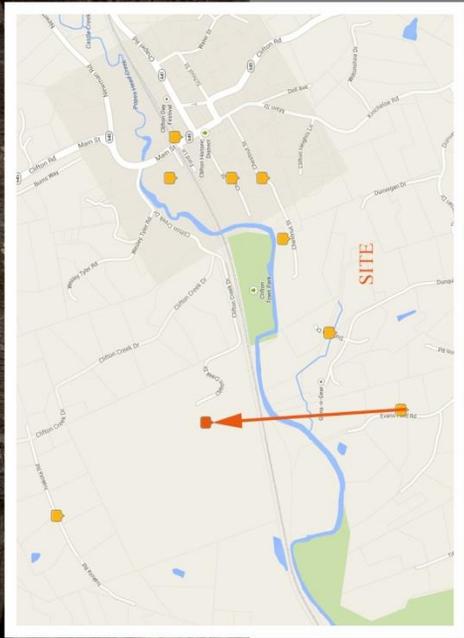
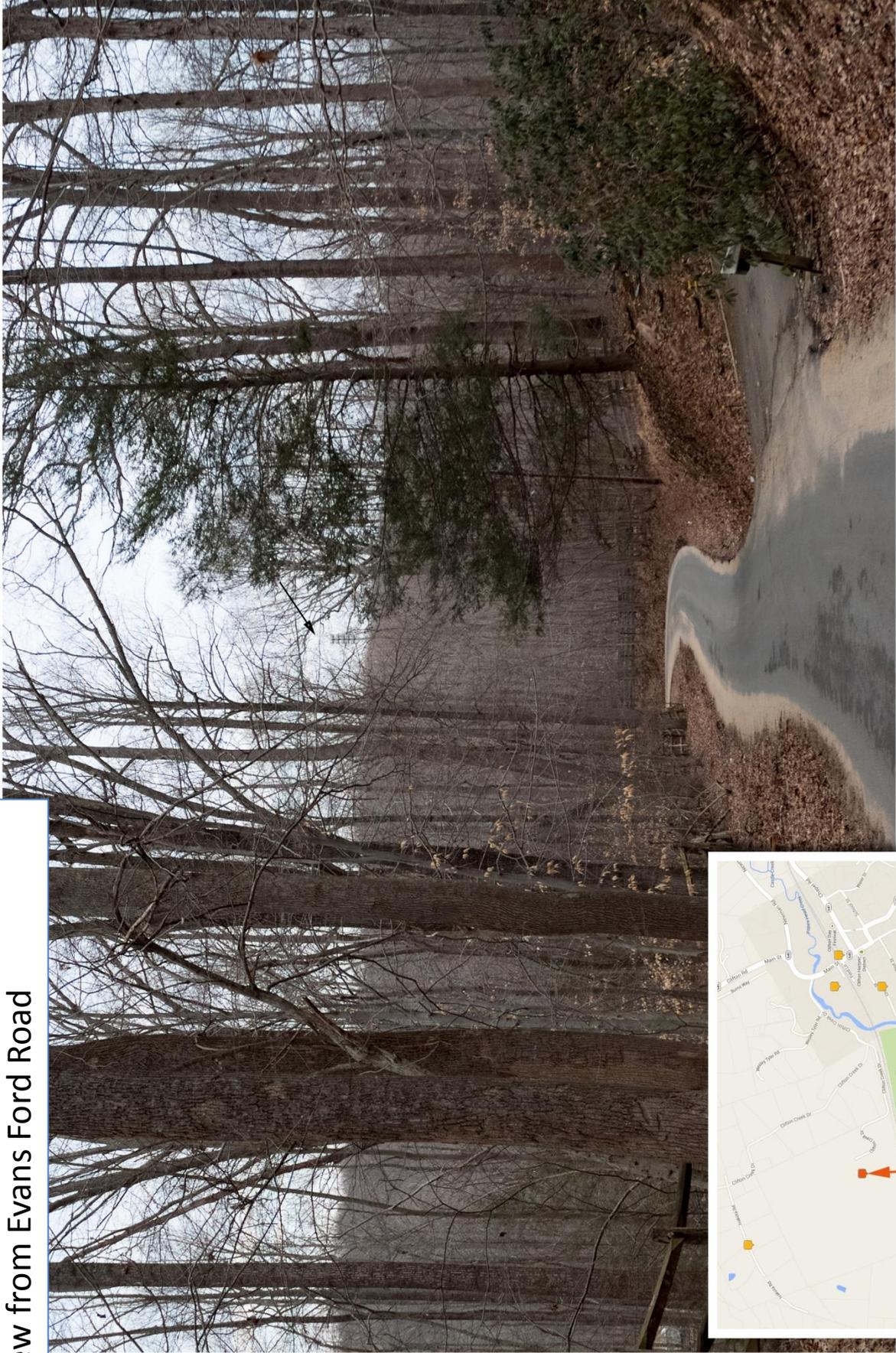


View from Dunquin Court



# CLIFTON CREEK SUBSTATION PROPOSED MONOPOLE

View from Evans Ford Road



# CLIFTON CREEK SUBSTATION PROPOSED MONOPOLE

## View from Chestnut Street



CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPINE



## View from Chestnut Street

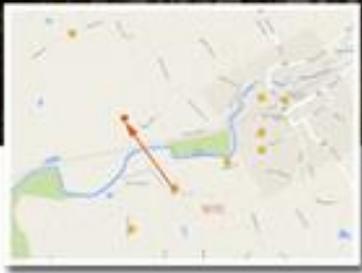
14



CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPINE



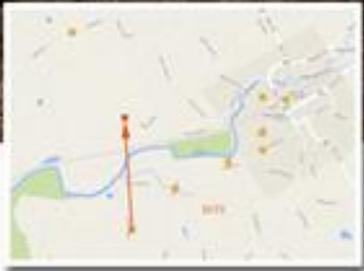
## View from Dunquin Court



CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPINE



## View from Evans Ford Road



CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPINE



**SPECIAL EXCEPTION AFFIDAVIT**

DATE: May 5, 2015  
 (enter date affidavit is notarized)

I, Frank W. Stearns, do hereby state that I am an  
 (enter name of applicant or authorized agent)

128305

(check one)       applicant  
                           applicant's authorized agent listed in Par. 1(a) below

in Application No.(s): SEA 91-S-031  
 (enter County-assigned application number(s), e.g. SE 88-V-001)

and that, to the best of my knowledge and belief, the following information is true:

1(a). The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS, and LESSEES** of the land described in the application,\* and, if any of the foregoing is a **TRUSTEE,\*\*** each **BENEFICIARY** of such trust, and all **ATTORNEYS and REAL ESTATE BROKERS**, and all **AGENTS** who have acted on behalf of any of the foregoing with respect to the application:

**(NOTE:** All relationships to the application listed above in **BOLD** print are to be disclosed. Multiple relationships may be listed together, e.g., **Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner**, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel(s) for each owner(s) in the Relationship column.)

<b>NAME</b> (enter first name, middle initial, and last name)	<b>ADDRESS</b> (enter number, street, city, state, and zip code)	<b>RELATIONSHIP(S)</b> (enter applicable relationships listed in <b>BOLD</b> above)
Cellco Partnership d/b/a Verizon Wireless Brian Stover, Agent	9000 Junction Drive Annapolis Junction, MD 20701	Applicant Tax Map 0753 01 0010 Applicant/Sub-Lessee
Milestone Tower Limited Partnership III Leonard NMI Forkas, Jr., Agent	12110 Sunset Hills Road, Suite 100 Reston, VA 20190	Applicant Tax Map 0753 01 0010 Applicant/Lessee and Sub-Lessor
Virginia Electric and Power Company d/b/a Dominion Virginia Power	701 East Cary Street Richmond, VA 23219	Owner of Tax Map 0753 01 0010 Lessor and Applicant
Donohue & Stearns, PLC Frank W. Stearns Edward L. Donohue	201 Liberty Street Leesburg, VA 20175	Attorneys/Agents/for Milestone Tower Limited Partnership III Applicant/Lessee
NB+C Engineering Services John Rupp, Agent	6095 Marshalee Drive, Suite 300 Elkridge, MD 21075	Engineers/for Milestone Tower Limited Partnership III
TreesPlease Ed Milhouse	6771 Jefferson Street Haymarket, VA 20169	Arborist/for Milestone Tower Limited Partnership III

(check if applicable)       There are more relationships to be listed and Par. 1(a) is continued on a "Special Exception Attachment to Par. 1(a)" form.

\* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.

\*\* List as follows: Name of trustee, Trustee for (name of trust, if applicable), for the benefit of: (state name of each beneficiary).

SPECIAL EXCEPTION AFFIDAVIT

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number(s))

1(b). The following constitutes a listing\*\*\* of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 10 or less shareholders, a listing of all of the shareholders:

**(NOTE: Include SOLE PROPRIETORSHIPS, LIMITED LIABILITY COMPANIES, and REAL ESTATE INVESTMENT TRUSTS herein.)**

CORPORATION INFORMATION

**NAME & ADDRESS OF CORPORATION:** (enter complete name and number, street, city, state, and zip code) Bell Atlantic Mobile Systems, LLC  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF SHAREHOLDERS:** (enter first name, middle initial and last name)

MCI Communications Services, Inc.

(check if applicable)  There is more corporation information and Par. 1(b) is continued on a "Special Exception Affidavit Attachment 1(b)" form.

\*\*\* All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. *In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE\* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE\* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.* Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

MCI Communications Services, Inc.  
One Verizon Way  
Basking Ridge, NJ 07920-1097

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

MCI Broadband Solutions, Inc.

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

MCI Broadband Solutions, Inc.  
901 International Parkway  
Lake Mary, FL 32746

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Terremark Worldwide, Inc.

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Terremark Worldwide, Inc.  
One Biscayne Tower  
2 South Biscayne Boulevard, Suite 2800  
Miami, FL 33131

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Business Network Services, Inc.

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Business Network Services, Inc.  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

MCI Communications Corporation

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

MCI Communications Corporation  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Business Global, LLC

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Business Global, LLC  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Communications, Inc.

(check if applicable)          There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Communications, Inc.  
140 West Street  
New York, NY 10007

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

GTE Wireless Incorporated  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

MFS Globenet Inc.  
GTE Corporation

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

GTE Corporation  
140 West Street  
New York, NY 10007

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Communications Inc.  
NYNEX LLC  
Verizon Ventures LLC

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

NYNEX LLC  
140 West Street  
New York, NY 10007

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Communications Inc.

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Ventures LLC  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Communications Inc.

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

MFS Globenet Inc.  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

MCI International Services, Inc.

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

MCI International Services, Inc.  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

MCI International, Inc.  
Verizon Business Network Services, Inc.

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

MCI International, Inc.  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

MCI Communications Corporation

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

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**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

JV PartnerCo, LLC  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Americas Inc.

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**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Americas Inc.  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Americas Holdings, Inc.

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(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Americas Holdings Inc.  
901 International Parkway  
Lake Mary, FL 32746

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Americas Finance 2 Inc.

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Americas Finance 2 Inc.  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Americas Finance 1 Inc.

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Americas Finance I Inc.  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Communications Inc.

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Verizon Holdings LLC  
One Verizon Way  
Basking Ridge, NJ 07920

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Verizon Americas Inc.

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

178305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Milestone Communications Management III, Inc.  
12110 Sunset Hills Road, Suite 100  
Reston, VA 20190

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Leonard NMI Forkas, Jr.

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Virginia Electric and Power Company d/b/a Dominion Virginia Power  
701 East Cary Street  
Richmond, VA 23219

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

Donohue & Stearns, PLC  
117 Oronoco Street  
Alexandria, VA 22314

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Edward L. Donohue  
Frank W. Stearns

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

NB+C Engineering Services  
6095 Marshalee Drive, Suite 300  
Eldridge, MD 21075

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

Tom Kane

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

**Special Exception Attachment to Par. 1(b)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)  
TreesPlease  
6771 Jefferson Street  
Haymarket, VA 20169

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)  
Ed Milhous

**NAME & ADDRESS OF CORPORATION:** (enter complete name, number, street, city, state, and zip code)

**DESCRIPTION OF CORPORATION:** (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

**NAMES OF THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

(check if applicable)  There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

SPECIAL EXCEPTION AFFIDAVIT

DATE: May 5, 2015
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031
(enter County-assigned application number(s))

1(c). The following constitutes a listing\*\*\* of all of the PARTNERS, both GENERAL and LIMITED, in any partnership disclosed in this affidavit:

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, and number, street, city, state, and zip code)
Cellco Partnership d/b/a Verizon Wireless
One Verizon Way
Basking Ridge, NJ 07920

(check if applicable) [X] The above-listed partnership has no limited partners.

NAMES AND TITLE OF THE PARTNERS (enter first name, middle initial, last name, and title, e.g. General Partner, Limited Partner, or General and Limited Partner)

Bell Atlantic Mobile Systems LLC General Partner
GTE Wireless Inc. General Partner
JV PartnerCo LLC General Partner
PCS Nucleus L.P. General Partner

(check if applicable) [X] There is more partnership information and Par. 1(c) is continued on a "Special Exception Affidavit Attachment to Par. 1(c)" form.

\*\*\* All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE\* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE\* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed. Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

**Special Exception Attachment to Par. 1(c)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**PARTNERSHIP NAME & ADDRESS:** (enter complete name & number, street, city, state & zip code)

PCS Nucleus, L.P.  
One Verizon Way  
Basking Ridge, NJ 07920

(check if applicable)  The above-listed partnership has no limited partners.

**NAMES AND TITLES OF THE PARTNERS:** (enter first name, middle initial, last name, and title, e.g.,  
**General Partner, Limited Partner, or General and Limited Partner)**

Verizon Holdings LLC	General Partner
JV PartnerCo, LLC	General Partner

(check if applicable)  There is more partnership information and Par. 1(c) is continued further on a "Special Exception Attachment to Par. 1(c)" form.

**Special Exception Attachment to Par. 1(c)**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number (s))

**PARTNERSHIP NAME & ADDRESS:** (enter complete name & number, street, city, state & zip code)

Milestone Tower Limited Partnership III  
12110 Sunset Hills Road, Suite 100  
Reston, Va 20190

(check if applicable)  The above-listed partnership has no limited partners.

**NAMES AND TITLES OF THE PARTNERS:** (enter first name, middle initial, last name, and title, e.g.,  
**General Partner, Limited Partner, or General and Limited Partner)**

Milestone Communications Management General Partner  
III, Inc.

(check if applicable)  There is more partnership information and Par. 1(c) is continued further on a  
"Special Exception Attachment to Par. 1(c)" form.

SPECIAL EXCEPTION AFFIDAVIT

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

for Application No. (s): SEA 91-S-031  
(enter County-assigned application number(s))

1(d). One of the following boxes **must** be checked:

In addition to the names listed in Paragraphs 1(a), 1(b), and 1(c) above, the following is a listing of any and all other individuals who own in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE\*** of the land:

Other than the names listed in Paragraphs 1(a), 1(b), and 1(c) above, no individual owns in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE\*** of the land.

2. That no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or through an interest in a partnership owning such land.

**EXCEPT AS FOLLOWS:** (**NOTE:** If answer is none, enter "NONE" on the line below.)

NONE

(check if applicable)  There are more interests to be listed and Par. 2 is continued on a "Special Exception Attachment to Par. 2" form.

Application No.(s): SEA 91-S-031  
(county-assigned application number(s), to be entered by County Staff)

**SPECIAL EXCEPTION AFFIDAVIT**

DATE: May 5, 2015  
(enter date affidavit is notarized)

128305

3. That within the twelve-month period prior to the public hearing of this application, no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household, either directly or by way of partnership in which any of them is a partner, employee, agent, or attorney, or through a partner of any of them, or through a corporation in which any of them is an officer, director, employee, agent, or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has, or has had any business or financial relationship, other than any ordinary depositor or customer relationship with or by a retail establishment, public utility, or bank, including any gift or donation having a value of more than \$100, singularly or in the aggregate, with any of those listed in Par. 1 above.

**EXCEPT AS FOLLOWS:** (NOTE: If answer is none, enter "NONE" on line below.)

During the twelve month period Frank W. Stearns, Esq., a partner in the law firm of Donohue & Stearns, PLC, made contributions in excess of \$100 to Supervisor Pat Herry and Supervisor John Cook. During the twelve month period Leonard NMI Forkas, Jr., with Milestone Tower Limited Partnership III, made contributions in excess of \$100 to Supervisor Pat Herry, Supervisor Lynda Smyth, and Supervisor Jeff McKay.

**NOTE:** Business or financial relationships of the type described in this paragraph that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings. See Par. 4 below.)

(check if applicable)  There are more disclosures to be listed and Par. 3 is continued on a "Special Exception Attachment to Par. 3" form.

4. That the information contained in this affidavit is complete, that all partnerships, corporations, and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE\* of the land have been listed and broken down, and that prior to each and every public hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including business or financial relationships of the type described in Paragraph 3 above, that arise on or after the date of this application.

WITNESS the following signature:

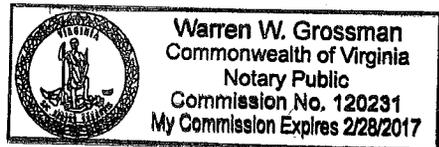
(check one) Frank W. Stearns  
 Applicant  Applicant's Authorized Agent

Frank W. Stearns  
(type or print first name, middle initial, last name, and & title of signee)

Subscribed and sworn to before me this 5<sup>th</sup> day of May, 2015, in the State/Comm. of King William, County/City of LYNDEN.

[Signature]  
Notary Public

My commission expires: \_\_\_\_\_





# County of Fairfax, Virginia

## MEMORANDUM

DATE: May 8, 2015

**TO:** Barbara C. Berlin, Director  
Zoning Evaluation Division, DPZ

**FROM:** Chris Caperton, Chief  
Public Facilities Planning Branch, DPZ

**SUBJECT:** Section 15.2-2232 Review  
**Application 2232-S14-9** (Concurrent with **SEA 91-S-031**)  
Milestone Tower Limited Partnership III, Cellco Partnership d/b/a Verizon  
Wireless, and Virginia Power and Electric Company  
Proposed Telecommunications Facility  
12895 Clifton Creek Drive, Clifton, VA 20124  
Tax Map 0753 01 0010

Pursuant to Va. Code Sec. 15.2-2232, the Public Facilities Planning Branch of the Planning Division offers the following comments and recommendation on the proposed telecommunications facility.

### APPLICATION

*Attachment A*

**Project Description:** The applicants, Milestone Tower Limited Partnership III, Cellco Partnership d/b/a Verizon Wireless, and Virginia Power and Electric Company, propose to construct a 140' tall monopole structure and associated equipment compound designed to hold telecommunications antennas for Verizon and up to 4 future carriers. The proposal is also subject to review and approval of SEA 91-S-031. The installation is needed by Verizon Wireless to provide coverage and capacity in the Clifton area, specifically along Main Street and Clifton Creek Drive. The site will also enhance in-building coverage to the neighboring residential communities.

**Location:** 12895 Clifton Creek Drive, Clifton, VA 20124. The 95.11 acre property is located to the west of Clifton Creek Drive between Ivakota Road to the north and the Southern Railway right-of-way to the south.

**Site:** The site is currently developed with the Clifton substation electrical distribution facility owned by the Virginia Power and Electric Company. The use will be located in the southeast quadrant of the substation property. The site is adjacent to a major electrical transmission easement.

Excellence \* Innovation \* Stewardship  
Integrity \* Teamwork \* Public Service

Department of Planning and Zoning  
Planning Division  
12055 Government Center Parkway, Suite 730  
Fairfax, Virginia 22035-5507  
Phone 703-324-1380  
Fax 703-324-3056  
[www.fairfaxcounty.gov/dpz/](http://www.fairfaxcounty.gov/dpz/)



**Proposed Facility:** The proposed 140' tall monopole and equipment compound will be constructed in an undeveloped area immediately southeast of the substation. Verizon Wireless is the initial carrier, and is installing 12 panel antennas (4 per sector) located with a RAD center of 136' on the structure. The equipment compound is 2,450 square feet, containing the monopole, a 2040 cubic foot equipment shelter and a 234 cubic foot diesel generator.

**Screening:** Mature woodland areas on and adjacent to the substation property in all directions will serve to screen the use from nearby residences and the Town of Clifton. The large acreage of the site, with the nearest residential dwelling unit 1,050 feet away, will assist in mitigating the visual impact of the telecommunication facility. A major transmission power line easement runs through the property and contains numerous tall towers and poles. The proposed equipment compound will be enclosed by an 8' tall chain link fence with brown privacy slats.

**Access:** Access is provided by an existing gravel driveway off of Clifton Creek Drive.

**Operations:** The telecommunications facility will be unmanned and will be visited once or twice a month by a technician for site inspection, repairs, or alterations.

**Service Area:** The proposed use will provide coverage and capacity in the Clifton area, specifically along Main Street and Clifton Creek Drive, and will enhance coverage to the neighboring residential communities.

## **COMPREHENSIVE PLAN GUIDANCE**

The subject property is located in the Area III, Pohick Planning District, Johnny Moore Community Planning Sector. The Comprehensive Plan Map identifies the property as planned for Public Facilities, Governmental and Institutional use.

### **Area Plan**

Fairfax County Comprehensive Plan, Area III, 2013 Edition, Pohick Planning District, Amended through 10-28-2014, P3-Johnny Moore Community Planning Sector, Page 74:

### **“RECOMMENDATIONS**

#### Land Use

.....

2. Nonresidential uses requiring special exception or special permit approval should be rigorously reviewed. In general, these uses should be located at the boundary of Low Density Residential Areas and Suburban Neighborhoods or where their impact on existing residences is minimal. These uses should be granted only if the following conditions are met:

- Access for the use is oriented to an arterial;
- The use is of a size and scale that will not adversely impact the character of the area in which it is located; and
- The use is designed to mitigate impacts on the water quality of the Occoquan Reservoir. [Not shown]

### Heritage Resources

Any development or ground disturbance in this sector, both on private and public land, should be preceded by heritage resource studies, and alternatives should be explored for the avoidance, preservation or recovery of significant heritage resources that are found. In those areas where significant heritage resources have been recorded, an effort should be made to preserve them. If preservation is not feasible, then, in accordance with countywide objectives and policies as cited in the Heritage Resources section of the Policy Plan, the threatened resource should be thoroughly recorded and in the case of archaeological resources, the artifacts recovered.”

Fairfax County Comprehensive Plan, Area III, 2013 Edition, Pohick Planning District, Amended through 10-28-2014, P3-Johnny Moore Community Planning Sector, Page 48:

### Public Facilities

“In order to meet the growing need for public utilities, transmission lines and two electrical substations will be required on Parcel 75-3((1))10 by Virginia Power and the Northern Virginia Electric Cooperative. The Fairfax County Zoning Ordinance requires that electric substation and distribution centers including transformer stations obtain special exception approval. Further, utility transmission facilities including but not limited to poles, structures, or other similar equipment for the transmission of electricity require special exception approval. Under the Zoning Ordinance, transmission lines approved by the State Corporation Commission (SCC) pursuant to Section 56.46.1 of the Code of Virginia, as amended, are not included as utility transmission facilities. Virginia Power and the Northern Virginia Electric Cooperative should participate in the Fairfax County public hearing process for any facilities to be constructed on this site.

There should be no transmission lines through the Town of Clifton. Special exception applications filed for the two electrical substations/distribution centers shall include sufficient acreage surrounding the proposed facilities in order to ameliorate the visual and audio impacts on nearby properties. Additional buffering and screening in excess of minimum Zoning Ordinance provisions shall be required in those areas which do not contain existing substantial vegetation.”

### **Policy Plan**

Fairfax County Comprehensive Plan, Policy Plan, 2013 Edition, Public Facilities, Amended through 3-4-2014, Mobile and Land-Based Telecommunication Services, Pages 37-40:

## GENERAL GUIDELINES

**“Objective 42: In order to provide for the mobile and land-based telecommunication network for wireless telecommunication systems licensed by the Federal Communications Commission, and to achieve opportunities for the co-location of related facilities and the reduction or elimination of their visual impact, locate the network’s necessary support facilities which include any antennas, support structures and equipment buildings or equipment boxes in accordance with the following policies.**

- Policy a. Avoid the construction of new structures by locating proposed telecommunication facilities on available existing structures such as rooftops, telecommunication and broadcast support structures, electrical utility poles and towers, and water storage facilities when the telecommunication facilities can be placed inconspicuously to blend with such existing structures.” .....
- Policy b. “When existing structures are not available for co-location, or co-location is not appropriate because of adverse visual impacts or service needs, locate new structures that are required to support telecommunication antennas on properties that provide the greatest opportunity to conceal the telecommunication facilities and minimize their visual impact on surrounding areas.
- Policy c. When new structures or co-locations are required to serve residential neighborhoods, consider minimizing visual impacts on the surrounding area by utilizing camouflage structure design and/or micro-cell technologies or similar miniaturization technologies, such as distributed antenna systems (DAS), if feasible.
- Policy d. When multiple sites provide similar or equal opportunity to minimize impacts, public lands shall be the preferred location.
- Policy e. Locate mobile and land-based telecommunication facilities on public property only after a lease agreement between the county, or related board or authority, and the service provider has been established.
- Policy f. Ensure that the use of public property by mobile and land-based telecommunication facilities does not interfere with the existing or planned operational requirements of the public use and complies with adopted policies and plans to protect natural resources.
- Policy g. Co-locate mobile and land-based telecommunication facilities operated by different service providers on single sites and/or structures whenever appropriate. Locate single-use structures on a property only when a co-location structure for multiple service providers is not desirable or feasible due to technological differences, site limitations or visual impact concerns.
- Policy h. Ensure that the height of the proposed telecommunication facility is no greater than necessary to allow for co-location on the telecommunication

facility based on its service area requirements while still mitigating the visual impact of the facility.

- Policy i. When new structures, co-locations and/or technologies (such as distributed antenna systems, micro-cell technology or miniaturization technology) are necessary to meet the service area requirements for the residential neighborhood(s), ensure that the height and mass of any appropriate co-location on the telecommunication facility is in character with the surrounding residential area and mitigates the visual impact of the facility on the surrounding residential area.
- Policy j. Design, site and/or landscape proposed telecommunication facilities to minimize impacts on the character of the property and surrounding areas. Demonstrate the appropriateness of the design through facility schematics and plans which detail the type, location, height, and material of the proposed structures and their relationship to other structures on the property and surrounding areas.
- Policy k. Demonstrate that the selected site for a new telecommunication facility provides the least visual impact on residential areas and the public way, as compared with alternate sites. Analyze the potential impacts from other vantage points in the area, especially from residential properties, to show how the selected site provides the best opportunity to minimize its visual impact on the area and on properties near the proposed site.
- Policy l. A key concept in assessing telecommunication facilities is mitigation which is defined as actions taken to reduce or eliminate negative visual impacts. Mitigate the visual impact of proposed telecommunication facilities and their equipment, by using effective design options appropriate to the site such as:
- Design, site and/or landscape the proposed facility to minimize impacts on the character of the area;
  - Locate proposed telecommunication facilities near or within areas of mature vegetation and trees that effectively screen or provide an appropriate setting for the proposed structure provided such location does not adversely impact sensitive resources or cause fragmentation of forested communities. When viewed in context, consider perspective views, relative topography and other factors, to mitigate the visual presence and prominence of the structure;
  - Blend proposed telecommunication facilities with an existing pattern of tall structures;
  - Obscure or block the views of proposed telecommunication facilities with other existing structures, vegetation, tree cover, or topographic features to the maximum extent feasible; and
  - Replace existing telecommunication facilities with taller structures or extend their overall height to reduce the need for another structure

when such height increases or structure replacements are visually appropriate to the site, including the surrounding area and are consistent with the type, style and pattern of the existing structure.

- Policy m. Locate proposed telecommunication facilities to ensure the protection of historically significant landscapes and cultural resources. The views of and vistas from architecturally and/or historically significant structures should not be impaired or diminished by the placement of telecommunication facilities.
  - Policy n. Site proposed telecommunication facilities to avoid areas of environmental sensitivity, such as steep slopes, floodplains, wetlands, environmental quality corridors, and resource protection areas.
  - Policy o. Site proposed telecommunication facilities to allow for future expansion and with corresponding levels of screening to accommodate expansion.
  - Policy p. Design and site proposed telecommunication facilities to preserve areas necessary for future right-of-way dedication and ancillary easements for construction of road improvements.
  - Policy q. Locate and construct antennas used for purposes other than mobile and land-based telecommunication services in accordance with the same guidelines established in this "Mobile and Land-Based Telecommunications Services" section.
- Objective 43: Design proposed telecommunication facilities to mitigate their visual presence and prominence, particularly when located in residential areas, by concealing their intended purpose in a way that is consistent with the character of the surrounding area. (See Figures 11 and 12.)**
- Policy a. Disguise or camouflage the appearance of proposed telecommunication facilities to resemble other man-made structures and natural features (such as flagpoles, bell towers, and trees) that are typically found in a similar context and belong to the setting where placed.
  - Policy b. Design proposed telecommunication facilities that are disguised and camouflaged to be of a bulk, mass and height typical of and similar to the feature selected.
  - Policy c. Use other new and existing structures and vegetation of comparable form and style to establish a grouping that complements a camouflaged telecommunication facility and supports its design, location and appearance."

## **STAFF ANALYSIS**

### **Department of Planning and Zoning - Zoning Administration Division *Attachment B***

The proposed application general meets those standards set forth in Par. 3 of Sect. 2-514 of the Zoning Ordinance. In addition, an amendment to the governing special exception is required and has been submitted to the Zoning Evaluation Division.

### **CONFORMANCE WITH THE COMPREHENSIVE PLAN**

*Attachment C*

Va. Code Sec. 15.2-2232, as amended, requires the Planning Commission to determine whether the general location or approximate location, character, and extent of the proposed facility, as amended, are substantially in accord with the adopted Comprehensive Plan:

#### **Location**

The proposed telecommunications facility will be located on the same parcel as an existing electrical substation. The exact site of the enclosed compound will be adjacent and to the south of the enclosed substation site. A transmission easement with utility poles of comparable height to the proposed monopole is located to the north and east, and the Southern Railway right-of-way is located to the south of the proposed site. The location is consistent with Comprehensive Plan objectives to locate new facilities that provide the greatest opportunity to conceal the facility and minimize its visual impact on surrounding areas. The ability to provide room on the monopole for four future carriers is consistent with the Comprehensive Plan guidelines of co-locating mobile and land-based telecommunication facilities operated by different service providers on single sites and/or structures wherever possible.

#### **Character**

Comprehensive Plan guidelines state that new structures are to be of comparable form and style to establish a grouping that complements a camouflaged telecommunication facility and supports its design, location, and appearance. Existing electrical towers on the property are constructed from the same material and are of a similar height, approximately 122'-137' tall. The proposed monopole also meets Plan objectives to blend telecommunication facilities with an existing pattern of tall structures, and that the use is of a size and scale that will not adversely impact the character of the area in which it is located.

The equipment cabinet compound at the base of the proposed tower is screened by an 8' tall chain link fence with brown privacy slats. The site is buffered by mature woodlands that surround the site on all sides, along with the existing substation to the north, transmission easement to the north and east, and the railroad right-of-way to the south.

The proposal meets Comprehensive Plan guidelines to design, site and/or landscape the proposed facility to minimize impacts on the character of the area, and to obscure or block the views of proposed telecommunication facilities with other existing structures, vegetation, tree cover, or topographic features to the maximum extent feasible.

**Extent**

The proposed monopole will be located on an electrical substation property that contains 95.11 acres and is identified on the Comprehensive Plan map as Public Facilities, Governmental, and Institutional use. The monopole will be located approximately 1,450 feet west of Clifton Creek Drive, with the nearest residential dwelling unit located approximately 1,050 feet to the east. No adverse impacts on stream valleys, watersheds, natural or scenic areas, or agricultural lands are envisioned. The proposed monopole will be unmanned and will be visited one or twice a month by a technician, therefore, the proposed facility will have no impact on traffic or parking. The proposed telecommunication facility is consistent with Comprehensive Plan guidelines to ensure that new structures are necessary to meet the service area requirements, the height and mass of the telecommunication facility is in character with the surrounding area, and the visual impact of the facility on surrounding areas is mitigated.

**CONCLUSION AND RECOMMENDATIONS**

Staff concludes that the subject proposal, as amended, by Milestone Tower Limited Partnership III, Cellco Partnership d/b/a Verizon Wireless, and Virginia Power and Electric Company, to install a telecommunications facility at 12895 Clifton Creek Drive, Clifton, VA 20124, satisfies the criteria of location, character, and extent as specified in Va. Code Sec. 15.2-2232, as amended.

Staff therefore recommends that the Planning Commission find the subject Application **2232-S14-9**, as amended, substantially in accord with provisions of the adopted Comprehensive Plan.

CBC: HDC

ATTACHMENT A



**COUNTY OF FAIRFAX, VIRGINIA  
APPLICATION FOR DETERMINATION  
PURSUANT TO VIRGINIA CODE SECTION 15.2-2232**

\*\*\* This area to be completed by staff \*\*\*

**APPLICATION NUMBER** 2232-S14-9

Date application received \_\_\_\_\_ by \_\_\_\_\_

Date(s) Revised \_\_\_\_\_

Date application accepted \_\_\_\_\_ by \_\_\_\_\_

(Please Type or Clearly Print)

**PART I: APPLICATION SUMMARY**

**LOCATION OF PROPOSED USE**

Address 12895 Clifton Creek Drive

City/Town Clifton Zip Code 20124

Place Name (example: Dale High School) Clifton Substation

Tax Map I.D. Number(s) 0753 01 10

Fairfax County Supervisor District Springfield

**APPLICANT(S)**

Name (Company or Agency) Milestone Tower Limited Partnership III, Cellco Partnership d/b/a Verizon Wireless; Virginia Power and Electric Company

Agent Name Frank W. Stearns

(Note: Failure to notify County of a change in agent may result in application processing delays)

Agent's Mailing Address 201 Liberty Street

City/Town Leesburg State VA Zip Code 20175

Telephone Number (703) 726-2547 Fax (703) 737-3793

E-mail fwstearns@donohuestearns.com

Secondary Contact Cristian Hernandez

Telephone Number (703) 620-2555 x102 E-mail cris@milestonecorp.com

**BRIEF DESCRIPTION OF PROPOSED USE**

Construction of a telecommunications monopole structure with an overall height of 140 feet above ground level and an associated 35 feet by 70 feet (2,450 square feet) equipment compound area. The monopole and equipment compound are designed to accommodate a total of five telecommunication carriers. Verizon Wireless will be the initial carrier on the facility and up to four additional carriers will co-locate on the facility in the future.

Total Area of Subject Parcel(s) 95.11 acres

Zoning District R-C (WS)

Applicant's previous Zoning Approvals for all uses on site (proffered conditions, special permits, special exceptions, variances, development plans)

None by applicant. Others pertaining to site:

SE 91-S-031

SE 91-S-046

**PROPERTY OWNER(S) OF RECORD**

Owner Virginia Electric and Power Company c/o Blaine Garrett

Street Address PO Box 27007, 12th Dominion Resources Inc.

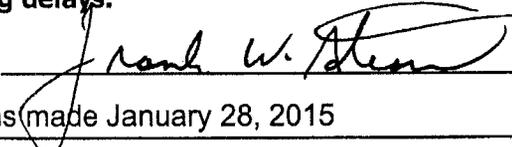
City/Town Richmond State VA Zip Code 23261

Has property owner been contacted about this proposed use?  YES  NO

**SIGNATURE**

**The undersigned acknowledges that additional Fairfax County land use review requirements may be identified during the review of this 2232 Review application and the fulfillment of such requirements is the responsibility of the applicant. The undersigned also acknowledges that all Fairfax County Zoning Ordinance requirements pertaining to this project shall be fulfilled.**

**In the event a new agent is assigned responsibility for this application, the applicant agrees to provide a letter to the Department of Planning and Zoning authorizing the transfer of responsibility for the application and providing all new contact information. In the event the applicant fails to notify County staff of a change in agent, the application may be subject to processing delays.**

Signature of Applicant or Agent 

Date July 15, 2015; Revisions made January 28, 2015

**Submit completed application to:**

**Chris Caperton, Chief, Facilities Planning Branch  
Fairfax County Department of Planning and Zoning  
12055 Government Center Parkway, Suite 730  
Fairfax, Virginia 22035-5507  
(703) 324-1380**

**PART II: STATEMENT OF JUSTIFICATION**

**PART IV: TELECOMMUNICATION USES**  
*(Do not submit for non-telecommunications public facility uses)*

**A. TYPE OF PROPOSED FACILITY** Check the appropriate box(es) and provide the required information

	<b>Yes</b>	<b>No</b>
New monopole* or tower	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Collocation on existing monopole or tower	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Collocation on building facade or rooftop	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Collocation on replacement light pole or utility pole	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Located in utility or transportation easement and/or right-of-way	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Modification to approved telecommunications facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Collocation on other structure _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*\*Including treepoles, flagpoles and other freestanding stealth structures.*

**B. CALCULATION OF FACILITY MODIFICATIONS** for modifications to an approved telecommunications facility, provide the following:

1. Application number(s) (456-, 2232-, FS-, FSA-) for all applicant's prior telecommunications uses on site:

None by applicant

2. Calculate the surface area, in square inches (height x width **or** height x diameter), of the applicant's antennas organized in the following categories:

- a. approved \_\_\_\_\_
- b. existing \_\_\_\_\_
- c. proposed 6 antennas @ 1,059.5 sq. in. each and 6 antennas @ 297.3 sq. in. each = 8,140.6 total square inches

3. Calculate the volume (height x width x depth) of the applicant's equipment cabinets (in cubic inches) and/or shelter (in cubic feet) organized in the following categories:

- a. approved \_\_\_\_\_
- b. existing \_\_\_\_\_
- c. proposed cabinet 1 = 53.2 cu. ft.; cabinet 2 = 43.0 cu. ft.; generator = 233.9 cu. ft.

**C. ANTENNA(S)** Provide a separate page for each provider listed as part of the application

Provider Verizon Wireless

Model # or name	Type Panel, Dish, Omni	Quantity	Height	Width	Diameter	Location height on the structure
BXA-70063-8CF	Panel	6	94.6"	11.2"		140' rad center
BXA-171063-12BF	Panel	6	72.5"	4.1"		140' rad center

Existing structure color: galvanized steel- silver Antenna color: silver

Is antenna painted to match existing structure? Yes  No

If No, please explain: Antenna will match the new monopole strucutre

Will the antennas be screened? Yes  No  If Yes, describe the screening to be provided:

Will the antennas be flush-mounted to the structure on which they are located? Yes  No

If No, please explain: Antenna will be attached to platform on strucutre

Additional information:

**D. EQUIPMENT**

Model # or name	Type cabinet or shelter	Quantity	Height	Width	Depth	Location
Charles LT-PM63922RF2	Cabinet	1	89.1"	32"	32.3"	equipment compound
Charles Cube-BBDLJ2HN1	Battery Cabinet	1	73"	32"	32"	equipment compound
Power Backup	Generator	1	7'8"	9'2"	3'4"	equipment compound

How will the equipment cabinet or shelter be screened? fence

Screen material: chain link with slats Screen color: brown

Additional information:

The compound and equipment is on a 95.1 acre site surrounded by wooded areas.

**Application for Determination  
Pursuant to  
Section 15.2-2232, Code of Virginia**

**Part II: Statement of Justification**

<b>Applicants:</b>	Milestone Tower Limited Partnership III, Cellco Partnership d/b/a Verizon Wireless, and Virginia Power and Electric Company
<b>Site Name:</b>	Clifton Substation
<b>Property Address:</b>	12895 Clifton Creek Drive, Clifton, Virginia 20124 (the "Property")
<b>Supervisor District:</b>	Springfield
<b>Parcel Number:</b>	075 3 01 0010
<b>Comprehensive Plan:</b>	Public Facilities, Governmental and Institutional Use
<b>Zoning Classification:</b>	Residential-Conservation District, R-C (WS)
<b>Property Owner:</b>	Virginia Electric and Power Company

**Description of Proposed Use**

Pursuant to Section 15.2-2232 of the Code of Virginia, Milestone Communications, Cellco Partnership Verizon Wireless, along with the property owner, Virginia Power and Electric Company ("Applicant") respectively request that a proposed 140 feet tall telecommunications facility monopole structure with a supporting equipment compound at the base be approved at the Clifton Substation, 12895 Clifton Creek Drive, Clifton, VA 20124.

The Property consists of 95.11 acres, is zoned R-C (Residential Conservation), and is planned for Public Facilities, Governmental and Institutional use. The property is owned by the Virginia Electric and Power Company and is currently improved with an electric substation. It is adjacent to and connects with utility structures located in major electrical transmission corridor with an easement width of two hundred thirty feet (230') that runs from east to west across the property. The existing substation use is located within a fenced area with two transformer banks consisting of seven transformers, circuits, and a 70' by 20' building that houses control and communications equipment. The existing substation facility occupies approximately 8.1 acres of the total 95.11 acre site. It operates continuously and is unmanned with only routine service visits. Access to the substation property is via a controlled access gravel driveway off of Clifton Creek Drive. The existing substation property is bordered by heavy vegetation in all directions except as cleared for the transmission easement and transmission lines.

The substation on the property was approved under special exception SE 91-S-031 on March 9, 1992. A special exception amendment application has been submitted with the Zoning Evaluation Division of the Department of Planning and Zoning for the proposed telecommunications facility described in this 2232 Review application.

The proposed facility will consist of a one hundred forty feet (140') tall monopole structure and associated equipment to house a telecommunications use. The use will be designed to accommodate up to a total of five (5) wireless telecommunications carriers, including the co-applicant, Verizon Wireless. The use will be located in the southeast quadrant of the substation property, approximately 545 feet north of the Norfolk and Southern Railroad corridor and 1,700 feet west of Clifton Creek Drive.

Milestone will enter into a lease agreement with the Owner, Virginia Power and Electric Company, pursuant to which Verizon Wireless will install and operate a wireless telecommunications facility on the Property. Verizon Wireless will install up to twelve (12) antennas on the monopole in three sectors at a rad center elevation of one hundred forty feet (140'). Verizon Wireless will use two antenna models for the facility: one model will measure approximately ninety-four point six inches (94.6") high by eleven point two inches (11.2") wide and one model will measure approximately seventy-two point five inches (72.5") high by four point one (4.1) inches wide. The antenna details are provided on Sheet A-4 of the Zoning Drawings.

The monopole is designed to accommodate up to four additional future telecommunication carriers at rad center heights of one hundred thirty feet (130'), one hundred twenty feet (120'), one hundred ten feet (110') and one hundred feet (100'). An elevation of the monopole showing the location of all antenna platforms is provided on Sheet A-1 of the Zoning Drawings.

Verizon Wireless will have two steel equipment cabinets, one measuring thirty two inches (32") by thirty two point three inches (32.3") by eighty nine point one inches (89.1") tall and one measuring thirty two inches (32") by thirty two inches (32") by seventy three inches (73") tall, inside the cabinet area. The cabinet area will be covered by a metal canopy with a three inch (3") metal decking roof and measuring twenty feet (20') wide by eight feet six inches (8'6") tall. Verizon Wireless will also install a back-up generator measuring nine feet two inches (9'2") long by three feet four inches (3'4") wide by seven feet eight inches (7'8") high on a concrete pad within the compound area. The monopole and the compound area will be designed to support Verizon's antennas and equipment and that of up to four (4) additional telecommunication carriers. The overall compound area will be enclosed by an eight feet (8') tall chain link fence with brown privacy slats and a 12 feet (12') wide access gate. A compound plan is provided on Sheet A-1 of the Zoning Drawings. The equipment and fencing details are provided on Sheet A-3.

The installation proposed by Verizon Wireless will not interfere with radio, television or telephone reception and the radio frequency emissions will comply with all applicable EPA and FCC emission requirements. Furthermore, neither the antennas nor the related equipment will produce any noise, fumes, dust, odors, lights, glare or vibrations.

### **Requirement of Proposed Use**

The area served by the proposed telecommunications use is depicted on the attached Verizon radio frequency coverage maps. The map identified as "Ivatoka Neighbors Only" shows

the current Verizon coverage in the general area as provided by existing or pending sites labeled on the map as "Manassas Park", "Stonewall Park", "Sudley", "Clifton", and "Clifton Creek." The map identified as "Ivatoka with Neighbors at 140'", shows the coverage from the existing and pending sites in the general area with the projected improvement in the coverage from a new 140 feet tall monopole on the subject application site identified on the map as "Ivatoka".

Verizon Wireless' objective for this site is to provide coverage and capacity in the Clifton area, specifically along Main Street and Clifton Creek Drive. The site will also enhance in-building coverage to the neighboring residential communities. The new Ivatoka site will resolve the need for adequate coverage in the area surrounding the proposed site and also ensure adequate overlapping coverage between and among existing Verizon sites in this general area. Ultimately, the proposed site will allow residents and commuters to experience better quality and diminished dropped calls.

To achieve the desired coverage and capacity within the intended geographical area, each antenna facility must be strategically located so as to ensure maximum coverage and a minimum overlap with each other facility. Because of the low power of the system, the antennas are effective only within a limited geographical area. Thus, each facility site is subject to technical and geographical constraints in order to provide reliable and efficient service. The proposed facility is necessary to meet Verizon Wireless' objectives for the area and will further satisfy similar needs of other wireless telecommunications carriers in the future. Moreover, the proposed height of the structure allows placement of the antennas at a sufficient height so as to permit radio signals to clear any obstructions such as trees and structures while simultaneously providing coverage to the intended service area and allowing for the collocation of up to four (4) additional wireless carriers at the site.

Since one of the primary benefits of the wireless communication system is the ability to communicate to and from any location, a network of facilities that provide seamless coverage is essential. The location and design of each facility in the network is therefore critical to the overall functioning of the entire network. Without a facility at or near this location, Verizon Wireless will be unable to provide reliable coverage to its users in the area.

#### **Anticipated Impacts On Adjoining Properties**

The telecommunications facility will be located on an electrical substation property consisting of 95.11 acres. The property is identified on the Comprehensive Plan map as "Public Facilities, Governmental and Institutional". The immediately surrounding area is shown on the Comprehensive Plan for Residential Use at .1 - .2 dwelling units per acre.

The property is currently used for an unmanned electric substation that borders a major utility corridor containing two electrical transmission lines supported by a combination of lattice tower and pole structures, and an underground-liquefied natural gas pipeline. The existing transmission structures in this utility corridor are approximately 122 feet to 137 feet in height (see Sheet of the Zoning Drawings for tower elevation details). The use will be located in the southeast quadrant of the substation property, approximately 545 feet north of the Norfolk and Southern Railroad corridor and approximately 1,450 feet west of Clifton Creek Drive. The

nearest residential dwelling unit is approximately 1,050 feet to the east of the proposed telecommunications compound.

The overall substation property is bordered in all directions by wooded areas except as cleared for the transmission easement and substation. The property's size, the distance to residences, the nature of the nature of the surrounding area, and the other comparable tall transmission structures in the area will minimize impacts and the proposed use will not adversely affect the existing or proposed uses envisioned for this area by the Comprehensive Plan. The use will not impact watercourses, stream valleys or watersheds nor will degrade wooded, natural and scenic areas or agricultural lands. The overall addition of the monopole structure and equipment compound to the existing sub-station property will not increase the impact on the surrounding R-C (WS) zoned area.

The proposed facility will have no impact on traffic or parking as the facility will be unmanned and does not generate vehicular traffic other than the once or twice a month for a technician to visit to ensure everything is in proper working order. The technician uses a standard vehicle and will have access to the structure and compound via an existing access drive to the substation property from Clifton Creek Drive. There is no perceptible noise generated by the facility, except as needed for the emergency generator use, and there will be no interference with electronic equipment for telephone, television, radio or other electronic uses.

#### **Alternative Sites Considered for the Proposal**

The proposed monopole will be located to fill an existing service void and to address capacity issues. The overall area is characterized by existing large lot single-family residential development and collocation on tall existing tall buildings in the area is not an option. Public property to the west is owned by the Fairfax County Park Authority, undeveloped and heavily wooded. Use of this property would require substantial clearing and site disturbance in order to locate a telecommunication use on the property. Other than a small elementary school site to the southeast, and a *place* of worship or commercial properties in the historic Clifton area, there are no non-residential sites in the immediate area as an alternative location.

The applicant identified existing structures of sufficient height in the existing electrical transmission corridor in the general area where the monopole is proposed to be located. However, the existing Dominion Virginia Power (DVP) transmission towers in this corridor that are of sufficient height and structurally capable of accommodating a telecommunications use are already occupied by other telecommunications carriers. By adding the Verizon Wireless equipment to these towers, failure will occur. There are no other suitable structures in the immediate area that are structurally capable of collocation or will fulfill the applicant's service area objectives.

#### **Relationship of the Proposed Facility to the Comprehensive Plan**

The property is located in the Johnny Moore Community Planning Sector (P3) of the Pohick Planning District in Planning Area III and is planned for Public Facilities, Governmental and

Institutional use. On page 50 of the Pohick Planning District section of the Fairfax County Comprehensive Plan, as amended through 4-9-2013 the Plan states:

“1. In order to meet the growing need for public utilities, transmission lines and two electrical substations will be required on Parcel 75-3((1))10 by Virginia Power and the Northern Virginia Electric Cooperative. The Fairfax County Zoning Ordinance requires that electric substation and distribution centers including transformer stations obtain special exception approval. Further, utility transmission facilities including but not limited to poles, structures, or other similar equipment for the transmission of electricity require special exception approval. Under the Zoning Ordinance, transmission lines approved by the State Corporation Commission (SCC) pursuant to Section 56.46.1 of the Code of Virginia, as amended, are not included as utility transmission facilities. Virginia Power and the Northern Virginia Electric Cooperative should participate in the Fairfax County public hearing process for any facilities to be constructed on this site.

There should be no transmission lines through the Town of Clifton. Special exception applications filed for the two electrical substations/distribution centers shall include sufficient acreage surrounding the proposed facilities in order to ameliorate the visual and audio impacts on nearby properties. Additional buffering and screening in excess of minimum Zoning Ordinance provisions shall be required in those areas which do not contain existing substantial vegetation.”

The proposed meets the requirements of Policy Plan’s Public Facilities element for Mobile and Land Based Telecommunication uses as addressed in the following:

### **General Guidelines**

**Objective 42:** In order to provide for the mobile and land-based telecommunication network for wireless telecommunication systems licensed by the Federal Communications Commission, and to achieve opportunities for the collocation of related facilities and the reduction or elimination of their visual impact, locate the network’s necessary support facilities which include antennas, support structures and equipment buildings or equipment boxes in accordance with the following policies.

**Policy a.** Avoid the construction of new structures by locating proposed telecommunication facilities on available existing structures such as rooftops, telecommunication and broadcast support structures, electrical utility poles and towers, and water storage facilities when the telecommunication facilities can be placed inconspicuously to blend with such existing structures. (See Figures 8, 9, 10.)

*Applicants’ Response:* The applicant identified existing structures of sufficient height in the existing electrical transmission corridor in the general area where the monopole is proposed to be located. However, the existing Dominion Virginia Power (DVP) transmission towers in this corridor that are of sufficient height and structurally capable of accommodating a telecommunications use are already occupied by other telecommunications carriers. By adding the Verizon Wireless equipment to these towers, failure may likely occur. There are no other

suitable structures for collocation in the immediate and surrounding areas that fulfill Verizon's service area objectives.

**Policy b. When existing structures are not available for co-location, or co-location is not appropriate because of adverse visual impacts or service needs, locate new structures that are required to support telecommunication antennas on properties that provide the greatest opportunity to conceal the telecommunication facilities and minimize their visual impact on surrounding areas.**

*Applicants' Response:* The proposed monopole and compound will be located on a large 95-acre property developed with an electrical power substation that contains and is adjacent to an existing major electrical transmission corridor approximately 230 feet in width. The transmission easement that runs through the property and then to both the northwest and southeast contains two rows of large transmission structures in the form of lattice towers and steel poles approximately one hundred twenty two feet (122') to one hundred thirty seven feet (137') in height. Eight tall poles and towers are located on the easement through the property. Another five tall poles are used to connect the substation with the major transmission line and to distribute power off the property to the south and southwest. At least three poles on the property also are used for the collocation of other telecommunication facilities. The proposed monopole will be compatible and blend with the numerous existing tall structures on the property and those along the utility corridor. The site is also and buffered by wooded areas on and adjoining the 95-acre property. As such the proposed facility will have minimal visual impact on surrounding areas.

**Policy c. When new structures or co-locations are required to serve residential neighborhoods, consider minimizing visual impacts on the surrounding area by utilizing camouflage structure design and/or micro-cell technologies or similar miniaturization technologies, such as distributed antenna systems (DAS), if feasible.**

*Applicants' Response:* The proposed structure will not have a camouflaged design but will be located on a large public utility site and will blend with existing tall structures, most approximately one hundred twenty two feet (122') to one hundred thirty seven feet (137') in height, used for electrical transmission purposes in the immediate area.

**Policy d. When multiple sites provide similar or equal opportunity to minimize impacts, public lands shall be the preferred location.**

*Applicants Response:* There are no public sites in the immediate area with an equal opportunity to locate the structure and minimize impacts.

**Policy e. Locate mobile and land-based telecommunication facilities on public property only after a lease agreement between the County, or related board or authority, and the service provider has been established.**

*Applicants Response:* The structure will not be located on a public use site.

**Policy f. Ensure that the use of public property by mobile and land-based telecommunication facilities does not interfere with the existing or planned operational requirements of the public use and complies with adopted policies and plans to protect natural resources.**

*Applicants Response:* The proposed structure will not be located on a public use site.

**Policy g. Co-locate mobile and land-based telecommunication facilities operated by different service providers on single sites and/or structures whenever appropriate. Locate single-use structures on a property only when a co-location structure for multiple service providers is not desirable or feasible due to technological differences, site limitations or visual impact concerns.**

*Applicants' Response:* The proposed 140-foot tall monopole will accommodate up to a total of five telecommunication providers, including the co-applicant Verizon Wireless.

**Policy h. Ensure that the height of the proposed telecommunication facility is no greater than necessary to allow for co-location on the telecommunication facility based on its service area requirements while still mitigating the visual impact of the facility.**

*Applicants' Response:* The 140-foot height of the proposed monopole is the minimum extent feasible to meet wireless coverage objectives and accommodate up to five telecommunication carriers. The height is consistent with adjacent and nearby utility transmission structures and will not have a visual impact on surrounding areas.

**Policy i. When new structures, co-locations and/or technologies (such as distributed antenna systems, micro-cell technology or miniaturization technology) are necessary to meet the service area requirements for the residential neighborhood(s), ensure that the height and mass of any appropriate co-location on the telecommunication facility is in character with the surrounding residential area and mitigates the visual impact of the facility on the surrounding residential area.**

*Applicants' Response:* The proposed monopole structure is in keeping with other large poles and towers of comparable height on the property and in the power transmission that runs through the substation property. The monopole is designed to accommodate up to five telecommunication carriers in an integrated placement of antennas at ten-foot intervals.

**Policy j. Design, site and/or landscape proposed telecommunication facilities to minimize impacts on the character of the property and surrounding areas. Demonstrate the appropriateness of the design through facility schematics and plans which detail the type, location, height, and material of the proposed structures and their relationship to other structures on the property and surrounding areas.**

*Applicants' Response:* The proposed monopole is of similar height and scale as the existing one hundred twenty feet two feet (122') to one hundred thirty seven feet (137') electrical transmission poles and towers on the property and in the adjacent transmission corridor. The

facility is also consistent with the existing electrical substation facility use of the subject property and in context with its immediate surroundings. Extensive and well-established woodland areas on and adjoining the substation property, as well as the property's size and distance from most properties, will serve to screen the use from nearby residences and the Town of Clifton. The appropriateness of the design and site is demonstrated by the elevations of the proposed structure and its relationship to nearby structures and trees provided on the Zoning Drawings, Sheet A-1, and on the attached site photos and photo-simulations of the structure taken from different vantage points throughout the area.

**Policy k. Demonstrate that the selected site for a new telecommunication facility provides the least visual impact on residential areas and the public way, as compared with alternate sites. Analyze the potential impacts from other vantage points in the area, especially from residential properties, to show how the selected site provides the best opportunity to minimize its visual impact on the area and on properties near the proposed site.**

*Applicants' Response:* The selected site is located in a residentially zoned (RC) area and is used for non-residential / electrical substation purposes. The site's relationship to an existing pattern of large electrical transmission structures in the area mitigates visual impacts by providing context and the opportunity to visually blend the new structure with those existing on the property and in the surrounding area. Other non-residential properties in the immediate area are used for schools and places of worship or are located in the historic Clifton Town Center. As compared with the proposed site, a new structure on these properties would be more solitary and prominent and have little context or compatibility to the existing uses. The application contains a set of photo-simulations taken from eight vantage points in nearby residential areas that demonstrate the appropriateness of the design and any visual impacts on surrounding areas.

**Policy l. A key concept in assessing telecommunication facilities is mitigation which is defined as actions taken to reduce or eliminate negative visual impacts. Mitigate the visual impact of proposed telecommunication facilities and their equipment, by using effective design options appropriate to the site such as:**

- **Design, site and/or landscape the proposed facility to minimize impacts on the character of the area;**
- **Locate proposed telecommunication facilities near or within areas of mature vegetation and trees that effectively screen or provide an appropriate setting for the proposed structure provided such location does not adversely impact sensitive resources or cause fragmentation of forested communities. When viewed in context, consider perspective views, relative topography and other factors, to mitigate the visual presence and prominence of the structure;**
- **Blend proposed telecommunication facilities with an existing pattern of tall structures;**
- **Obscure or block the views of proposed telecommunication facilities with other existing structures, vegetation, tree cover, or topographic features to the maximum extent feasible; and**
- **Replace existing telecommunication facilities with taller structures or extend their overall height to reduce the need for another structure when such height increases or**

**structure replacements are visually appropriate to the site, including the surrounding area and are consistent with the type, style and pattern of the existing structure.**

*Applicants' Response:* The structure is located on an established non-residential, public utility property that contains electrical transmission structures and equipment and is of an industrial character. The proposed monopole will blend with an existing pattern of tall structures on the property and in the existing transmission corridor that are of a comparable height and design. Three of these tall structures are currently equipped with collocated telecommunication antenna platforms. Views of the proposed structure from most residences in the area will be mitigated by the extensive areas of woodland on the substation property and the surrounding area. Distance and the proposed structure's relationship to other tall structures in the existing transmission corridor will also reduce the structure's visual presence and impact.

**Policy m. Locate proposed telecommunication facilities to ensure the protection of historically significant landscapes and cultural resources. The views of and vistas from architecturally and/or historically significant structures should not be impaired or diminished by the placement of telecommunication facilities.**

*Applicants' Response:* The proposed facility will not adversely impact historically significant landscapes and cultural resources nor impair or diminish views and vistas from such resources.

**Policy n. Site proposed telecommunication facilities to avoid areas of environmental sensitivity, such as steep slopes, floodplains, wetlands, environmental quality corridors, and resource protection areas.**

*Applicants' Response:* The facility will avoid areas of environmental sensitivity.

**Policy o. Site proposed telecommunication facilities to allow for future expansion and with corresponding levels of screening to accommodate expansion.**

*Applicants' Response:* Both the monopole and equipment compound area will be designed to accommodate up to a total of five telecommunication providers while maintaining current levels of screening.

**Policy p. Design and site proposed telecommunication facilities to preserve areas necessary for future right-of-way dedication and ancillary easements for construction of road improvements.**

*Applicants' Response:* The facility is far removed from all roadways and will not impede on any areas necessary for future right-of-way or road improvements

**Policy q. Locate and construct antennas used for purposes other than mobile and land-based telecommunication services in accordance with the same guidelines established in this "Mobile and Land-Based Telecommunications Services" section.**

*Applicants' Response:* The proposed monopole is for mobile and land based purposes.

**Objective 43: Design proposed telecommunication facilities to mitigate their visual presence and prominence, particularly when located in residential areas, by concealing their intended purpose in a way that is consistent with the character of the surrounding area. (See Figures 11 and 12.)**

***Policy a.* Disguise or camouflage the appearance of proposed telecommunication facilities to resemble other man-made structures and natural features (such as flagpoles, bell towers, and trees) that are typically found in a similar context and belong to the setting where placed.**

*Applicants' Response:* The proposed structure will not be of a camouflaged design but will be consistent and in context with the other tall utility structures on the substation and adjoining electrical transmission line easement.

***Policy b.* Design proposed telecommunication facilities that are disguised and camouflaged to be of a bulk, mass and height typical of and similar to the feature selected.**

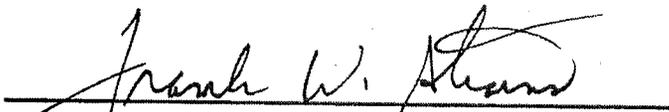
*Applicants' Response:* The proposed structure will be of a mass and height similar to other large towers and poles used for electric transmission purposes on the subject property and along the transmission power line that traverses the area in a generally north to south direction.

***Policy c.* Use other new and existing structures and vegetation of comparable form and style to establish a grouping that complements a camouflaged telecommunication facility and supports its design, location and appearance.**

*Applicants' Response:* The design, style and height of the proposed monopole are comparable with the other existing poles and towers in the electrical transmission corridor that traverses the property. The new monopole will be supported by and visually blend with these structures.

### **Conclusion**

In light of the foregoing and the reasons stated, Milestone Communications, Inc. and Verizon Wireless hereby submit that this proposal is in compliance with the Fairfax County Comprehensive Plan and respectfully requests that the 2232 Review Application be approved.



Frank W. Stearns  
Donohue and Stearns, PLC  
Agent for Applicant

PRIOR SPECIAL EXCEPTION APPROVALS  
SE 91-8-031 APPROVED 3/6/92

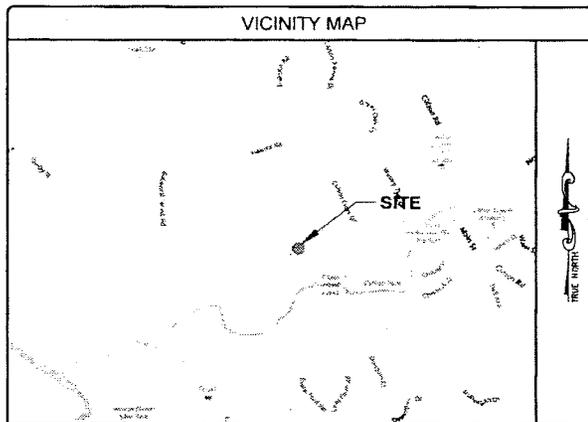


SITE NAME: CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY



Know what's below.  
Call before you dig.

SITE INFORMATION	
SCOPE OF WORK	MILESTONE COMMUNICATIONS PROPOSES TO BUILD A TELECOMMUNICATIONS FACILITY ON THE PROPERTY LISTED BELOW. THE FACILITY CONSISTS OF A 140' MONOPOLE AND SPACE FOR MULTIPLE CARRIERS IN A FENCED-IN COMPOUND
SITE ADDRESS:	12895 CLIFTON CREEK DRIVE CLIFTON, VA 20124
PROPERTY OWNER ADDRESS:	ELECTRIC AND POWER, CO VIRGINIA PO BOX 27007 FLR 12TH DOMINION RESOURCES INC C/O BLAINE GARRETT RICHMOND, VA 23281
MAP #	0753 01 0010
PARCEL AREA	95.11± ACRES
LATITUDE (NAD 83)	38° 46' 47.36" NAD 83
LONGITUDE (NAD 83)	77° 23' 55.44" NAD 83
JURISDICTION	FAIRFAX COUNTY
ZONING	RC (OVS)
ZONING AREA	95.11± ACRES
GROUND ELEVATION	286.7' (AMSL) NAVD 88
STRUCTURE TYPE	MONOPOLE
STRUCTURE HEIGHT	140.0' (AGL)
HANDICAP REQUIREMENTS	FACILITY IS UN-MANNED AND NOT FOR HUMAN HABITATION. DISABLED ACCESS NOT REQUIRED



DIRECTIONS

FROM MILESTONE OFFICE:  
HEAD WEST ON VA-475/SUNSET HILLS RD. CONTINUE TO FOLLOW VA-875. SLIGHT RIGHT ONTO THE RAMP TO VA-206 S/FAIRFAX COUNTY PKWY. SHARP RIGHT ONTO VA-206 S/FAIRFAX COUNTY PKWY. SLIGHT RIGHT ONTO THE US-28 N RAMP. TURN RIGHT ONTO VA-808 S. TAKE THE RAMP ONTO US-29 S/LEE HW. TURN LEFT ONTO VA-865/CLIFTON RD. CONTINUE TO FOLLOW VA-645. TURN RIGHT ONTO MAIN ST. TAKE THE 1ST RIGHT ONTO CLIFTON CREEK DR. SITE WILL BE LOCATED ON THE LEFT.

CODE COMPLIANCE

- ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
- 2009 INTERNATIONAL BUILDING CODE
  - 2008 NATIONAL ELECTRICAL CODE
  - 2009 NFPA 101, LIFE SAFETY CODE
  - 2008 IFC
  - AMERICAN CONCRETE INSTITUTE
  - AMERICAN INSTITUTE OF STEEL CONSTRUCTION
  - MANUAL OF STEEL CONSTRUCTION 13TH EDITION
  - VIRGINIA UNIFORM BUILDING CODE (USBC 2009)
  - ANS/NETA-222-G
  - TIA 907
  - INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
  - IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
  - TELECORDIA GR-1275
  - ANS/T 311

DRAWING INDEX	
T-1	TITLE SHEET
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Z-2	CIVIL MAPS
Z-3	PARTIAL SITE PLAN
Z-4	EXISTING VEGETATION PLAN
A-1	COMPOUND PLAN & ELEVATION
A-2	TOWER ELEVATION DETAILS
A-3	EQUIPMENT DETAILS
A-4	ANTENNA DETAILS
SWM-1	DRAINAGE AREA MAPS
SWM-2	STORMWATER MANAGEMENT PLAN
SWM-3	STORMWATER MANAGEMENT CALCULATIONS
ES-1	EROSION & SEDIMENT CONTROL PLAN
ES-2	EROSION & SEDIMENT CONTROL DETAILS

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 24"x36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

SIGNATURE BLOCK

PROJECT MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

LEASING \_\_\_\_\_ DATE \_\_\_\_\_

PROJECT TEAM	
APPLICANT	MILESTONE COMMUNICATIONS 12110 SUNSET HILLS ROAD, SUITE 100 RESTON, VA 20190 (703) 828-2555
PROPERTY OWNER	VIRGINIA POWER AND ELECTRIC COMPANY PO BOX 27007 FLR 12TH DOMINION RESOURCES INC C/O BLAINE GARRETT RICHMOND, VA 23281
PROJECT MANAGEMENT FIRM:	NETWORK BUILDING + CONSULTING, LLC 8065 MARSHALEE DRIVE, SUITE 300 ELKRIEGE, MD 21075 (410) 712-7062
ENGINEERING FIRM:	NB+C ENGINEERING SERVICES, LLC 8065 MARSHALEE DRIVE, SUITE 300 ELKRIEGE, MD 21075 (410) 712-7062

ENGINEER

TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC  
12110 SUNSET HILLS ROAD, SUITE 100  
RESTON, VA 20190  
TEL: (703) 620-2555  
FAX: (703) 620-4069

APPLICANT

12110 SUNSET HILLS ROAD, SUITE 100  
RESTON, VA 20190  
TEL: (703) 620-2555  
FAX: (703) 620-4069

SITE INFORMATION

CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

REVISIONS

REV	DATE	DESCRIPTION	BY
1	10/15/13	EVM PLAN	RLC
2	12/15/14	FINAL	RLC

PROFESSIONAL STAMP

ENGINEER

TRENT SNARI, P.E.  
VA PROFESSIONAL ENGINEER LIC #649978

SHEET TITLE

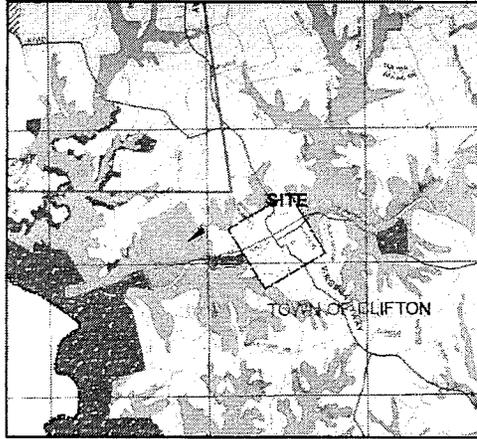
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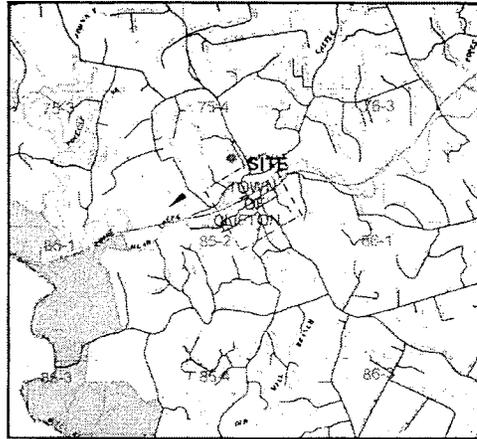
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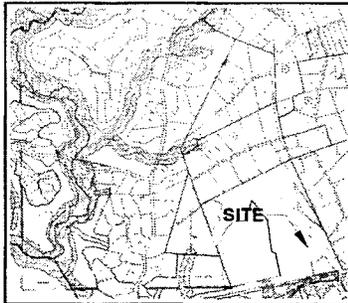
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SE 81-S-031 APPROVED 3/5/92



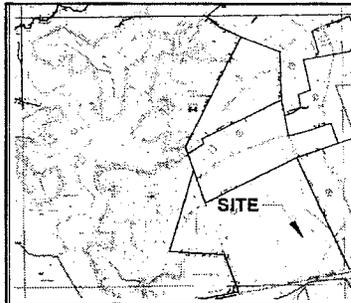
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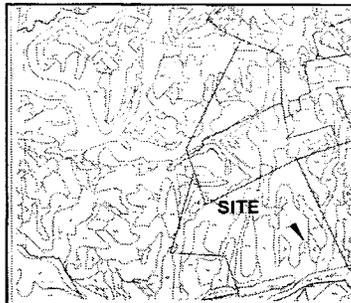
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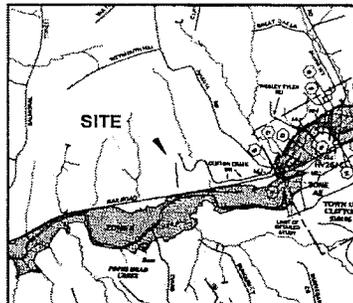
3 RESOURCE MANAGEMENT MAP  
Z-2 SCALE 1"=1000'



4 ZONING MAP  
Z-2 SCALE 1"=1000'



5 SOILS MAP  
Z-2 SCALE 1"=1000'

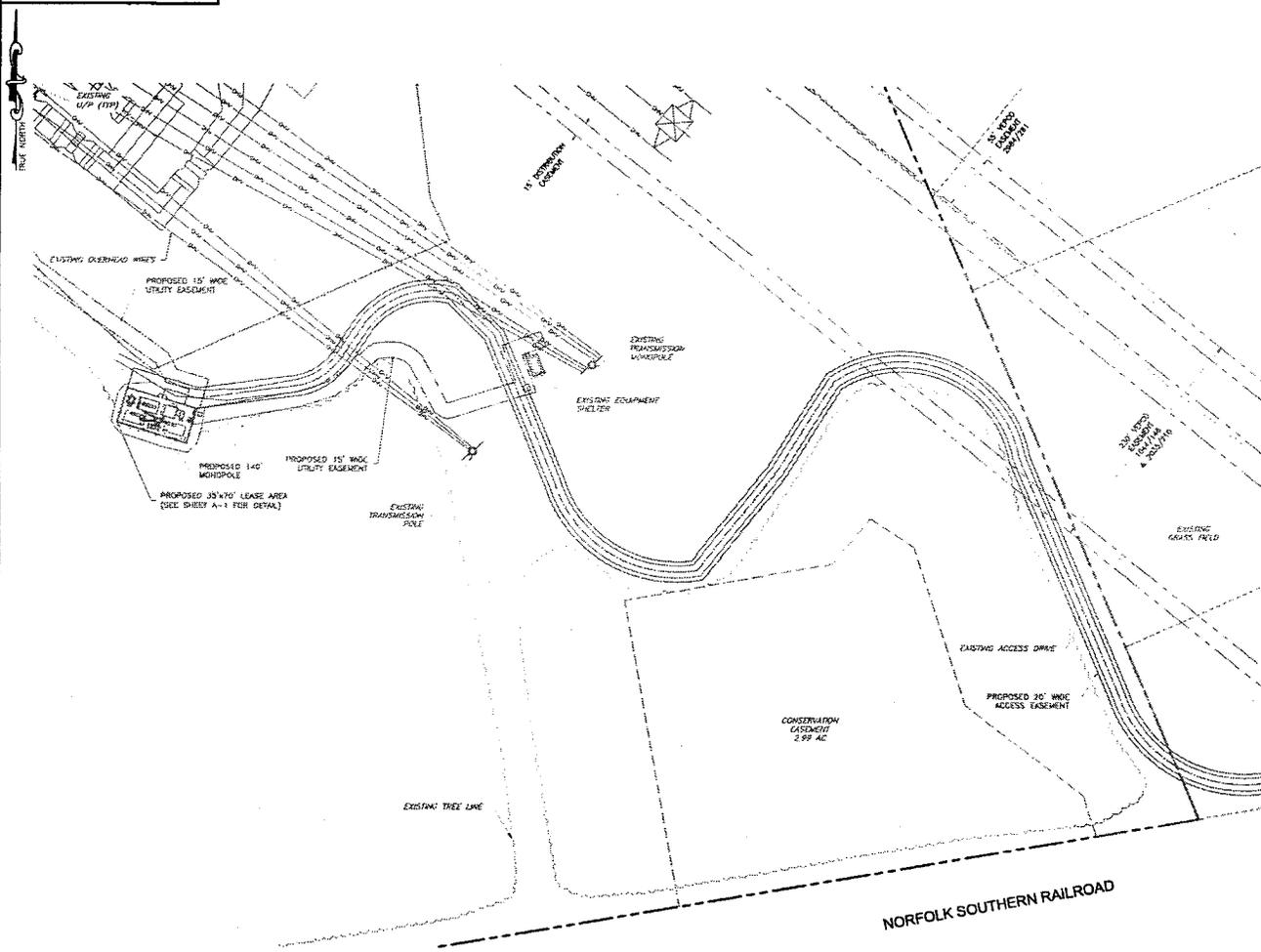


6 FLOOD ZONE MAP  
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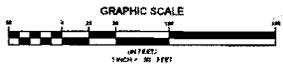
ENGINEER	 <b>TOTALLY COMMITTED.</b> <small>NB+C ENGINEERING SERVICES, LLC 12110 SUNSET HILLS ROAD, SUITE 100 RESTON, VA 20190 TEL: (703) 620-2555 FAX: (703) 620-8899</small>													
APPLICANT	 <small>12110 SUNSET HILLS ROAD, SUITE 100 RESTON, VA 20190 TEL: (703) 620-2555 FAX: (703) 620-8899</small>													
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2	12/15/14	FINAL												
PROFESSIONAL STAMP														
ENGINEER	<b>TRENT SNARR, P.E.</b> VA PROFESSIONAL ENGINEER LIC. #040978													
SHEET TITLE	<b>CIVIL MAPS</b>													
SHEET NUMBER	<b>Z-2</b>													

PRINCIPAL SPECIAL EXCEPTION APPROVALS  
SE 91-8-031 APPROVED 3/8/92

LEGEND	
	PROPERTY LINE - SUBJECT PARCEL
	PROPOSED EASE - ABUTTING
	EXISTING ROAD
	EXISTING EASE LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	PROPOSED LINE OF EASEMENT
	EXISTING BUILDING



1 SITE PLAN  
SCALE 1"=50'



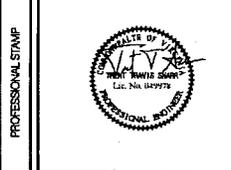
**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC  
1200 W. MARKET ST. SUITE 200  
FAIRFAX, VA 22031

**Milestone COMMUNICATIONS**  
4210 SUNSET HILL L.S. ROAD, SUITE 100  
SPOTSDALE, VA 20180  
TEL: (703) 429-2558  
FAX: (703) 429-1090

**SITE INFORMATION**  
CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
1	1/16/15	REVISED PLAN	RNC
0	12/15/14	FINAL	RNC



**ENGINEER**  
TRENT SHARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #144972

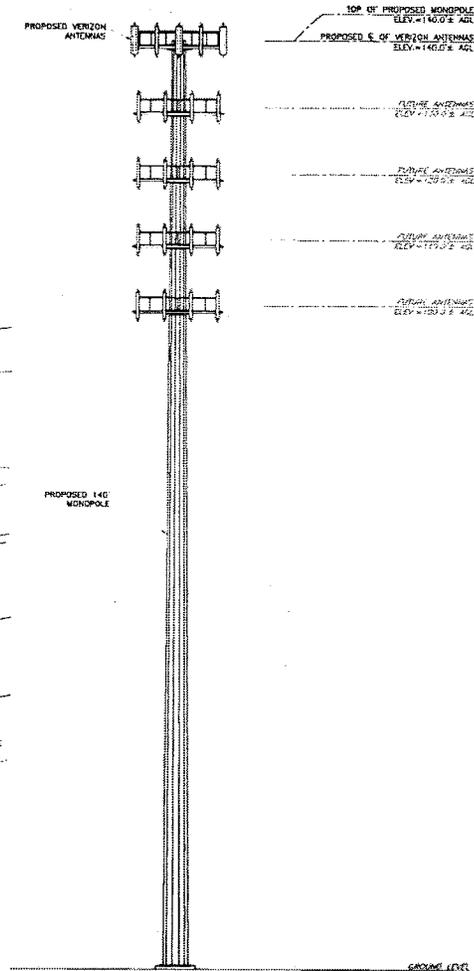
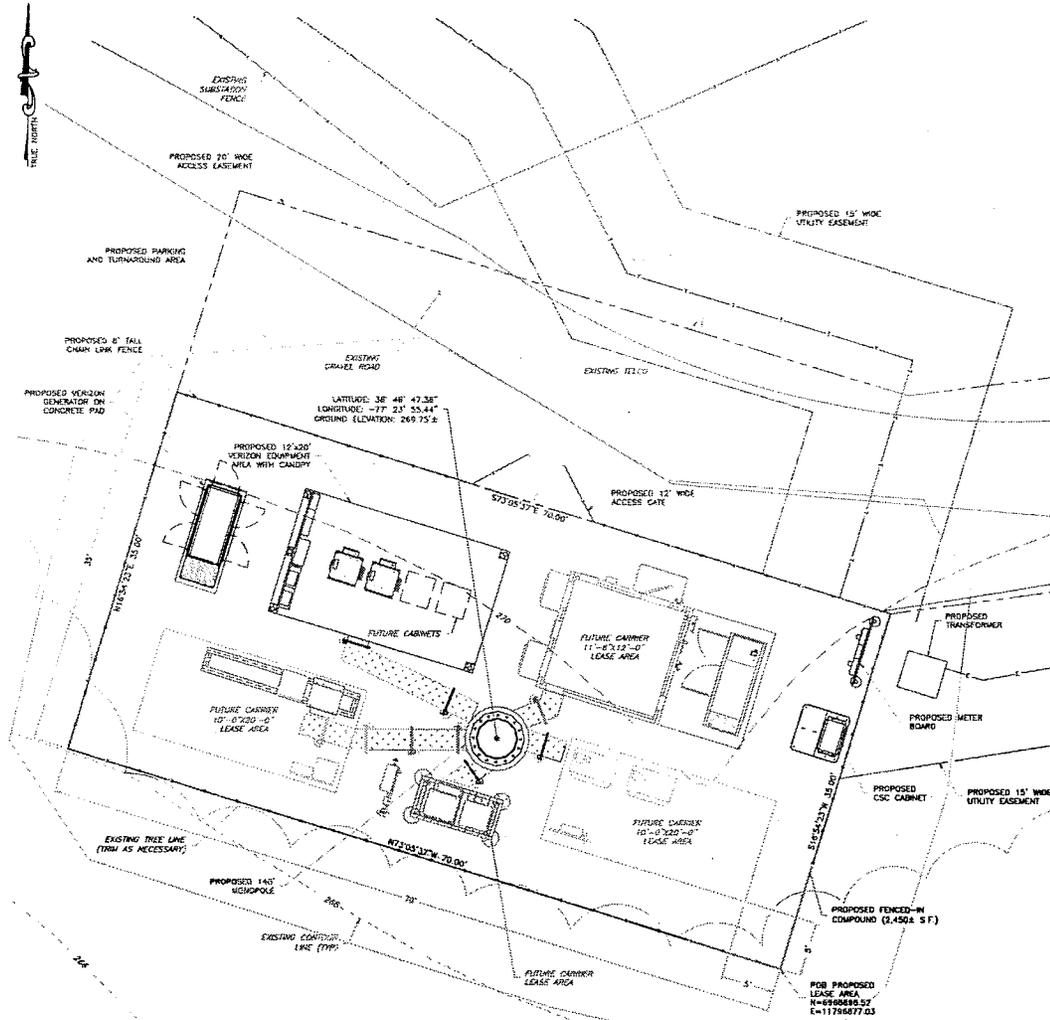
**SHEET TITLE**  
PARTIAL SITE PLAN

**SHEET NUMBER**  
Z-3

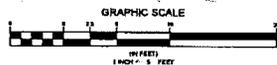


PRIOR SPECIAL EXCEPTION APPROVALS

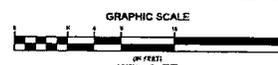
SE 01-8-031 APPROVED 3/8/92



1 COMPOUND PLAN SCALE 1/8"=1'-0"



2 ELEVATION SCALE 1/8"=1'-0"



ENGINEER	 <b>TOTALLY COMMITTED.</b> <small>NB+C ENGINEERING SERVICES, LLC          13400 WOODLAND DRIVE, SUITE 100          CLIFTON, VA 20124</small>													
APPLICANT	 12119 SUNSET HILLS ROAD, SUITE 100 RESTON, VA 20190 TEL: (703) 620-2555 FAX: (703) 620-8699													
SITE INFORMATION	CLIFTON CREEK SUBSTATION 12895 CLIFTON CREEK DRIVE CLIFTON, VA 20124 FAIRFAX COUNTY													
DESIGN RECORD	<table border="1"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12/15/14</td> <td>ENV PLAN</td> </tr> <tr> <td>0</td> <td>12/15/14</td> <td>FINAL</td> </tr> </tbody> </table>		REVISIONS			REV	DATE	DESCRIPTION	1	12/15/14	ENV PLAN	0	12/15/14	FINAL
REVISIONS														
REV	DATE	DESCRIPTION												
1	12/15/14	ENV PLAN												
0	12/15/14	FINAL												
PROFESSIONAL STAMP														
ENGINEER	TRENT SHARR, P.E. VA PROFESSIONAL ENGINEER LIC. #048676													
SHEET TITLE	<b>COMPOUND PLAN &amp; ELEVATION</b>													
SHEET NUMBER	<b>A-1</b>													

PRIOR SPECIAL EXCEPTION APPROVALS  
SE 81-S-031 APPROVED 3/9/82

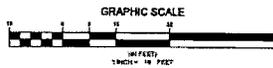
PROPOSED 140'  
MONOPOLE

TOP OF PROPOSED MONOPOLE  
ELEV = 140.0' A.S.L.

TOP OF EXISTING TRANSMISSION TOWER  
ELEV = 127.2' A.S.L.

TOP OF EXISTING TRANSMISSION TOWER  
ELEV = 127.2' A.S.L.

1  
A-2  
ELEVATION  
SCALE 1/4" = 1'-0"



ENGINEER

**NB+C**  
TOTALLY COMMITTED

NB+C ENGINEERING SERVICES, LLC  
2400 WOODLAND DRIVE, SUITE 100  
FAIRFAX, VA 22031

APPLICANT

**Milestone**  
COMMUNICATIONS

12110 SUNSET HILAN ROAD, SUITE 100  
JEFFERSON, VA 20110  
TEL: (703) 626-2555  
FAX: (703) 626-8869

SITE INFORMATION

CLIFTON CREEK SUBSTATION  
12885 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
1	1/14/18	ISSUE FOR PERMITS	TRN
2	1/15/18	ISSUE FOR PERMITS	TRN

PROFESSIONAL STAMP



ENGINEER

TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #048978

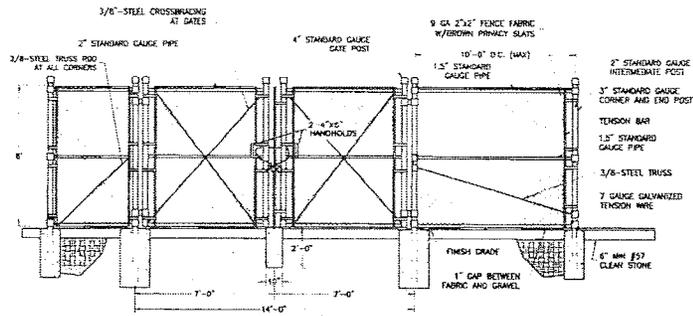
SHEET TITLE

**TOWER ELEVATION  
DETAILS**

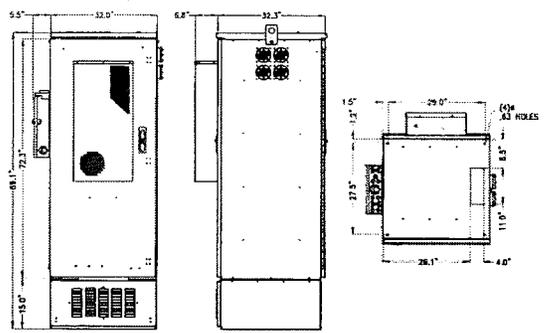
SHEET NUMBER

**A-2**

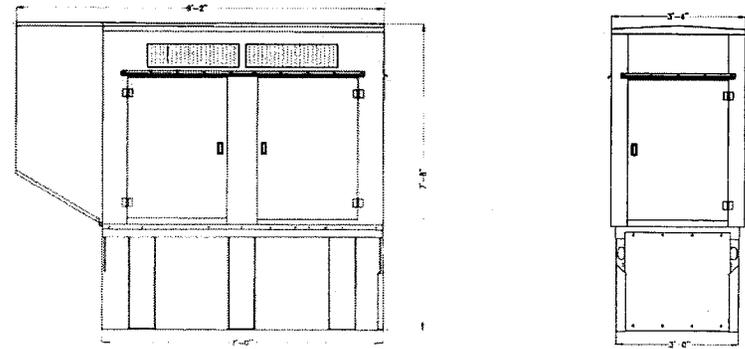
PRIOR SPECIAL EXCEPTION APPROVALS  
SE 81-S-031 APPROVED 3/8/92



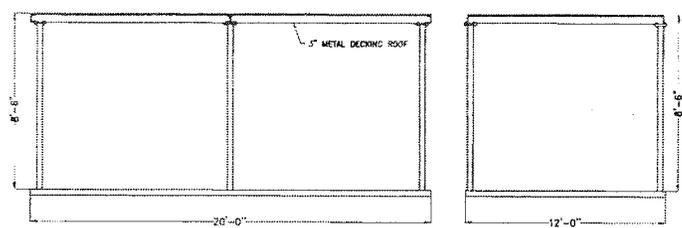
1 TYPICAL FENCE AND GATE DETAILS  
SCALE 3/8\"/>



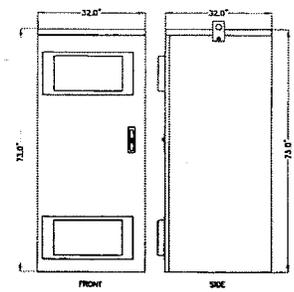
2 CHARLES LT-PM63922RF2 OUTDOOR PRIMARY CABINET  
SCALE 3/4\"/>



3 GENERATOR ELEVATIONS  
SCALE 3/4\"/>



4 METAL CANOPY DETAIL  
SCALE 1/8\"/>



CONFIGURATION	THERMAL	BATTERY STRINGS	TRAYS	# OF BUSES	WEIGHT (EMPTY)	WEIGHT (FULLY LOADED)
24 OR 48V IN-CO	DAC	10	3	2	800 LBS	3450 LBS

5 CHARLES CUBE-BBDLJ2HN1 BATTERY CABINET  
SCALE 3/4\"/>

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES LLC  
247 WOODLAND DR., #2004-04  
CLIFTON CREEK, VA 20124  
1-800-722-7227

**Milestone COMMUNICATIONS**  
12310 SUNSET HILL LN ROAD, SUITE 100  
RESTON, VA 20190  
TEL: (703) 626-2555  
FAX: (703) 626-8009

CLIFTON CREEK SUBSTATION  
12895 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

REVISIONS

REV	DATE	DESCRIPTION	BY
1	1/24/15	EXIB PLAN	MCV
2	1/24/14	7 SHEET	MCV



TRENT SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #040678

EQUIPMENT DETAILS

A-3

ENGINEER  
APPLICANT  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
ENGINEER  
SHEET TITLE  
SHEET NUMBER

PRIOR SPECIAL EXCEPTION APPROVALS  
SE 91-S-031 APPROVED 3/9/92

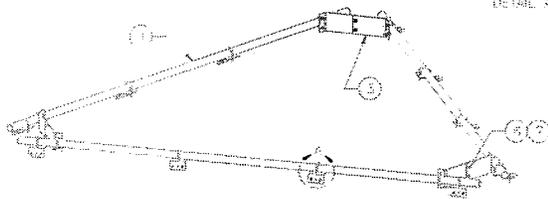
ANTENNA INFORMATION CHART

SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER	AZIMUTH	MECHANICAL DOWN TILT	RRH QUANTITY & MODEL	COAX/HYBRID CABLE QUANTITY & SIZE	CABLE LENGTH
ALPHA	PROPOSED	ANTEL	BXA-70063-8CF-750MHZ	140'-0"	315°	0'	--	--	UNKNOWN
ALPHA	PROPOSED	ANTEL	BXA-171063-12BF-EDM-0	140'-0"	315°	0'	--	--	UNKNOWN
ALPHA	PROPOSED	ANTEL	BXA-70063-8CF-750MHZ	140'-0"	315°	0'	(1) ALCATEL-LUCENT RRH240-AWS	HYBRID CABLE	UNKNOWN
ALPHA	PROPOSED	ANTEL	BXA-171063-12BF-EDM-0	140'-0"	315°	0'	(1) ALCATEL-LUCENT RRH240-AWS	HYBRID CABLE	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-70063-8CF-750MHZ	140'-0"	80°	0'	--	--	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-171063-12BF-EDM-0	140'-0"	80°	0'	--	--	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-70063-8CF-750MHZ	140'-0"	80°	0'	(1) ALCATEL-LUCENT RRH240-AWS	HYBRID CABLE FROM ALPHA	UNKNOWN
BETA	PROPOSED	ANTEL	BXA-171063-12BF-EDM-0	140'-0"	80°	0'	(1) ALCATEL-LUCENT RRH240-AWS	HYBRID CABLE FROM ALPHA	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-70063-8CF-750MHZ	140'-0"	215°	0'	--	--	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-171063-12BF-EDM-0	140'-0"	215°	0'	--	--	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-70063-8CF-750MHZ	140'-0"	215°	0'	(1) ALCATEL-LUCENT RRH240-AWS	HYBRID CABLE FROM ALPHA	UNKNOWN
GAMMA	PROPOSED	ANTEL	BXA-171063-12BF-EDM-0	140'-0"	215°	0'	(1) ALCATEL-LUCENT RRH240-AWS	HYBRID CABLE FROM ALPHA	UNKNOWN

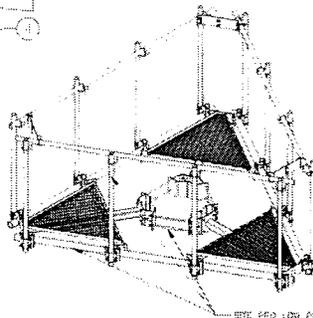
NOTES:  
1. CONTRACTOR TO VERIFY PROPOSED ANTENNA INFORMATION IS THE MOST CURRENT DATA AT TIME OF CONSTRUCTION.  
2. CONTRACTOR TO CONFIRM CABLE LENGTHS PRIOR TO CONSTRUCTION.  
3. CONTRACTOR TO VERIFY ALL PROPOSED AND EXISTING ANTENNA AND CABLES WERE CONSIDERED AND PASSED A STRUCTURAL ANALYSIS PERFORMED BY A LICENSED ENGINEER PRIOR TO INSTALLATION.

1 ANTENNA SCHEDULE  
NOT TO SCALE

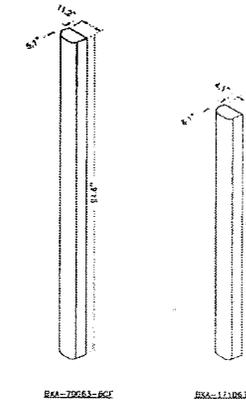
NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL
1	ANTENNA SCHEDULE	1	EA	100.00	100.00
2	LOW PROFILE PLATFORM	1	EA	150.00	150.00
3	ANTENNA DETAILS	1	EA	100.00	100.00
4	ANTENNA PLAN	1	EA	100.00	100.00
5	ANTENNA SCHEDULE	1	EA	100.00	100.00
6	LOW PROFILE PLATFORM	1	EA	150.00	150.00
7	ANTENNA DETAILS	1	EA	100.00	100.00
8	ANTENNA PLAN	1	EA	100.00	100.00
9	ANTENNA SCHEDULE	1	EA	100.00	100.00
10	LOW PROFILE PLATFORM	1	EA	150.00	150.00
11	ANTENNA DETAILS	1	EA	100.00	100.00
12	ANTENNA PLAN	1	EA	100.00	100.00



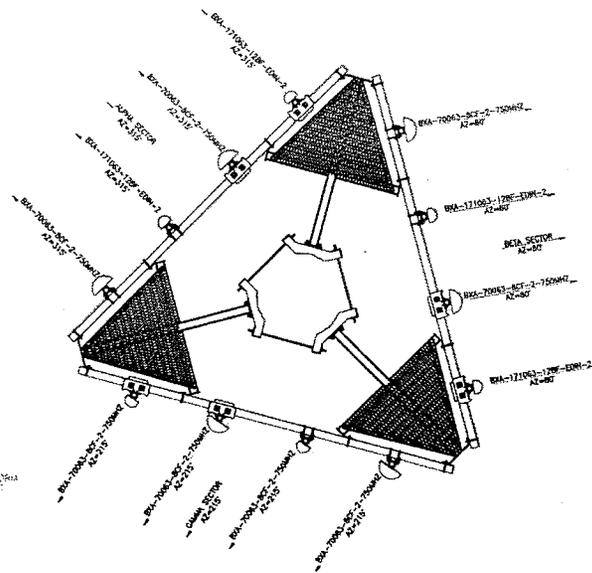
3 LOW PROFILE PLATFORM  
NOT TO SCALE



SEE 3RD LOW PROFILE PLATFORM SHEET FOR CABLES AND PIPE LAYOUTS. SHOW SEPARATELY.



2 ANTENNA DETAILS  
NOT TO SCALE



4 ANTENNA PLAN  
SCALE 1/2"=1'

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC  
12110 NINETY FIFTH ROAD, SUITE 100  
RESTON, VA 20190  
TEL: (703) 420-2555  
FAX: (703) 420-9999

**Milestone COMMUNICATIONS**  
12110 NINETY FIFTH ROAD, SUITE 100  
RESTON, VA 20190  
TEL: (703) 420-2555  
FAX: (703) 420-9999

CLIFTON CREEK SUBSTATION  
12885 CLIFTON CREEK DRIVE  
CLIFTON, VA 20124  
FAIRFAX COUNTY

REVISIONS

REV	DATE	DESCRIPTION	BY



TRENT SAFFIR, P.E.  
VA PROFESSIONAL ENGINEER LIC #049976

ANTENNA DETAILS

A-4



**STORMWATER MANAGEMENT NARRATIVE**

**GENERAL DESCRIPTION**

THE PROPOSED WEIR IS TO DISCHARGE A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL. THE CHANNEL IS TO BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL. THE CHANNEL IS TO BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL.

**STORMWATER MANAGEMENT PLAN**

THE STORMWATER MANAGEMENT PLAN WILL BE MET THROUGH THE USE OF A GRASS SWALE THAT WILL CAPTURE AND STORE THE RAINFALL FROM A 24-HOUR STORM EVENT. THE SWALE WILL HAVE A BOTTOM WIDTH OF 3' 0" AND A SIDE SLOPE OF 1:1. THE SWALE WILL BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL. THE CHANNEL IS TO BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL.

**ITEM DESCRIPTION**

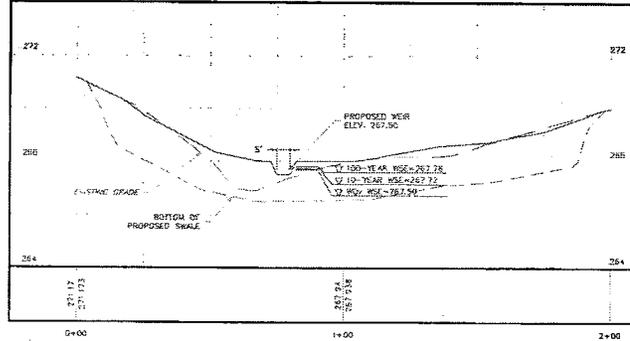
BASED ON THE AREA OF THE SWALE, THE SWALE WILL BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL. THE CHANNEL IS TO BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL.

THE SWALE WILL BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL. THE CHANNEL IS TO BE CONSTRUCTED WITH A 12" GRASS SWALE, DISCHARGING TO A NEW 36" X 30" FIBER CONCRETE CHANNEL.

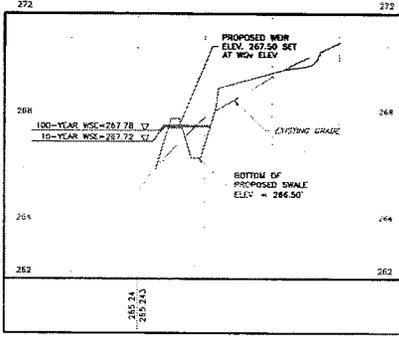
**NOTES**

THE STORMWATER MANAGEMENT PLAN WILL BE MET THROUGH THE USE OF A GRASS SWALE THAT WILL CAPTURE AND STORE THE RAINFALL FROM A 24-HOUR STORM EVENT. THE SWALE WILL HAVE A BOTTOM WIDTH OF 3' 0" AND A SIDE SLOPE OF 1:1.

CUT AND FILL ANALYSIS				
CUT FACTOR	FILL FACTOR	CUT (CY)	FILL (CY)	NET (CY)
1.04	1.25	79.54	83.58	14.01



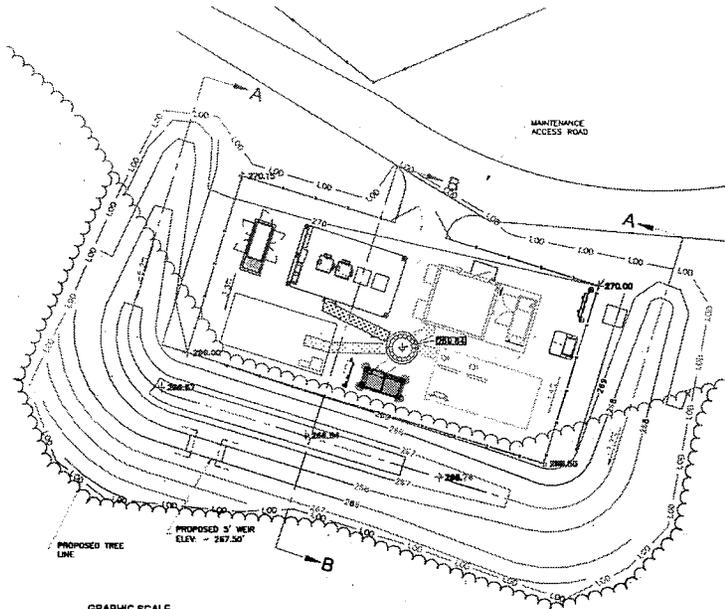
1 GRASS SWALE CROSS SECTION A-A  
SCALE: 1" = 10'-0"



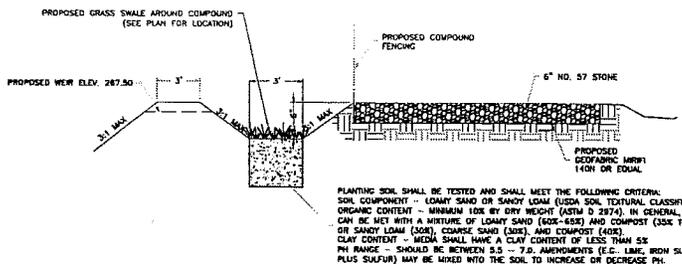
2 GRASS SWALE CROSS SECTION B-B  
SCALE: 1" = 10'-0"

STAGE STORAGE TABLE						
ELEV.	AREA (sq. ft.)	DEPT. H (ft.)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	CONIC INC. VOL. (cu. ft.)	CONIC TOTAL VOL. (cu. ft.)
268.50	185.56	N/A	N/A	0.00	N/A	0.00
266.75	263.61	0.25	58.15	58.15	58.75	58.75
267.00	475.71	0.25	84.81	154.06	93.89	152.64
267.25	726.47	0.25	150.27	304.33	148.17	301.81
267.50	974.83	0.25	212.87	517.20	211.91	513.72
267.75	1248.91	0.25	278.11	795.31	277.38	793.12
268.00	1522.57	0.25	348.58	1143.87	348.00	1137.12

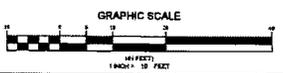
NOTE: MAX VOLUME IS ACHIEVED AT ELEV. 267.50. THE WEIR IS SET AT THAT ELEVATION.



3 STORMWATER MANAGEMENT DETAIL  
SCALE: 1" = 10'-0"



3 GRAVEL COMPOUND GRASS SWALE TYPICAL  
SCALE: 1" = 10'-0"



**ENGINEER**  
**NB-C**  
 TOTALLY COMMITTED.  
 NB-C ENGINEERING SERVICES, LLC  
 13116 SUNSET HILLS ROAD, SUITE 100  
 RESTON, VA 20190  
 TEL: (703) 426-2555  
 FAX: (703) 426-2099

**APPLICANT**  
**Milestone**  
 COMMUNICATIONS  
 13116 SUNSET HILLS ROAD, SUITE 100  
 RESTON, VA 20190  
 TEL: (703) 426-2555  
 FAX: (703) 426-2099

**SITE INFORMATION**  
 CLIFTON CREEK SUBSTATION  
 12895 CLIFTON CREEK DRIVE  
 CLIFTON, VA 20124  
 FAIRFAX COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
1	01/15/15	FINAL PLAN	RNC
2	02/15/14	FINAL	RNC

**PROFESSIONAL STAMP**  
 TRENT SMARR, P.E.  
 VA PROFESSIONAL ENGINEER LIC. #046978

**ENGINEER**  
 TRENT SMARR, P.E.  
 VA PROFESSIONAL ENGINEER LIC. #046978

**SHEET TITLE**  
 STORMWATER  
 MANAGEMENT  
 PLAN

**SHEET NUMBER**  
 SWM-2

Site Data Summary

Item	Value
Site Area	1.25
Impervious Area	0.85
Permeable Area	0.40
Runoff Coefficient	0.65
Peak Discharge (cfs)	1.25
Time to Peak (hrs)	1.25
Volume (cu ft)	1.25

SWMS SCALE NONE

Drainage Area Summary

Area	Area (Ac)	Area (Sq Ft)	Area (Ac)	Area (Sq Ft)
Subarea 1	0.10	4356	0.10	4356
Subarea 2	0.15	6534	0.15	6534
Subarea 3	0.20	8712	0.20	8712
Subarea 4	0.25	10890	0.25	10890
Subarea 5	0.30	13068	0.30	13068
Subarea 6	0.35	15246	0.35	15246
Subarea 7	0.40	17424	0.40	17424
Subarea 8	0.45	19602	0.45	19602
Subarea 9	0.50	21780	0.50	21780
Subarea 10	0.55	23958	0.55	23958
Subarea 11	0.60	26136	0.60	26136
Subarea 12	0.65	28314	0.65	28314
Subarea 13	0.70	30492	0.70	30492
Subarea 14	0.75	32670	0.75	32670
Subarea 15	0.80	34848	0.80	34848
Subarea 16	0.85	37026	0.85	37026
Subarea 17	0.90	39204	0.90	39204
Subarea 18	0.95	41382	0.95	41382
Subarea 19	1.00	43560	1.00	43560
Subarea 20	1.05	45738	1.05	45738
Subarea 21	1.10	47916	1.10	47916
Subarea 22	1.15	50094	1.15	50094
Subarea 23	1.20	52272	1.20	52272
Subarea 24	1.25	54450	1.25	54450
Subarea 25	1.30	56628	1.30	56628
Subarea 26	1.35	58806	1.35	58806
Subarea 27	1.40	60984	1.40	60984
Subarea 28	1.45	63162	1.45	63162
Subarea 29	1.50	65340	1.50	65340
Subarea 30	1.55	67518	1.55	67518
Subarea 31	1.60	69696	1.60	69696
Subarea 32	1.65	71874	1.65	71874
Subarea 33	1.70	74052	1.70	74052
Subarea 34	1.75	76230	1.75	76230
Subarea 35	1.80	78408	1.80	78408
Subarea 36	1.85	80586	1.85	80586
Subarea 37	1.90	82764	1.90	82764
Subarea 38	1.95	84942	1.95	84942
Subarea 39	2.00	87120	2.00	87120
Subarea 40	2.05	89298	2.05	89298
Subarea 41	2.10	91476	2.10	91476
Subarea 42	2.15	93654	2.15	93654
Subarea 43	2.20	95832	2.20	95832
Subarea 44	2.25	98010	2.25	98010
Subarea 45	2.30	100188	2.30	100188
Subarea 46	2.35	102366	2.35	102366
Subarea 47	2.40	104544	2.40	104544
Subarea 48	2.45	106722	2.45	106722
Subarea 49	2.50	108900	2.50	108900
Subarea 50	2.55	111078	2.55	111078
Subarea 51	2.60	113256	2.60	113256
Subarea 52	2.65	115434	2.65	115434
Subarea 53	2.70	117612	2.70	117612
Subarea 54	2.75	119790	2.75	119790
Subarea 55	2.80	121968	2.80	121968
Subarea 56	2.85	124146	2.85	124146
Subarea 57	2.90	126324	2.90	126324
Subarea 58	2.95	128502	2.95	128502
Subarea 59	3.00	130680	3.00	130680
Subarea 60	3.05	132858	3.05	132858
Subarea 61	3.10	135036	3.10	135036
Subarea 62	3.15	137214	3.15	137214
Subarea 63	3.20	139392	3.20	139392
Subarea 64	3.25	141570	3.25	141570
Subarea 65	3.30	143748	3.30	143748
Subarea 66	3.35	145926	3.35	145926
Subarea 67	3.40	148104	3.40	148104
Subarea 68	3.45	150282	3.45	150282
Subarea 69	3.50	152460	3.50	152460
Subarea 70	3.55	154638	3.55	154638
Subarea 71	3.60	156816	3.60	156816
Subarea 72	3.65	158994	3.65	158994
Subarea 73	3.70	161172	3.70	161172
Subarea 74	3.75	163350	3.75	163350
Subarea 75	3.80	165528	3.80	165528
Subarea 76	3.85	167706	3.85	167706
Subarea 77	3.90	169884	3.90	169884
Subarea 78	3.95	172062	3.95	172062
Subarea 79	4.00	174240	4.00	174240
Subarea 80	4.05	176418	4.05	176418
Subarea 81	4.10	178596	4.10	178596
Subarea 82	4.15	180774	4.15	180774
Subarea 83	4.20	182952	4.20	182952
Subarea 84	4.25	185130	4.25	185130
Subarea 85	4.30	187308	4.30	187308
Subarea 86	4.35	189486	4.35	189486
Subarea 87	4.40	191664	4.40	191664
Subarea 88	4.45	193842	4.45	193842
Subarea 89	4.50	196020	4.50	196020
Subarea 90	4.55	198198	4.55	198198
Subarea 91	4.60	200376	4.60	200376
Subarea 92	4.65	202554	4.65	202554
Subarea 93	4.70	204732	4.70	204732
Subarea 94	4.75	206910	4.75	206910
Subarea 95	4.80	209088	4.80	209088
Subarea 96	4.85	211266	4.85	211266
Subarea 97	4.90	213444	4.90	213444
Subarea 98	4.95	215622	4.95	215622
Subarea 99	5.00	217800	5.00	217800
Subarea 100	5.05	220000	5.05	220000

Hydrograph Report

Hyd. No. 2  
GRASS SWALE

Hydrograph type: Reservoir  
Storm frequency: 10 yrs  
Time interval: 2 min  
Inflow hyd. No.: 1 - Grass Swale  
Reservoir name: Clifton Creek

Peak discharge: 0.213 cfs  
Time to peak: 12.37 hrs  
Hyd. volume: 0.627 cu ft  
Max. Elevation: 237.72 ft  
Max. Storage: 652 cu ft

Hydrograph Report

Hyd. No. 2  
GRASS SWALE

Hydrograph type: Reservoir  
Storm frequency: 100 yrs  
Time interval: 2 min  
Inflow hyd. No.: 1 - Grass Swale  
Reservoir name: Clifton Creek

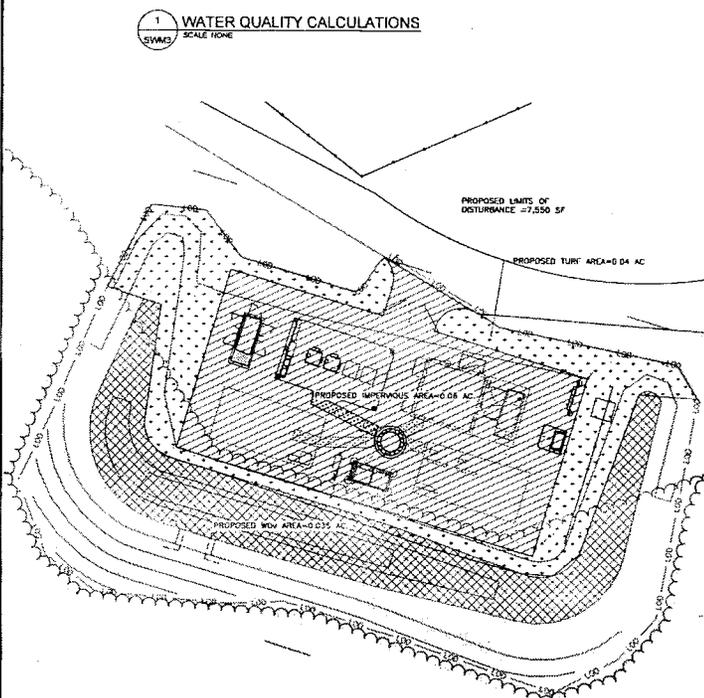
Peak discharge: 0.561 cfs  
Time to peak: 12.13 hrs  
Hyd. volume: 1.773 cu ft  
Max. Elevation: 237.78 ft  
Max. Storage: 845 cu ft

Hydrograph Report

Hyd. No. 2  
GRASS SWALE

Hydrograph type: Reservoir  
Storm frequency: 10 yrs  
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Peak discharge: 0.213 cfs  
Time to peak: 12.37 hrs  
Hyd. volume: 0.627 cu ft  
Max. Elevation: 237.72 ft  
Max. Storage: 652 cu ft



2 EXISTING TR55 CALCULATIONS  
SCALE NONE

Hydrograph Report

Hyd. No. 2  
GRASS SWALE

Hydrograph type: Reservoir  
Storm frequency: 10 yrs  
Time interval: 2 min  
Inflow hyd. No.: 1 - Grass Swale  
Reservoir name: Clifton Creek

Peak discharge: 0.213 cfs  
Time to peak: 12.37 hrs  
Hyd. volume: 0.627 cu ft  
Max. Elevation: 237.72 ft  
Max. Storage: 652 cu ft

3 PROPOSED TR55 CALCULATIONS  
SCALE NONE

Hydrograph Report

Hyd. No. 2  
GRASS SWALE

Hydrograph type: Reservoir  
Storm frequency: 100 yrs  
Time interval: 2 min  
Inflow hyd. No.: 1 - Grass Swale  
Reservoir name: Clifton Creek

Peak discharge: 0.561 cfs  
Time to peak: 12.13 hrs  
Hyd. volume: 1.773 cu ft  
Max. Elevation: 237.78 ft  
Max. Storage: 845 cu ft

4 GRASS SWALE ROUTING CALCULATIONS  
SCALE NONE

Hydrograph Report

Hyd. No. 2  
GRASS SWALE

Hydrograph type: Reservoir  
Storm frequency: 100 yrs  
Time interval: 2 min  
Inflow hyd. No.: 1 - Grass Swale  
Reservoir name: Clifton Creek

Peak discharge: 0.561 cfs  
Time to peak: 12.13 hrs  
Hyd. volume: 1.773 cu ft  
Max. Elevation: 237.78 ft  
Max. Storage: 845 cu ft

1 WATER QUALITY CALCULATIONS  
SCALE NONE

2 SITE LAND COVER MAP  
SCALE NONE

3 PROPOSED TR55 CALCULATIONS  
SCALE NONE

4 GRASS SWALE ROUTING CALCULATIONS  
SCALE NONE

Hydrograph Report

Hyd. No. 2  
GRASS SWALE

Hydrograph type: Reservoir  
Storm frequency: 10 yrs  
Time interval: 2 min  
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Peak discharge: 0.561 cfs  
Time to peak: 12.13 hrs  
Hyd. volume: 1.773 cu ft  
Max. Elevation: 237.78 ft  
Max. Storage: 845 cu ft

ENGINEER: NB+C TOTALLY COMMITTED. NB+C ENGINEERING SERVICES, LLC

APPLICANT: Milestone COMMUNICATIONS

SITE INFORMATION: 12116 SUNSPY HILLS ROAD, SUITE 100, RESTON, VA 20190, TEL: (703) 620-2555, FAX: (703) 620-8009

CLIFTON CREEK SUBSTATION, 12895 CLIFTON CREEK DRIVE, CLIFTON, VA 20124, FAIRFAX COUNTY

REVISIONS

DESIGN RECORD

PROFESSIONAL STAMP: TRIENT SNARR, P.E., VA PROFESSIONAL ENGINEER No. #0400718

ENGINEER: TRIENT SNARR, P.E.

SHEET TITLE: STORMWATER MANAGEMENT CALCULATIONS

SHEET NUMBER: SWM-3





## PHOTO SIMULATIONS

# Overview Map

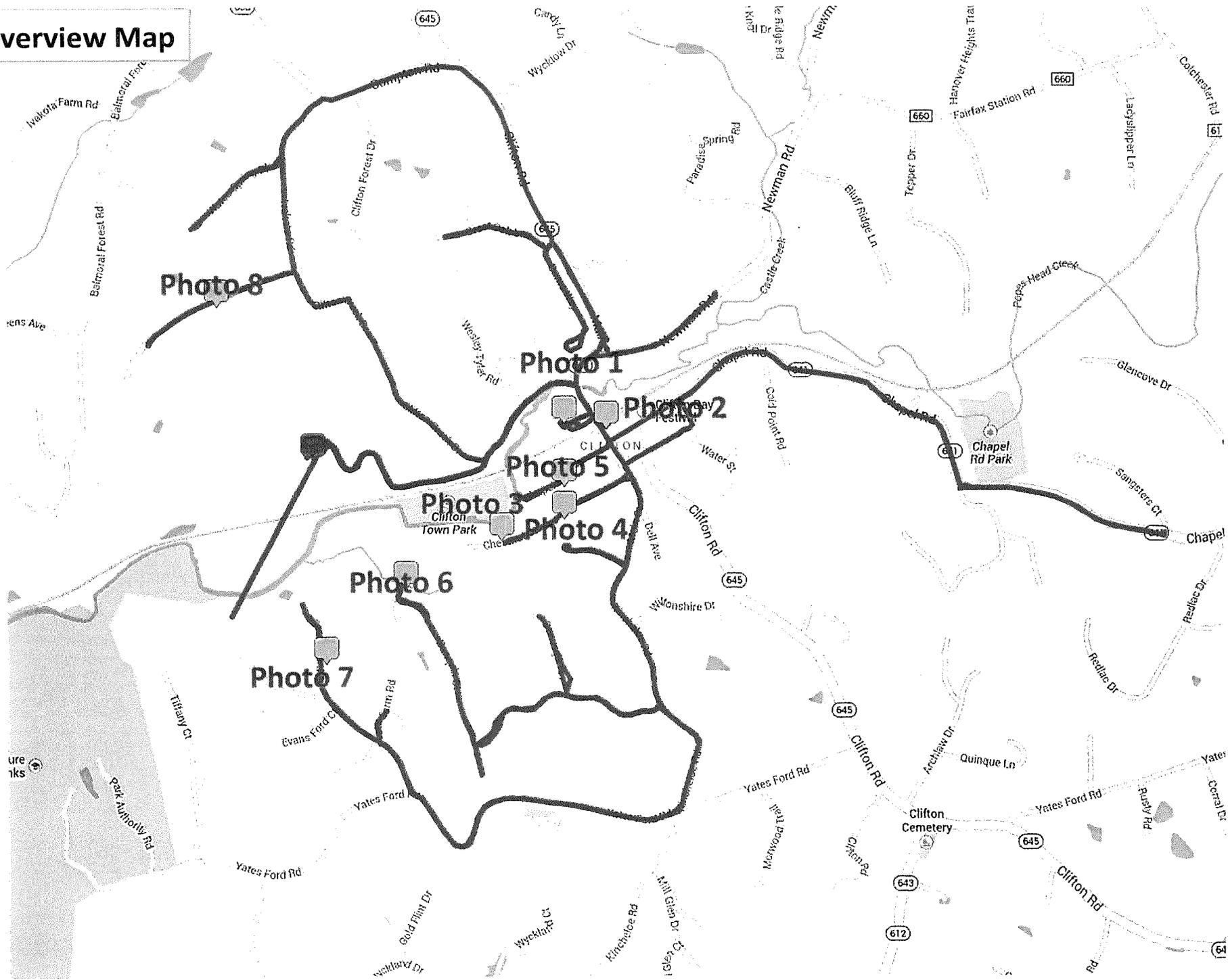


Photo 8

Photo 1

Photo 2

Photo 5

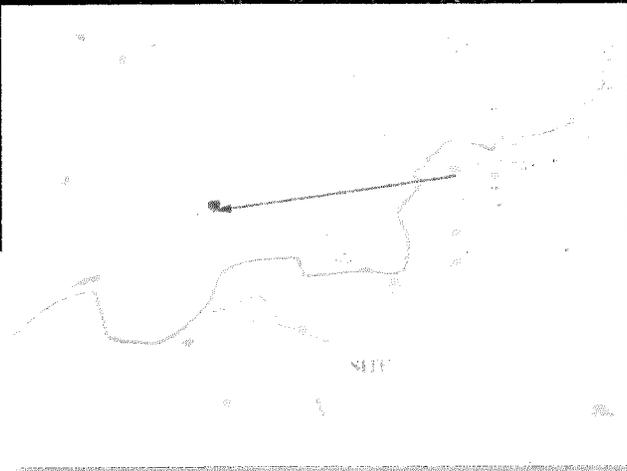
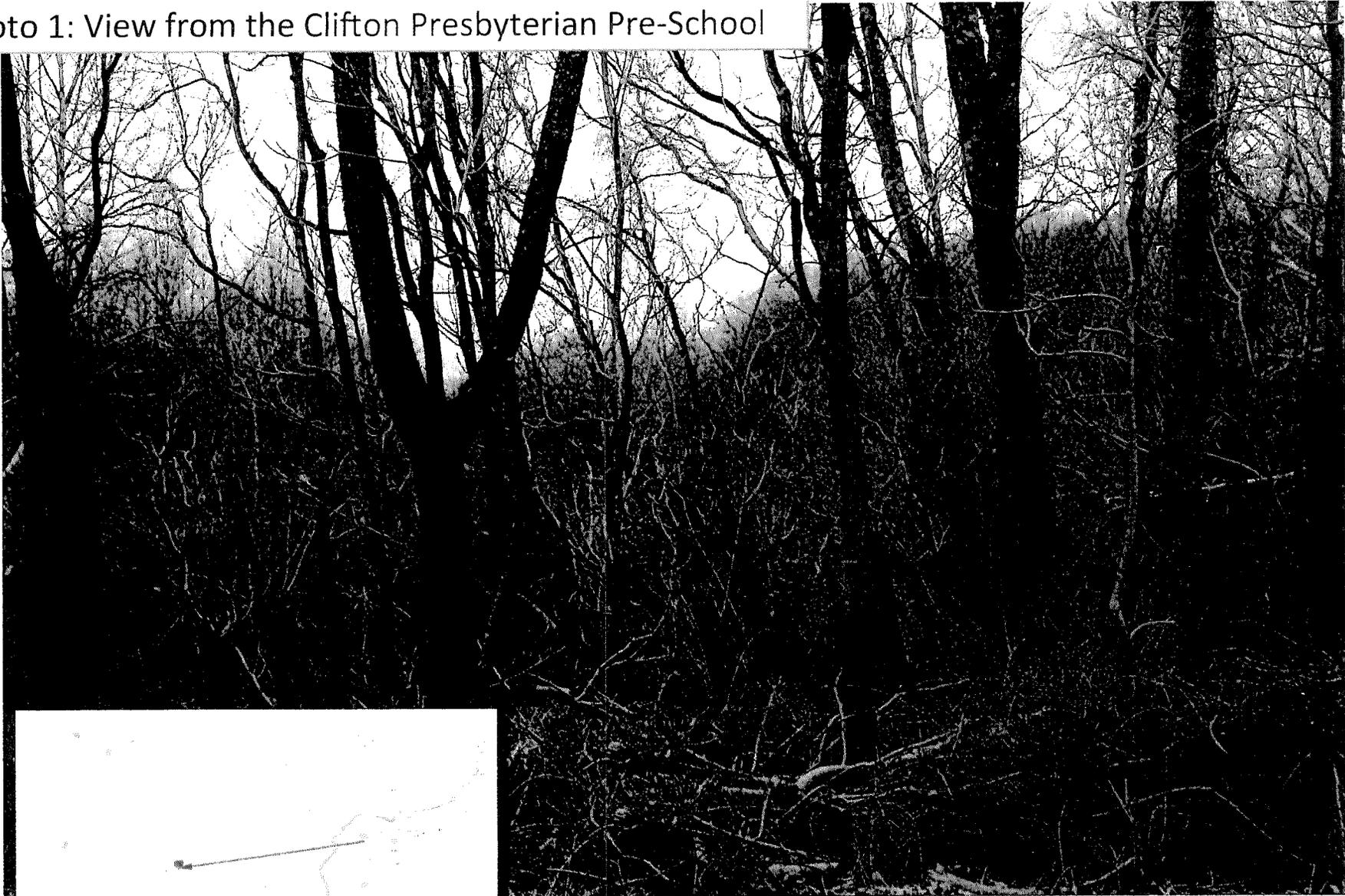
Photo 3

Photo 4

Photo 6

Photo 7

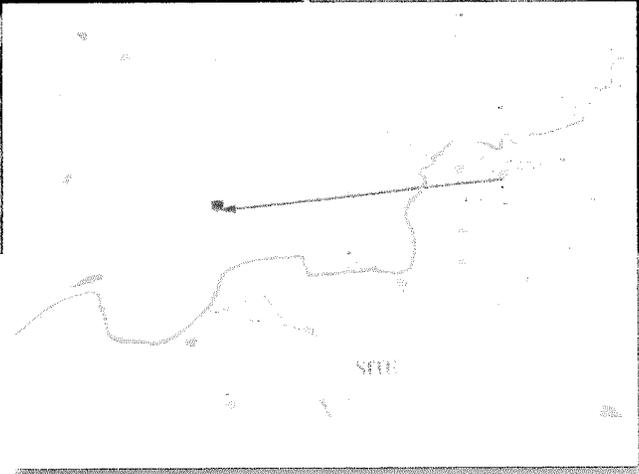
Photo 1: View from the Clifton Presbyterian Pre-School



RECEIVED  
JUL 23 2014  
DEPARTMENT OF PLANNING & ZONING  
PLANNING DIVISION

CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPOLE

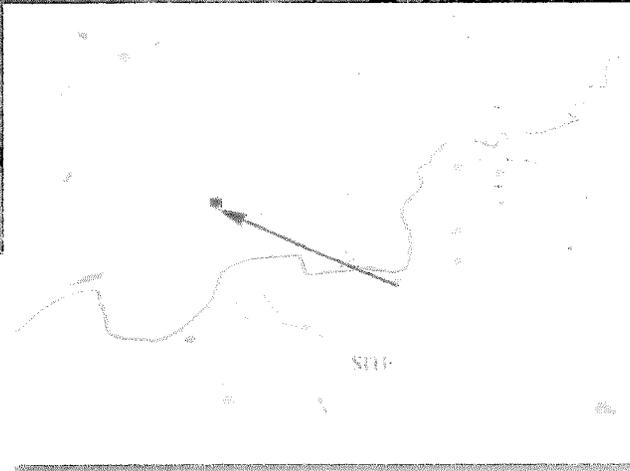
Photo 2: View from the Main Street



RECEIVED  
JUL 23 2014  
DEPARTMENT OF PLANNING & ZONING  
PLANNING DIVISION

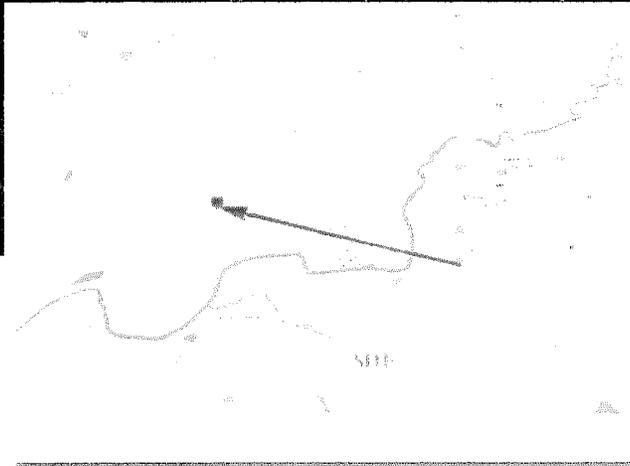
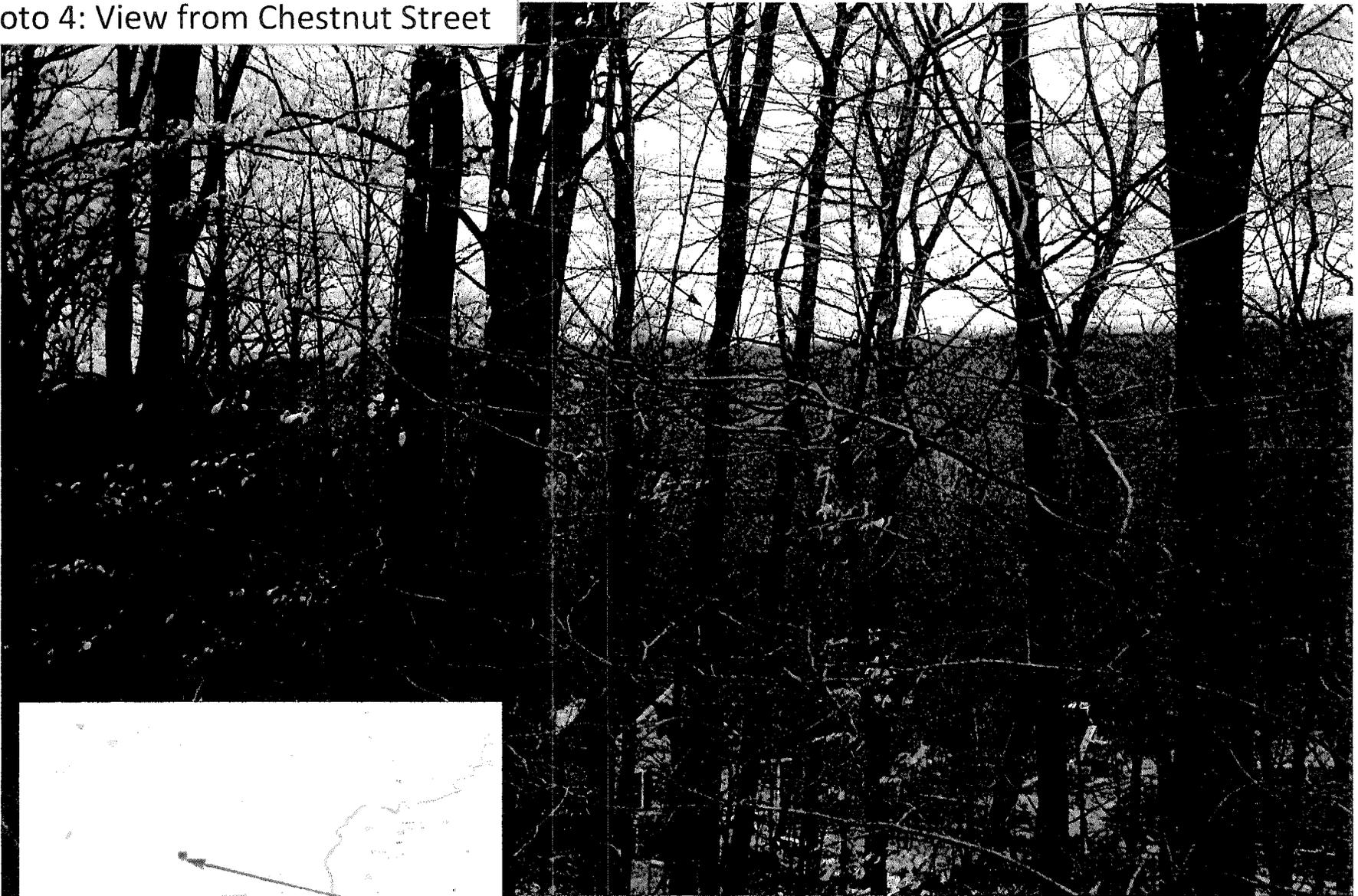
# CLIFTON CREEK SUBSTATION PROPOSED MONOPOLE

Photo 3: View from Chestnut Street



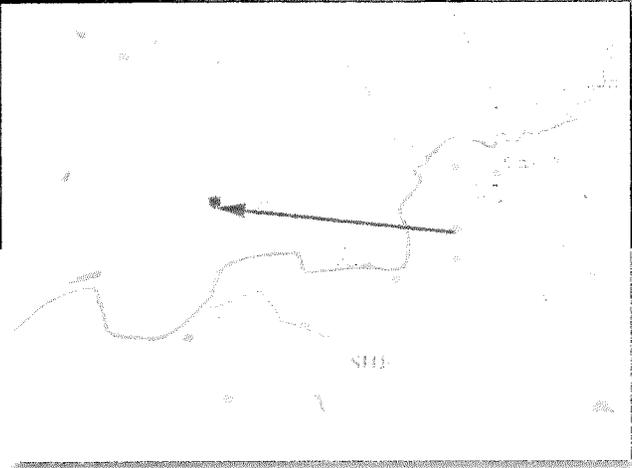
CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPOLE

Photo 4: View from Chestnut Street



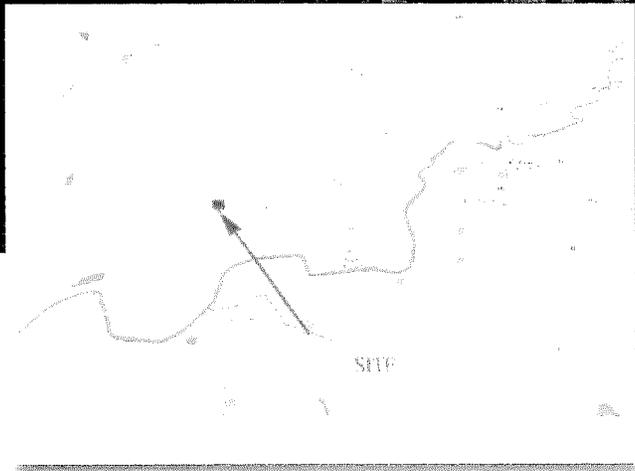
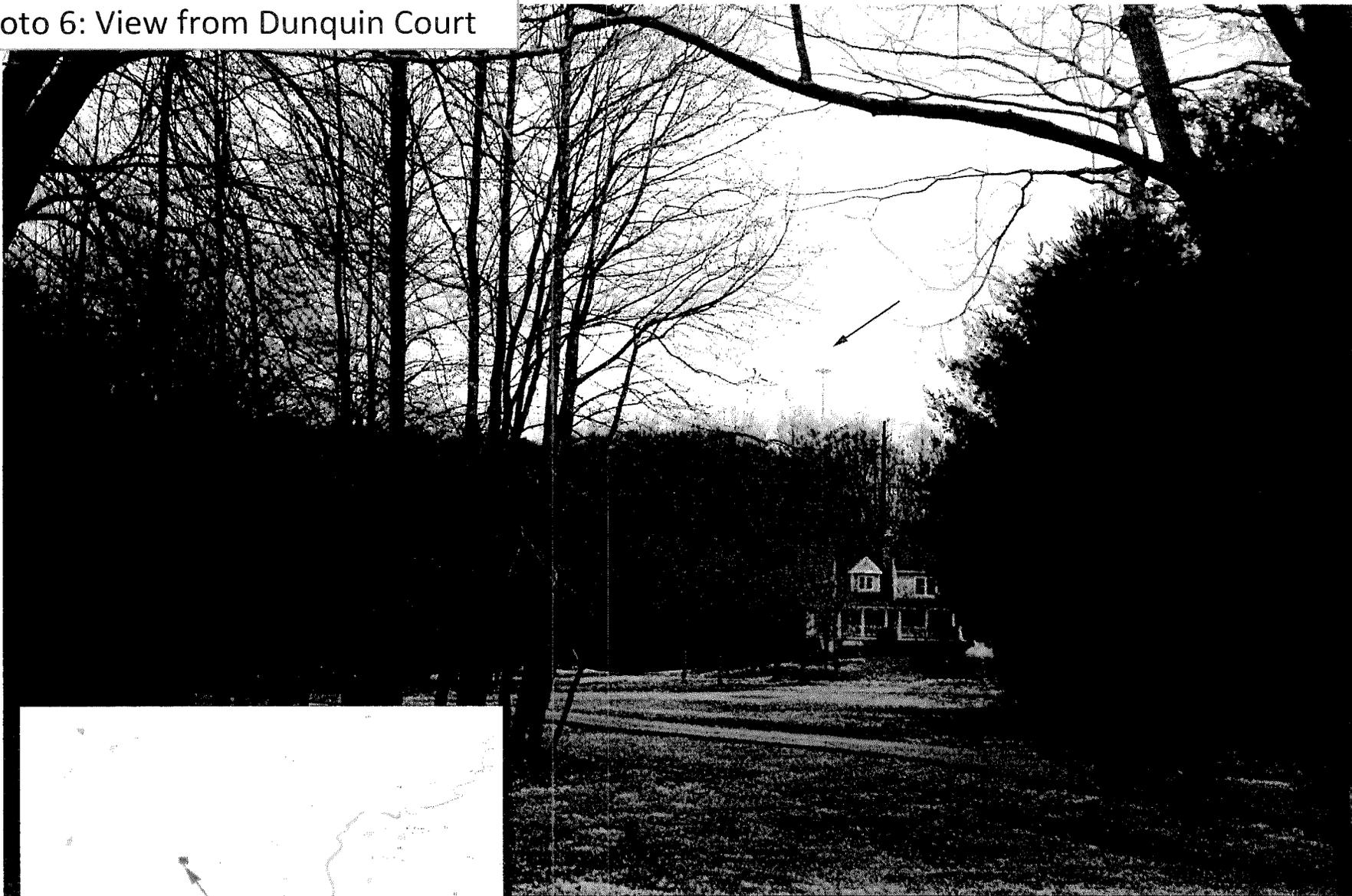
CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPOLE

Photo 5: View from Chapel Street



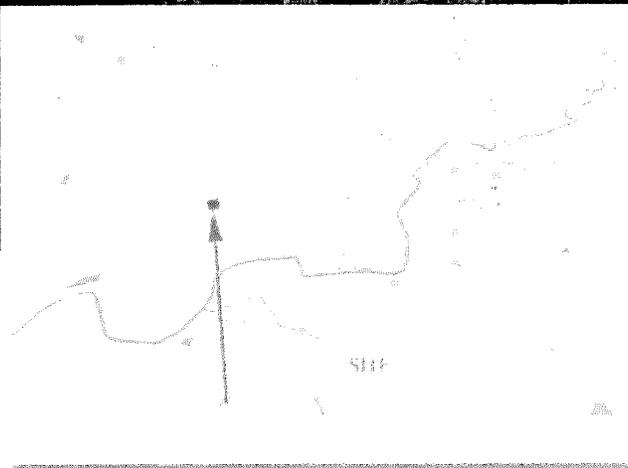
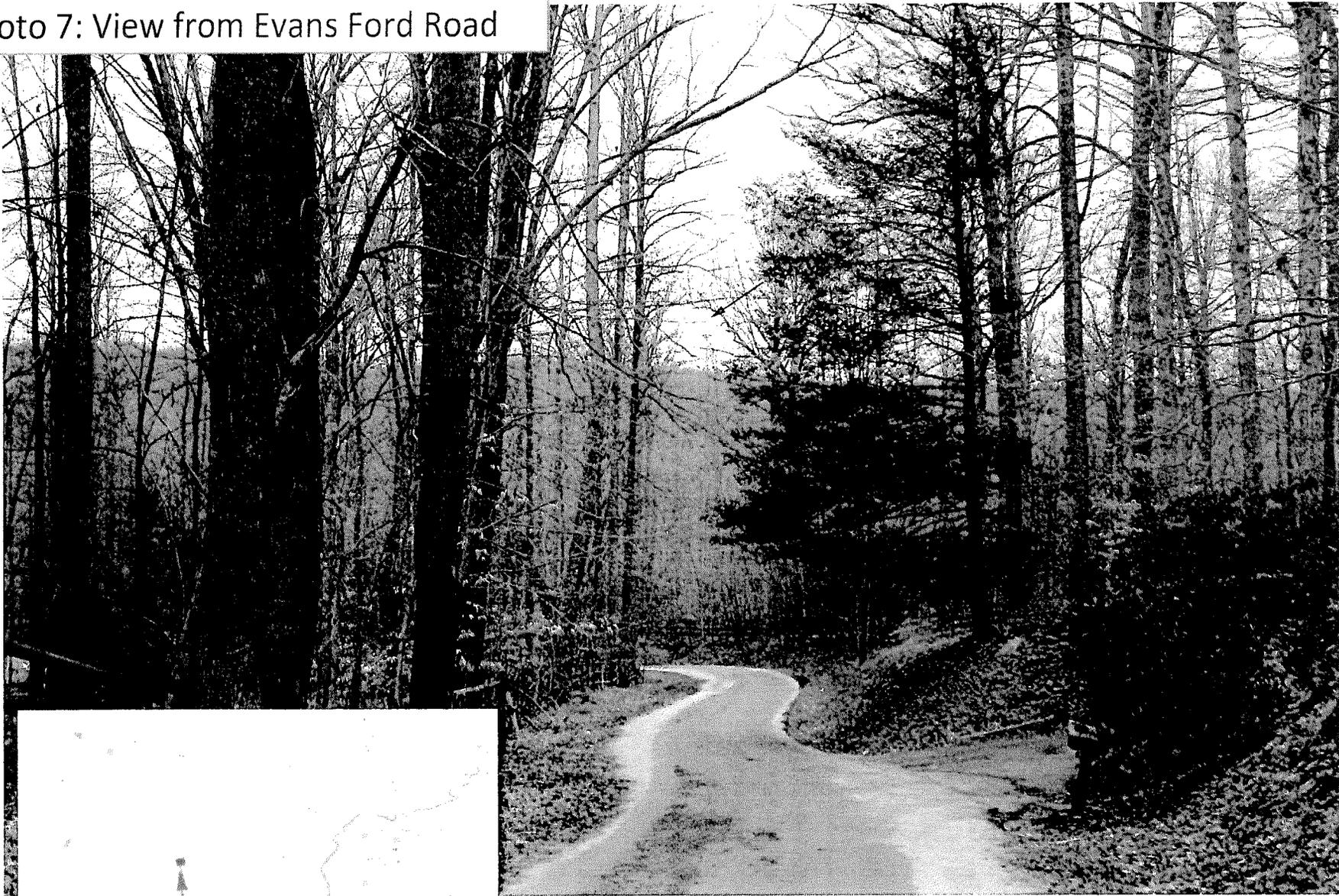
CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPOLE

Photo 6: View from Dunquin Court



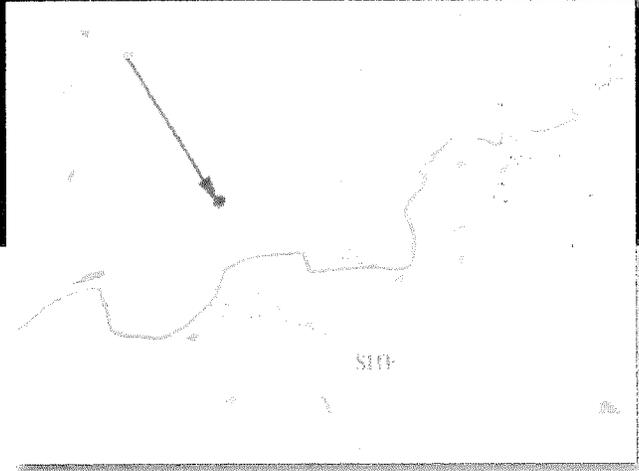
CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPOLE

Photo 7: View from Evans Ford Road



CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPOLE

Photo 8: View from Ivakota Road



CLIFTON CREEK  
SUBSTATION  
PROPOSED MONOPOLE

**RF JUSTIFICATION AND  
PROPAGATION MAPS**



April 29, 2014



**Statement of Certified Engineer  
Site Selection and Performance Standards**

Site Name: Ivatoka  
Site Address: 12895 Clifton Creek Drive, Clifton, VA 20124

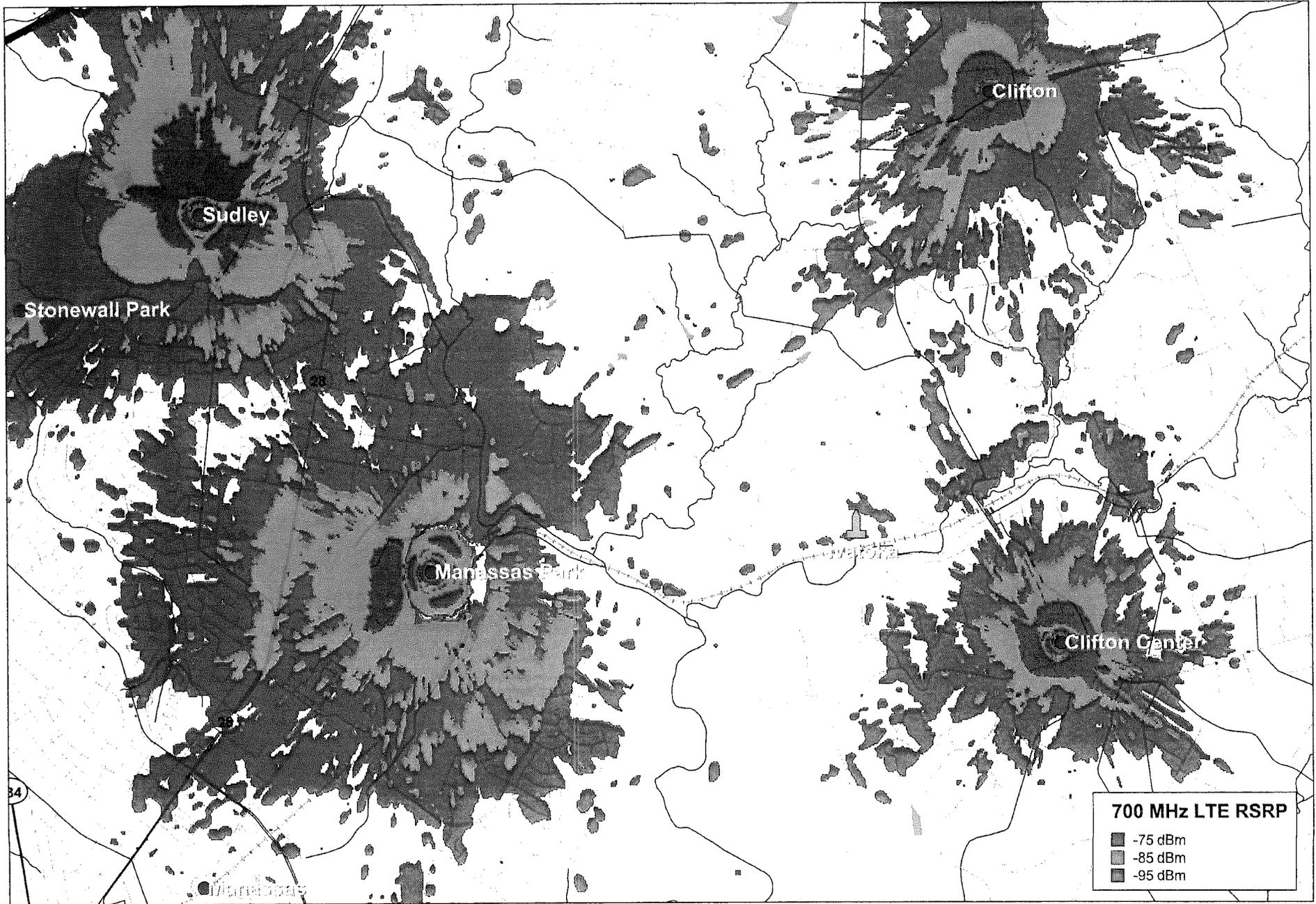
The Dominion substation parcel located at 12895 Clifton Creek Drive was selected by Verizon Wireless to provide and improve wireless coverage along Clifton Creek Drive, and Main Street in historical Clifton. The site will also enhance in-building coverage to the neighboring residential communities.

The applicant identified existing structures of sufficient height in the area. However, each of the existing Dominion Virginia Power (DVP) transmission towers that were of sufficient height and structurally capable were already occupied by other carriers. By adding Verizon Wireless equipment, these transmission towers would fail structurally.

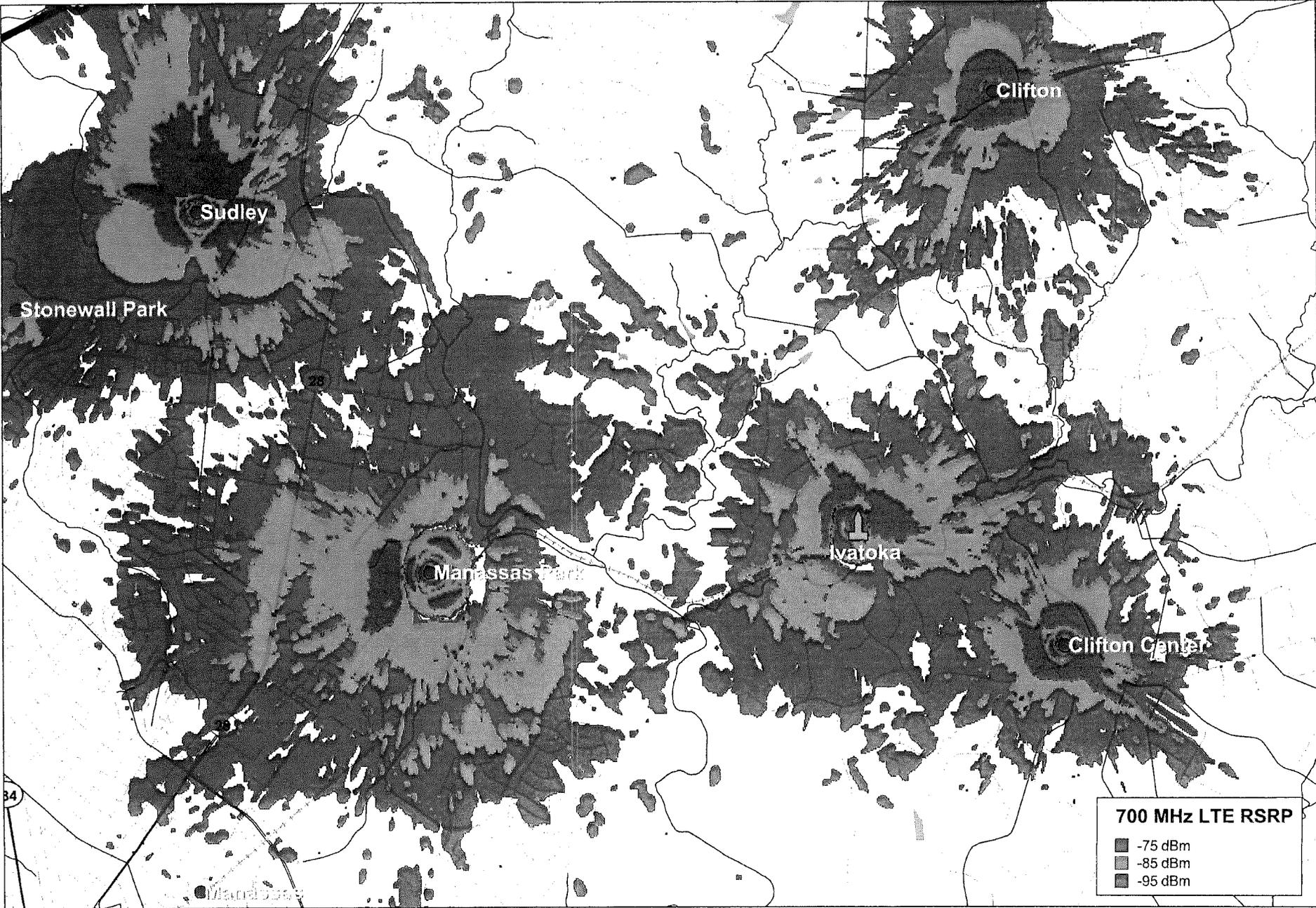
The proposed Milestone facility will resolve the need for adequate coverage in the area surrounding the proposed site and also ensure adequate overlapping coverage between and among existing Verizon sites. Ultimately, the proposed site will allow residents and commuters to experience better quality and diminished drop calls. The propagation maps attached to the application and prepared by an RF Engineer illustrate the improved coverage that will result with the addition of the new telecommunications site.

Shawn Boykins  
Radio Frequency Engineer  
9000 Junction Drive  
Annapolis Junction, MD 20701

# Ivatoka Neighbors Only



# Ivatoka with Neighbors at 140'



## ANTENNA SPECIFICATION SHEETS

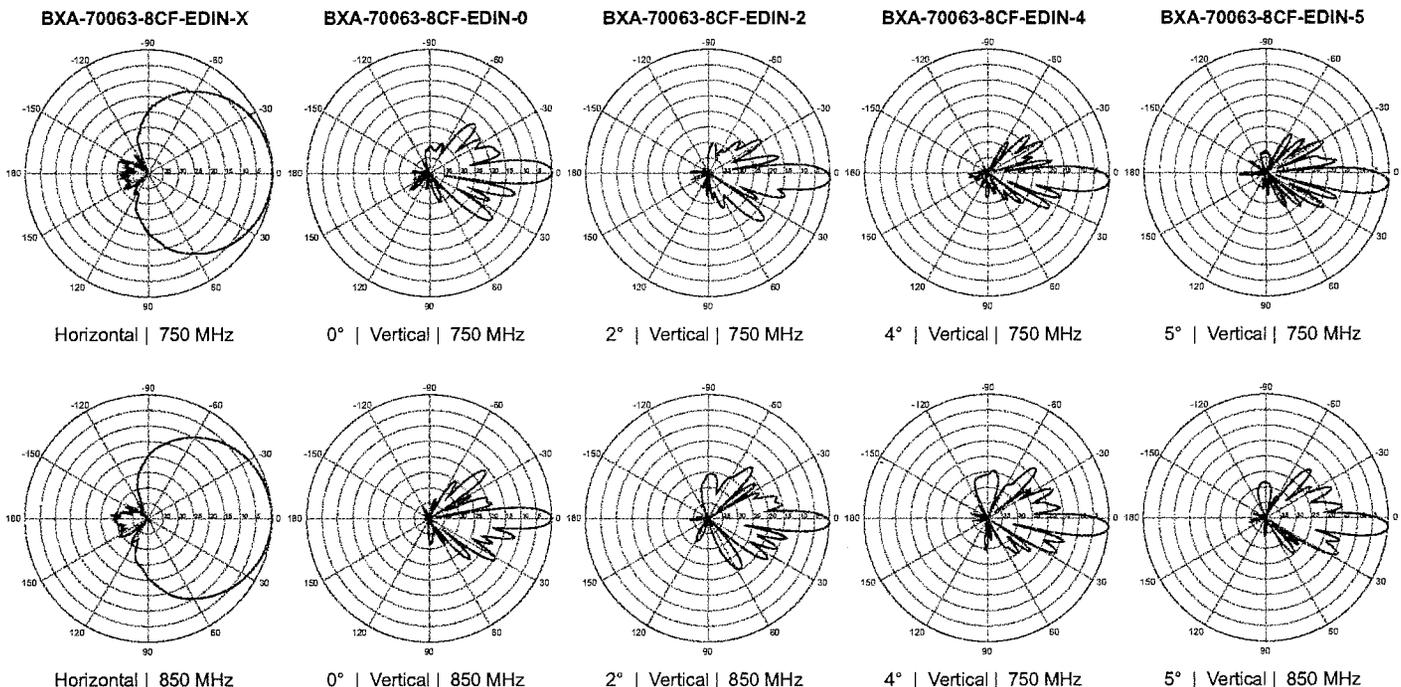
## BXA-70063-8CF-EDIN-X

X-Pol | FET Panel | 63° | 16.0 dBd

Replace "X" with desired electrical downtilt.

Antenna is also available with NE connector(s). Replace "EDIN" with "NE" in the model number when ordering.

Electrical Characteristics		696-900 MHz		
	696-806 MHz	806-900 MHz		
Frequency bands	696-806 MHz	806-900 MHz		
Polarization	±45°			
Horizontal beamwidth	65°	63°		
Vertical beamwidth	9°	7°		
Gain	15.5 dBd (17.6 dBi)	16.0 dBd (18.1 dBi)		
Electrical downtilt (X)	0, 2, 4, 5, 6, 7, 10			
Impedance	50Ω			
VSWR	≤1.35:1			
Upper sidelobe suppression (0°)	-16.2 dB	-19.0 dB		
Front-to-back ratio (+/-30°)	-32.9 dB	-31.3 dB		
Null fill	5% (-26.02 dB)			
Isolation between ports	< -30 dB			
Input power	500 W			
Lightning protection	Direct Ground			
Connector(s)	2 Ports / EDIN or NE / Female / Center (Back)			
Mechanical Characteristics				
Dimensions Length x Width x Depth	2405 x 285 x 130 mm	94.6 x 11.2 x 5.1 in		
Depth with z-brackets	170 mm	6.7 in		
Weight without mounting brackets	10.9 kg	24 lbs		
Survival wind speed	> 201 km/hr	> 125 mph		
Wind area	Front: 0.69 m <sup>2</sup> Side: 0.31 m <sup>2</sup>	Front: 7.4 ft <sup>2</sup> Side: 3.4 ft <sup>2</sup>		
Wind load @ 161 km/hr (100 mph)	Front: 1031 N Side: 581 N	Front: 232 lbf Side: 129 lbf		
Mounting Options		Part Number	Fits Pipe Diameter	Weight
3-Point Mounting Bracket Kit	36210003	50-160 mm 2.0-6.3 in	6.3 kg 14 lbs	
3-Point Downtilt Bracket Kit (0-14°)	36210004	50-160 mm 2.0-6.3 in	7.3 kg 16 lbs	
Downtilt Mounting Applications	A mounting bracket and downtilt bracket kit must be ordered for downtilt applications			
Concealment Configurations	For concealment configurations, order BXA-70063-8CF-EDIN-X-FP			



Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

## ANTENAS

### AMPHENOL ANTEL

ADA SERIES

BCD SERIES

BCR SERIES

BSA SERIES

BUILDING ANTENNAS

BXA SERIES

BXA-70040-4CF

BXA-70063-6CF

BXA-70090-8BF

BXA-80040-4CF

BXA-80063-6CF

BXA-80080-8CF

BXA-80090-8CF

BXA-87063-2CF

BXA-87065-6-M

BXA-87090-4-M

BXA-171040-8CF

**BXA-171063-12BF**

BXA-171090-8CF

BXA-185040-12CF

BXA-185060-8BF

BXA-185063-16CF

BXA-185085-12CF

BXA-185090-4CF

BXA-230063-8CF

C-BXA-80065-10BF

C-BXA-80090-4-M

C-BXA-185065-4-M

BXD SERIES

BXV SERIES

GPS ANTENNAS

LPA SERIES

LPD SERIES

MPA SERIES

WPA SERIES

## FEEDERS

## CATEGORÍAS

ENERGÍA

ENERGÍAS ALTERNATIVAS

SOLUCIÓN DE GABINETES

AIRES ACONDICIONADOS

RADIO FRECUENCIA

SERVICIOS

## BUSCAR UN PRODUCTO



RADIO FRECUENCIA / ANTENAS / AMPHENOL ANTEL / BXA SERIES / BXA-171063-12BF

BXA-171063-12BF :

### DESCRIPCIÓN:

X-Pol | FET Panel | 63° | 19.0 dBi

Frequency bands 1710-1880 MHz 1850-1990 MHz

1920-2170 MHz

Polarization  $\pm 45^\circ$   $\pm 45^\circ$   $\pm 45^\circ$

Horizontal beamwidth 68° 65° 60°

Vertical beamwidth 4.5° 4.5° 4.5°

Gain 16.1 dBd / 18.2 dBi 16.5 dBd / 18.6 dBi 16.9 dBd / 19.0 dBi

Electrical downtilt (X) 0, 2, 5

Impedance 50Ω

VSWR  $\leq 1.5:1$

First upper sidelobe < -17 dB

Front-to-back ratio > 30 dB

In-band isolation > 28 dB

IM3 (20W carrier) < -150 dBc

Input power 300 W

Lightning protection Direct Ground

Connector(s) 2 Ports / EDIN / Female / Bottom

Operating temperature -40° to +60° C / -40° to +140° F



**ATTACHMENT B**

## Clark, Harvey

---

**From:** Robalik, Anthony  
**Sent:** Tuesday, August 12, 2014 9:58 AM  
**To:** Clark, Harvey  
**Cc:** Hushour, Andrew  
**Subject:** 2232-S14-9; Milestone Communications and Verizon Wireless; 12895 Clifton Creek

2232-S14-9

Milestone Communications and Verizon Wireless—Construction of new monopole  
12895 Clifton Creek

Tax Map Ref.: 75-3 ((1)) 10

Zoning District: R-C

Comments: The proposed application generally meets those standards set forth in Par. 3 of Sect. 2-514 of the Zoning Ordinance. However, given the height of the proposed monopole, a steady red marker light is required pursuant to Par. 3.H. of Sect. 2-514 of the Zoning Ordinance, unless such is waived by the Zoning Administrator at the request of the applicant. In addition, an amendment to the governing special exception is required and has been submitted to the Zoning Evaluation Division.

ZED: Must be in substantial conformance with SE 91-S-03 and RZ 91-S-046.

Prepared by Tony Robalik 8/12/2014

ATTACHMENT C

### § 15.2-2232. Legal status of plan.

A. Whenever a local planning commission recommends a comprehensive plan or part thereof for the locality and such plan has been approved and adopted by the governing body, it shall control the general or approximate location, character and extent of each feature shown on the plan. Thereafter, unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof. In connection with any such determination, the commission may, and at the direction of the governing body shall, hold a public hearing, after notice as required by § 15.2-2204. Following the adoption of the Statewide Transportation Plan by the Commonwealth Transportation Board pursuant to § 33.1-23.03 and written notification to the affected local governments, each local government through which one or more of the designated corridors of statewide significance traverses, shall, at a minimum, note such corridor or corridors on the transportation plan map included in its comprehensive plan for information purposes at the next regular update of the transportation plan map. Prior to the next regular update of the transportation plan map, the local government shall acknowledge the existence of corridors of statewide significance within its boundaries.

B. The commission shall communicate its findings to the governing body, indicating its approval or disapproval with written reasons therefor. The governing body may overrule the action of the commission by a vote of a majority of its membership. Failure of the commission to act within 60 days of a submission, unless the time is extended by the governing body, shall be deemed approval. The owner or owners or their agents may appeal the decision of the commission to the governing body within 10 days after the decision of the commission. The appeal shall be by written petition to the governing body setting forth the reasons for the appeal. The appeal shall be heard and determined within 60 days from its filing. A majority vote of the governing body shall overrule the commission.

C. Widening, narrowing, extension, enlargement, vacation or change of use of streets or public areas shall likewise be submitted for approval, but paving, repair, reconstruction, improvement, drainage or similar work and normal service extensions of public utilities or public service corporations shall not require approval unless such work involves a change in location or extent of a street or public area.

D. Any public area, facility or use as set forth in subsection A which is identified within, but not the entire subject of, a submission under either § 15.2-2258 for subdivision or subdivision A 8 of § 15.2-2286 for development or both may be deemed a feature already shown on the adopted master plan, and, therefore, excepted from the requirement for submittal to and approval by the commission or the governing body; provided, that the governing body has by ordinance or resolution defined standards governing the construction, establishment or authorization of such public area, facility or use or has approved it through acceptance of a proffer made pursuant to § 15.2-2303.

E. Approval and funding of a public telecommunications facility on or before July 1, 2012, by the Virginia Public Broadcasting Board pursuant to Article 12 (§ 2.2-2426 et seq.) of Chapter 24 of Title 2.2 or after July 1, 2012, by the Board of Education pursuant to § 22.1-20.1 shall be deemed to satisfy the requirements of this section and local zoning ordinances with respect to such facility with the exception of television and radio towers and structures not necessary to house electronic apparatus. The exemption provided for in this subsection shall not apply to facilities existing or approved by the Virginia Public Telecommunications Board prior to July 1, 1990. The Board of Education shall notify the governing body of the locality in advance of any meeting where approval of any such facility shall be acted upon.

F. On any application for a telecommunications facility, the commission's decision shall comply with the requirements of the Federal Telecommunications Act of 1996. Failure of the commission to act on any such application for a telecommunications facility under subsection A submitted on or after July 1, 1998, within 90 days of such submission shall be deemed approval of the application by the commission unless the governing body has authorized an extension of time for consideration or the applicant has agreed to an extension of time. The governing body may extend the time required for action by the local commission by no more than 60 additional days. If the commission has not acted on the application by the end of the extension, or by the end of such longer period as may be agreed to by the applicant, the application is deemed approved by the commission.

(Code 1950, §§ 15-909, 15-923, 15-964.10; 1958, c. 389; 1960, c. 567; 1962, c. 4 7, § 15.1-456; 1964, c. 528; 1966, c. 596; 1968, c. 290; 1975, c. 641; 1976, c. 291; 1978, c. 584; 1982, c. 39; 1987, c. 312; 1989, c. 532; 1990, c. 633; 1997, cc. 587, 858; 1998, c. 683; 2007, c. 801; 2009, cc. 670, 690; 2012, cc. 803, 835.)



# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** April 16, 2015

**TO:** Barbara Berlin, Director  
Zoning Evaluation Division  
Department of Planning and Zoning

**FROM:** Michael A. Davis, Acting Chief   
Site Analysis Section  
Department of Transportation

**FILE:** 3-5 (SE 91-S-031)

**SUBJECT:** Transportation Impact

**REFERENCE:** SEA 91-S-031 – Milestone Communications, Cellco Partnership dba Verizon Wireless, Virginia Power and Electric.  
Land Identification Map: 75-3 ((1)) 10

Transmitted herewith are the comments from the Department of Transportation with respect to the referenced application. These comments are based on plats made available to this office dated December 15, 2014, and revised through January 14, 2015. The applicant wishes to amend SE 91-S-031 in order to construct and operate a wireless telecommunications facility. The facility will consist of a 140 foot tall monopole and associated equipment. Access is via a controlled access gravel driveway off Clifton Creek Drive which connects to Clifton Road.

During the construction of this facility, large trucks will be delivering materials and equipment. The turning of these trucks to and from Clifton Road may interfere with traffic on Clifton Road. In order to not impede peak hour traffic on Clifton Road, a development condition should be adopted to prohibit large trucks accessing the site during the peak hours of traffic on Clifton Road, 6-9 a.m. and 3-7 p.m., on weekdays.

MAD/LAH/lah

cc: Mary Ann Tsai, DPZ



# County of Fairfax, Virginia

## MEMORANDUM

DATE: 31 March 2015

**TO:** Mary Ann Tsai, Staff Coordinator, Zoning Evaluation Division

**FROM:** Linda Cornish Blank, Historic Preservation Planner *LCB*

**CC:** Harvey Clark, Planner, Facilities Planning Branch

**SUBJECT:** SEA 91-S-031, Milestone Communications, 12895 Clifton Creek Drive, Tax Map 75-3((1)) 10; amend SE to permit construction of a 140' high monopole with up to 5 carriers and associated equipment

**Policy Plan:** Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Amended through 3-4-2014, Public Facilities, page 39:

"Policy m. Locate proposed telecommunication facilities to ensure the protection of historically significant landscapes and cultural resources. The views of and vistas from architecturally and/or historically significant structures should not be impaired or diminished by the placement of telecommunication facilities."

Background: The subject parcel is not included within the boundaries of a Fairfax County Historic Overlay District, is not listed in the Fairfax County Inventory of Historic Sites or the National Register of Historic Places or documented in the historic structures survey file. The Clifton National Register (NR) Historic District and the Clifton Historic District listed in the Fairfax County Inventory of Historic Sites are in the immediate vicinity of the subject property of this application.

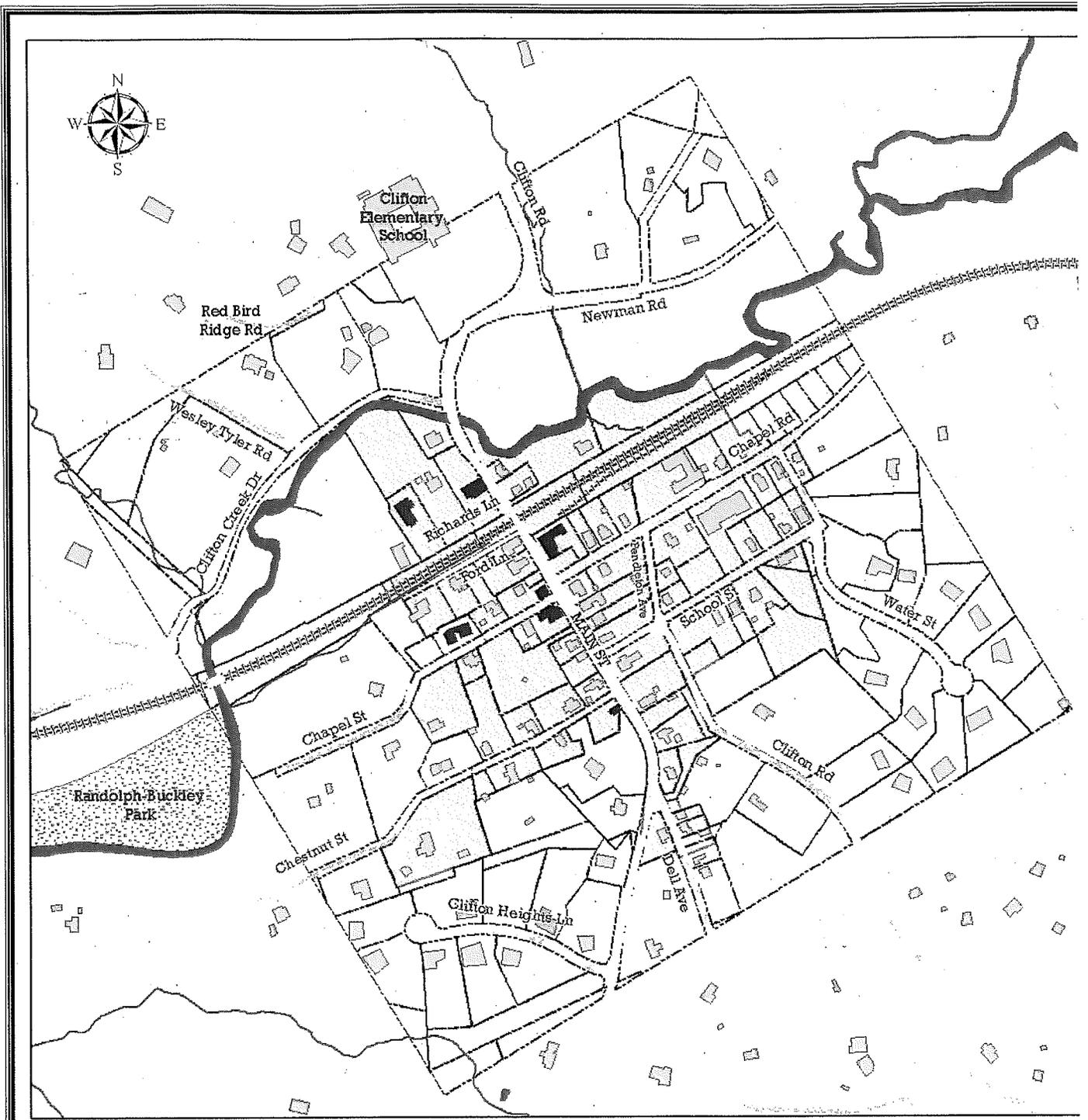
Findings:

1. Staff finds from the materials supplied by the applicant that the proposal is in-keeping with the Policy Plan text cited above regarding effect of the proposal on known historic properties.
2. The applicant provided a copy of the review completed under Section 106 of the National Historic Preservation Act of 1966, as amended, to DPZ as requested in August 2014.
3. The photo simulation views provided by the applicant and those included under Section 106 review show representative views from within the boundaries of the Clifton NR Historic District. These photos indicate that there is no adverse visual effect on the historic district.
4. Staff concurs with the findings of the Section 106 review that there are no visual adverse effects to known historic properties.
5. No further action concerning heritage resources is required.

Attachment: Map showing Clifton National Register Historic District and individual sites listed in the Fairfax County Inventory of Historic Sites; The Town of Clifton Comprehensive Plan 2009, Fig. 3, p. 18.

Department of Planning and Zoning  
 Planning Division  
 12055 Government Center Parkway, Suite 730  
 Fairfax, Virginia 22035-5509  
 Phone 703-324-1380  
 Fax 703-324-3056  
[www.fairfaxcounty.gov/dpz/](http://www.fairfaxcounty.gov/dpz/)





# Clifton Historic District National Register of Historic Places

Produced by the  
Northern Virginia Regional Commission  
for the  
Town of Clifton

June 2009

Based upon data from  
Fairfax County Government

-  Fairfax County Inventory of Historic Sites
-  Federal Historic District Boundary

See appendix A for a description of properties in Historic District

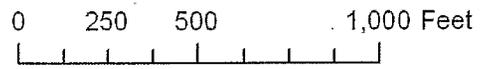


Figure 3: Clifton Historic District and Historic Homes.



# FAIRFAX COUNTY PARK AUTHORITY



## M E M O R A N D U M

**TO:** Barbara Berlin, AICP, Director  
Zoning Evaluation Division  
Department of Planning and Zoning

**FROM:** Sandy Stallman, AICP, Manager   
Park Planning Branch, PDD

**DATE:** April 21, 2015

**SUBJECT:** SEA 91-S-031, Clifton Creek Substation (Milestone Communications)  
Tax Map Number: 75-3((1)) 10

### **BACKGROUND**

The Park Authority staff has reviewed the proposed Development Plan dated January 14, 2015, for the above referenced application. The Development Plan shows a communications tower on a 95 acre site.

### **COMPREHENSIVE PLAN GUIDANCE**

The County Comprehensive Plan includes both general and specific guidance regarding parks and resources. The Policy Plan describes the need to mitigate adverse impacts to park and recreation facilities caused by growth and development; it also offers a variety of ways to offset those impacts, including contributions, land dedication, development of facilities, and others (Parks and Recreation, Objective 6, p.8). Resource protection is addressed in multiple objectives, focusing on protection, preservation, and sustainability of resources (Parks and Recreation Objectives 2 and 5, p.5-7).

### **ANALYSIS AND RECOMMENDATIONS**

#### **Cultural Resources Impact:**

The parcels were subjected to cultural resources review. The portion of the parcel to be impacted is disturbed by previous construction and development. From the viewpoint of the Park Authority, there are no cultural resources issues and no archaeological work is warranted. However, all telecommunications projects are under federal jurisdiction and trigger Section 106 of the National Historic Preservation Act. Therefore, staff recommends that the applicant initiate consultation with the Virginia Department of Historic Resources.

Barbara Berlin  
SEA 91-S-031, Clifton Creek Substation (Milestone Communications)  
Page 2

FCPA Reviewer: Andy Galusha  
DPZ Coordinator: Mary Ann Tsai

Copy: Cindy Walsh, Director, Resource Management Division  
Liz Crowell, Manager, Cultural Resource Management & Protection Section  
Mary Ann Tsai, DPZ Coordinator  
Chron File  
File Copy



# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** April 23, 2015

**TO:** Mary Ann Tsai, Staff Coordinator  
Zoning Evaluation Division, DPZ

**FROM:** Ian Fuze, Urban Forester II  
Forest Conservation Branch, DPWES

**SUBJECT:** Clifton Creek Substation. SEA 91-S-031

This review is based upon the revised Special Exception Amendment resubmission received by Urban Forest Management Division April 15, 2015.

1. **Comment:** It appears that the applicant is requesting to reaffirm the modifications to the transitional screening and the waiver of the barrier requirement as approved by the Board of Supervisors on March 9, 1992 and as described in the Clerks Letter dated March 27, 1992. However, it is unclear if the first condition of approval has been met, as part of this SEA, which states the following:

*The Board also:*

*Modified the transitional screening requirements in favor of the existing vegetation on the site, the landscape plantings shown on the Special Exception Plat, and the Development Conditions, subject to final approval by the Chief of Urban Forestry Branch of the Department of Environmental Management.*

**Recommendation:** The applicant should clearly draw and label the transitional screening yards that are required between the subject property and the adjacent properties. These transitional screening yards should be depicted along the property boundaries and transitional screening calculations should also be provided so that it is clear how the existing vegetation meets the intent of the requirements set forth in ZO 13-303.

2. **Comment:** A landscape plan has not been provided and it is unclear if this application is in conformance with Development Conditions #4A-G or the conditions of approval, relating to landscaping, as described in the Clerks letter dated March 27, 1992 and approved by the Board of Supervisors on March 9, 1992 for SE-91-S-031. These conditions describe in detail the landscaping that shall be installed and maintained in accordance with the Special Permit Plat dated November 19, 1991 and revised through February 21, 1992.

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Department of Public Works and Environmental Services  
Urban Forest Management Division  
12055 Government Center Parkway, Suite 518  
Fairfax, Virginia 22035-5503  
Phone 703-324-1770, TTY: 711, Fax: 703-653-9550  
[www.fairfaxcounty.gov/dpwes](http://www.fairfaxcounty.gov/dpwes)



**Recommendation:** All future applications involving the subject property should demonstrate conformance with Development Conditions #4A-G and the conditions of approval, relating to landscaping, as described in the Clerks letter dated March 27, 1992 and approved by the Board of Supervisors on March 9, 1992 for SE-91-S-031.

If you have any questions please feel free to contact me directly at 703-324-1770.

IF/

UFMDID #: 199163

cc: DPZ File

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**Department of Public Works and Environmental Services**  
**Land Development Services, Environmental and Site Review Division**  
12055 Government Center Parkway, Suite 535  
Fairfax, Virginia 22035-5503  
Phone 703-324-1720, TTY: 703-324-1877, Fax: 703-324-8359  
[www.fairfaxcounty.gov/dpwes](http://www.fairfaxcounty.gov/dpwes)





# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** March 10, 2015

**TO:** Mary Ann Tsai, Senior Staff Coordinator  
Zoning Evaluation Division  
Department of Planning and Zoning

**FROM:** Mohan Bastakoti, P.E., Senior Engineer III   
South Branch  
Site Development and Inspections Division  
Department of Public Works and Environmental Services

**SUBJECT:** Application # SEA 91-S-031; Milestone Communications; 8612-ZONA-001-1, Tax Map #075-3-01-0010; Springfield District

We have reviewed the subject application and offer the following stormwater management comments:

### Chesapeake Bay Preservation Ordinance (CBPO)

Resource Protection area is present on this site. RPA delineation will be required per LT 08-12. RPA location was not shown on the plan. If there is a land disturbance proposed within RPA, the applicant needs to provide information how they qualify for the land disturbance in RPA per CBPO.

### Floodplain

There is a FEMA regulated floodplain on this site. An engineering study of flood plain to delineate 100-yr flood boundary is required per ZO 2-901. Use of existing flood hazard data to delineate floodplain boundaries shall be per technical bulletin 12-03.

If there is any encroachment or land disturbance proposed within the FEMA Flood Plain, a floodplain use determination shall be required from SDID. ZO 2-902

### Downstream Drainage Complaints

There is no storm water complaint on file within the property.



#### Drainage Diversion

During the development, the natural drainage divide shall be honored. If natural drainage divides cannot be honored, a drainage diversion justification narrative must be provided. The increase and decrease in discharge rates, volumes, and durations of concentrated and non-concentrated Stormwater runoff leaving a development site due to the diverted flow shall not have an adverse impact (e.g., soil erosion; sedimentation; yard, dwelling, building, or private structure flooding; duration of ponding water; inadequate overland relief) on adjacent or downstream properties. (PFM 6-0202.2A)

#### Water Quality Control

The applicant has provided water quality compliance sheet of VRRM which is not complete. A completed VRRM spreadsheet showing the BMP requirements have been met is required. It should be clearly written on the plan that the proposed BMP will be privately maintained. A narrative explaining how the BMP requirements of SWM Ordinance section 124-4-3 have been met is also required.

BMP sizing computations, setbacks and construction specifications shall be provided and reviewed during site plan review.

#### Stormwater Detention

Unless waived by the Director, the post development peak flow for the 2-year 24-hour storm event shall be released at a rate that is equal to or less than the predevelopment peak flow rate from the 2-year 24-hour storm event and the post development peak flow for the 10-year 24-hour storm event shall be released at a rate that is less than or equal to the predevelopment peak flow rate from the 10-year 24-hour storm event. SWMO 124-4-4.D.

The applicant has proposed runoff detention within grass swales to meet the detention requirement of PFM. 6-0301.3. The details of routing and sizing computations will be reviewed during site plan review.

#### Water Quantity Control

The applicant shall provide a narrative and a summary of computations to demonstrate how the concentrated stormwater flow will be released into a stormwater conveyance system and shall meet criteria (1), (2) or (3) of 124-4-4B, where applicable, from the point of discharge to a point to the limits of analysis in Section 124-4-4(b)(5).

The applicant shall also provide a narrative and a summary of computations to demonstrate how the concentrated stormwater flow shall be released into a stormwater conveyance system and

Mary Ann Tsai, Senior Staff Coordinator

Application # SEA 91-S-031; Milestone Communications; 8612-ZONA-001

shall meet criteria subsections (1), (2), or (3) of 124-4-4C, where applicable, from the point of discharge to a point to the limits of analysis in Section 124-4-4(c)(5).

The details of the hydrological and hydraulic computations will be reviewed during site plan/sub division plan review.

#### Downstream Drainage System

An outfall narrative has been provided, however, the description of the adequacy and stability of the outfall is not a part of the statement. The minimum Stormwater information for rezoning, special exception, special permit, and development plan applications require a description of the existing conditions of each site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres), whichever comes first. (ZO 9-011.J (2) (C)).

cc: Don Demetrius, Chief, Watershed Projects Evaluation Branch, SPD, DPWES  
Fred Rose, Chief, Watershed Planning & Assessment Branch, SPD, DPWES  
Durga Kharel, Chief, central Branch, SDID, DPWES  
Zoning Application File



# County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

**RECEIVED**  
APR 6 2015

March 30, 2015

Mr. Frank W. Stearns  
Donohue & Stearns, PLC  
201 Liberty Street  
Leesburg, VA 20175

BY: \_\_\_\_\_

RE: Request for Waiver of Steady Red Marker – 2232-S14-9

Dominion Virginia Power – Clifton Creek Substation  
12895 Clifton Creek Drive  
Tax Map: 75-3 ((1)) 10  
Zoning District: RC

Dear Mr. Stearns:

This is in response to your August 15, 2014 letter to Leslie Johnson, Zoning Administrator, in which you requested waiver of the steady red marker requirement for the proposed 140 foot tall telecommunications facility on the above referenced property. The proposed facility is associated with Application# 2232-S14-9. Pursuant to Par. 3.H. of Sect. 2-514 of the Fairfax County Zoning Ordinance, a steady red marker light is required to be installed, and operated at all times, on all antenna structures exceeding 100 feet in height. However, this requirement may be waived by the Zoning Administrator upon a determination by the Police Department that such marker is not necessary for flight safety requirements for police and emergency helicopter operations.

We have received confirmation from the Helicopter Division of the Police Department that the steady red marker is not required for the proposed facility; a copy of their finding is enclosed for your records. Given the input from the Helicopter Division, the requirement for the steady red marker has been waived by the Zoning Administration Division for this particular application.

I trust this information adequately responds to your request. If you have any additional questions, please feel free to contact me at 703-324-1314.

Sincerely,

Andrew B. Hushour  
Deputy Zoning Administrator

ABH/

Department of Planning and Zoning  
Zoning Administration Division  
Ordinance Administration Branch  
12055 Government Center Parkway, Suite 807  
Fairfax, Virginia 22035-5505  
Phone 703-324-1314 FAX 703-803-6372  
www.fairfaxcounty.gov/dpz/



Mr. Frank W. Stearns

March 30, 2015

Page 2

cc: Pat Herry, Supervisor, Springfield District  
Diane Johnson-Quinn, Deputy Zoning Administrator for Zoning Permit Review Branch  
Chris Caperton, Chief, Facilities Planning Branch, DPZ  
Captain Thomas J. Rogers, Commander, Helicopter Division, Police Department



# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** October 14, 2014

**TO:** Mr. Andrew Hushour  
Deputy Zoning Administrator

**FROM:** Thomas J. Rogers, Captain  
Commander, Helicopter Division

**SUBJECT:** Waiver Request of Steady Marker

**RE:** #2232-S14-9, 12895 Clifton Creek Drive, Clifton

The Fairfax County Police Helicopter Division has reviewed the referenced application. The proposed structure does not pose an adverse safety condition for our daily operations. We have also concluded that the lack of a steady red marker would not pose a flight safety hazard for our aircrews or aircraft.

At the discretion of the Zoning Administrator, the requirement for a steady red light marker may be waived with no objection from the Police Helicopter Division.

Any questions may be directed to Mr. Jason Post, Chief Pilot @ [Jason.post@fairfaxcounty.gov](mailto:Jason.post@fairfaxcounty.gov) or 703-830-3105.

**Cc:** Mr. Leslie Johnson, Zoning Administrator  
Mr. Jason Post, FCPD Helicopter Division  
Mr. Doug Hansen, DPZ  
Mr. Chris Caperton, DPZ

Jmp

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Fairfax County Police Department  
4100 Chain Bridge Road  
Fairfax, Virginia 22030



**GLOSSARY**

This Glossary is provided to assist the public in understanding the staff evaluation and analysis of development proposals. It should not be construed as representing legal definitions. Refer to the Fairfax County Zoning Ordinance, Comprehensive Plan or Public Facilities Manual for additional information.

**ABANDONMENT:** Refers to road or street abandonment, an action taken by the Board of Supervisors, usually through the public hearing process, to abolish the public's right-of-passage over a road or road right-of way. Upon abandonment, the right-of-way automatically reverts to the underlying fee owners. If the fee to the owner is unknown, Virginia law presumes that fee to the roadbed rests with the adjacent property owners if there is no evidence to the contrary.

**ACCESSORY DWELLING UNIT (OR APARTMENT):** A secondary dwelling unit established in conjunction with and clearly subordinate to a single family detached dwelling unit. An accessory dwelling unit may be allowed if a special permit is granted by the Board of Zoning Appeals (BZA). Refer to Sect. 8-918 of the Zoning Ordinance.

**AFFORDABLE DWELLING UNIT (ADU) DEVELOPMENT:** Residential development to assist in the provision of affordable housing for persons of low and moderate income in accordance with the affordable dwelling unit program and in accordance with Zoning Ordinance regulations. Residential development which provides affordable dwelling units may result in a density bonus (see below) permitting the construction of additional housing units. See Part 8 of Article 2 of the Zoning Ordinance.

**AGRICULTURAL AND FORESTAL DISTRICTS:** A land use classification created under Chapter 114 or 115 of the Fairfax County Code for the purpose of qualifying landowners who wish to retain their property for agricultural or forestal use for use/value taxation pursuant to Chapter 58 of the Fairfax County Code.

**BARRIER:** A wall, fence, earthen berm, or plant materials which may be used to provide a physical separation between land uses. Refer to Article 13 of the Zoning Ordinance for specific barrier requirements.

**BEST MANAGEMENT PRACTICES (BMPs):** Stormwater management techniques or land use practices that are determined to be the most effective, practicable means of preventing and/or reducing the amount of pollution generated by nonpoint sources in order to improve water quality.

**BUFFER:** Graduated mix of land uses, building heights or intensities designed to mitigate potential conflicts between different types or intensities of land uses; may also provide for a transition between uses. A landscaped buffer may be an area of open, undeveloped land and may include a combination of fences, walls, berms, open space and/or landscape plantings. A buffer is not necessarily coincident with transitional screening.

**CHESAPEAKE BAY PRESERVATION ORDINANCE:** Regulations which the State has mandated must be adopted to protect the Chesapeake Bay and its tributaries. These regulations must be incorporated into the comprehensive plans, zoning ordinances and subdivision ordinances of the affected localities. Refer to Chesapeake Bay Preservation Act, Va. Code Section 10.1-2100 et seq and VR 173-02-01, Chesapeake Bay Preservation Area Designation and Management Regulations.

**CLUSTER DEVELOPMENT:** Residential development in which the lots are clustered on a portion of a site so that significant environmental/historical/cultural resources may be preserved or recreational amenities provided. While smaller lot sizes are permitted in a cluster subdivision to preserve open space, the overall density cannot exceed that permitted by the applicable zoning district. See Sect. 2-421 and Sect. 9-615 of the Zoning Ordinance.

**COUNTY 2232 REVIEW PROCESS:** A public hearing process pursuant to Sect. 15.2-2232 (Formerly Sect. 15.1-456) of the Virginia Code which is used to determine if a proposed public facility not shown on the adopted Comprehensive Plan is in substantial accord with the plan. Specifically, this process is used to determine if the general or approximate location, character and extent of a proposed facility is in substantial accord with the Plan.

**dba:** The momentary magnitude of sound weighted to approximate the sensitivity of the human ear to certain frequencies; the dBA value describes a sound at a given instant, a maximum sound level or a steady state value. See also Ldn.

**DENSITY:** Number of dwelling units (du) divided by the gross acreage (ac) of a site being developed in residential use; or, the number of dwelling units per acre (du/ac) except in the PRC District when density refers to the number of persons per acre.

**DENSITY BONUS:** An increase in the density otherwise allowed in a given zoning district which may be granted under specific provisions of the Zoning Ordinance when a developer provides excess open space, recreation facilities, or affordable dwelling units (ADUs), etc.

**DEVELOPMENT CONDITIONS:** Terms or conditions imposed on a development by the Board of Supervisors (BOS) or the Board of Zoning Appeals (BZA) in connection with approval of a special exception, special permit or variance application or rezoning application in a "P" district. Conditions may be imposed to mitigate adverse impacts associated with a development as well as secure compliance with the Zoning Ordinance and/or conformance with the Comprehensive Plan. For example, development conditions may regulate hours of operation, number of employees, height of buildings, and intensity of development.

**DEVELOPMENT PLAN:** A graphic representation which depicts the nature and character of the development proposed for a specific land area: information such as topography, location and size of proposed structures, location of streets trails, utilities, and storm drainage are generally included on a development plan. A development plan is a submission requirement for rezoning to the PRC District. A **GENERALIZED DEVELOPMENT PLAN (GDP)** is a submission requirement for a rezoning application for all conventional zoning districts other than a P District. A development plan submitted in connection with a special exception (SE) or special permit (SP) is generally referred to as an SE or SP plat. A **CONCEPTUAL DEVELOPMENT PLAN (CDP)** is a submission requirement when filing a rezoning application for a P District other than the PRC District; a CDP characterizes in a general way the planned development of the site. A **FINAL DEVELOPMENT PLAN (FDP)** is a submission requirement following the approval of a conceptual development plan and rezoning application for a P District other than the PRC District; an FDP further details the planned development of the site. See Article 16 of the Zoning Ordinance.

**EASEMENT:** A right to or interest in property owned by another for a specific and limited purpose. Examples: access easement, utility easement, construction easement, etc. Easements may be for public or private purposes.

**ENVIRONMENTAL QUALITY CORRIDORS (EQCs):** An open space system designed to link and preserve natural resource areas, provide passive recreation and protect wildlife habitat. The system includes stream valleys, steep slopes and wetlands. For a complete definition of EQCs, refer to the Environmental section of the Policy Plan for Fairfax County contained in Vol. 1 of the Comprehensive Plan.

**ERODIBLE SOILS:** Soils that wash away easily, especially under conditions where stormwater runoff is inadequately controlled. Silt and sediment are washed into nearby streams, thereby degrading water quality.

**FLOODPLAIN:** Those land areas in and adjacent to streams and watercourses subject to periodic flooding; usually associated with environmental quality corridors. The 100 year floodplain drains 70 acres or more of land and has a one percent chance of flood occurrence in any given year.

**FLOOR AREA RATIO (FAR):** An expression of the amount of development intensity (typically, non-residential uses) on a specific parcel of land. FAR is determined by dividing the total square footage of gross floor area of buildings on a site by the total square footage of the site itself.

**FUNCTIONAL CLASSIFICATION:** A system for classifying roads in terms of the character of service that individual facilities are providing or are intended to provide, ranging from travel mobility to land access. Roadway system functional classification elements include Freeways or Expressways which are limited access highways, Other Principal (or Major) Arterials, Minor Arterials, Collector Streets, and Local Streets. Principal arterials are designed to accommodate travel; access to adjacent properties is discouraged. Minor arterials are designed to serve both through traffic and local trips. Collector roads and streets link local streets and properties with the arterial network. Local streets provide access to adjacent properties.

**GEOTECHNICAL REVIEW:** An engineering study of the geology and soils of a site which is submitted to determine the suitability of a site for development and recommends construction techniques designed to overcome development on problem soils, e.g., marine clay soils.

**HYDROCARBON RUNOFF:** Petroleum products, such as motor oil, gasoline or transmission fluid deposited by motor vehicles which are carried into the local storm sewer system with the stormwater runoff, and ultimately, into receiving streams; a major source of non-point source pollution. An oil-grit separator is a common hydrocarbon runoff reduction method.

**IMPERVIOUS SURFACE:** Any land area covered by buildings or paved with a hard surface such that water cannot seep through the surface into the ground.

**INFILL:** Development on vacant or underutilized sites within an area which is already mostly developed in an established development pattern or neighborhood.

**INTENSITY:** The magnitude of development usually measured in such terms as density, floor area ratio, building height, percentage of impervious surface, traffic generation, etc. Intensity is also based on a comparison of the development proposal against environmental constraints or other conditions which determine the carrying capacity of a specific land area to accommodate development without adverse impacts.

**Ldn:** Day night average sound level. It is the twenty-four hour average sound level expressed in A-weighted decibels; the measurement assigns a "penalty" to night time noise to account for night time sensitivity. Ldn represents the total noise environment which varies over time and correlates with the effects of noise on the public health, safety and welfare.

**LEVEL OF SERVICE (LOS):** An estimate of the effectiveness of a roadway to carry traffic, usually under anticipated peak traffic conditions. Level of Service efficiency is generally characterized by the letters A through F, with LOS-A describing free flow traffic conditions and LOS-F describing jammed or grid-lock conditions.

**MARINE CLAY SOILS:** Soils that occur in widespread areas of the County generally east of Interstate 95. Because of the abundance of shrink-swell clays in these soils, they tend to be highly unstable. Many areas of slope failure are evident on natural slopes. Construction on these soils may initiate or accelerate slope movement or slope failure. The shrink-swell soils can cause movement in structures, even in areas of flat topography, from dry to wet seasons resulting in cracked foundations, etc. Also known as slippage soils.

**OPEN SPACE:** That portion of a site which generally is not covered by buildings, streets, or parking areas. Open space is intended to provide light and air; open space may function as a buffer between land uses or for scenic, environmental, or recreational purposes.

**OPEN SPACE EASEMENT:** An easement usually granted to the Board of Supervisors which preserves a tract of land in open space for some public benefit in perpetuity or for a specified period of time. Open space easements may be accepted by the Board of Supervisors, upon request of the land owner, after evaluation under criteria established by the Board. See Open Space Land Act, Code of Virginia, Sections 10.1-1700, et seq.

**P DISTRICT:** A "P" district refers to land that is planned and/or developed as a Planned Development Housing (PDH) District, a Planned Development Commercial (PDC) District or a Planned Residential Community (PRC) District. The PDH, PDC and PRC Zoning Districts are established to encourage innovative and creative design for land development; to provide ample and efficient use of open space; to promote a balance in the mix of land uses, housing types, and intensity of development; and to allow maximum flexibility in order to achieve excellence in physical, social and economic planning and development of a site. Refer to Articles 6 and 16 of the Zoning Ordinance.

**PROFFER:** A written condition, which, when offered voluntarily by a property owner and accepted by the Board of Supervisors in a rezoning action, becomes a legally binding condition which is in addition to the zoning district regulations applicable to a specific property. Proffers are submitted and signed by an owner prior to the Board of Supervisors public hearing on a rezoning application and run with the land. Once accepted by the Board, proffers may be modified only by a proffered condition amendment (PCA) application or other zoning action of the Board and the hearing process required for a rezoning application applies. See Sect. 15.2-2303 (formerly 15.1-491) of the Code of Virginia.

**PUBLIC FACILITIES MANUAL (PFM):** A technical text approved by the Board of Supervisors containing guidelines and standards which govern the design and construction of site improvements incorporating applicable Federal, State and County Codes, specific standards of the Virginia Department of Transportation and the County's Department of Public Works and Environmental Services.

**RESOURCE MANAGEMENT AREA (RMA):** That component of the Chesapeake Bay Preservation Area comprised of lands that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the Resource Protection Area. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

**RESOURCE PROTECTION AREA (RPA):** That component of the Chesapeake Bay Preservation Area comprised of lands at or near the shoreline or water's edge that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation of the quality of state waters. In their natural condition, these lands provide for the removal, reduction or assimilation of sediments from runoff entering the Bay and its tributaries, and minimize the adverse effects of human activities on state waters and aquatic resources. New development is generally discouraged in an RPA. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

**SITE PLAN:** A detailed engineering plan, to scale, depicting the development of a parcel of land and containing all information required by Article 17 of the Zoning Ordinance. Generally, submission of a site plan to DPWES for review and approval is required for all residential, commercial and industrial development except for development of single family detached dwellings. The site plan is required to assure that development complies with the Zoning Ordinance.

**SPECIAL EXCEPTION (SE) / SPECIAL PERMIT (SP):** Uses, which by their nature, can have an undue impact upon or can be incompatible with other land uses and therefore need a site specific review. After review, such uses may be allowed to locate within given designated zoning districts if appropriate and only under special controls, limitations, and regulations. A special exception is subject to public hearings by the Planning Commission and Board of Supervisors with approval by the Board of Supervisors; a special permit requires a public hearing and approval by the Board of Zoning Appeals. Unlike proffers which are voluntary, the Board of Supervisors or BZA may impose reasonable conditions to assure, for example, compatibility and safety. See Article 8, Special Permits and Article 9, Special Exceptions, of the Zoning Ordinance.

**STORMWATER MANAGEMENT:** Engineering practices that are incorporated into the design of a development in order to mitigate or abate adverse water quantity and water quality impacts resulting from development. Stormwater management systems are designed to slow down or retain runoff to re-create, as nearly as possible, the pre-development flow conditions.

**SUBDIVISION PLAT:** The engineering plan for a subdivision of land submitted to DPWES for review and approved pursuant to Chapter 101 of the County Code.

**TRANSPORTATION DEMAND MANAGEMENT (TDM):** Actions taken to reduce single occupant vehicle automobile trips or actions taken to manage or reduce overall transportation demand in a particular area.

**TRANSPORTATION SYSTEM MANAGEMENT (TSM) PROGRAMS:** This term is used to describe a full spectrum of actions that may be applied to improve the overall efficiency of the transportation network. TSM programs usually consist of low-cost alternatives to major capital expenditures, and may include parking management measures, ridesharing programs, flexible or staggered work hours, transit promotion or operational improvements to the existing roadway system. TSM includes Transportation Demand Management (TDM) measures as well as H.O.V. use and other strategies associated with the operation of the street and transit systems.

**URBAN DESIGN:** An aspect of urban or suburban planning that focuses on creating a desirable environment in which to live, work and play. A well-designed urban or suburban environment demonstrates the four generally accepted principles of design: clearly identifiable function for the area; easily understood order; distinctive identity; and visual appeal.

**VACATION:** Refers to vacation of street or road as an action taken by the Board of Supervisors in order to abolish the public's right-of-passage over a road or road right-of-way dedicated by a plat of subdivision. Upon vacation, title to the road right-of-way transfers by operation of law to the owner(s) of the adjacent properties within the subdivision from whence the road/road right-of-way originated.

**VARIANCE:** An application to the Board of Zoning Appeals which seeks relief from a specific zoning regulation such as lot width, building height, or minimum yard requirements, among others. A variance may only be granted by the Board of Zoning Appeals through the public hearing process and upon a finding by the BZA that the variance application meets the required Standards for a Variance set forth in Sect. 18-404 of the Zoning Ordinance.

**WETLANDS:** Land characterized by wetness for a portion of the growing season. Wetlands are generally delineated on the basis of physical characteristics such as soil properties indicative of wetness, the presence of vegetation with an affinity for water, and the presence or evidence of surface wetness or soil saturation. Wetland environments provide water quality improvement benefits and are ecologically valuable. Development activity in wetlands is subject to permitting processes administered by the U.S. Army Corps of Engineers

**TIDAL WETLANDS:** Vegetated and nonvegetated wetlands as defined in Chapter 116 Wetlands Ordinance of the Fairfax County Code: includes tidal shores and tidally influenced embayments, creeks, and tributaries to the Occoquan and Potomac Rivers. Development activity in tidal wetlands may require approval from the Fairfax County Wetlands Board.

#### Abbreviations Commonly Used in Staff Reports

A&F	Agricultural & Forestal District	PDH	Planned Development Housing
ADU	Affordable Dwelling Unit	PFM	Public Facilities Manual
ARB	Architectural Review Board	PRC	Planned Residential Community
BMP	Best Management Practices	RC	Residential-Conservation
BOS	Board of Supervisors	RE	Residential Estate
BZA	Board of Zoning Appeals	RMA	Resource Management Area
COG	Council of Governments	RPA	Resource Protection Area
CBC	Community Business Center	RUP	Residential Use Permit
CDP	Conceptual Development Plan	RZ	Rezoning
CRD	Commercial Revitalization District	SE	Special Exception
DOT	Department of Transportation	SEA	Special Exception Amendment
DP	Development Plan	SP	Special Permit
DPWES	Department of Public Works and Environmental Services	TDM	Transportation Demand Management
DPZ	Department of Planning and Zoning	TMA	Transportation Management Association
DU/AC	Dwelling Units Per Acre	TSA	Transit Station Area
EQC	Environmental Quality Corridor	TSM	Transportation System Management
FAR	Floor Area Ratio	UP & DD	Utilities Planning and Design Division, DPWES
FDP	Final Development Plan	VC	Variance
GDP	Generalized Development Plan	VDOT	Virginia Dept. of Transportation
GFA	Gross Floor Area	VPD	Vehicles Per Day
HC	Highway Corridor Overlay District	VPH	Vehicles per Hour
HCD	Housing and Community Development	WMATA	Washington Metropolitan Area Transit Authority
LOS	Level of Service	WS	Water Supply Protection Overlay District
Non-RUP	Non-Residential Use Permit	ZAD	Zoning Administration Division, DPZ
OSDS	Office of Site Development Services, DPWES	ZED	Zoning Evaluation Division, DPZ
PCA	Proffered Condition Amendment	ZPRB	Zoning Permit Review Branch
PD	Planning Division		
PDC	Planned Development Commercial		