



## SITE NAME: SOUTHLAND

325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911  
ALBEMARLE COUNTY



Know what's below.  
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### SITE INFORMATION

PROJECT DESCRIPTION: INSTALLATION OF ANTENNAS, ASSOCIATED EQUIPMENT & POWER MOUNT POLE ON AN EXISTING UTILITY LATTICE TOWER

SITE ADDRESS: 325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911

LATITUDE (NAD 83): 38° 02' 09.519"  
LONGITUDE (NAD 83): -78° 27' 17.104"

GROUND ELEVATION: 358.6' (AMSL)

JURISDICTION: ALBEMARLE COUNTY

ZONING: C1 & CO

PARCEL ID: 07880-01-00-10100

PARCEL OWNER: RIVER'S EDGE III, LLC.  
320 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911

TOWER OWNER: DOMINION POWER  
701 EAST CARY STREET, 12TH FLOOR  
RICHMOND, VA 23219

STRUCTURE TYPE: UTILITY POWER POLE INSIDE LATTICE TOWER

OVERALL HEIGHT: 134.0' (AGL)

STRUCTURE HEIGHT: 130.0' (AGL)

PROPOSED IMPERVIOUS AREA: 440.0 SQ. FT.

PROPOSED LIMITS OF DISTURBANCE: 800.0 SQ. FT.

POWER PROVIDER: DOMINION POWER (888) 867-3000

TELCO PROVIDER: CENTURY LINK (888) 637-9528

### EMERGENCY INFORMATION:

CHARLOTTESVILLE CITY FIRE DEPARTMENT: (434) 970-3245  
CHARLOTTESVILLE POLICE DEPT: (434) 970-3280

### PROJECT TEAM

APPLICANT: VERIZON WIRELESS  
1831 RADY COURT  
RICHMOND, VA 23222  
MERLE DAIGER  
(804) 543-7573

PROJECT MANAGEMENT FIRM: GDN SITES  
CHAD FRECKMANN  
(434) 998-4473

ENGINEERING FIRM: NB+C ENGINEERING SERVICES, LLC.  
4435 WATERFRONT DRIVE, SUITE 100  
GLEN ALLEN, VA 23060  
804-548-4079

### VICINITY MAP

SCALE: 1" = 2000'



### DIRECTIONS

FROM 1831 RADY COURT: HEAD NORTHWEST ON RADY CT TOWARD RADY ST. TURN LEFT ONTO RADY ST. TURN LEFT ONTO MAGNOLIA ST. TURN RIGHT ONTO MECHANICSVILLE TURNPIKE. SLIGHT RIGHT ONTO THE INTERSTATE 64 W RAMP TO INTERSTATE 95. MERGE ONTO I-64 W. CONTINUE ONTO I-64/I-95 N. KEEP RIGHT TO CONTINUE ON I-64 W, FOLLOW SIGNS FOR INTERSTATE 64 W/INTERSTATE 95 S/POWWHITE PKWY/CHARLOTTESVILLE. TAKE EXIT 124 FOR US-250 TOWARD CHARLOTTESVILLE/SHADWELL. TURN RIGHT ONTO US-250 W. TURN RIGHT ONTO VA-20 S. TURN LEFT ONTO WINDING RIVER LN. TURN LEFT. TURN RIGHT. TURN LEFT. DESTINATION WILL BE ON THE RIGHT

### 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
- 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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S-1	CONSTRUCTION DETAILS & NOTES
S-2	GENERATOR DETAILS
S-3	EQUIPMENT PLATFORM DETAILS
S-4	ICE CANOPY FRAMING DETAILS
S-5	SITE SIGNAGE DETAILS
E-1	ELECTRICAL PLAN & DETAILS
E-2	RISER DIAGRAM & SERVICE ENTRANCE SCHEMATIC
E-3	ELECTRICAL PANEL SCHEDULE DIAGRAM & NOTES
E-4	ELECTRICAL CONDUIT SCHEMATIC
G-1	GROUNDING PLAN & DETAILS
G-2	GROUNDING RISER DIAGRAM, DETAILS & NOTES
P-1	GAS PIPING DETAILS
L-1	LANDSCAPING PLAN

### 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.

### APPROVAL BLOCK

PROPERTY OWNER	DATE	APPROVED
SITE ACQUISITION	DATE	APPROVED AS NOTED
CONSTRUCTION MANAGER	DATE	DISAPPROVED/REVISE
ZONING	DATE	
RF ENGINEER	DATE	

ENGINEER



APPLICANT



SITE INFORMATION

SOUTHLAND  
NB+C ES PROJ# 27074  
DOMINION STRUCTURE  
#5/3 & 2028/3  
325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911  
ALBEMARLE COUNTY

DESIGN RECORD

REVISIONS			
REV	DATE	DESCRIPTION	BY
6	11/05/15	ADDED LANDSCAPING PLAN	LAR
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4	07/08/15	REVISED	AMM
3	06/08/15	REVISED	AMM
2	12/04/14	FINAL	MEH
1	12/01/14	REVISED	MEH
0	07/07/14	PRELIMINARY	MEH

PROFESSIONAL STAMP



ENGINEER

TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

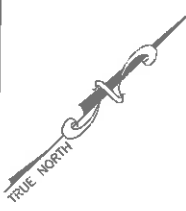
SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

SITE SURVEY PREPARED BY HALDER SURVEYS (SITE NAME: SOUTHLAND) DATED 04-10-2014



**ENGINEER**

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
405 WATERFRONT DRIVE, SUITE 100  
OLNEY ALLEN, VA 22080  
(804) 454-4219

**APPLICANT**

**verizon**wireless

1831 RADY COURT  
RICHMOND, VA 23222

**SITE INFORMATION**

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1	12/01/14	REVISED	MEH
0	07/07/14	PRELIMINARY	MEH

**PROFESSIONAL STAMP**

Seal of the Commonwealth of Virginia  
Trent T. Snarr, P.E.  
Lic. No. 049978  
DATE 11/05/15  
PROFESSIONAL ENGINEER

**ENGINEER**

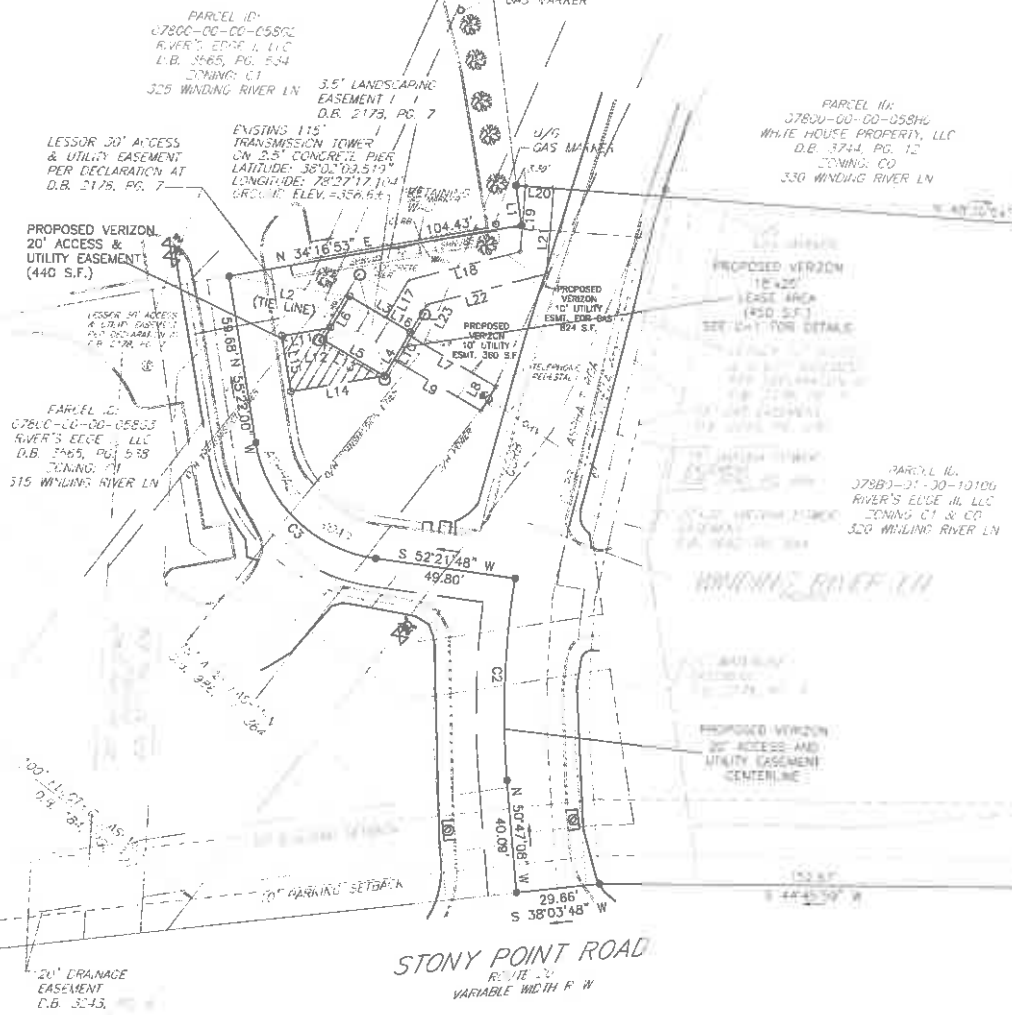
TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

**SHEET TITLE**

**SITE PLAN**

**SHEET NUMBER**

**Z-1**



**GENERAL NOTES**

- A BOUNDARY LINE SURVEY WAS NOT PERFORMED FOR THE PREPARATION OF THIS PLAN. PROPERTY LINES AS SHOWN WERE COMPILED FROM TAX MAPS, DEEDS, & PLATS OF RECORD. IT SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
- THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
- NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
- THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION. THERE IS NO HANDICAP ACCESS REQUIRED.
- THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.

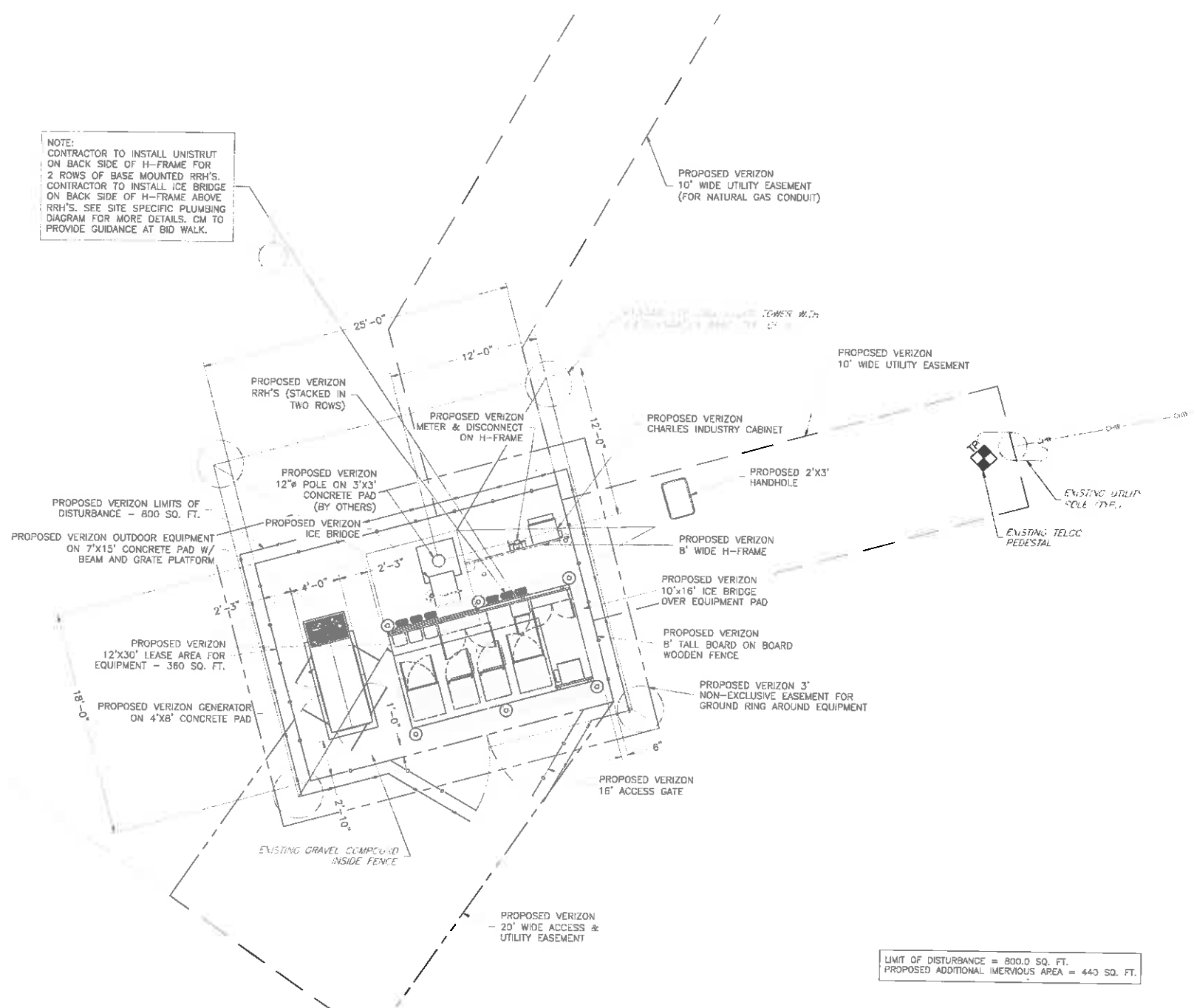
**1 SITE PLAN**  
SCALE 1"=30'

**811**  
Know what's below.  
Call before you dig.

GRAPHIC SCALE  
0 30 60 90 120  
(IN FEET)  
1 INCH = 30 FEET

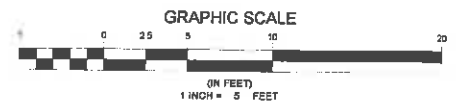


NOTE:  
CONTRACTOR TO INSTALL UNISTRUT  
ON BACK SIDE OF H-FRAME FOR  
2 ROWS OF BASE MOUNTED RRH'S.  
CONTRACTOR TO INSTALL ICE BRIDGE  
ON BACK SIDE OF H-FRAME ABOVE  
RRH'S. SEE SITE SPECIFIC PLUMBING  
DIAGRAM FOR MORE DETAILS. CM TO  
PROVIDE GUIDANCE AT BID WALK.



LIMIT OF DISTURBANCE = 800.0 SQ. FT.  
PROPOSED ADDITIONAL IMMERSED AREA = 440 SQ. FT.

1 COMPOUND PLAN  
C-1 SCALE 1" = 5'



ENGINEER

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
4036 WATERFRONT DRIVE, SUITE 102  
GLEN ALLEN, VA 22080  
(804) 448-4279

APPLICANT

**verizon**wireless

1831 RADY COURT  
RICHMOND, VA 23222

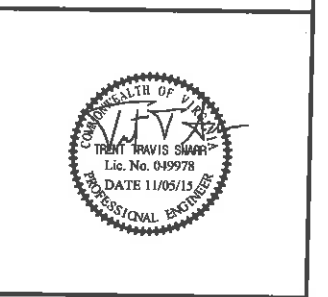
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2	12/04/14	FINAL	MEH	
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0	07/07/14	PRELIMINARY	MEH	

PROFESSIONAL STAMP



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TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

COMPOUND PLAN

SHEET NUMBER

C-1

## GENERAL NOTES

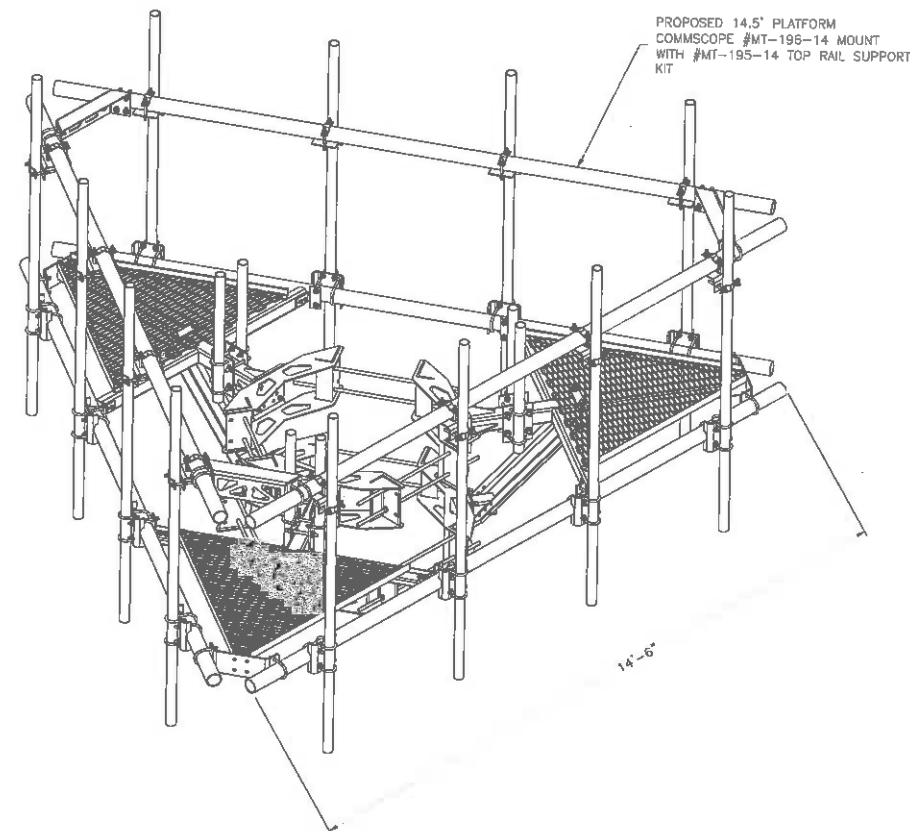
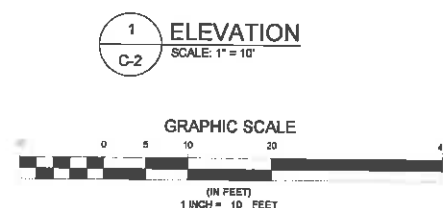
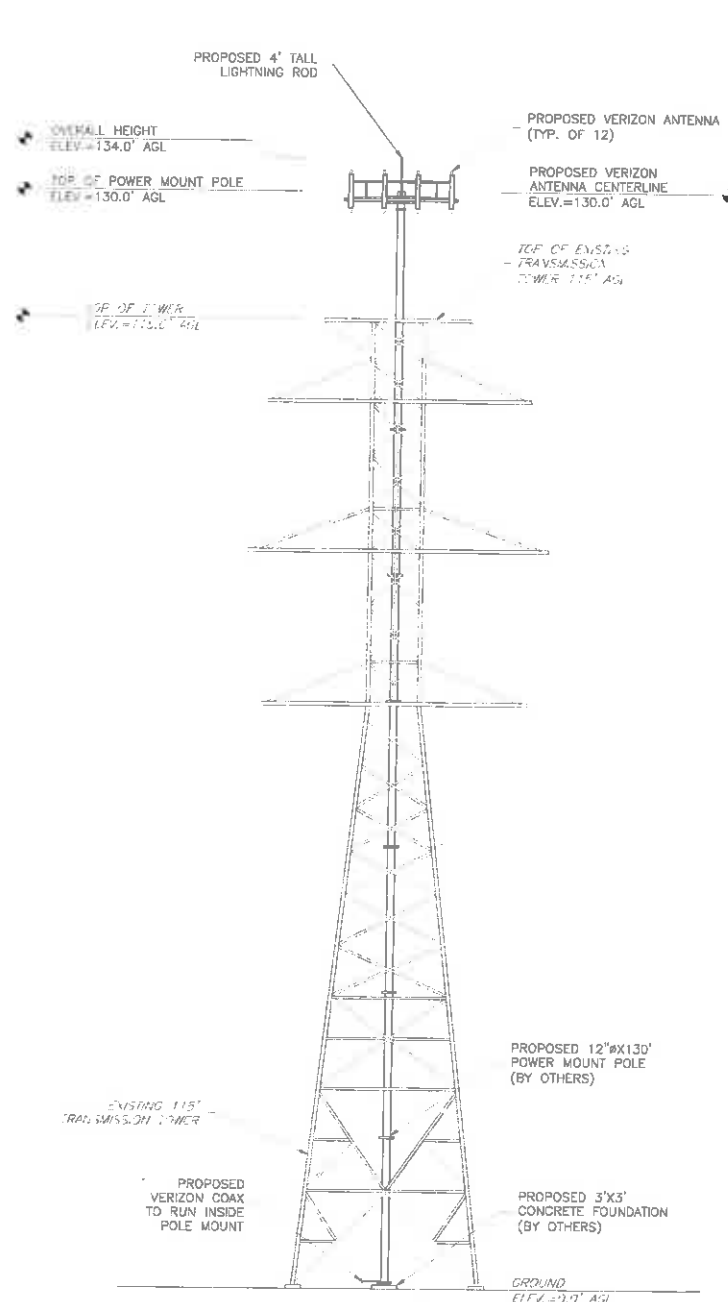
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
- THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
- TRANSMITTER EQUIPMENT AND ANTENNAS ARE DESIGNED TO MEET ANSI/TIA 222-G REQUIREMENTS.
- ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
- CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
- IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.
- PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION OF THE EXISTING STRUCTURE, A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY THE OWNER'S AGENT TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES.
- PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
- THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
- THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
- NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
- THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
- THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
- POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.

## GENERAL NOTES

- ALL ANTENNAS ARE TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR IS TO COORDINATE VERIFY THE PROPOSED DOWNTILTS THE V&W CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- ANTENNA RAD CENTER IS IN REFERENCE TO ELEVATION 0'-0" (EXISTING GRADE).
- CONTRACTOR IS TO VERIFY ALL ANTENNA MODELS AZIMUTHS WITH THE V&W CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.

## HILTI-EPOXY ANCHOR NOTES

- INSTALL ADHESIVE ANCHORING SYSTEM PER MANUFACTURER'S SPECS.
- ANY CONTRACTOR INSTALLING ADHESIVE ANCHORS SHOULD BE TRAINED BY A MANUFACTURER REPRESENTATIVE PRIOR TO INSTALLATION.



2 MOUNT DETAIL  
C-2 SCALE: NTS

NOTE: CONTRACTOR TO INSTALL THIS COMMSCOPE PLATFORM MOUNT OR AN APPROVED EQUIVALENT

ENGINEER

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
4430 WATERFRONT DRIVE, SUITE 100  
GLEN ALLEN, VA 22080  
804-546-4279

APPLICANT

**verizon**wireless

1831 RADY COURT  
RICHMOND, VA 23222

SITE INFORMATION

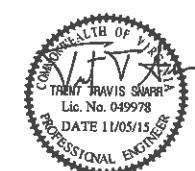
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PROFESSIONAL STAMP



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VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

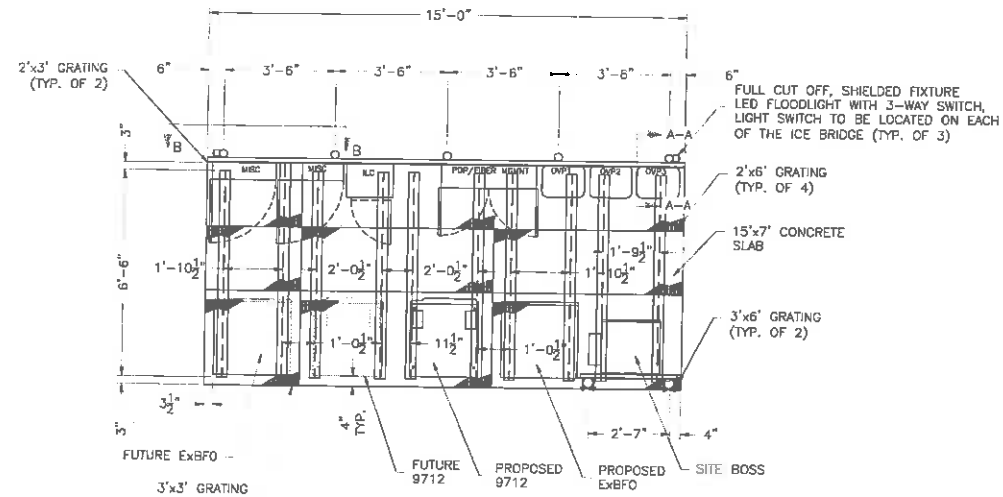
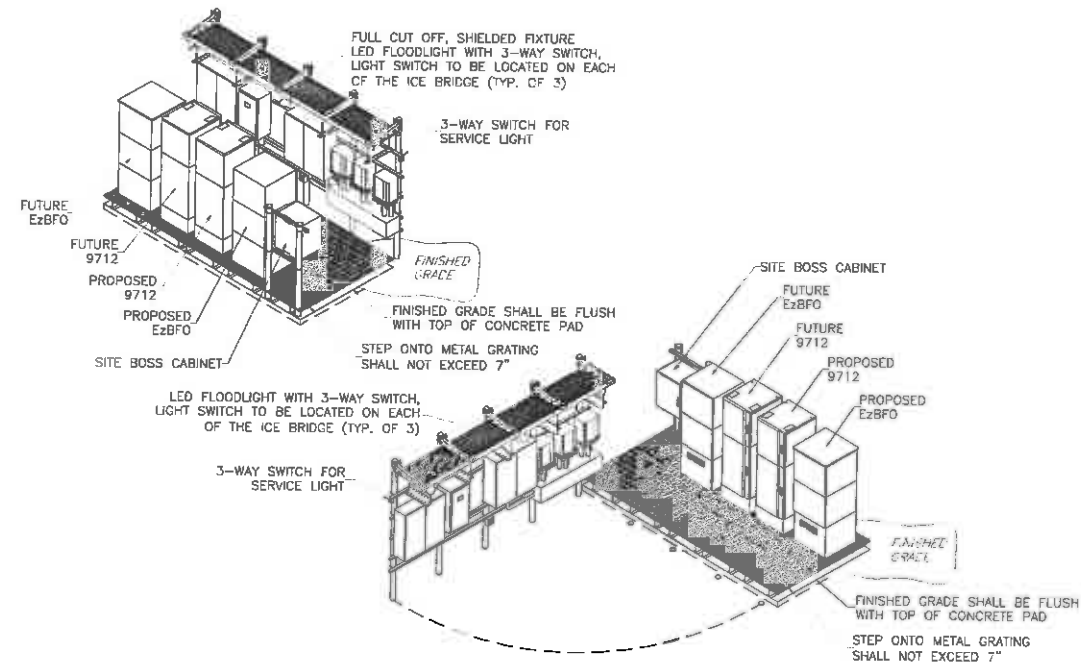
**TOWER ELEVATION  
& MOUNT DETAILS**

SHEET NUMBER

**C-2**

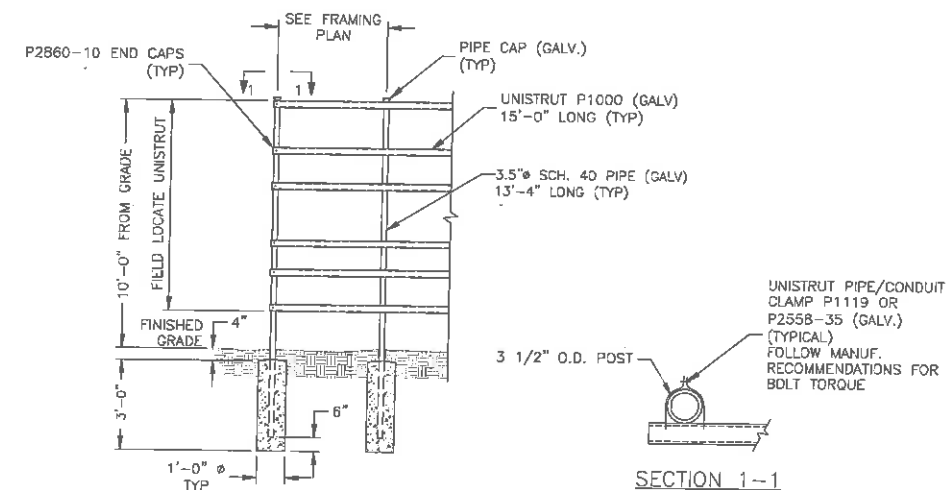
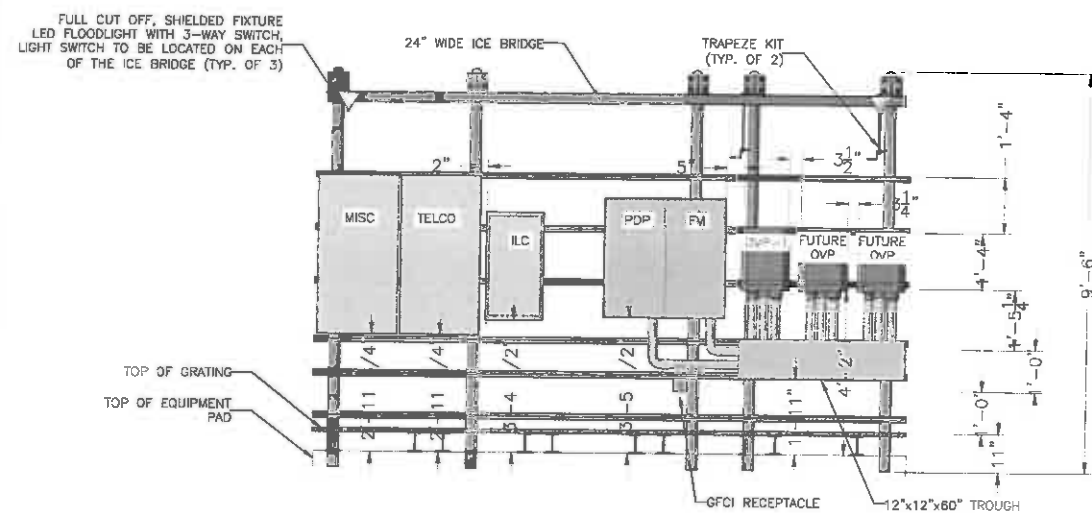
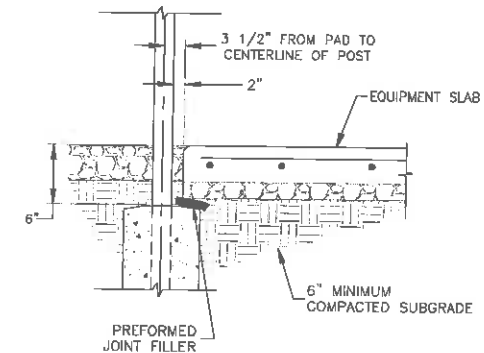


Know what's below.  
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- FRAMING PLAN NOTES:

1. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED.
2. STEEL FRAMING IS DESIGNED TO SUPPORT EQUIPMENT SHOWN ON THE EQUIPMENT PLATFORM LAYOUT.
3. WIDE FLANGE SHAPES SHALL BE IN ACCORDANCE WITH ASTM A992.
4. BAR GRATING SHALL BE GALVANIZED STEEL WITH 1' x 3/16" BAR SIZE. MAIN BARS TO BE SPACED 1 3/16" OC MAX AND CROSS BAR SPACING SHALL NOT EXCEED 4 OC.
5. POST INSTALLED EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT 3. ALL ANCHORS SHALL BE INSTALLED WITH HILTI NUTS AND WASHERS.
6. BAR GRATING SHALL BE TRIM BANDED ON EXTERIOR SIDE.
7. COORDINATE WITH CM FOR EXACT PLACEMENT AND ORIENTATION.
8. WIDE FLANGE SHAPES SHALL NOT EXCEED SIZE AS NOTED ON PLAN.
9. EQUIPMENT PLATFORM SHALL NOT EXCEED 7" ABOVE CONCRETE PAD.



**NB+C ENGINEERING SERVICES, LLC.**  
4435 WATERFRONT DRIVE, SUITE 100  
GLEN ALLEN, VA 23060  
804-548-4079

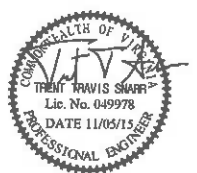


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## REVISIONS

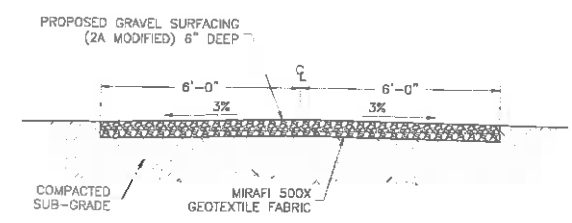
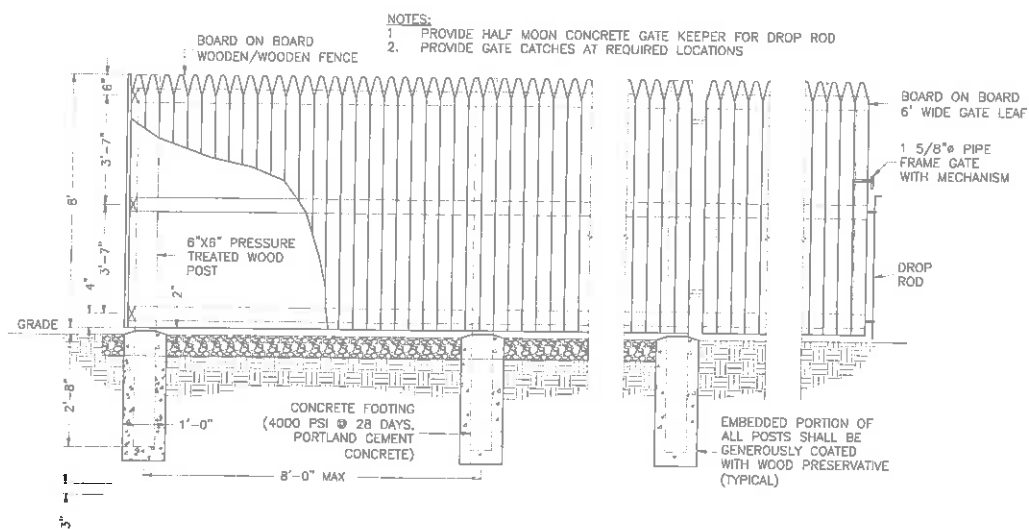
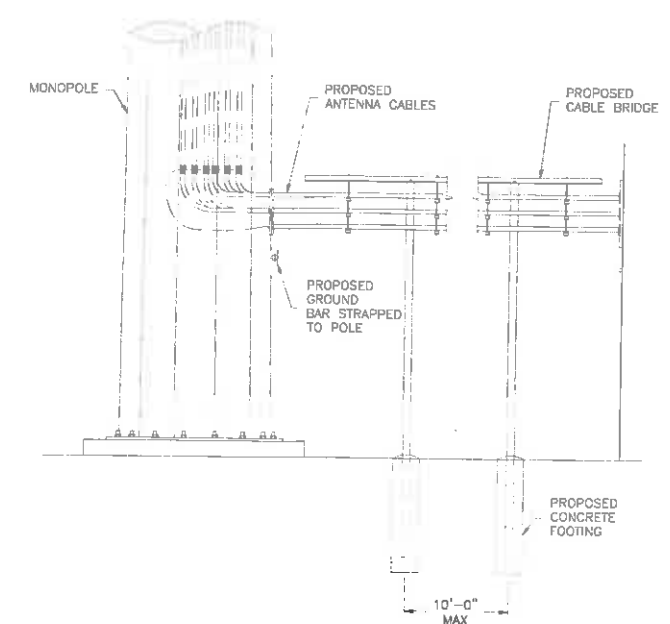
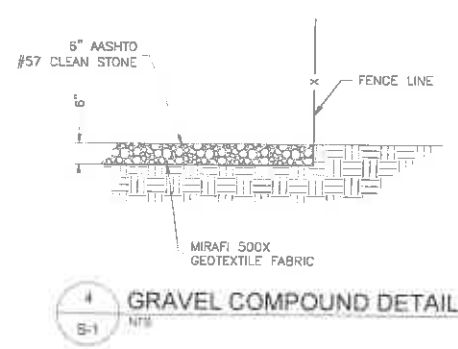
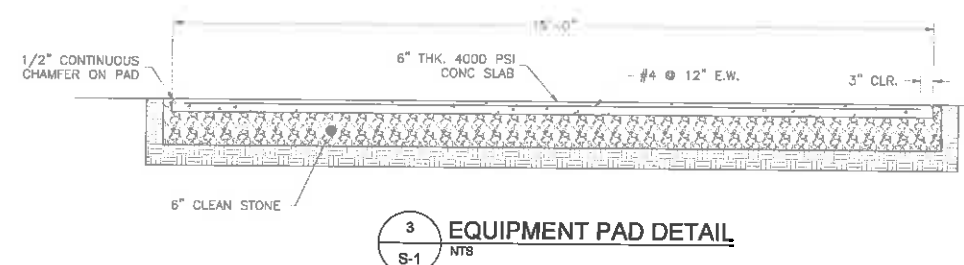
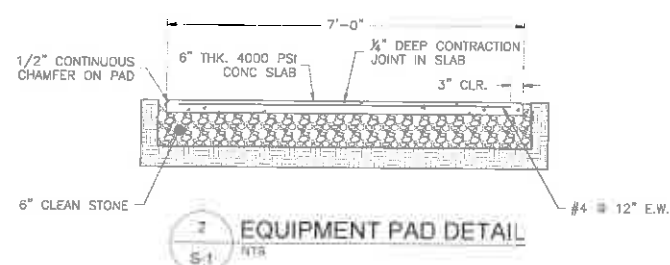
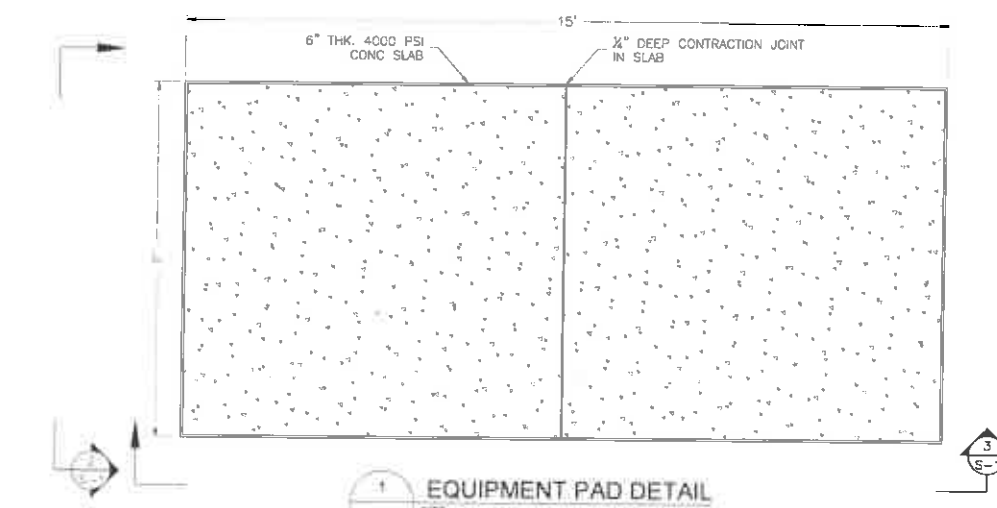
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VA PROFESSIONAL ENGINEER LIC. #49978



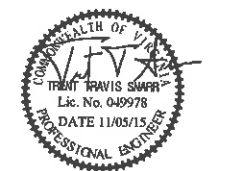
## GROUND EQUIPMENT LAYOUT

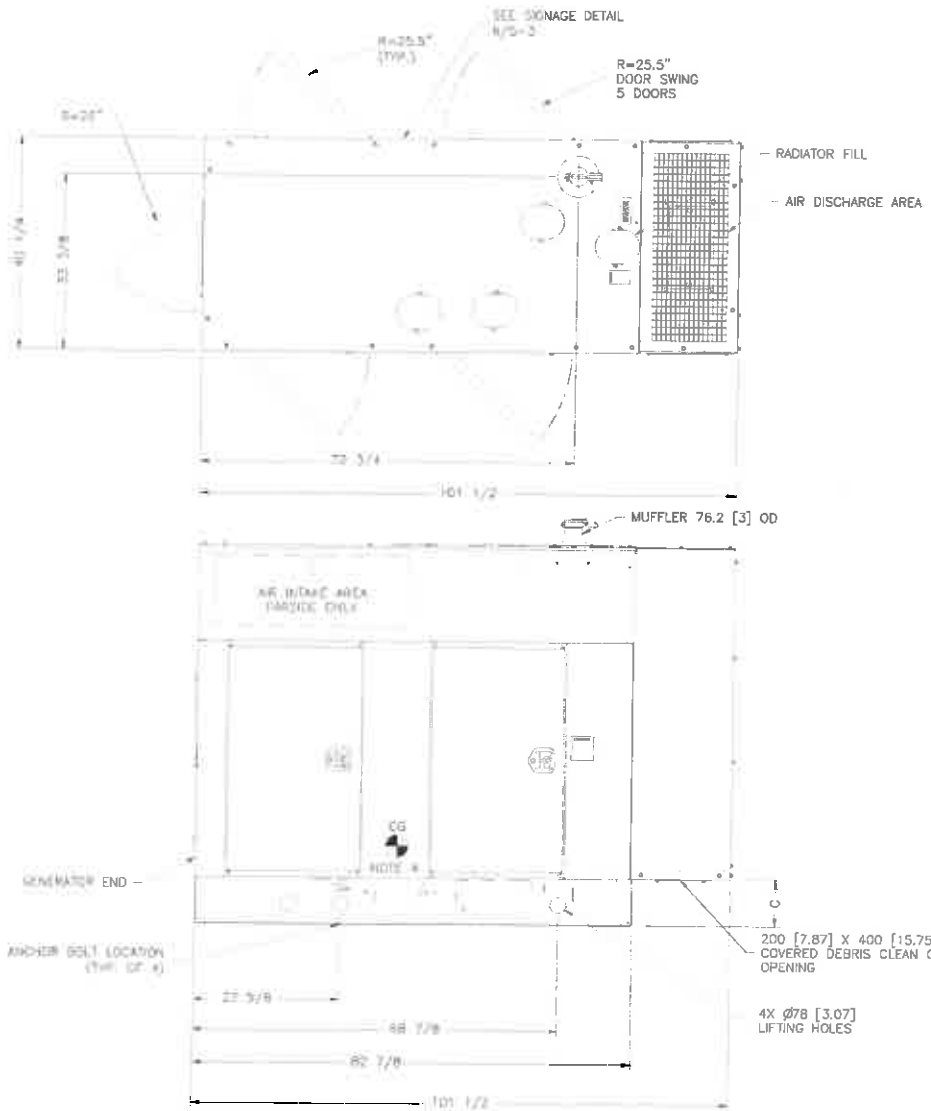
A-1



# STRUCTURAL NOTES

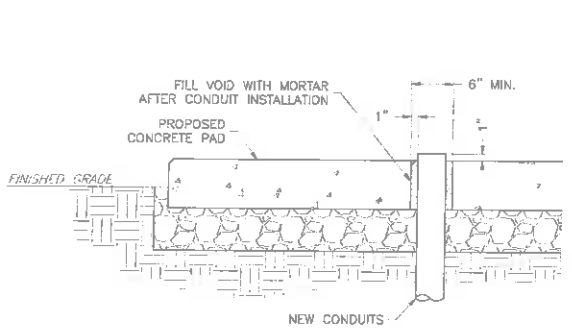
- DESIGN REQUIREMENTS PER INTERNATIONAL BUILDING CODE 2009 AND THE EA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT AND FROM THE EXISTING STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.
- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN INCLUDING THE COMMENTARY AND THE AISC CODE FOR STANDARD PRACTICE.
- STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A36. ALL STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B. ALL STRUCTURAL STEEL COMPONENTS AND FABRICATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE - STEEL WELD ELECTRODES SHALL BE E70XX.
- ALL COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE AS SPECIFIED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
- ALL THREADED STRUCTURAL FASTENERS AND THREADED ROD FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8\"/>

ENGINEER	 <p><b>TOTALLY COMMITTED.</b></p> <p>NB+C ENGINEERING SERVICES, LLC.</p> <p>4436 WATERFRONT DRIVE, SUITE 102 GLENN ALLEN, VA 22080 804-466-8079</p>																																						
APPLICANT	 <p>1831 RADY COURT RICHMOND, VA 23222</p>																																						
SITE INFORMATION	<p>SOUTHLAND NB+C ES PROJ.# 27074 DOMINION STRUCTURE #5/3 &amp; 2028/3 325 WINDING RIVER LANE CHARLOTTESVILLE, VA 22911 ALBEMARLE COUNTY</p>																																						
DESIGN RECORD	<table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>11/05/15</td> <td>ADDED LANDSCAPING PLAN</td> <td>LAR</td> </tr> <tr> <td>5</td> <td>08/09/15</td> <td>BID SET</td> <td>AMM</td> </tr> <tr> <td>4</td> <td>07/08/15</td> <td>REVISED</td> <td>AMM</td> </tr> <tr> <td>3</td> <td>06/05/15</td> <td>REVISED</td> <td>AMM</td> </tr> <tr> <td>2</td> <td>12/04/14</td> <td>FINAL</td> <td>MEH</td> </tr> <tr> <td>1</td> <td>12/01/14</td> <td>REVISED</td> <td>MEH</td> </tr> <tr> <td>0</td> <td>07/07/14</td> <td>PRELIMINARY</td> <td>MEH</td> </tr> </tbody> </table>			REVISIONS				REV	DATE	DESCRIPTION	BY	6	11/05/15	ADDED LANDSCAPING PLAN	LAR	5	08/09/15	BID SET	AMM	4	07/08/15	REVISED	AMM	3	06/05/15	REVISED	AMM	2	12/04/14	FINAL	MEH	1	12/01/14	REVISED	MEH	0	07/07/14	PRELIMINARY	MEH
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ENGINEER	<p>TRENT T. SNARR, P.E. VA PROFESSIONAL ENGINEER LIC. #49978</p>																																						
SHEET TITLE	<p><b>CONSTRUCTION DETAILS &amp; NOTES</b></p>																																						
SHEET NUMBER	<p><b>S-1</b></p>																																						

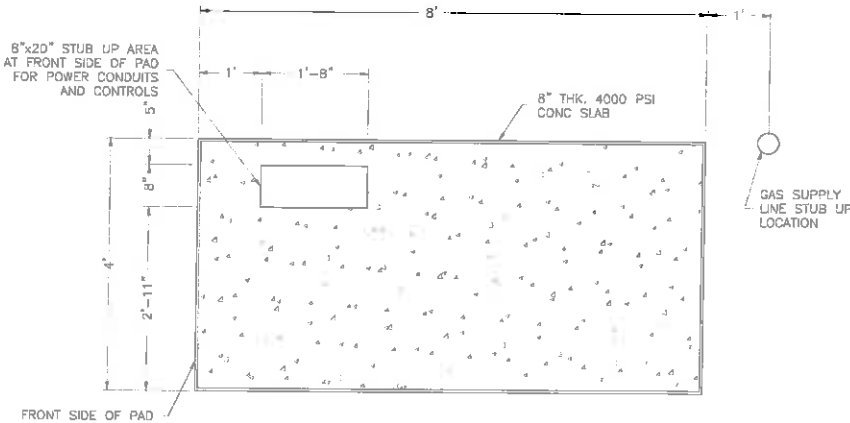


**1 40KW GGPB CUMMINS POWER GENERATION NATURAL GAS GENERATOR DETAIL**  
 NTS

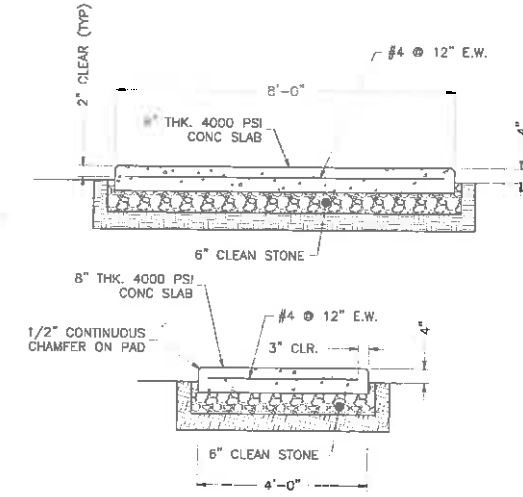
- NOTES:**
- 1) APPROX. WEIGHT: (WET) 2,572 LBS
  - 2) REFERENCE ENCLOSURE DRAWING: 0500\_3167; GENERATOR DRAWING: 0500\_5070
  - 3) ANCHOR GENERATOR TO CONCRETE PAD WITH (4) EXPANSION ANCHORS SEE DETAIL 5/S-2
  - 4) NATURAL GAS FUEL CONSUMPTION IS 646 CFH
  - 5) OPERATING FUEL PRESSURE RANGE IS 7"-13.6" H2O



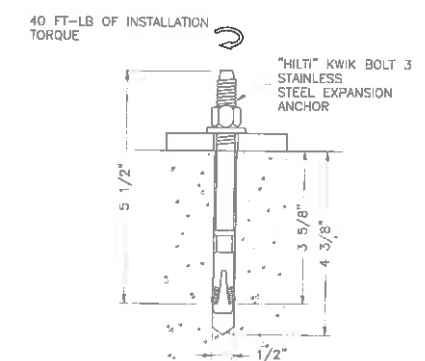
**2 CONDUIT ROUTING DETAIL**  
 NTS



**3 GENERATOR PAD DETAIL**  
 NTS



**4 GENERATOR PAD DETAIL**  
 NTS

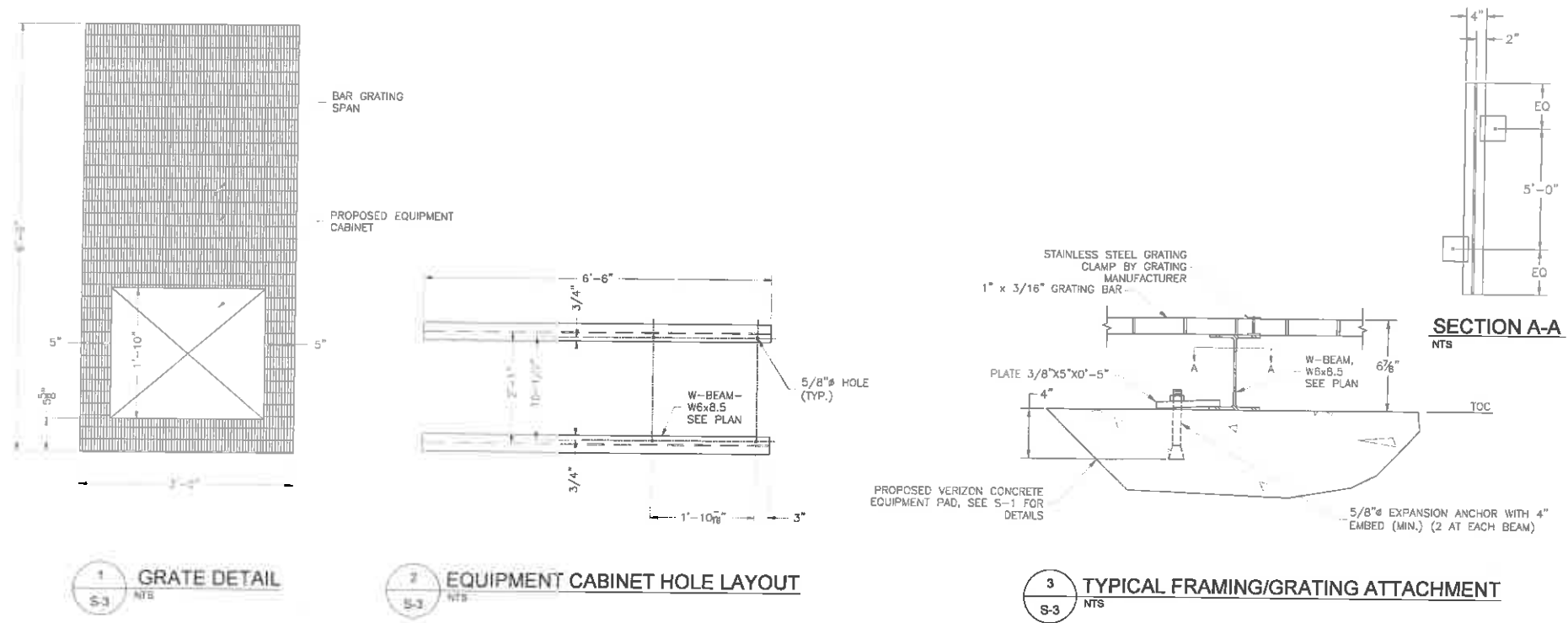


**5 EXPANSION ANCHOR DETAIL**  
 NTS



**6 SIGNAGE DETAIL**  
 NTS

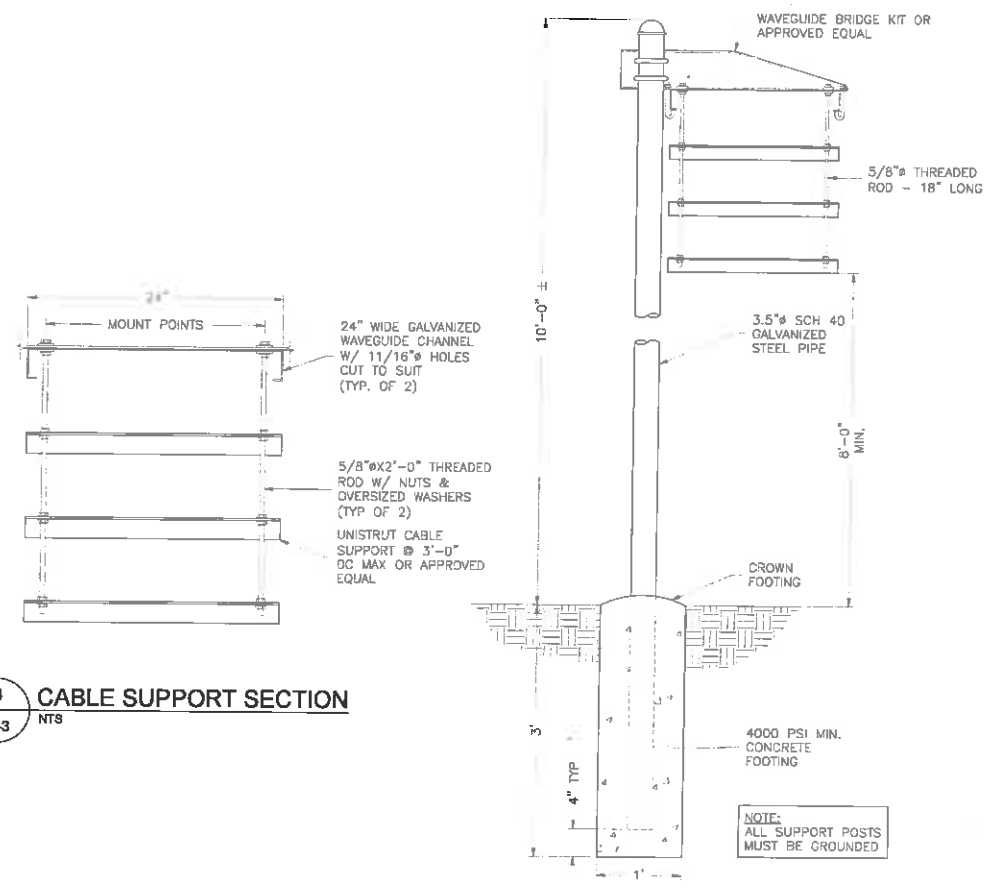
ENGINEER	<b>NB+C</b> <b>TOTALLY COMMITTED.</b> <b>NB+C ENGINEERING SERVICES, LLC.</b> <small>4435 WATERFRONT DRIVE, SUITE 100        OLNEY ALLE, VA 22080        804-546-4573</small>																																				
APPLICANT	 <b>verizon</b> wireless 1831 RADY COURT RICHMOND, VA 23222																																				
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SHEET TITLE	<b>GENERATOR DETAILS</b>																																				
SHEET NUMBER	<b>S-2</b>																																				



1 GRATE DETAIL  
S-3 NTS

2 EQUIPMENT CABINET HOLE LAYOUT  
S-3 NTS

3 TYPICAL FRAMING/GRATING ATTACHMENT  
S-3 NTS



4 CABLE SUPPORT SECTION  
S-3 NTS

5 CABLE BRIDGE DETAIL  
S-3 NTS

### CONCRETE GENERAL NOTES

- ALL CONCRETE WORK SHALL CONFORM TO ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND TO THE PROJECT SPECIFICATIONS.
- ALL CONCRETE IS TO BE NORMAL DENSITY CONCRETE WITH A MAXIMUM SLUMP OF 4 INCHES. MAXIMUM AGGREGATE SIZE 3/4 INCH. NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.
- PROVIDE AIR ENTRAINMENT OF 4 TO 6 PERCENT IN ALL EXPOSED CONCRETE WORK WITH AIR-ENTRAINING ADMIXTURE COMPLYING WITH ASTM C 260. AT TROWEL-FINISHED FLOORS, DO NOT EXCEED AIR-ENTRAINMENT CONTENT OF 3 PERCENT.
- NO HOLES OR SLEEVES SHALL BE MADE THROUGH CONCRETE WORK OTHER THAN THOSE INDICATED ON THE STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.
- ALL FORMWORK OFFSET TOLERANCES (PER ACI 117) TO BE CLASS A.
- FLOOR SLAB TOLERANCES TO ASTM F1555; SPECIFIED OVERALL MINIMUM VALUE OF FLATNESS F F=25 WITH LOCAL MINIMUM F F=17, AND MINIMUM VALUE OF LEVELNESS F F=20 WITH LOCAL MINIMUM F F=17 AND F F WITHIN 72 HOURS OF SLAB CONSTRUCTION.
- CABINETS ON SLAB (IF APPLICABLE). ALLOWABLE CAPACITY OF CONCRETE USED IN DESIGN MIN. 3500 PSI.

### FOUNDATION NOTES:

- DESIGN INFORMATION AND GENERAL REQUIREMENTS
  - 1.1 CODES
    - DESIGN CONFORMS TO INTERNATIONAL BUILDING CODE 2009.
    - AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318-99.
- EARTHWORK
  - 2.1 FOUNDATIONS
    - FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON (UNDISTURBED RESIDUAL SOILS/COMPACTED STRUCTURAL FILL), CAPABLE OF SAFELY SUPPORTING A NET ALLOWABLE BEARING PRESSURE OF 2000 PSF. IF FOUNDATION CONDITIONS PROVE UNACCEPTABLE AT ELEVATIONS SHOWN, EXCAVATION SHALL BE CARRIED DEEPER AND SHALL BE BACKFILLED WITH LEAN CONCRETE TO PLAN FOOTING BOTTOM, OR REDESIGN OF FOUNDATIONS WILL BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
    - DESIGN, FURNISH AND INSTALL ALL TEMPORARY SHEETING, SHORING AND DRAINAGE NECESSARY TO MAINTAIN THE EXCAVATION AND PROTECT SURROUNDING STRUCTURES AND UTILITIES.
    - THOROUGHLY COMPACT ALL BOTTOM OF FOOTINGS PRIOR TO PLACING ANY CONCRETE.

### 3.1 FORMWORK

- CONCRETE CONSTRUCTION SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL, CONCRETE FOR BUILDINGS," (ACI 301-89).
- FORMWORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."

### 3.2 REINFORCEMENT

- REINFORCING STEEL ASTM A615, GRADE 60. WELDED WIRE ASTM A185 (FLAT SHEET). LAPS 40 BAR DIAMETERS UNLESS NOTED. BARS SHALL BE SECURELY HELD IN ACCURATE POSITION BY SUITABLE ACCESSORIES, TIE BARS, SUPPORT BARS, ETC. HOOK LENGTHS SHALL BE 12 BAR DIAMETERS.
- CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED.
 

ITEM	COVER (INCHES)
FOOTINGS & SLABS CAST AGAINST GROUND	3"
CONCRETE TO BE IN CONTACT WITH GROUND OR WEATHER AT BARS GREATER THAN #5	2"
AT BARS #5 OR LESS	1-1/2"
CONCRETE NOT TO BE EXPOSED TO GROUND OR WEATHER BEAMS, GIRDERS & COLUMNS	1-1/2"
SLABS & WALLS	3/4"

### 3.3 CAST-IN-PLACE-CONCRETE

- MINIMUM 28 DAY CYLINDER STRENGTH AND MAXIMUM SLUMP, PRIOR TO ADDITION OF SUPER PLASTICIZERS, AS FOLLOWS:

	F'C (PSI)	SLUMP
CLASS I FOOTINGS	4000	3"
CLASS II FOOTINGS	4000	3"
CLASS III INTERIOR ELEVATED SLABS & WALLS	4000	4"
CLASS V OTHER WORK	4000	4"
CLASS VI LEAN CONCRETE FOR OVER EXCAVATION OF FOUNDATIONS	2000	N/A

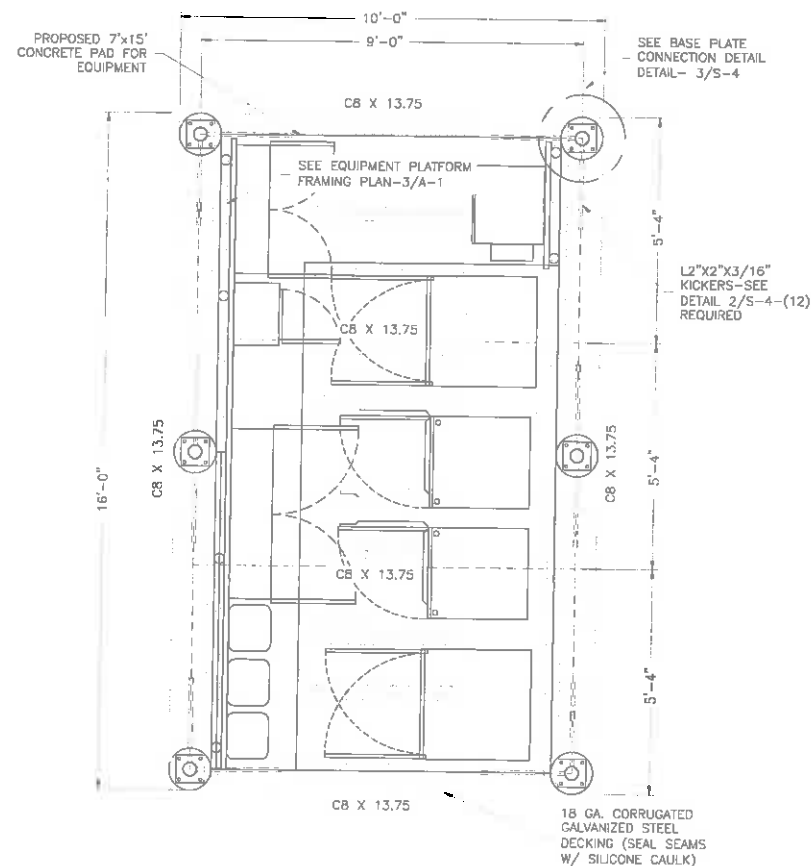
- MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318, CHAPTER 5. NO CALCIUM CHLORIDE OR ADMIXTURE CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE.
- COARSE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 SIZE #57. COARSE AGGREGATE FOR LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C330 GRADED 3/4" TO 1/4".
- COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1
- HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 305 R.
- CHAMFER ALL EXPOSED EDGES 3/4".
- THE MAXIMUM TEMPERATURE OF ALL CONCRETE AT DELIVERY TO THE SITE SHALL BE 85°F, TOTAL DELIVERY TIME SHALL BE LESS THAN 75 MINUTES.

ENGINEER	<b>NB+C</b> TOTALLY COMMITTED. NB+C ENGINEERING SERVICES, LLC. 4415 WATERFRONT DRIVE, SUITE 100 GLEN ALLEN, VA 22080 (804) 545-4578																																		
APPLICANT	 1831 RADY COURT RICHMOND, VA 23222																																		
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ENGINEER	TRENT T. SNARR, P.E. VA PROFESSIONAL ENGINEER LIC. #49978																																		
SHEET TITLE	<b>EQUIPMENT PLATFORM &amp; FENCE DETAILS</b>																																		
SHEET NUMBER	<b>S-3</b>																																		

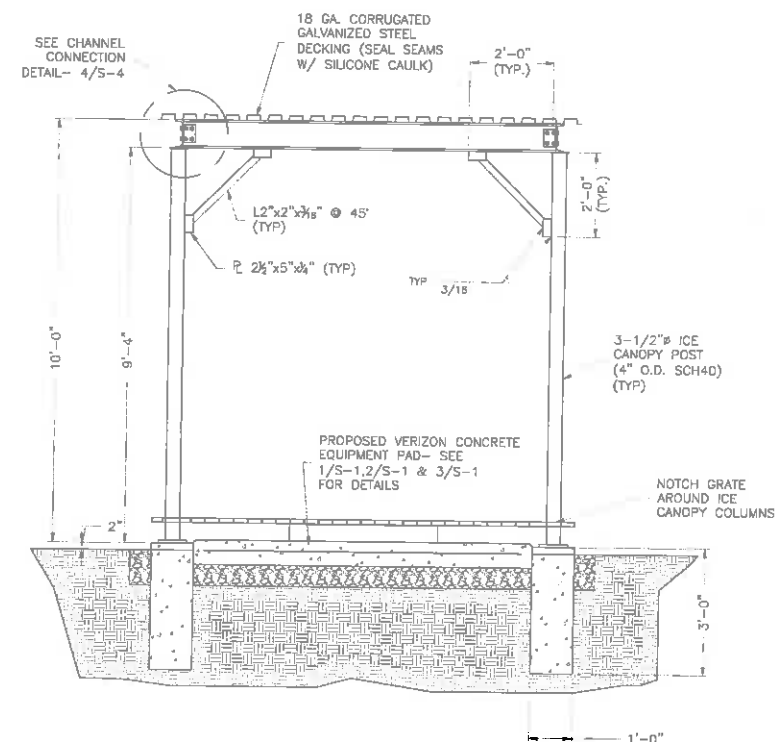


# STRUCTURAL NOTES

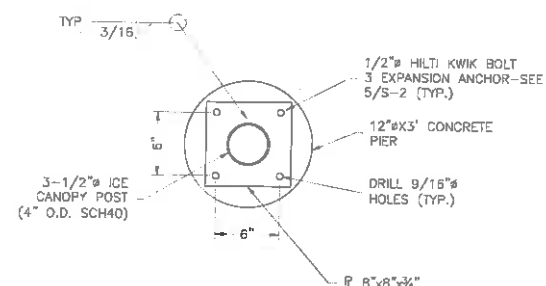
- DESIGN REQUIREMENTS PER INTERNATIONAL BUILDING CODE 2009 AND THE EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT AND FROM THE EXISTING STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.
- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN INCLUDING THE COMMENTARY AND THE AISC CODE FOR STANDARD PRACTICE.
- STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A36. ALL STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B. ALL STRUCTURAL STEEL COMPONENTS AND FABRICATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE - STEEL WELD ELECTRODES SHALL BE E70XX.
- ALL COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE AS SPECIFIED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
- ALL THREADED STRUCTURAL FASTENERS AND THREADED ROD FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8" MIN. DIAMETER BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. ALL EXPOSED FASTENERS, NUTS AND WASHERS SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHERWISE NOTED.
- NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH AND INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.



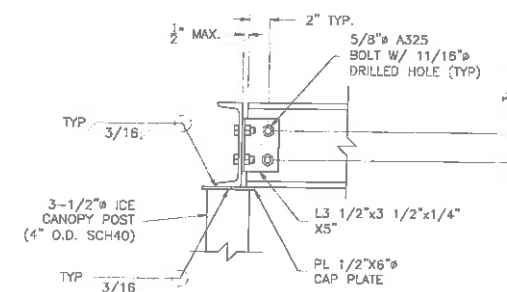
1 ICE CANOPY FRAMING PLAN  
S-4 NTS



2 ICE CANOPY ELEVATION  
S-4 NTS



3 BASE PLATE DETAIL  
S-4 NTS



4 CHANNEL CONNECTION DETAIL  
S-4 NTS

ENGINEER

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
405 WATERBURY DRIVE, SUITE 100  
GLEN ALLEN, VA 23060  
804-545-4078

APPLICANT

**verizon**wireless  
1831 RADY COURT  
RICHMOND, VA 23222

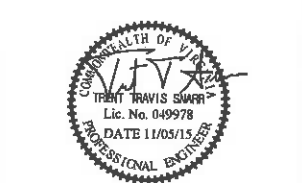
SITE INFORMATION

SOUTHLAND  
NB+C ES PROJ.# 27074  
DOMINION STRUCTURE  
#5/3 & 2028/3  
325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911  
ALBEMARLE COUNTY

DESIGN RECORD

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PROFESSIONAL STAMP



ENGINEER

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

SHEET TITLE

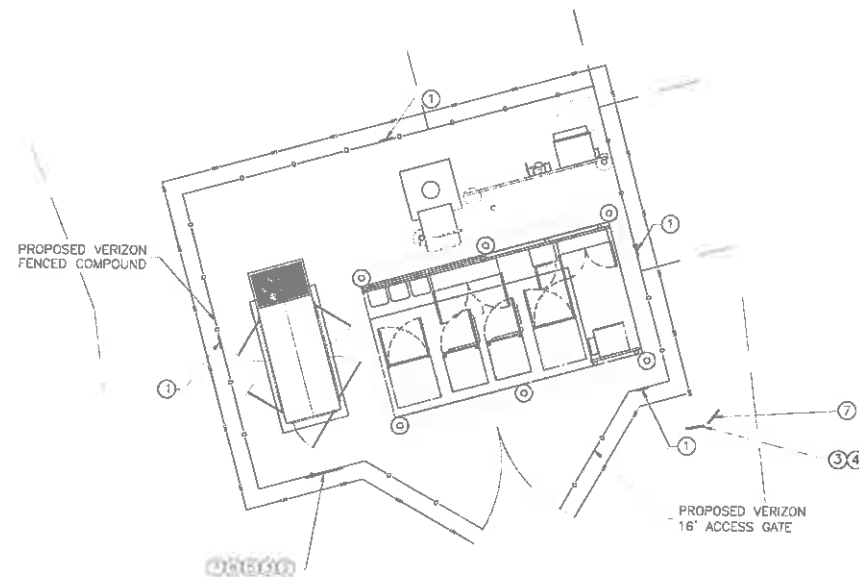
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FRAMING DETAILS

SHEET NUMBER

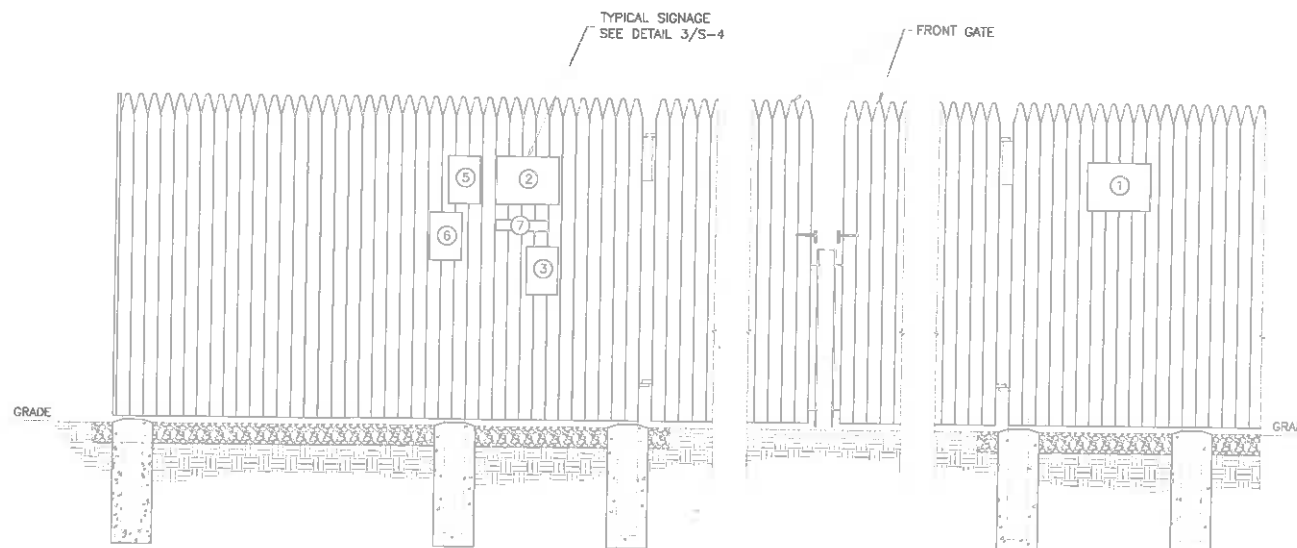
S-4

## SIGNAGE NOTES

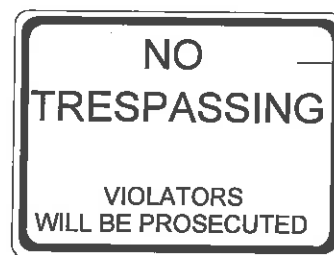
1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS UNLESS NOTED OTHERWISE SHALL BE MOUNTED TO THE TOWER, GATE AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
3. ONE VERIZON SITE ID SIGN SHALL BE MOUNTED TO THE RIGHT DOOR OF THE SHELTER. TWO SIDED TAPE SHALL BE UTILIZED AT EACH CORNER ON THE BACKSIDE TO AID PLACEMENT UNTIL THE ADHESIVE SETS.



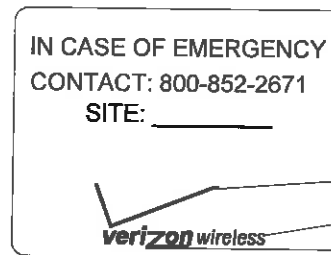
1 TOWER SITE COMPOUND SIGN PLACEMENT  
S-5 NTS



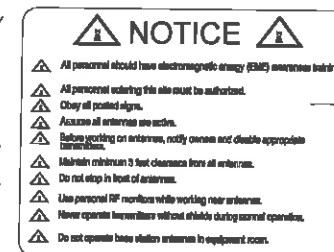
2 FENCE SIGNAGE LOCATION  
S-5 NTS



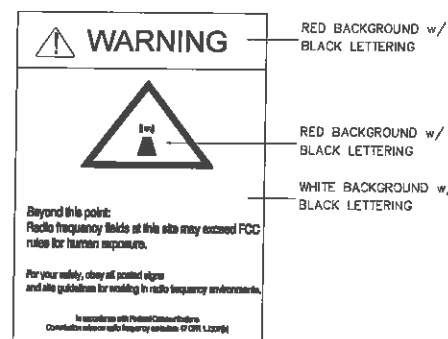
1 NO-TRESPASSING SIGN  
18"HIGHx24" WIDE  
(OPERATIONS PROVIDED)



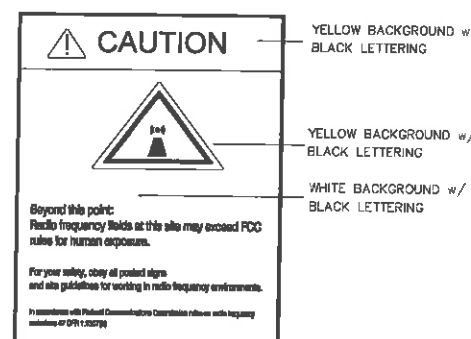
2 VERIZON WIRELESS-SITE ID SIGN  
18"HIGHx24" WIDE  
(OPERATIONS PROVIDED)



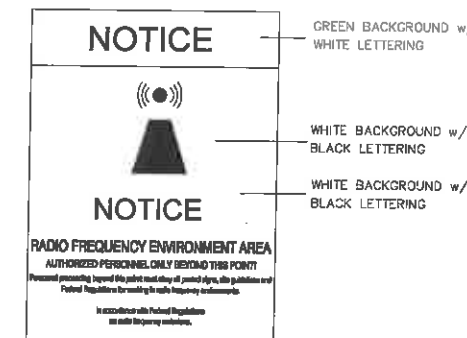
3 NOTICE-RFE SIGN  
12"HIGHx18" WIDE  
(OPERATIONS PROVIDED)



4 WARNING-RF SIGN (RED)  
12"HIGHx18" WIDE  
(OPERATIONS PROVIDED)



5 CAUTION-RF SIGN (YELLOW)  
12"HIGHx18" WIDE  
(OPERATIONS PROVIDED)



6 NOTICE-RF SIGN (BLUE)  
12"HIGHx18" WIDE  
(OPERATIONS PROVIDED)



7 FCC REGISTRATION SIGN  
20"HIGHx4" WIDE  
(OPERATIONS PROVIDED)

3 TYPICAL SIGNS AND SPECIFICATIONS  
S-5 NTS

ENGINEER



APPLICANT



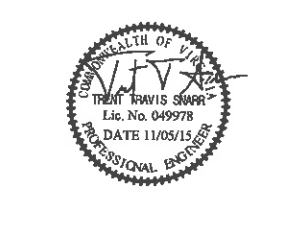
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2	12/04/14	FINAL	MEH
1	12/01/14	REVISED	MEH
0	07/07/14	PRELIMINARY	MEH

PROFESSIONAL STAMP



ENGINEER

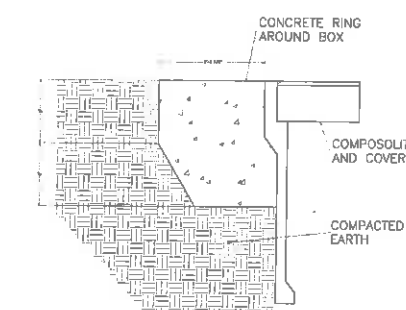
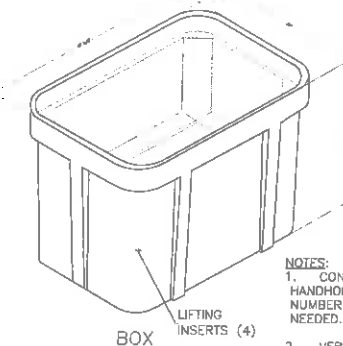
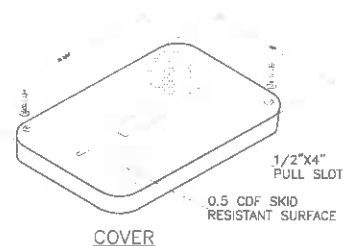
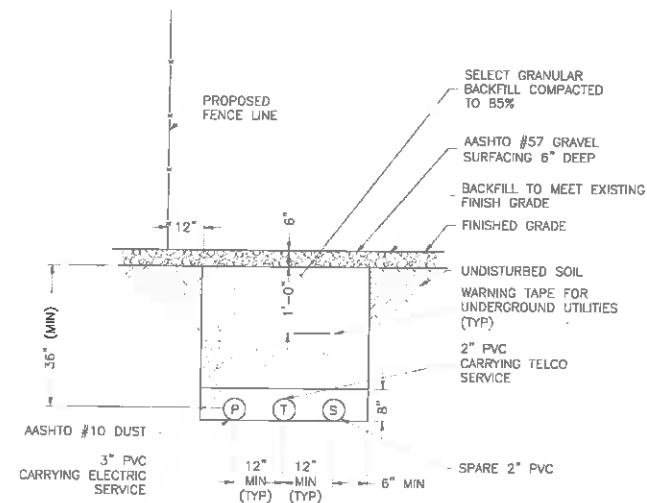
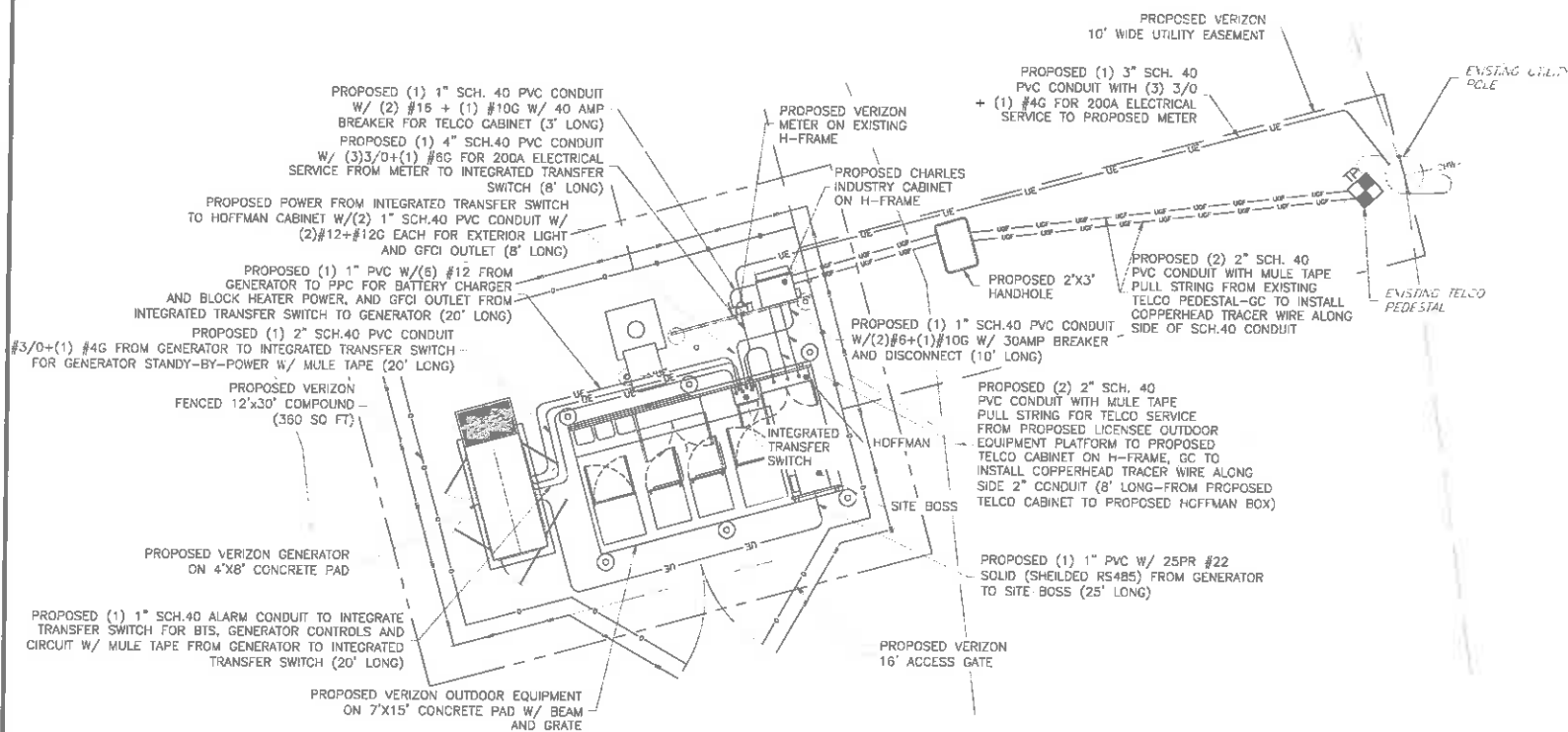
TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

SITE SIGNAGE  
DETAILS

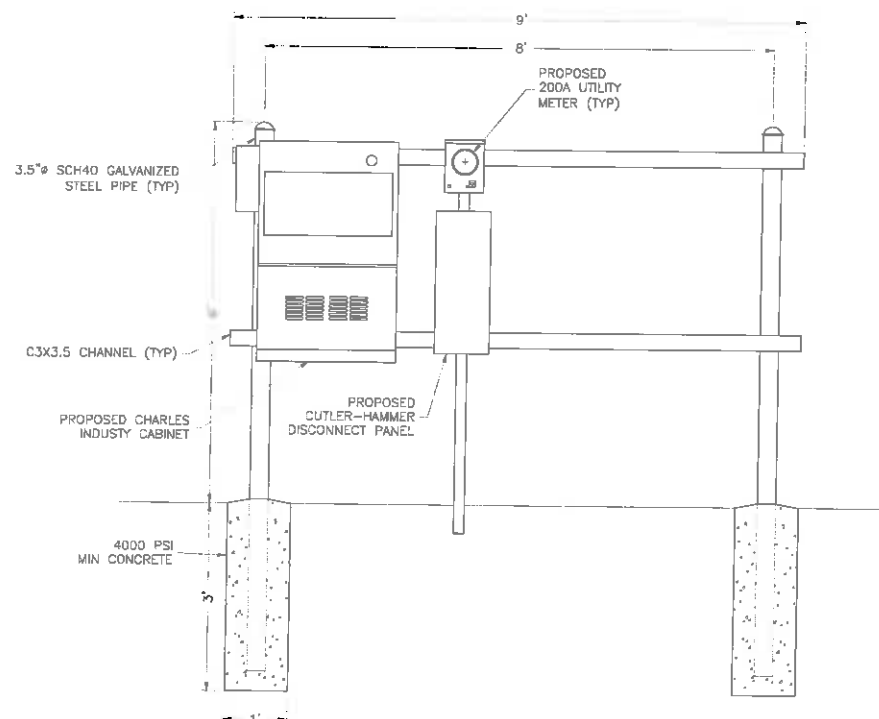
SHEET NUMBER

S-5



- NOTES:
1. CONCRETE ENCASEMENT TO BE 3,000 P.S.I. MINIMUM.
  2. CONCRETE ENCASEMENT RING DIMENSION, D, TO BE EQUAL TO DESIGN PAVEMENT DEPTH.
  3. PAVEMENT AND SUBGRADE TO BE AS SHOWN ON THE ENGINEERING PLANS.
  4. QUAZITE DOES NOT RECOMMEND THE USE OF CONCRETE OR POLYMER CONCRETE BOXES IN HIGH VOLUME TRAFFIC APPLICATIONS.

- NOTES:
1. CONTRACTOR TO ORDER HANDHOLE BOX WITH THE CORRECT NUMBER AND SIZE OF KNOCKOUTS NEEDED.
  2. VERIFY DIMENSIONS OF UNIT.



**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
4435 WATERFRONT DRIVE, SUITE 100  
GLYNN ALLEN, VA 22060  
703-545-8579



1831 RADY COURT  
RICHMOND, VA 23222

SOUTHLAND  
NB+C ES PROJ# 27074  
DOMINION STRUCTURE  
#5/3 & 2028/3  
325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911  
ALBEMARLE COUNTY

#### REVISIONS

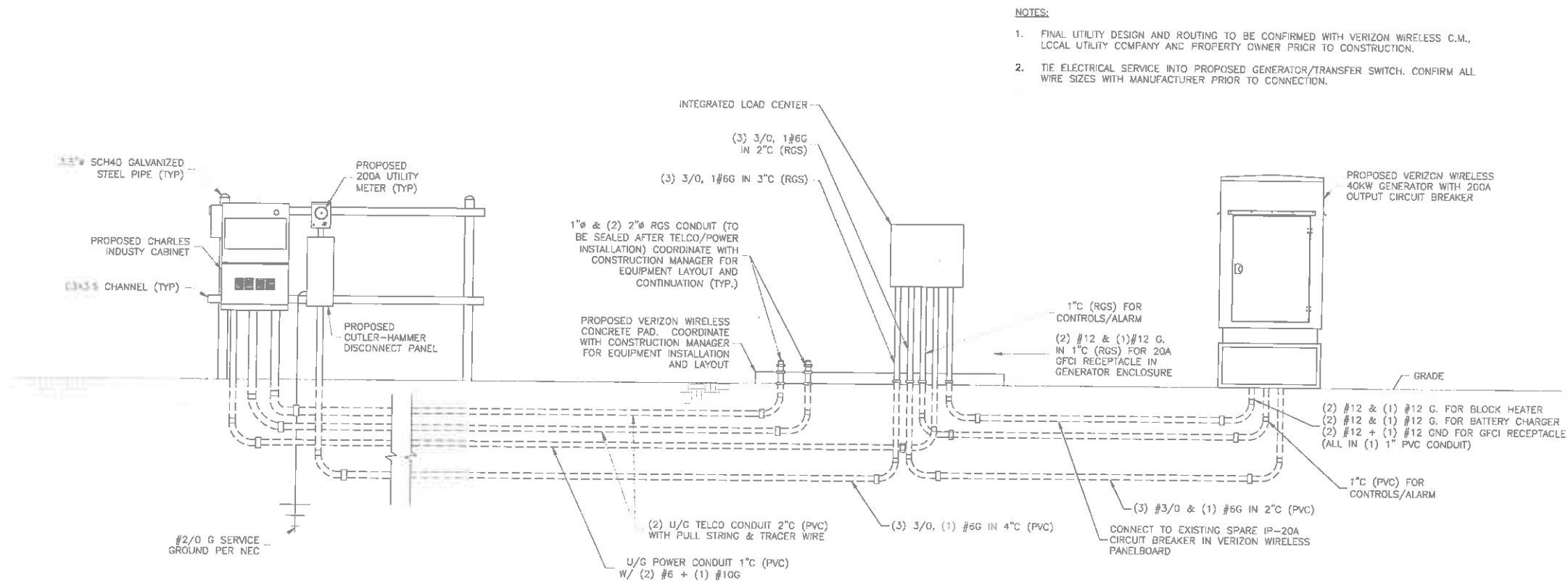
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**ELECTRICAL PLAN  
& DETAILS**

**E-1**



- NOTES:
1. FINAL UTILITY DESIGN AND ROUTING TO BE CONFIRMED WITH VERIZON WIRELESS C.M., LOCAL UTILITY COMPANY AND PROPERTY OWNER PRIOR TO CONSTRUCTION.
  2. TIE ELECTRICAL SERVICE INTO PROPOSED GENERATOR/TRANSFER SWITCH. CONFIRM ALL WIRE SIZES WITH MANUFACTURER PRIOR TO CONNECTION.

1  
E-2  
NTS

**ELECTRICAL RISER DIAGRAM AND SERVICE ENTRANCE (SCHEMATIC)**



ENGINEER



APPLICANT



SITE INFORMATION

SOUTHLAND  
NB+C ES PROJ# 27074  
DOMINION STRUCTURE  
#5/3 & 2028/3  
325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911  
ALBEMARLE COUNTY

DESIGN RECORD

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PROFESSIONAL STAMP



ENGINEER

TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

**ELECTRICAL RISER  
DIAGRAM &  
SERVICE ENTRANCE  
SCHEMATIC**

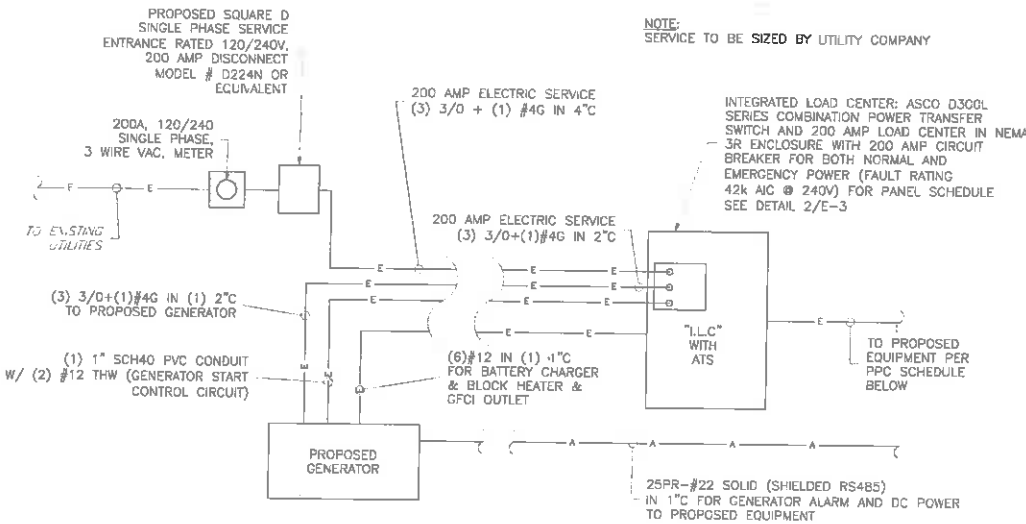
SHEET NUMBER

**E-2**

ELECTRICAL NOTES

1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. CONTRACTOR SHALL COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "U" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10. PROPERLY SEAL ALL PENETRATIONS, PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT.
11. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.
12. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110-14(C).
13. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.
14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.
15. CONDUIT:
- A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
- B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL. FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
- C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
- D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
- E. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.
17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.
22. RED LINED AS-BUILT PLANS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER.

23. INDOOR CONDUCTORS SHALL BE INSTALLED IN EMT UNLESS NOTED OTHERWISE. OUTDOOR CONDUCTORS SHALL BE INSTALLED IN RIGID GALVANIZED STEEL CONDUIT UNLESS NOTED OTHERWISE.
24. NY SMSA TO PROVIDE SURGE SUPPRESSOR FOR TELCO BOARD SERVING NEW EQUIPMENT, THE SURGE SUPPRESSOR TO BE INSTALLED BY CONTRACTOR AND GROUNDED TO MGB.
25. SEAL AROUND PENETRATIONS RESULTING FROM CONDUIT ROUTING WITH FIRE-STOPPING FOAM SEALANT HAVING A UL-LISTED RATING OF 2 HOURS. HAMMER-DRILLING IS NOT PERMITTED. CORE-DRILLING TO BE COORDINATED WITH BUILDING OWNER'S REPRESENTATIVE.
26. PROVIDE (2) FUSES OF SIZE RECOMMENDED BY CONDENSING UNIT MANUFACTURER.
27. PROVIDE SMOKE DETECTOR COMPATIBLE WITH EXISTING BUILDING FIRE ALARM SYSTEM. TIE TO LOCAL ZONE. COORDINATE WITH BUILDING OWNER'S FIRE ALARM SYSTEM CONTRACTOR. PROVIDE SENTROL 4460RT PHOTOELECTRIC SMOKE DETECTOR WITH AUXILIARY RELAY FOR ACU-1 SHUTDOWN.
28. PROVIDE GENERATOR CONNECTOR RECEPTACLE AND ENCLOSED CIRCUIT BREAKER IN LOCATION SUITABLE FOR PORTABLE GENERATOR ACCESS. COORDINATE WITH BUILDING OWNER FOR EXACT LOCATION. PAINT TO MATCH EXISTING WALL COLOR.
29. PROVIDE ALARM TERMINAL CABINET HIGH/LOW ALARMS MOUNTED ON TELCO BOARD.
30. PROVIDE DOOR ALARM CONTACT.



1 POWER DIAGRAM  
E-3 NTS

INTEGRATED LOAD CENTER (ITS)														
VOLTS: 120/240		WIRE: 3	RMS: 42k AIC	NEUTRAL BAR: YES	BRANCH CB: 24	NEMA TYPE: 3R	MFR: ASCO							
PHASE: 1		AMP: 200	MAIN CB AMP: 200	GROUND BAR: YES	KEY LOCK: NO	MOUNTING: SURFACE								
WATTS		CIRCUIT DESCRIPTION	CONDUCTOR	POLES	B K T	C K T	C K T	B K T	POLES	CONDUCTOR	CIRCUIT DESCRIPTION	WATTS		
	B											A	B	
2000		ALU 9712	(2)#4+(1)#8G	2	50	1	2	15	2	(2)#12+G	HEATER	1088		
360		INTERIOR GFCI OUTLET	(2)#12+G	1	20	5	5	20	1	(2)#12+G	INTERIOR LIGHTS	430		
	300	GENERATOR BATTERY CHARGER	(2)#12+G	1	20	7	8	20	1	(2)#12+G	SERVICE RECEPTACLES		360	
1000		GENERATOR BLOCK HEATER	(2)#12+G	1	20	9	10	20	1	(2)#12+G	EXHAUST FAN	60		
	300	TELCO CABINET	(2)#4+(1)#10G	1	30	11	12	--	1	--	SPARE			
		SPARE	--	1	--	13	14	--	1	--	SPARE			
		SPARE	--	1	--	15	16	--	1	--	SPARE			
		SPARE	--	1	--	17	18	--	1	--	SPARE			
		SPARE	--	1	--	19	20	--	1	--	SPARE			
		SPARE	--	1	--	21	22	--	1	--	SPARE			
		SPARE	--	1	--	23	24	--	1	--	SPARE			
3360	2600	TOTAL										TOTAL	1578	1448
LOAD DESCRIPTION	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	TOTAL CONNECTED LOAD BY PHASE										
LIGHTS	430	1.00	430	PHASE A WATTS = 4938										
EQUIPMENT	6176	1.00	6176	PHASE B WATTS = 4048										
RECEPTACLES	720	1.00	720	TOTAL CONNECTED LOAD Kva = 9.0										
MISC	1660	1.00	1660	TOTAL PANEL LOADING Kva = 9.0										
HVAC	0	1.00	0	TOTAL PANEL CAPACITY Kva = 48.0										
TOTAL	8986		8986											

2 PANEL SCHEDULE  
E-3 NTS

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
4435 WATERFRONT DRIVE, SUITE 100  
OLNEY ALLEN, VA 23060  
(804) 646-4070

**verizon**wireless

1831 RADY COURT  
RICHMOND, VA 23222

SOUTHLAND  
NB+C ES PROJ.# 27074  
DOMINION STRUCTURE  
#5/3 & 2028/3  
325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911  
ALBEMARLE COUNTY

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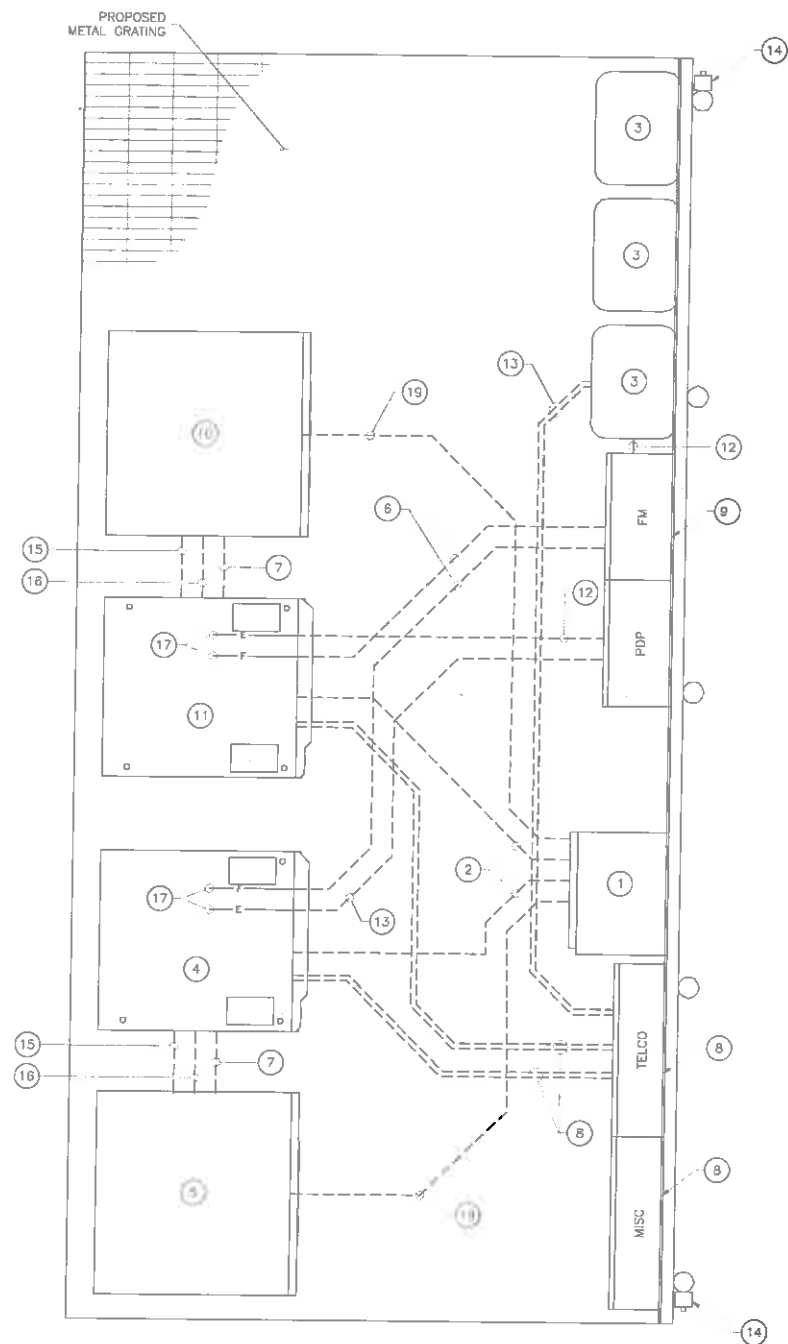


TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

**ELECTRICAL  
PANEL SCHEDULE,  
DIAGRAM & NOTES**

**E-3**

NOTE:  
PROVIDE CONDUITS SHOWN FOR FUTURE EQUIPMENT. POWER  
CONDUITS SHALL BE STUBBED UP AND CAPPED WITH PULL  
STRINGS. COMMUNICATION CONDUITS SHALL BE STUBBED UP  
AND CAPPED WITH 3-WAY INNER DUCT AND PULLSTRINGS.



1 PROPOSED EQUIPMENT PAD CONDUIT LAYOUT  
E-4 11/15

### CONSTRUCTION NOTES

1. ASCO D300L SERIES COMBINATION POWER TRANSFER SWITCH AND 200 AMP LOAD CENTER IN NEMA 3R ENCLOSURE WITH 200 AMP CIRCUIT BREAKER FOR BOTH NORMAL AND EMERGENCY POWER
2. (2) #4 + (1) #8 GND - 1-1/2" SCH 40 PVC CONDUIT, FED FROM 60A, 2-POLE BREAKER
3. OVER VOLTAGE PROTECTIVE DEVICE
4. 9712 CABINET
5. EBZF0
6. 2" SCH 40 PVC CONDUIT WITH PULL WIRE FOR FIBER AND COPPER ALARM CIRCUIT TO PDP/FIBER MANAGEMENT CABINET
7. (2) 1 1/2" SCH 40 PVC CONDUIT WITH PULLWIRE FOR ALARM CIRCUITS TO EACH 9712 CABINET
8. 24"x48"x12" HOFFMAN BOX W/ PLYWOOD BACKING BOARD - UL RATED NEMA 3
9. 36"x36"x12" PDP/FIBER MANAGEMENT BOX W/ PLYWOOD BACKBOARD AND DIVIDER (2) 18" DOORS RATED NEMA 3
10. FUTURE EZBF0 CABINET
11. FUTURE 9712 CABINET
12. (1) 2" SCH 40 PVC CONDUIT WITH PULLWIRE FOR DC POWER TO PDP SIDE OF THE PDP/FIBER MANAGEMENT CABINET
13. (2) 3/4" SCH 40 PVC CONDUIT WITH PULLWIRE FOR ALARM CIRCUITS TO OVP
14. 4" NEMA 3R JUNCTION BOX MOUNTED ON ICE BRIDGE WITH WEATHER TIGHT 100W LIGHT FIXTURE, CONTROLLED BY SWITCH MOUNTED ON H-FRAME POST.
15. (1) 1 1/2" SCH 40 PVC CONDUIT WITH PULLWIRE FOR HEATER CIRCUIT
16. (1) 1 1/2" SCH 40 PVC CONDUIT WITH PULLWIRE FOR POWER CIRCUIT
17. 2" CONDUITS FROM POWER/FIBER MANAGEMENT NEED 45° CONNECTORS ON 9712 CABINET ENTRY.
18. (1) 1" SCH 40 PVC CONDUIT, FED FROM 20A, 2-POLE BREAKER

ENGINEER

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TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
4035 WATERHUNT DRIVE, SUITE 100  
CLAY ALLEN, VA 22030  
804 546-4070

APPLICANT

**verizon**wireless

1831 RADY COURT  
RICHMOND, VA 23222

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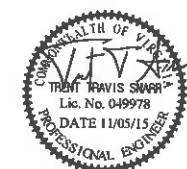
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PROFESSIONAL STAMP



ENGINEER

TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

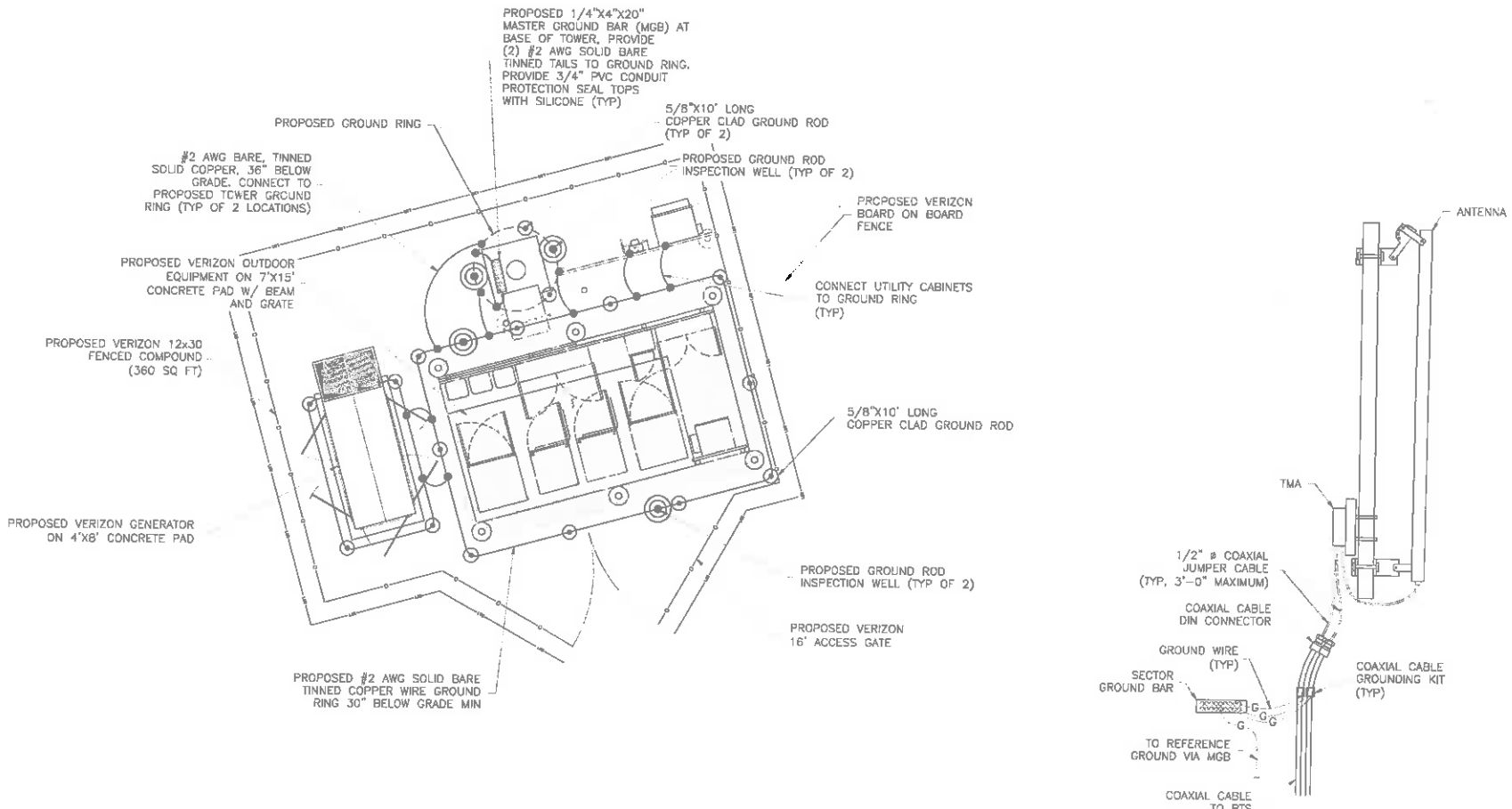
**ELECTRICAL  
CONDUIT  
SCHEMATIC**

SHEET NUMBER

**E-4**

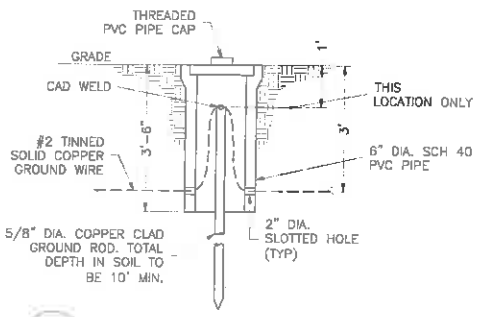
GROUNDING NOTES:

- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
- ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
- GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
- GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
- ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 TINNED SOLID COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
- REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
- THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"x10"-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 TINNED SOLID COPPER WIRE BURIED 36" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART.
- IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°.
- EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
- CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE METROPCS CONSTRUCTION MANAGER.
- ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 TINNED SOLID COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
- PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
- ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A METROPCS REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.
- WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.
- PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
- ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.

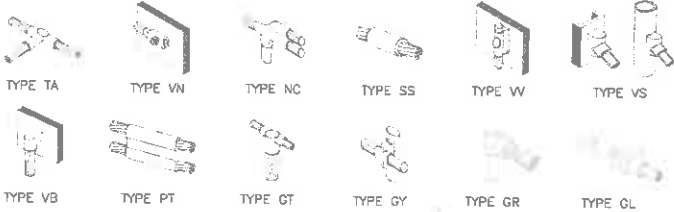


1 GROUNDING PLAN  
SCALE: 1/4"=1'

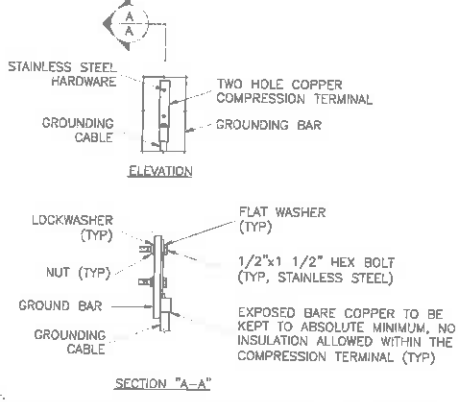
2 ANTENNA GROUNDING DETAIL  
NTS



3 INSPECTION WELL DETAIL  
NTS



4 CADWELD GROUNDING CONNECTION DETAILS  
NTS



5 TYPICAL GROUND BAR CONN DETAIL  
NTS

GROUNDING LEGEND	
	COAXIAL CABLE SHIELD GROUND KIT CONNECTION
	COMPRESSION FITTING CONNECTION
	EXOTHERMIC WELD CONNECTION
	5/8"x10" COPPER-CLAD STEEL GROUND ROD
	5/8"x10" COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL
	PROPOSED GROUND WIRING
	EXISTING GROUND WIRING
	TINNED COPPER GROUND BAR 1/4"x4"x12" OR 1/4"x4"x20"
	COLLECTOR GROUND BAR
	MASTER GROUND BAR

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

**NB+C**  
TOTALLY COMMITTED.  
  
NB+C ENGINEERING SERVICES, LLC.  
4435 WATERFRONT DRIVE, SUITE 102  
GLEN ALLEN, VA 22080  
(804) 945-4019

**verizon**wireless  
  
1831 RADY COURT  
RICHMOND, VA 23222

**SOUTHLAND**  
NB+C ES PROJ.# 27074  
DOMINION STRUCTURE  
#5/3 & 2028/3  
325 WINDING RIVER LANE  
CHARLOTTESVILLE, VA 22911  
ALBEMARLE COUNTY

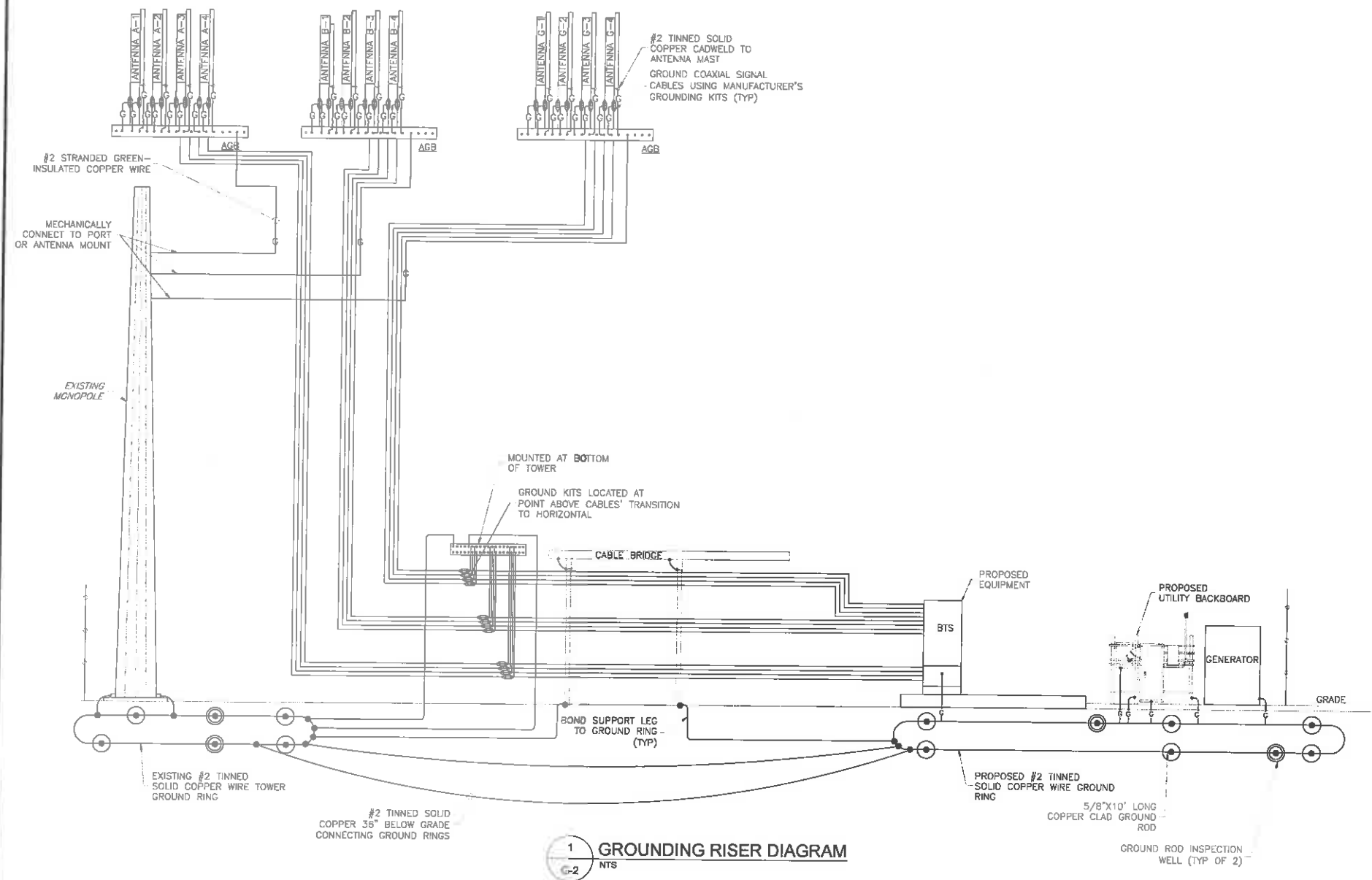
REVISIONS			
6	11/05/15	ADDED LANDSCAPING PLAN	LAR
5	08/09/15	BID SET	AMM
4	07/08/15	REVISED	AMM
3	05/05/15	REVISED	AMM
2	12/04/14	FINAL	MEH
1	12/01/14	REVISED	MEH
0	07/07/14	PRELIMINARY	MEH
REV	DATE	DESCRIPTION	BY

STATE OF VIRGINIA  
TRENT T. SNARR, P.E.  
Lic. No. 049978  
DATE 11/05/15  
PROFESSIONAL ENGINEER

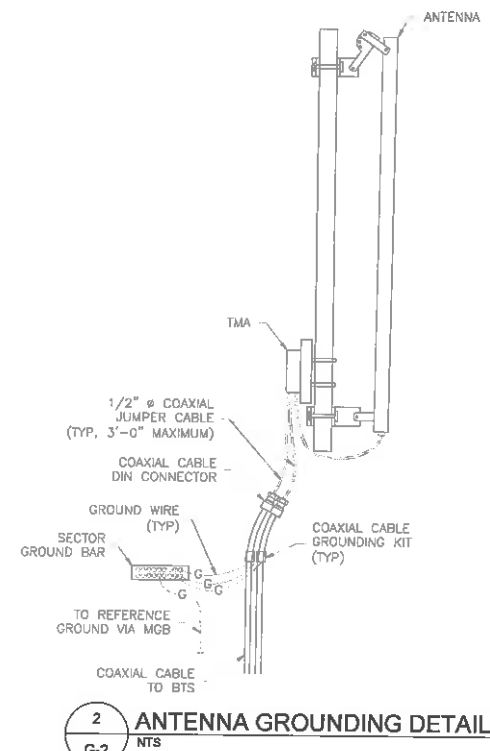
**TRENT T. SNARR, P.E.**  
VA PROFESSIONAL ENGINEER LIC. #49978

**GROUNDING PLAN & DETAILS**

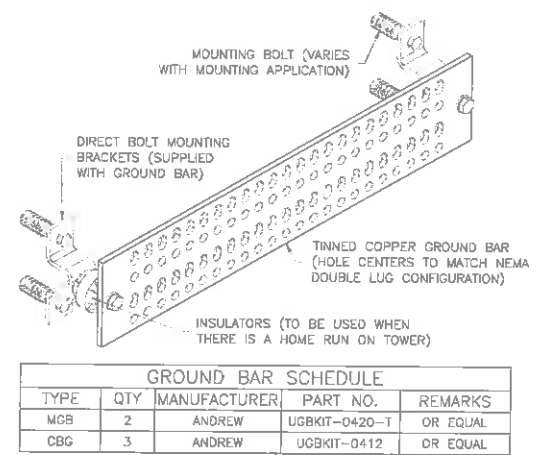
**G-1**



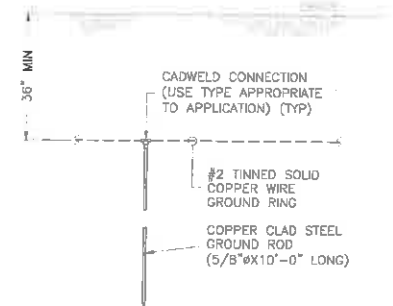
1 GROUND RISER DIAGRAM  
G-2 NTS



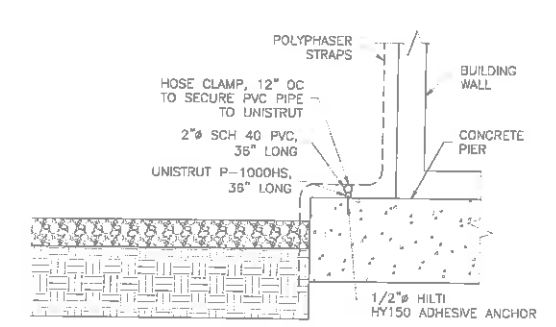
2 ANTENNA GROUNDING DETAIL  
G-2 NTS



3 GROUND BAR DETAIL  
G-2 NTS



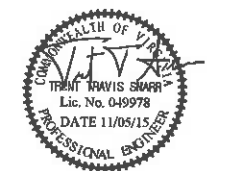


4 TYPICAL GROUND ROD DETAIL  
G-2 NTS

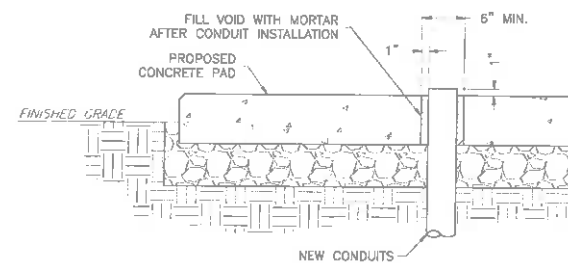


5 POLYPHASER STRAP TIE-DOWN DETAIL  
G-2 NTS

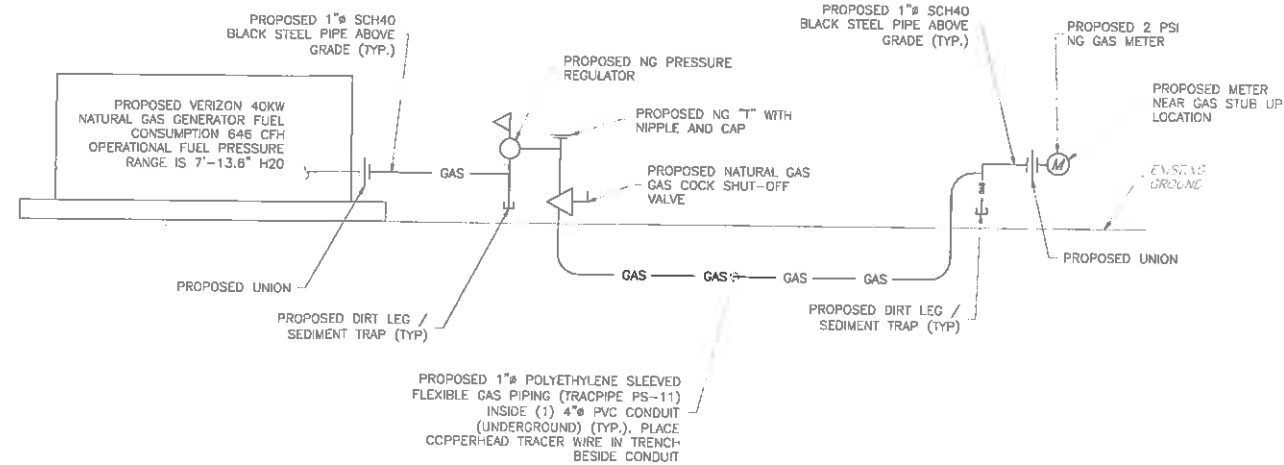
GROUND BAR SCHEDULE				
TYPE	QTY	MANUFACTURER	PART NO.	REMARKS
MCB	2	ANDREW	UGBKIT-0420-T	OR EQUAL
CBG	3	ANDREW	UGBKIT-0412	OR EQUAL

ENGINEER	 <p><b>TOTALLY COMMITTED.</b></p> <p>NB+C ENGINEERING SERVICES, LLC. 4038 WATERFRONT DRIVE, SUITE 100 CLINTON, VA 22040 804-545-4779</p>																																
APPLICANT	 <p><b>verizon</b>wireless</p> <p>1831 RADY COURT RICHMOND, VA 23222</p>																																
SITE INFORMATION	<p>SOUTHLAND NB+C ES PROJ# 27074 DOMINION STRUCTURE #5/3 &amp; 2028/3 325 WINDING RIVER LANE CHARLOTTESVILLE, VA 22911 ALBEMARLE COUNTY</p>																																
DESIGN RECORD	<p><b>REVISIONS</b></p> <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>11/05/15</td> <td>ADDED LANDSCAPING PLAN</td> <td>LAR</td> </tr> <tr> <td>5</td> <td>08/08/15</td> <td>BID SET</td> <td>AMM</td> </tr> <tr> <td>4</td> <td>07/09/15</td> <td>REVISED</td> <td>AMM</td> </tr> <tr> <td>3</td> <td>05/05/15</td> <td>REVISED</td> <td>AMM</td> </tr> <tr> <td>2</td> <td>12/04/14</td> <td>FINAL</td> <td>MEH</td> </tr> <tr> <td>1</td> <td>12/01/14</td> <td>REVISED</td> <td>MEH</td> </tr> <tr> <td>0</td> <td>07/07/14</td> <td>PRELIMINARY</td> <td>MEH</td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	BY	6	11/05/15	ADDED LANDSCAPING PLAN	LAR	5	08/08/15	BID SET	AMM	4	07/09/15	REVISED	AMM	3	05/05/15	REVISED	AMM	2	12/04/14	FINAL	MEH	1	12/01/14	REVISED	MEH	0	07/07/14	PRELIMINARY	MEH
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ENGINEER	<p>TRENT T. SNARR, P.E. VA PROFESSIONAL ENGINEER LIC. #49978</p>																																
SHEET TITLE	<p><b>GROUNDING RISER DIAGRAM, DETAILS &amp; NOTES</b></p>																																
SHEET NUMBER	<p><b>G-2</b></p>																																





1 CONDUIT PENETRATION DETAIL  
NTS



2 GAS RISER DIAGRAM  
SCALE: NOT TO SCALE

#### SYMBOLS LIST & ABBREVIATIONS

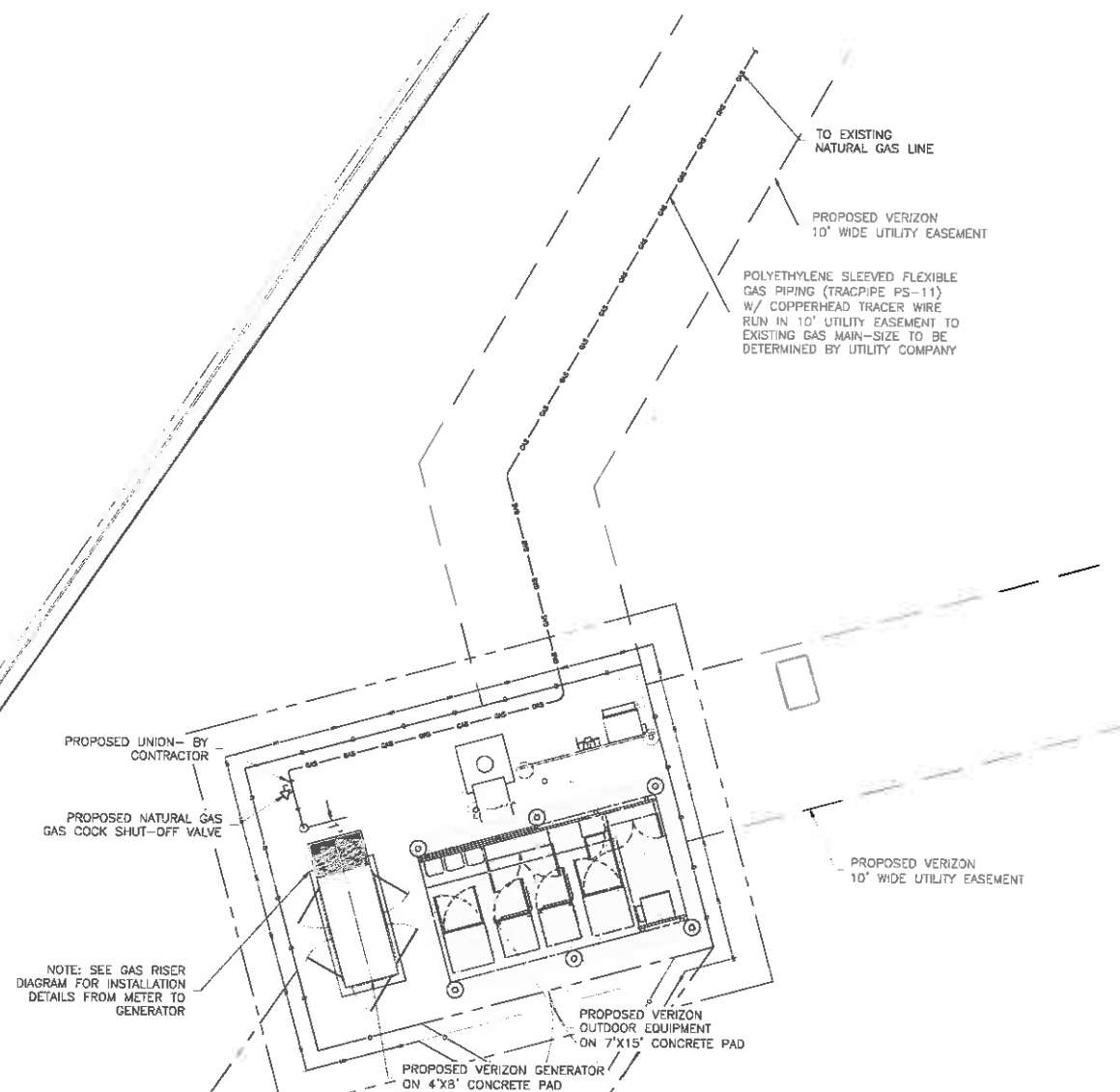
UNION	MBH	1000 BRITISH THERMAL UNITS/HOUR
GAS COCK	PSIG	POUNDS PER SQUARE INCH GAUGE
PRESSURE REGULATOR	CFH	CUBIC FEET PER HOUR
NATURAL GAS PIPE	IFGC	INTERNATIONAL FUEL GAS CODE
NATURAL GAS METER		

#### GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDITIONS, PARTICULARLY WHERE THEY MAY IMPACT THE PROPOSED WORK, PRIOR TO STARTING CONSTRUCTION. MINOR VARIATIONS CAN BE EXPECTED. ANY REQUIRED DEVIATION FROM THE CONTRACT DOCUMENTS AS A RESULT OF DIFFERING SITE CONDITIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS. EXISTING CONDITIONS HAVE BEEN OBTAINED FROM RECENT FIELD SURVEY.
- THE CONTRACTOR SHALL CONNECT ALL ITEMS OF EQUIPMENT AND SHALL PROVIDE ALL ITEMS NECESSARY TO COMPLETE THE GAS LINE INSTALLATION.
- ALL MATERIALS PROVIDED SHALL BE NEW AND FREE FROM DEFECTS.
- ALL VALVES SHALL BE INSTALLED TO ALLOW PROPER SERVICING AND OR REMOVAL WITHOUT DISCONNECTING ALL PIPING AND ACCESSORIES.
- ALL EXPOSED NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE (ASTM A53) WITH 150 PSI FITTINGS.
- ALL BELOW GRADE NATURAL GAS PIPING SHALL BE POLYETHYLENE-SLEEVED FLEXIBLE GAS PIPING (TRACPIPE PS-11) OR APPROVED EQUAL.
- DI-ELECTRIC FITTINGS SHALL BE USED FOR CONNECTIONS OF DISSIMILAR PIPING MATERIALS.
- ALL FERROUS GAS PIPING EXPOSED TO THE ATMOSPHERE OR OTHERWISE SUSCEPTIBLE TO CORROSION SHALL BE PROTECTED WITH A CORROSION RESISTANT COATING WITH "NATURAL GAS" IDENTIFICATION EVERY 25 FEET.

#### NOTES

- TOTAL LENGTH = 120 LF + 25 LF FOR FITTINGS = 145 LF.
- ALL GAS PIPING & AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH IFGC 2012 AND LOCAL CODES.
- ALL GAS PIPING SIZED IN ACCORDANCE WITH IFGC 2012, CHAPTER 4 (ASSUMING A 1" H2O PRESSURE DROP OVER ENTIRE LENGTH OF PIPING).
- GAS PIPING SIZES LISTED ARE BASED ON THE ENGINEER'S UNDERSTANDING OF THE PROPOSED ROUTING FROM THE GAS METER TO GENERATOR. CONTRACTOR SHALL BEAR SOLE RESPONSIBILITY FOR RECALCULATING GAS PIPE SIZE BASED ON ACTUAL ROUTING. UNDER NO CIRCUMSTANCES SHALL CONTRACTOR ASSUME THAT SIZES LISTED REFLECT EXACT PIPE LENGTHS AND NUMBER OF BENDS.
- FUEL CONSUMPTION: 646 CFH



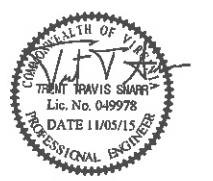
3 GAS PIPING PLAN  
SCALE: 1"=15'



SOUTHLAND  
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TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

#### GAS PIPING DETAILS

P-1



LANDSCAPE NOTES:

1. ALL PLANT MATERIALS AND PLANTING PROCEDURES SHALL BE IN ACCORDANCE WITH THE STANDARDS AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. MULCH SHALL BE FINELY SHREDDED HARDWOOD BARK MULCH. DO NOT COVER THE ROOT CROWN OF TREES OR SHRUBS WITH SOIL OR MULCH. CUT TWINE AWAY FROM THE BASE OF THE TRUNK OR STEM AND PULL BURLAP DOWN AND OFF OF THE BALL TOP.
3. PLANTING BACKFILL MIX SHALL BE ONE PART LOOSE PEAT HUMUS, TO ONE PART SAND, TO ONE PART PARENT SOIL BY VOLUME.
4. SOIL SHALL BE AMENDED WITH THE FOLLOWING: 0.25LBS ORGANIC GRANULAR FERTILIZER (5-10-5), 0.75LBS OF BONEMEAL, 1.0LBS OF ROTTED COW MANURE PER CUBIC FOOT OF MIX.
5. THE CONTRACTOR SHALL WARRANTY ALL PLANTS AND MATERIALS FOR TWO YEARS FROM OWNERS ACCEPTANCE. ALL REPLACEMENTS SHALL BE AS ORIGINALLY SPECIFIED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION PROTECTION AND REPLACEMENT OF ANY UTILITIES DAMAGED ON SITE. FIELD ADJUST PLANT LOCATIONS TO AVOID UTILITIES, SWALES, OVERHEAD WIRES, EXISTING VEGETATION TO REMAIN ETC.
7. LEASEE IS RESPONSIBLE FOR THE COST AND MAINTENANCE OF ALL LANDSCAPING.
8. ALL PLANT MATERIALS MUST BE INSTALLED EQUAL TO OR GREATER THAN THE MINIMUM SIZES SPECIFIED. NO GENUS OR SPECIES SUBSTITUTIONS ALLOWED. CULTIVAR VARIATION ALLOWED WITH THE LANDSCAPE ARCHITECTS APPROVAL.
9. FERTILIZER MAY NOT BE NECESSARY. PERFORM A SOIL TEST BEFORE APPLYING. DO NOT APPLY FERTILIZER IF SOIL SALTS ARE FOUND TO BE TOO HIGH.

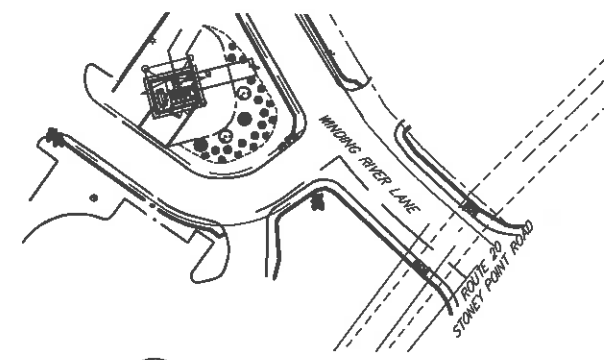
TREE LEGEND

- DEODAR CEDAR
- EASTERN REDBUD
- SCHIP LAUREL
- VANHOUTTE SPIREA
- PINKTERBLOOM AZALEA

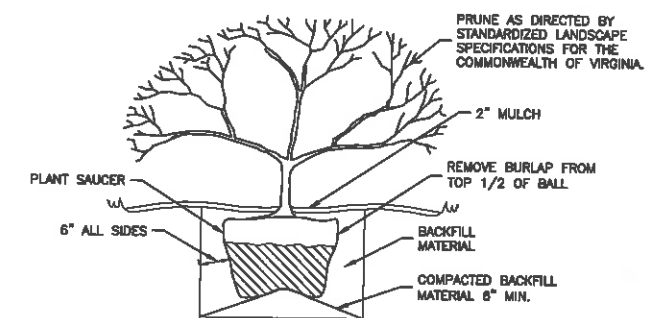
PLANT SUBSTITUTIONS REQUIRE A WRITTEN REQUEST FROM THE PROPERTY OWNER AND WRITTEN APPROVAL FROM ALBEMARLE COUNTY, DEVELOPMENT SERVICES CENTER LANDSCAPE ARCHITECT.

PLANTING SCHEDULE

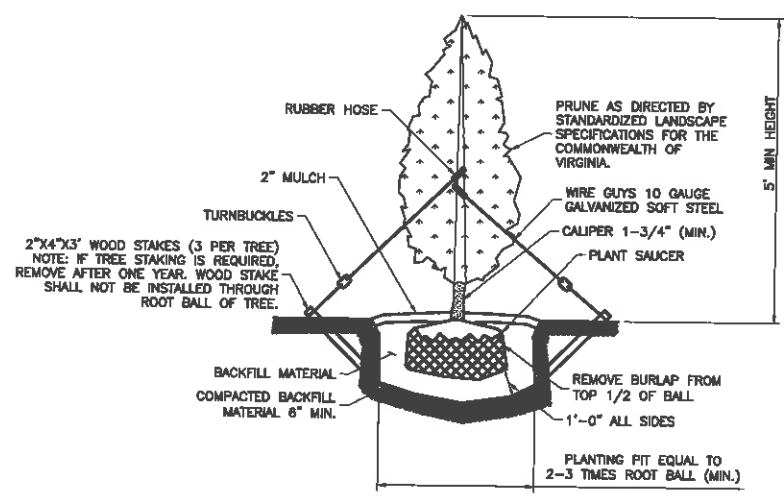
QUANTITY	BOTANICAL - COMMON NAME	PLANTING SIZE	GROWTH SIZE
5	RHODODENDRON PERICLYMENOIDES - PINKTERBLOOM AZALEA - DECIDUOUS SHRUB	2'	5' - 8'
5	SPIREA X VANHOUTTEI - VANHOUTTE SPIREA - DECIDUOUS SHRUB	2'	5' - 8'
9	PRUNUS LAUROCERASUS 'SCHIPKAENSIS' - SCHIP LAUREL - EVERGREEN SHRUB	3'	10' - 12'
2	CERCIS CANADENSIS - EASTERN REDBUD - DECIDUOUS TREE	5'	20' - 30'
2	CEDRUS DEODARA - DEODAR CEDAR - EVERGREEN TREE	5'	40' - 60'



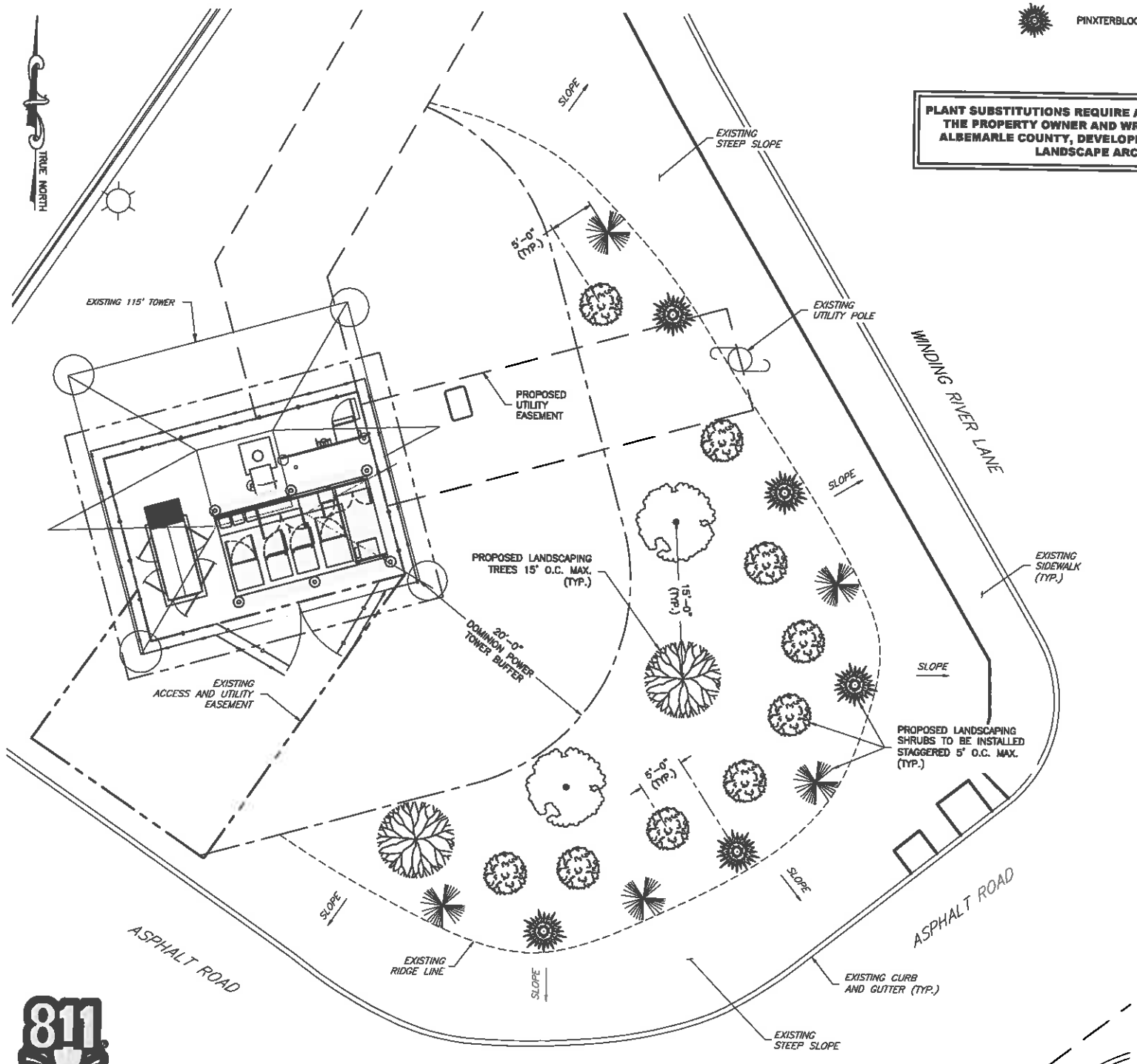
2 LANDSCAPING PLAN KEY SCALE: 1" = 60'



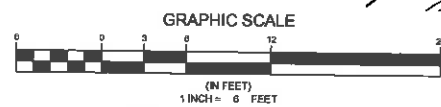
3 SHRUB PLANTING AND GUYING DETAIL NTS



4 TREE PLANTING AND GUYING DETAIL NTS



1 LANDSCAPING PLAN SCALE: 1" = 6'



ENGINEER

APPLICANT

SITE INFORMATION

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ENGINEER

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SHEET NUMBER

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
4435 WATERFRONT DRIVE, SUITE 100  
GLENN ALLEN, VA 22082  
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COMMONWEALTH OF VIRGINIA  
TRENT T. SHARR, P.E.  
Lic. No. 049978  
DATE 11/05/15  
PROFESSIONAL ENGINEER

TRENT T. SHARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

**LANDSCAPING PLAN**

**L-1**