

**NOTE TO GENERAL CONTRACTOR:**  
 REFER TO THE PASSING STRUCTURAL ANALYSIS AND APPLICABLE MOUNT ANALYSIS OF THE EXISTING BUILDING CONSIDERING THE EXISTING AND PROPOSED LOADS PERFORMED BY NB+C ES (PROJECT 100249). IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING.

DESIGN BASED ON RFDS VERSION: 1 DATED: 03/16/21.



**SITE NUMBER: 7WAC529A**  
**SITE CASCADE: WA33XC951**

**SPRINT KEEP INSTALLATION, DESIGN 67D5A997DB 6160 (GSM ONLY)**

374 MAPLE AVE EAST  
 VIENNA, VA 22180  
 TOWN OF VIENNA

**SCOPE OF WORK**

- PROJECT CONSISTS OF:**
- REMOVING:**
- (3) EXISTING ANTENNAS
  - (6) EXISTING RADIOS
  - (3) EXISTING COMBINERS
  - (2) EXISTING CABINETS
  - (1) EXISTING DISTRIBUTION BOX
- EXISTING CABLE TRAY  
 ALL EXISTING ICE BRIDGES  
 ALL EXISTING COAX/CABLES  
 (1) EXISTING FLAGPOLE
- INSTALLING:**
- (9) PROPOSED ANTENNAS
  - (6) PROPOSED RADIOS
  - (3) PROPOSED 6X24 HYBRID CABLES
  - (2) PROPOSED CABINETS
  - (9) PROPOSED MOUNTING PIPES
  - (9) PROPOSED MOUNTING BRACKETS
  - (1) PROPOSED WORK LIGHT
  - PROPOSED CUSTOM SCREEN WALL
  - PROPOSED HATCH GUARD RAIL

**SITE INFORMATION**

LATITUDE (NAD 83): 38.90676117°  
 LONGITUDE (NAD 83): -77.25909424°

JURISDICTION: TOWN OF VIENNA  
 ZONING: C-1A

MAP NUMBER: 0382 02 0025  
 PARCEL AREA: 0.83± ACRES  
 PARCEL OWNER: 374 MAPLE AVENUE LLC  
 ADDRESS: 1410 SPRING HILL RD #500  
 MCLEAN, VA 22102-3056 C022 C/O GRETA TO SI MILLER

GROUND ELEVATION: 380.0' (AMSL)  
 STRUCTURE TYPE: ROOFTOP  
 STRUCTURE HEIGHT: 38.0' (AGL)

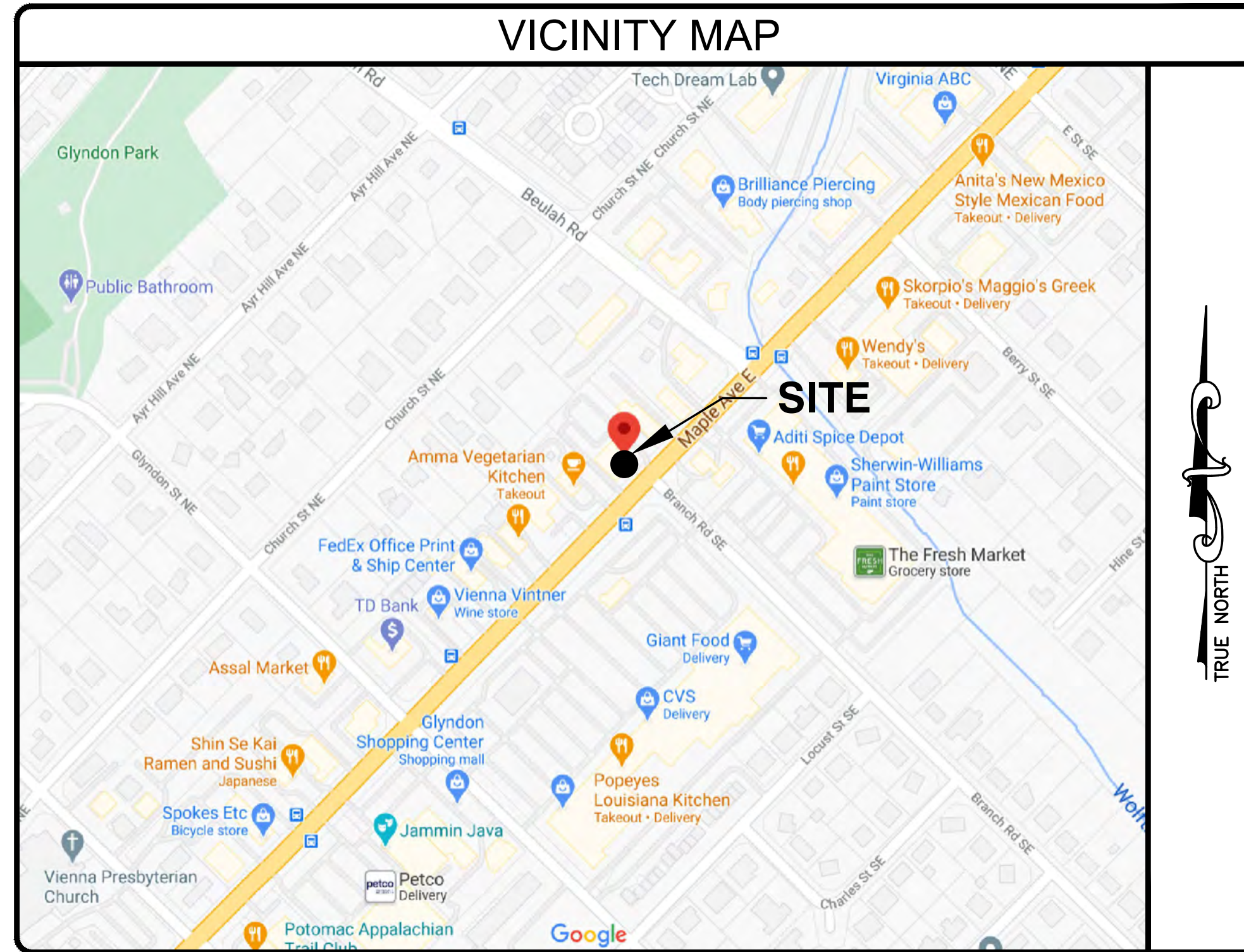
**PROJECT TEAM**

**APPLICANT:** APC REALTY AND EQUIPMENT COMPANY, LLC  
 6220 SPRINT PARKWAY  
 OVERLAND PARK, KS 66251  
 (855) 848-3280

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

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

MARCO GROTTI  
 MGROTTI@NBCLLC.COM  
 (410) 712-7092 - EXT 1032



**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.

- 2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC)
- 2014 NATIONAL ELECTRICAL CODE
- 2015 NFPA 101, LIFE SAFETY CODE
- 2015 STATEWIDE FIRE PREVENTION CODE
- 2015 INTERNATIONAL BUILDING CODE(IBC)
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSI/TIA-222-H
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELCORDIA GR-1275
- ANSI/T 311
- FAIRFAX STRUCTURAL DESIGN LOADS AND RELATED FACTORS
- GROUND SNOW LOAD = 25 PSF
- BASIC WIND SPEED = 90 MPH
- EARTHQUAKE SPECTRAL RESPONSE ACCELERATIONS SS = 0.16 AND S1 = 0.053

**DRAWING INDEX**

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A-4	EQUIPMENT SPECIFICATIONS & DETAILS
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E-1	ELECTRICAL DETAILS
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ST-6	SCREEN WALL SECTIONS
ST-7	SCREEN WALL DETAILS

**DO NOT SCALE DRAWINGS**

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34". 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.



VIRGINIA LAW REQUIRES THREE WORKING DAYS NOTICE PRIOR TO ANY EARTH MOVING ACTIVITIES

APPLICANT

NOW A PART OF T-Mobile  
 T-MOBILE NORTHEAST LLC  
 APC REALTY AND EQUIPMENT COMPANY, LLC  
 6220 SPRINT PARKWAY  
 OVERLAND PARK, KS 66251  
 (855) 848-3280

ENGINEER

TOTALLY COMMITTED.  
 NB+C ENGINEERING SERVICES, LLC.  
 6095 MARSHALEE DRIVE, SUITE 300  
 ELKRIDGE, MD 21075  
 (410) 712-7092

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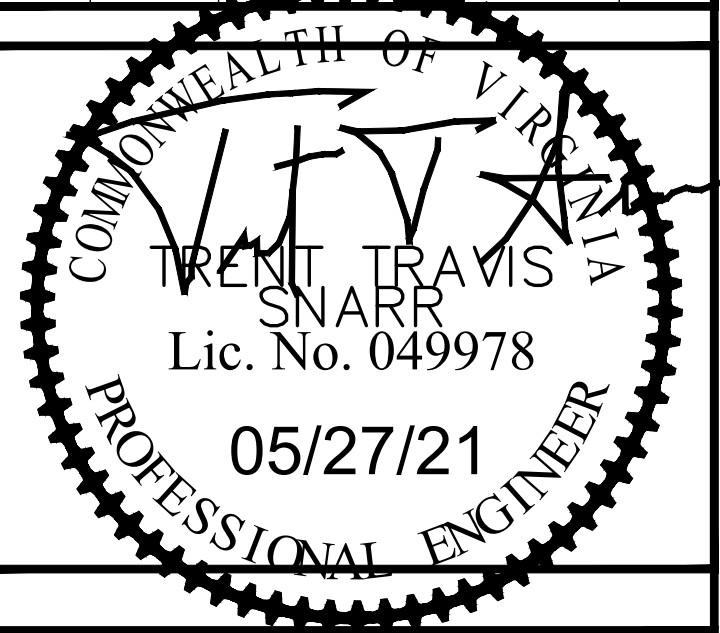
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 NTM REPL FOR WA33XC951  
 374 MAPLE AVE EAST  
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DESIGN RECORD

**REVISIONS**

REV	DATE	DESCRIPTION	BY
1	05/27/21	REV. PER COMMENTS	JNW
0	05/14/21	FINAL CDS	AMM

PROFESSIONAL STAMP



ENGINEER

TRENT TRAVIS SNARR, P.E.  
 VIRGINIA PROFESSIONAL ENGINEER  
 LICENSE #049978

SHEET TITLE

**TITLE SHEET**

SHEET NUMBER

**T-1**



ELECTRICAL & GROUNDING NOTES

- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- ELECTRICAL AND TELCO WIRING AT EXPOSED INDOOR LOCATIONS SHALL BE IN ELECTRICAL METALLIC TUBING OR RIGID NONMETALLIC TUBING (RIGID SCHEDULE 40 PVC OR RIGID SCHEDULE 80 PVC FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) (AS PERMITTED BY CODE).
- ELECTRICAL AND TELCO WIRING AT CONCEALED INDOOR LOCATIONS SHALL BE IN ELECTRICAL METALLIC TUBING, ELECTRICAL NONMETALLIC TUBING, OR RIGID NONMETALLIC TUBING (RIGID SCHEDULE 40 PVC AS PERMITTED BY CODE).
- ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING, ABOVE GRADE AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS (RGS) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- BURIED CONDUIT SHALL BE RIGID NONMETALLIC CONDUIT (RIGID SCHEDULE 40 PVC); DIRECT BURIED IN AREAS OF OCCASIONAL LIGHT TRAFFIC, ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED INDOORS AND OUTDOORS IN AREAS WHERE VIBRATION OCCURS AND FLEXIBILITY IS NEEDED.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE THHN, THWN-2, OR THIN INSULATION.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTING PROTECTION SHALL BE DONE IN ACCORDANCE WITH T-MOBILE CELL SITE GROUNDING STANDARDS.
- GROUND CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
- ALL POWER AND GROUND CONNECTIONS TO BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY HARGER (OR APPROVED EQUAL) RATED FOR OPERATION AT NO LESS THAN 75°C OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL MECHANICAL GROUND CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
- CONTRACTOR SHALL CONDUCT ANTENNA, CABLE, AND LNA RETURN-LOSS AND DISTANCE-TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.
- THE T-MOBILE ELECTRICAL EQUIPMENT INCLUDING PANEL, SWITCH GEAR AND DISCONNECT ARE TO BE LABELED WITH ENGRAVED BAKELITE LABELS.




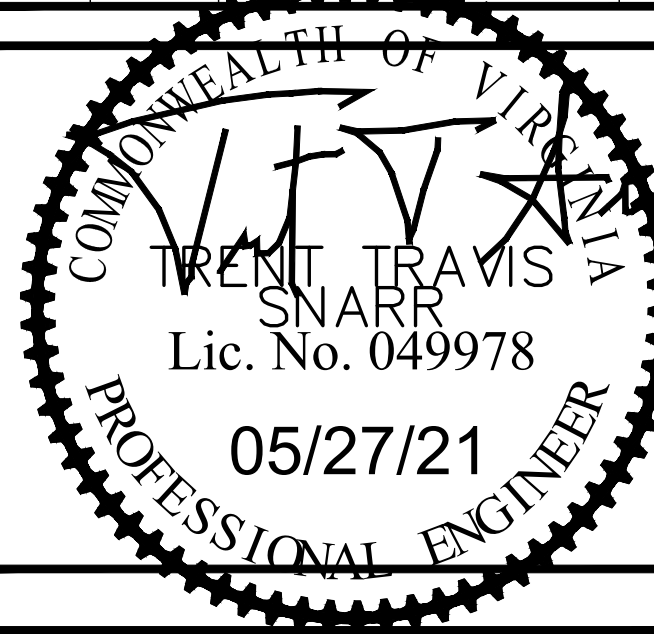
GENERAL NOTES

- 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.
- 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.
- 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.

STRUCTURAL NOTES

- THE STRUCTURAL STEEL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ANCHOR BOLT LOCATIONS, ELEVATION OF TOP OF CONCRETE AND BEARING PLATES, ALIGNMENT ETC. PRIOR TO START OF STEEL ERECTION.
- THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS SHALL GOVERN:
  - A. AISC - "ALLOWABLE STRESS DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
  - B. AISC - "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
  - C. AWS - "D1.1 STRUCTURAL WELDING CODE - STEEL".
- MATERIAL, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS
 

STRUCTURAL WIDE FLANGE & M SHAPES	A992 OR A572 FY = 50KSI
OTHER STRUCTURAL SHAPES AND PLATES	A36, FY = 36 KSI STRUCTURAL TUBING A500, GRADE B
HIGH STRENGTH BOLTS THREADED RODS ANCHOR BOLTS PIPE (HANDRAIL)	FY = 46 KSI A325 A354, GRADE BC A325 OR A354 BC SCH 40 PIPE
- ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 USING E70XX ELECTRODES. UNLESS OTHERWISE NOTED PROVIDE CONTINUOUS MINIMUM SIZED FILLET WELDS PER AISC REQUIREMENTS.
- HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED. ALL HOLES IN BEARING PLATES SHALL BE DRILLED.
- ALL STEEL TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123.
- EPOXY ANCHORS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- ALL BOLTS SHALL BE TIGHTENED USING TURN-OF-THE-NUT METHOD PER AISC SPECIFICATIONS USING STANDARD HOLES.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND FIT PRIOR TO FABRICATION.

APPLICANT	 NOW A PART OF  T-MOBILE NORTHEAST LLC APC REALTY AND EQUIPMENT COMPANY, LLC 6220 SPRINT PARKWAY OVERLAND PARK, KS 66251 (855) 848-3280																
ENGINEER	 <b>TOTALLY COMMITTED.</b> NB+C ENGINEERING SERVICES, LLC. 6095 MARSHALEE DRIVE, SUITE 300 ELK RIDGE, MD 21075 (410) 712-7082																
SITE INFORMATION	7WAC529A NTM REPL FOR WA33XC951 374 MAPLE AVE EAST VIENNA, VA 22180 TOWN OF VIENNA																
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ENGINEER	TRENT TRAVIS SNARR, P.E. VIRGINIA PROFESSIONAL ENGINEER LICENSE #049978																
SHEET TITLE	<b>GENERAL NOTES</b>																
SHEET NUMBER	<b>GN-1</b>																





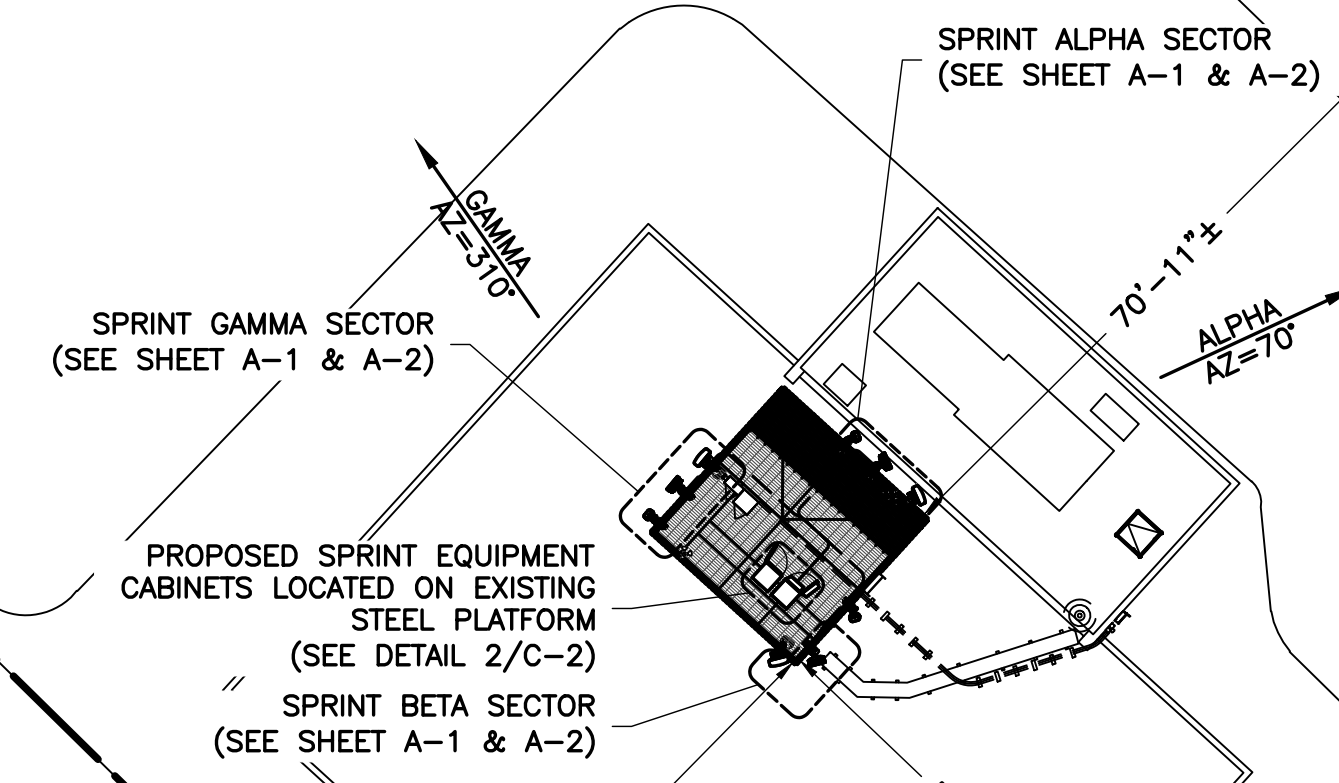
BEULAH ROAD ASSOC  
MAP#: 0382 02 0030A  
BOOK: 05392 PAGE: 1684

MOTON JOSEPH T, AND  
JACQUELINE R  
MAP#: 0382 02 0026  
BOOK: 06032 PAGE: 0707

HARTT RICHARD W, HARTT KRISTIN A  
MAP#: 0382 02 0025  
BOOK: 08693 PAGE: 1825

EXISTING PARKING LOT  
(TYP)

H STREET BUILDING CORP  
MAP#: 0382 07010012  
BOOK: N/A PAGE: N/A



ZONING INFORMATION		
JURISDICTION: TOWN OF VIENNA		
ZONING: C-1A		
DIMENSION	EXISTING ±	PROPOSED ±
FRONT YARD SETBACK:	70'-11"	NO CHANGE
SIDE YARD SETBACK:	50'-9"	NO CHANGE
REAR YARD SETBACK:	57'-10"	NO CHANGE
LOT AREA: 0.83 ± ACRES		
(ALL MEASUREMENTS ARE IN FEET ± UNLESS OTHERWISE NOTED)		
NOTES:		
1) SITE PLAN IS NOT THE RESULT OF A SURVEY. IT IS BASED ON FIELD MEASUREMENTS AND SCALED ASSESSORS MAPS AVAILABLE. ALL INFORMATION SHOWN IS APPROXIMATE ONLY AND SUBJECT TO ANY CONDITION THAT A SURVEY MAY REVEAL.		
2) ALL SETBACKS SHOWN ARE FROM PROPOSED ROOFTOP EQUIPMENT PLATFORM TO EXISTING PROPERTY LINES.		

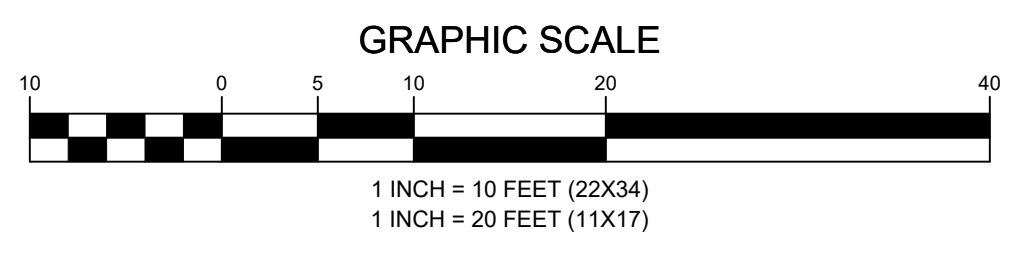
LEGEND	
	PROPERTY LINE - SUBJECT PARCEL
	PROPERTY LINE - ABUTTERS
	EXISTING FENCE LINE
	EXISTING ROAD
	EXISTING BUILDING

374 MAPLE AVENUE LLC  
1410 SPRING HILL RD #500  
MCLEAN, VA 22102-3056 C022  
C/O GRETA TO SI MILLER  
MAP #: 0382 02 0025  
ZONING: C-1A  
AREA: 0.83 ± ACRES

FAIRFAX PETROLEUM  
REALTY LLC.  
MAP#: 0382 02 0024F  
BOOK: 20906 PAGE: 1843

MAPLE AVENUE SHOPPING  
CENTER LLC  
MAP#: 0382 02 0024  
BOOK: 13490 PAGE: 1819

1 SITE PLAN  
SP-1  
SCALE: 1" = 10' (22X34)  
SCALE: 1" = 20' (11X17)



**APPLICANT**

NOW A PART OF T-MOBILE NORTH EAST LLC

APC REALTY AND EQUIPMENT COMPANY, LLC  
6220 SPRINT PARKWAY  
OVERLAND PARK, KS 66251  
(855) 848-3280

**ENGINEER**

**TOTALLY COMMITTED.**

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**ENGINEER**

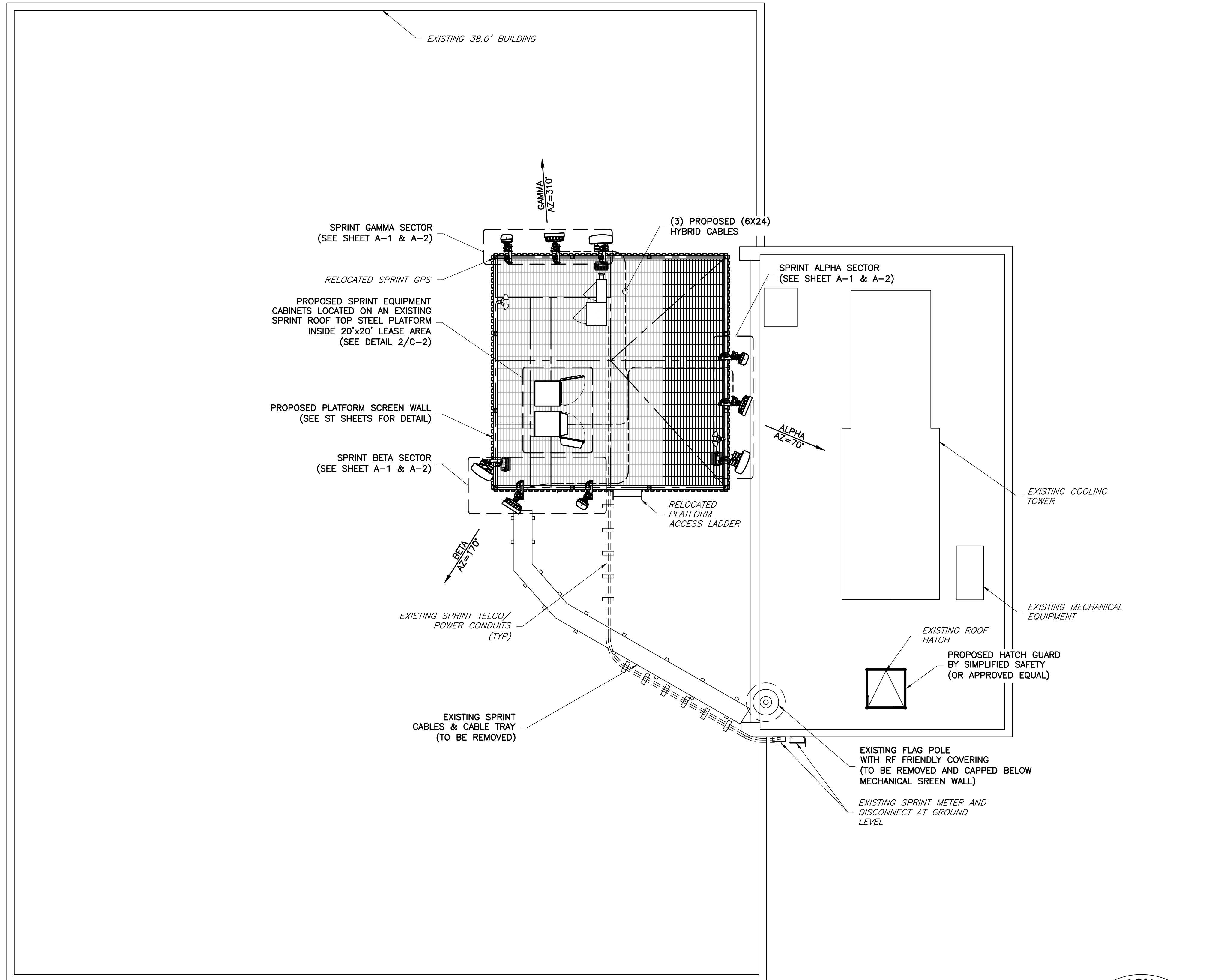
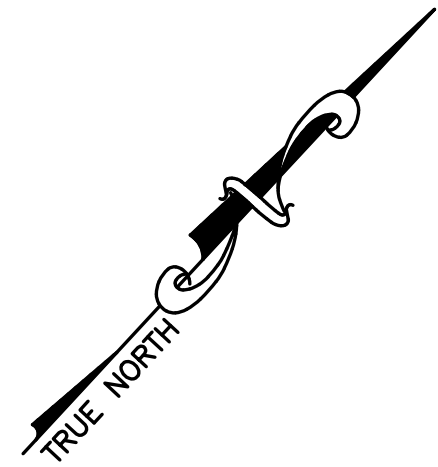
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**SHEET TITLE**

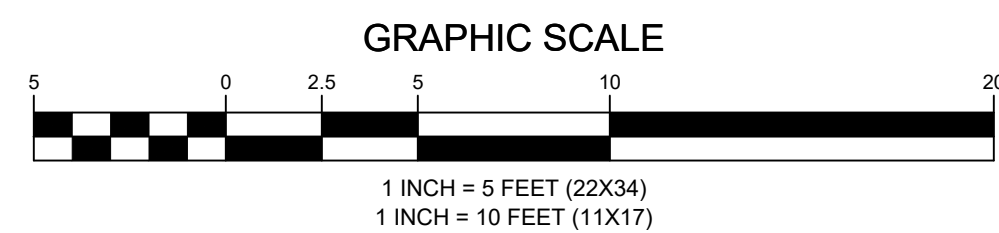
**SITE PLAN**

**SHEET NUMBER**

**SP-1**



1 ROOFTOP PLAN  
 C-1  
 SCALE: 1" = 5' (22X34)  
 SCALE: 1" = 10' (11X17)



PROPOSED ANTENNAS AND PLATFORM SCREENWALL ARE TO BE PAINTED BLACK TO MATCH THE EXISTING TO BE REPLACED

APPLICANT	<p>NOW A PART OF  <b>Mobile</b></p> <p>APC REALTY AND EQUIPMENT COMPANY, LLC          6220 SPRINT PARKWAY          OVERLAND PARK, KS 66251          (855) 848-3280</p>																
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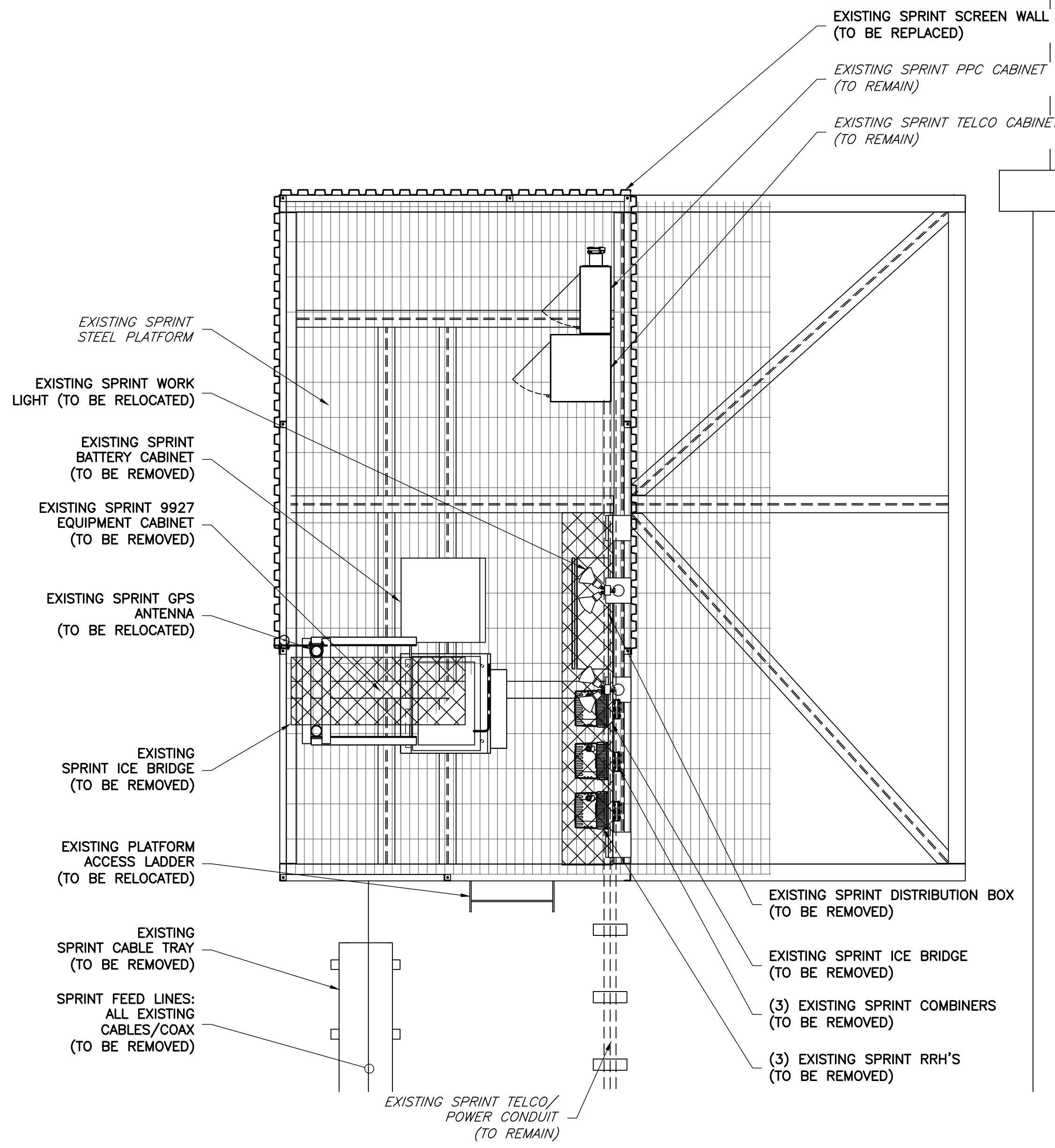
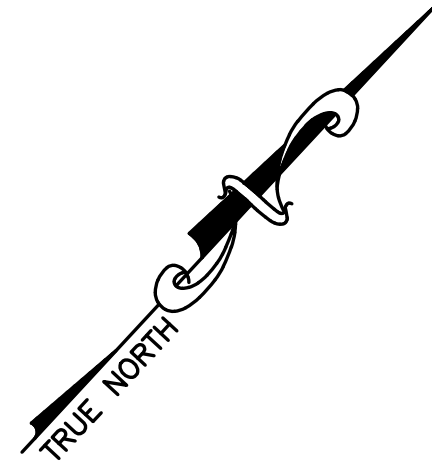


Know what's below.  
 Call before you dig.

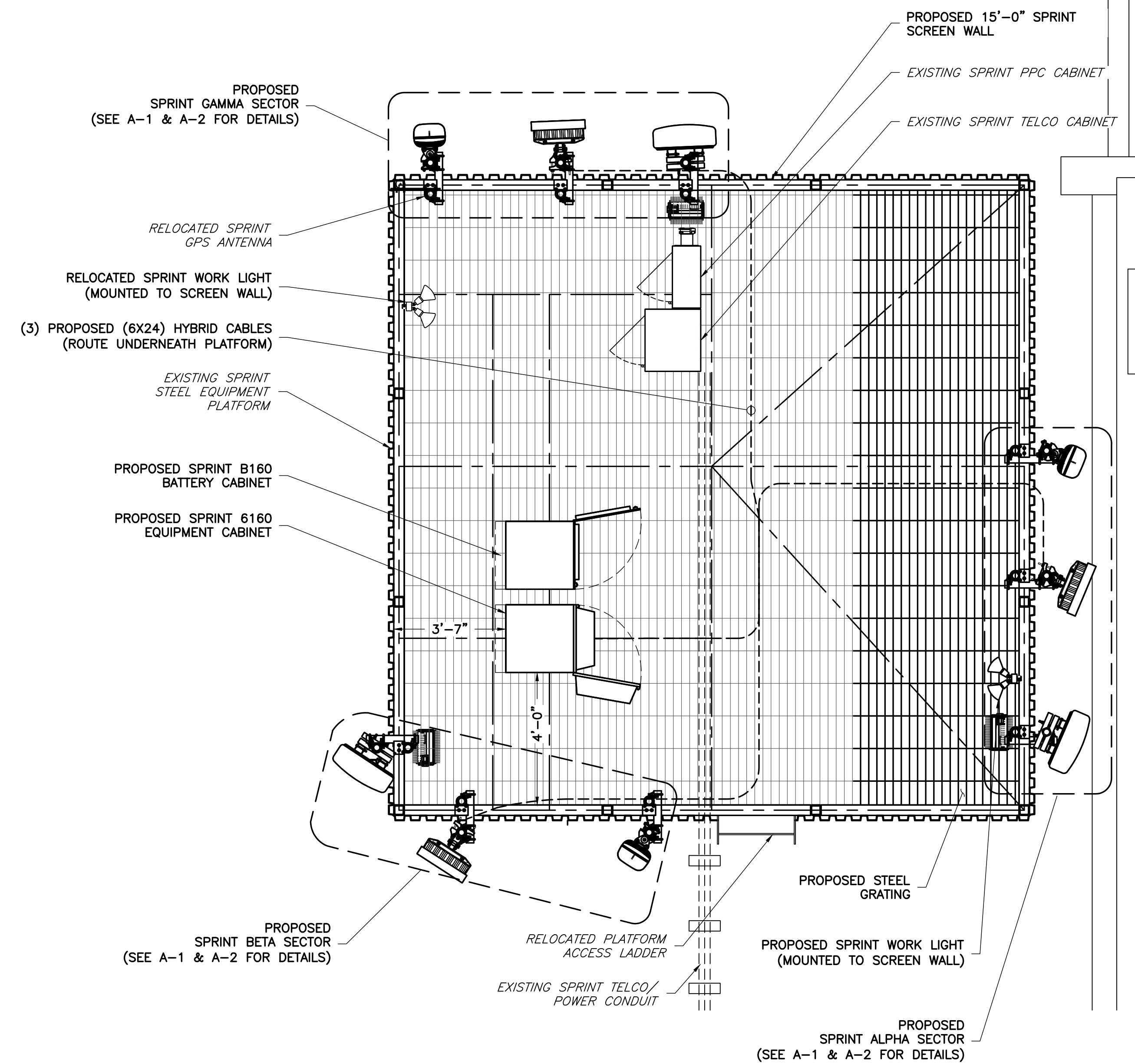
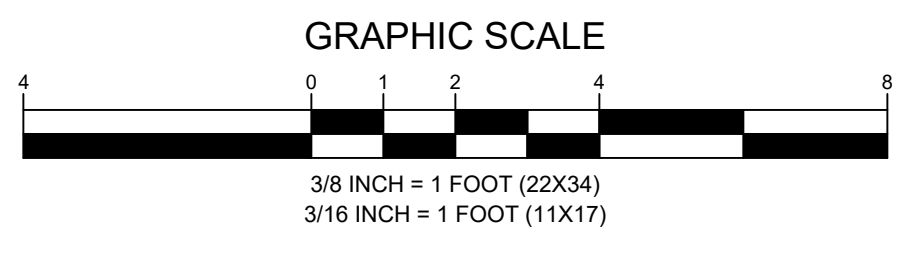


VIRGINIA LAW REQUIRES  
 THREE WORKING DAYS NOTICE PRIOR TO  
 ANY EARTH MOVING ACTIVITIES

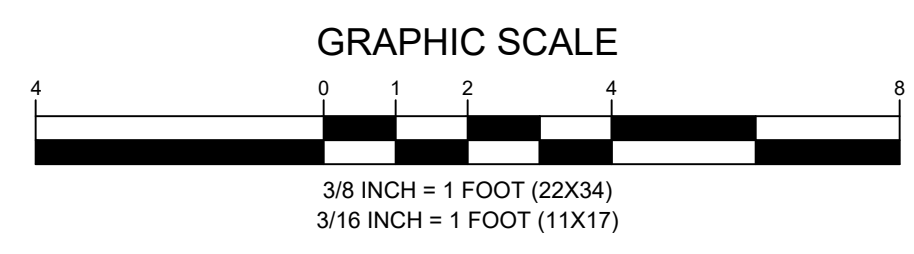




**1 EXISTING EQUIPMENT PLAN**  
 SCALE: 3/8" = 1' (22X34)  
 SCALE: 3/16" = 1' (11X17)



**2 PROPOSED EQUIPMENT PLAN**  
 SCALE: 3/8" = 1' (22X34)  
 SCALE: 3/16" = 1' (11X17)



PROPOSED ANTENNAS AND PLATFORM SCREENWALL ARE TO BE PAINTED BLACK TO MATCH THE EXISTING TO BE REPLACED

**APPLICANT**

**Sprint**  
 NOW A PART OF T-Mobile  
 APC REALTY AND EQUIPMENT COMPANY, LLC  
 6220 SPRINT PARKWAY  
 OVERLAND PARK, KS 66251  
 (855) 848-3280

**ENGINEER**

**NB+C**  
 TOTALLY COMMITTED.  
 NB+C ENGINEERING SERVICES, LLC.  
 6095 MARSHALEE DRIVE, SUITE 300  
 ELK RIDGE, MD 21075  
 (410) 712-7092

**SITE INFORMATION**

7WAC529A  
 NTM REPL FOR WA33XC951  
 374 MAPLE AVE EAST  
 VIENNA, VA 22180  
 TOWN OF VIENNA

**DESIGN RECORD**

REV	DATE	DESCRIPTION	BY
1	05/27/21	REV. PER COMMENTS	JNW
0	05/14/21	FINAL CDS	AMM

**PROFESSIONAL STAMP**

**ENGINEER**

TRENT TRAVIS SNARR, P.E.  
 VIRGINIA PROFESSIONAL ENGINEER  
 LICENSE #049978

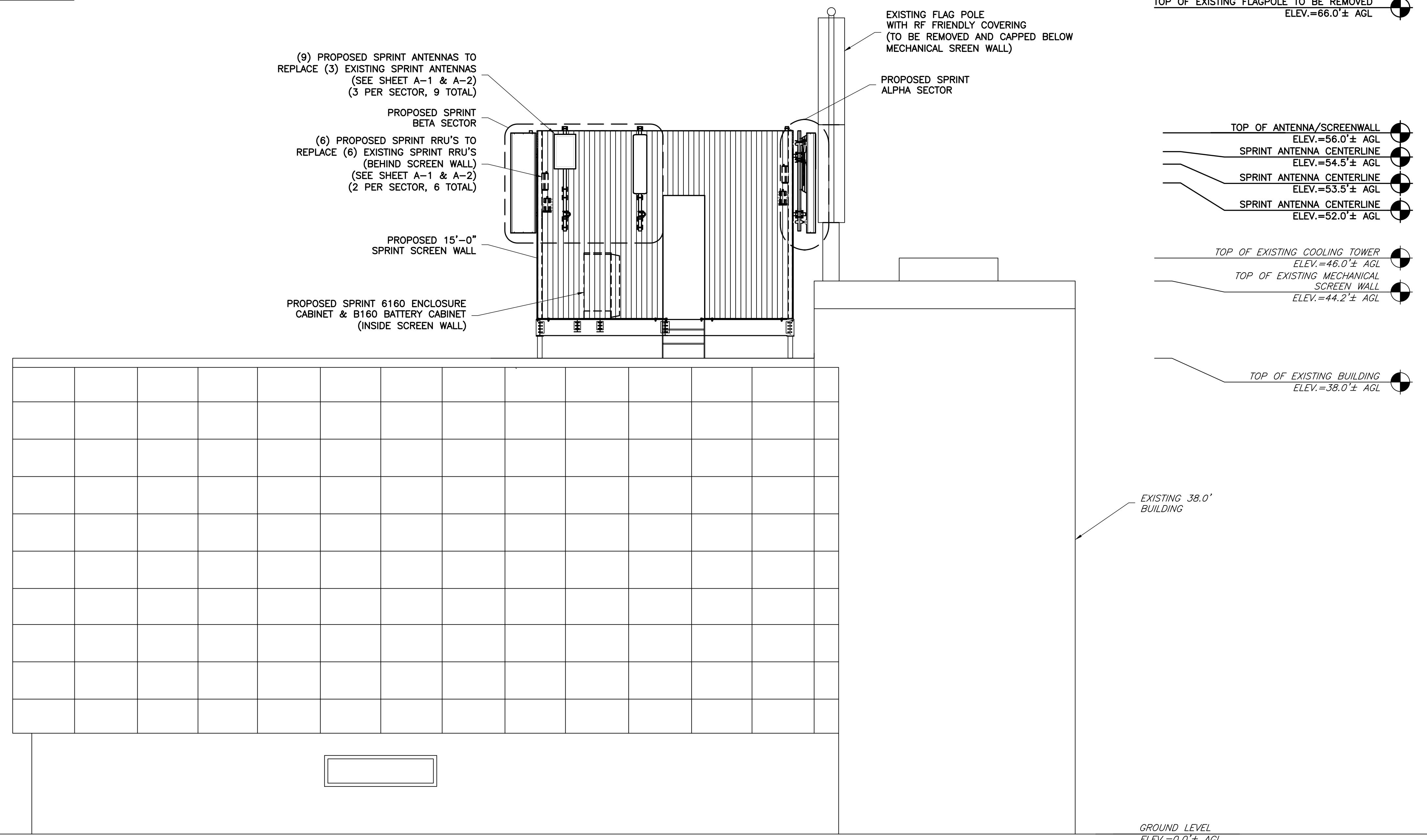
**SHEET TITLE**

**EQUIPMENT PLANS**

**SHEET NUMBER**

**C-2**

PROPOSED ANTENNAS AND PLATFORM SCREENWALL ARE TO BE PAINTED BLACK TO MATCH THE EXISTING TO BE REPLACED

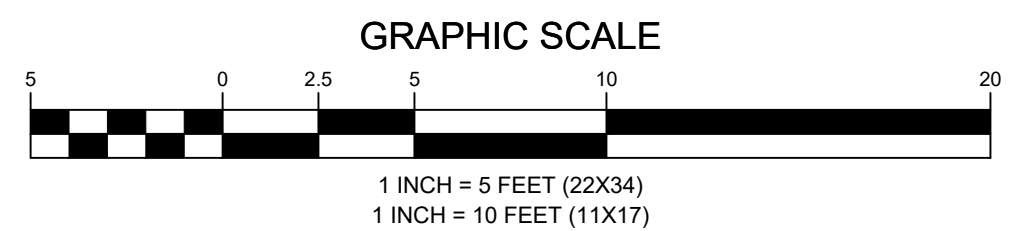





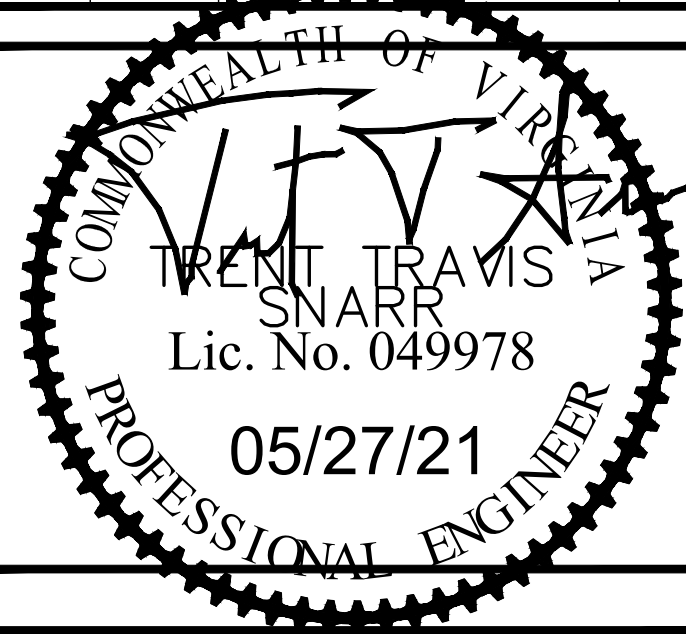
- TOP OF EXISTING FLAGPOLE TO BE REMOVED  
ELEV.=66.0'± AGL
- TOP OF ANTENNA/SCREENWALL  
ELEV.=56.0'± AGL
- SPRINT ANTENNA CENTERLINE  
ELEV.=54.5'± AGL
- SPRINT ANTENNA CENTERLINE  
ELEV.=53.5'± AGL
- SPRINT ANTENNA CENTERLINE  
ELEV.=52.0'± AGL
- TOP OF EXISTING COOLING TOWER  
ELEV.=46.0'± AGL
- TOP OF EXISTING MECHANICAL SCREEN WALL  
ELEV.=44.2'± AGL
- TOP OF EXISTING BUILDING  
ELEV.=38.0'± AGL
- GROUND LEVEL  
ELEV.=0.0'± AGL

**GENERAL ANTENNA NOTES**

1. ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR IS TO COORDINATE AND VERIFY THE PROPOSED DOWNTILTS WITH SPRINT MANAGER PRIOR TO CONSTRUCTION.
2. ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0.0'. (EXISTING GRADE)
3. CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE & AZIMUTH.
4. CONTRACTOR SHALL VERIFY ANTENNA TYPE AND AZIMUTH WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
5. ALL CABLE LENGTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
6. COLOR TAPE MARKINGS MUST BE 3/4" WIDE AND UV RESISTANT, SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE.
7. CONTRACTOR SHALL COORDINATE COLOR CODINGS IN THE FIELD WITH SPRINT REPRESENTATIVE.
8. PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION OF THE EXISTING STRUCTURE, A STRUCTURAL & MOUNT 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. THE OWNER'S AGENT SHALL FURNISH A CERTIFICATION LETTER SEALED BY A REGISTERED PROFESSIONAL ENGINEER STATING THAT THIS STRUCTURAL ANALYSIS WAS PREPARED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.

**1 ELEVATION**  
SCALE: 1" = 5' (22X34)  
SCALE: 1" = 10' (11X17)



APPLICANT	 NOW A PART OF  T-MOBILE NORTHEAST LLC APC REALTY AND EQUIPMENT COMPANY, LLC 6220 SPRINT PARKWAY OVERLAND PARK, KS 66251 (855) 848-3280																
ENGINEER	 <b>TOTALLY COMMITTED.</b> NB+C ENGINEERING SERVICES, LLC. 6095 MARSHALEE DRIVE, SUITE 300 ELK RIDGE, MD 21075 (410) 712-7092																
SITE INFORMATION	7WAC529A NTM REPL FOR WA33XC951 374 MAPLE AVE EAST VIENNA, VA 22180 TOWN OF VIENNA																
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PROFESSIONAL STAMP																	
ENGINEER	TRENT TRAVIS SNARR, P.E. VIRGINIA PROFESSIONAL ENGINEER LICENSE #049978																
SHEET TITLE	ELEVATION																
SHEET NUMBER	C-3																



**APPLICANT**



NOW A PART OF  **T-Mobile**  
T-MOBILE NORTHEAST LLC

APC REALTY AND EQUIPMENT COMPANY, LLC  
6220 SPRINT PARKWAY  
OVERLAND PARK, KS 66251  
(855) 848-3280

**ENGINEER**



**TOTALLY COMMITTED.**

**NB+C ENGINEERING SERVICES, LLC.**  
6095 MARSHALEE DRIVE, SUITE 300  
ELKRIDGE, MD 21075  
(410) 712-7082

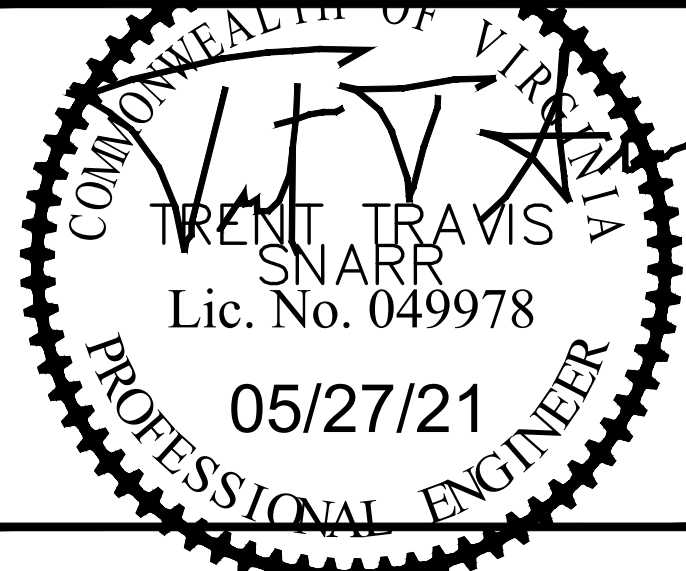
**SITE INFORMATION**

7WAC529A  
NTM REPL FOR WA33XC951  
374 MAPLE AVE EAST  
VIENNA, VA 22180  
TOWN OF VIENNA

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**PROFESSIONAL STAMP**



**ENGINEER**

TRENT TRAVIS SNARR, P.E.  
VIRGINIA PROFESSIONAL ENGINEER  
LICENSE #049978

**SHEET TITLE**

**ANTENNA SCHEDULE**

**SHEET NUMBER**

**A-1**

ANTENNA SCHEDULE												
SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	ANTENNA DIMENSIONS (HxWxD)	RAD CENTER	AZIMUTH	ELEC DOWNTILT	MECH DOWNTILT	RRU QUANTITY & MODEL	TMA/DIPLEXER QUANTITY & MODEL	CABLE QUANTITY & TYPE	CABLE LENGTH
A1	PROPOSED	ERICSSON	AIR32DB B2A/B66A	56.60"x12.90"x8.70"	53.50'	70°	2°/2°/2°	0°	-	-	(1) PROPOSED 6x24 HYBRID CABLE	30.00'
A2	PROPOSED	ERICSSON	AIR6449_B41	33.10"x20.60"x8.30"	54.50'	70°	2°/2°	0°	-	-		
A3	PROPOSED	RFS	APXVAALL24_43-U-NA20	95.90"x24.00"x8.50"	52.00'	70°	3°/3°/2°/2°	0°	(1) PROPOSED 4449 B71+B85 (1) PROPOSED 4415 B25	-		
B1	PROPOSED	ERICSSON	AIR32DB B2A/B66A	56.60"x12.90"x8.70"	53.50'	170°	2°/2°/2°/2°	0°	-	-	(1) PROPOSED 6x24 HYBRID CABLE	25.00'
B2	PROPOSED	ERICSSON	AIR6449_B41	33.10"x20.60"x8.30"	54.50'	170°	2°/2°	0°	-	-		
B3	PROPOSED	RFS	APXVAALL24_43-U-NA20	95.90"x24.00"x8.50"	52.00'	170°	3°/3°/2°/2°	0°	(1) PROPOSED 4449 B71+B85 (1) PROPOSED 4415 B25	-		
C1	PROPOSED	ERICSSON	AIR32DB B2A/B66A	56.60"x12.90"x8.70"	53.50'	310°	2°/2°/2°/2°	0°	-	-	(1) PROPOSED 6x24 HYBRID CABLE	22.00'
C2	PROPOSED	ERICSSON	AIR6449_B41	33.10"x20.60"x8.30"	54.50'	310°	2°/2°	0°	-	-		
C3	PROPOSED	RFS	APXVAALL24_43-U-NA20	95.90"x24.00"x8.50"	52.00'	310°	3°/3°/2°/2°	0°	(1) PROPOSED 4449 B71+B85 (1) PROPOSED 4415 B25	-		

**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.

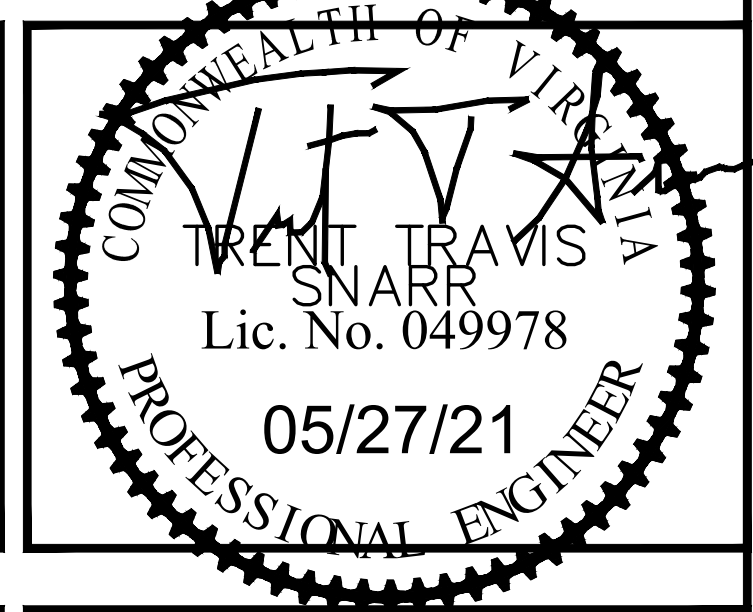
1 ANTENNA CONFIGURATION SCHEDULE  
A-1 NOT TO SCALE

PROPOSED ANTENNAS AND PLATFORM SCREENWALL ARE TO BE PAINTED BLACK TO MATCH THE EXISTING TO BE REPLACED

ALL EXISTING SPRINT ANTENNAS, RADIOS, TMA'S, DIPLEXERS, AND CABLES WILL BE REMOVED FROM THE SITE. (MICROWAVE EQUIPMENT IS EXCLUDED FROM THIS REQUIREMENT)

**REVISIONS**

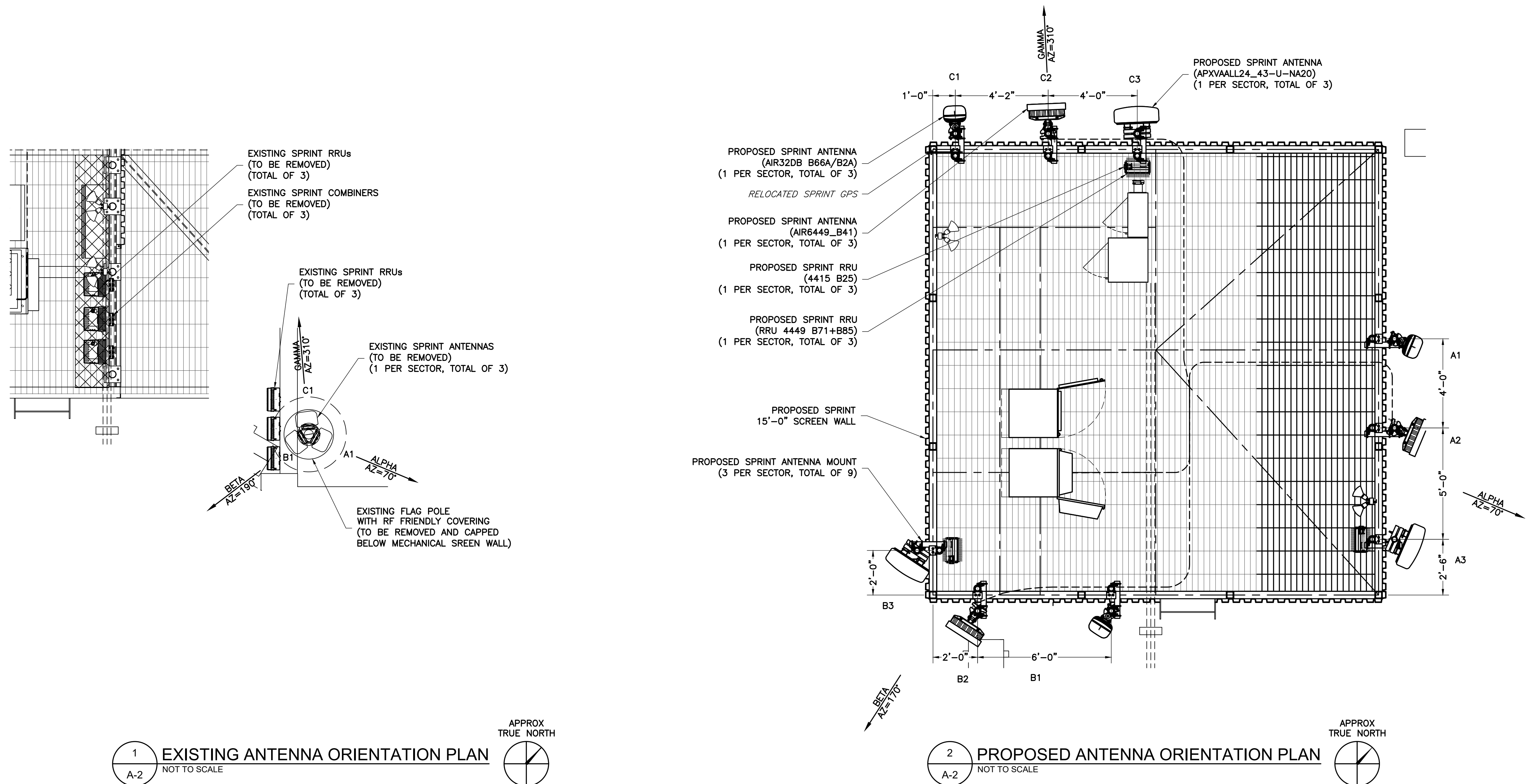
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TRENT TRAVIS SNARR, P.E.  
 VIRGINIA PROFESSIONAL ENGINEER  
 LICENSE #049978

**ANTENNA ORIENTATION PLANS**

**A-2**



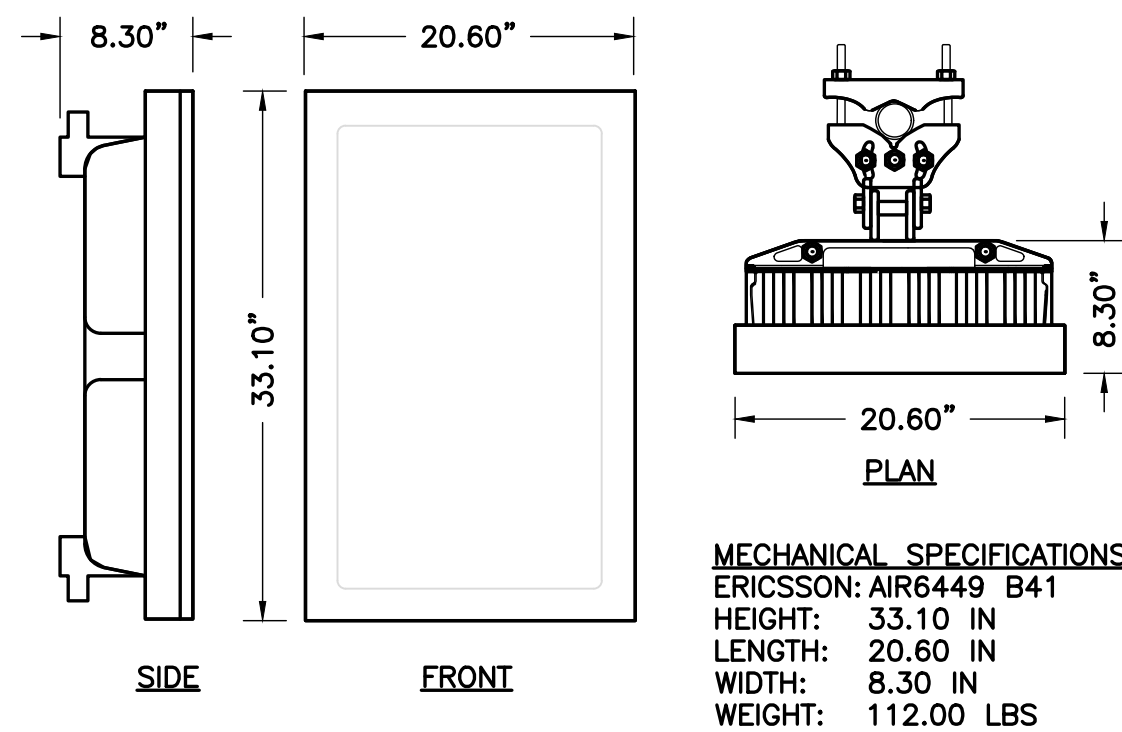
1 EXISTING ANTENNA ORIENTATION PLAN  
 A-2 NOT TO SCALE

2 PROPOSED ANTENNA ORIENTATION PLAN  
 A-2 NOT TO SCALE

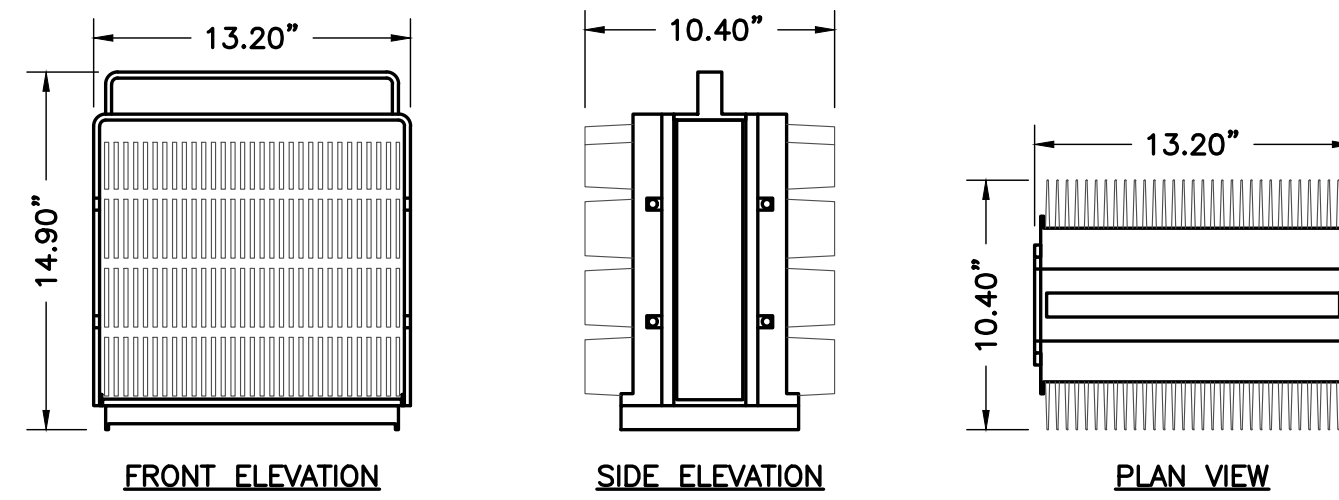
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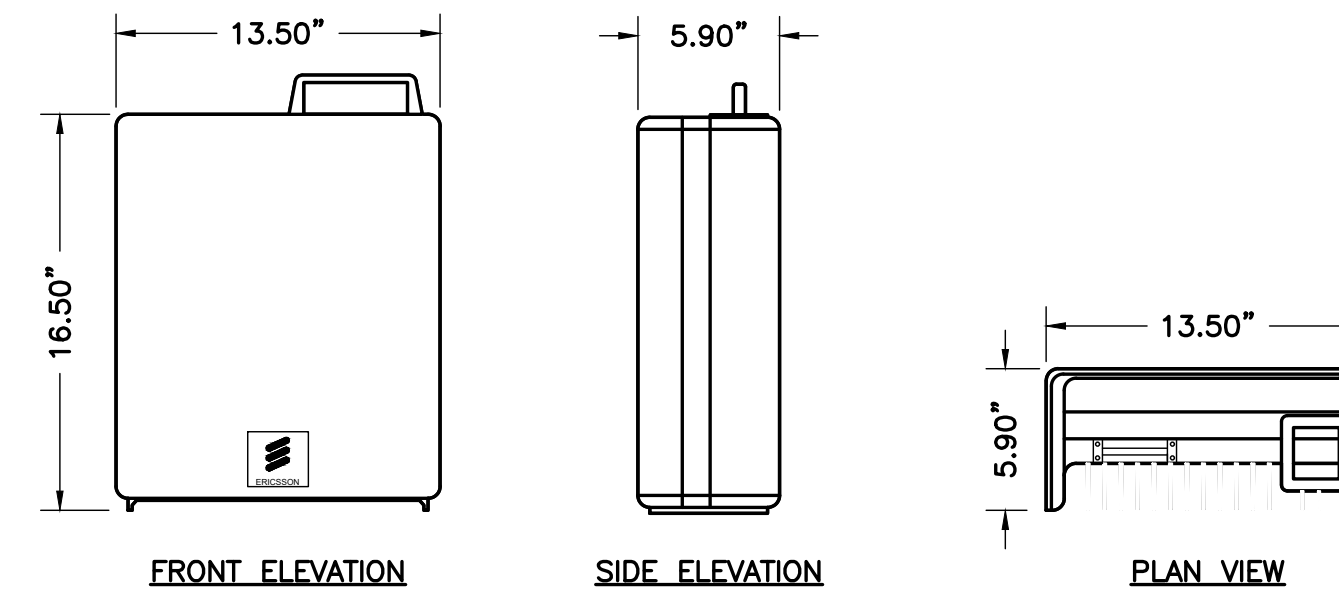
1 ERICSSON PANEL ANTENNA  
 A-3 NOT TO SCALE



SIZE AND WEIGHT TABLE				
MANUFACTURER & MODEL NUMBER	HEIGHT	WIDTH	DEPTH	WEIGHT WITHOUT BRACKET
ERICSSON 4449 B71+B85	14.90"	13.20"	10.40"	74.00 LBS

**NOTE:**  
 DO NOT PAINT THE RRU. RRU SOLAR SHIELD CAN BE PAINTED PER MANUFACTURER'S METHOD OF PROCEDURE.

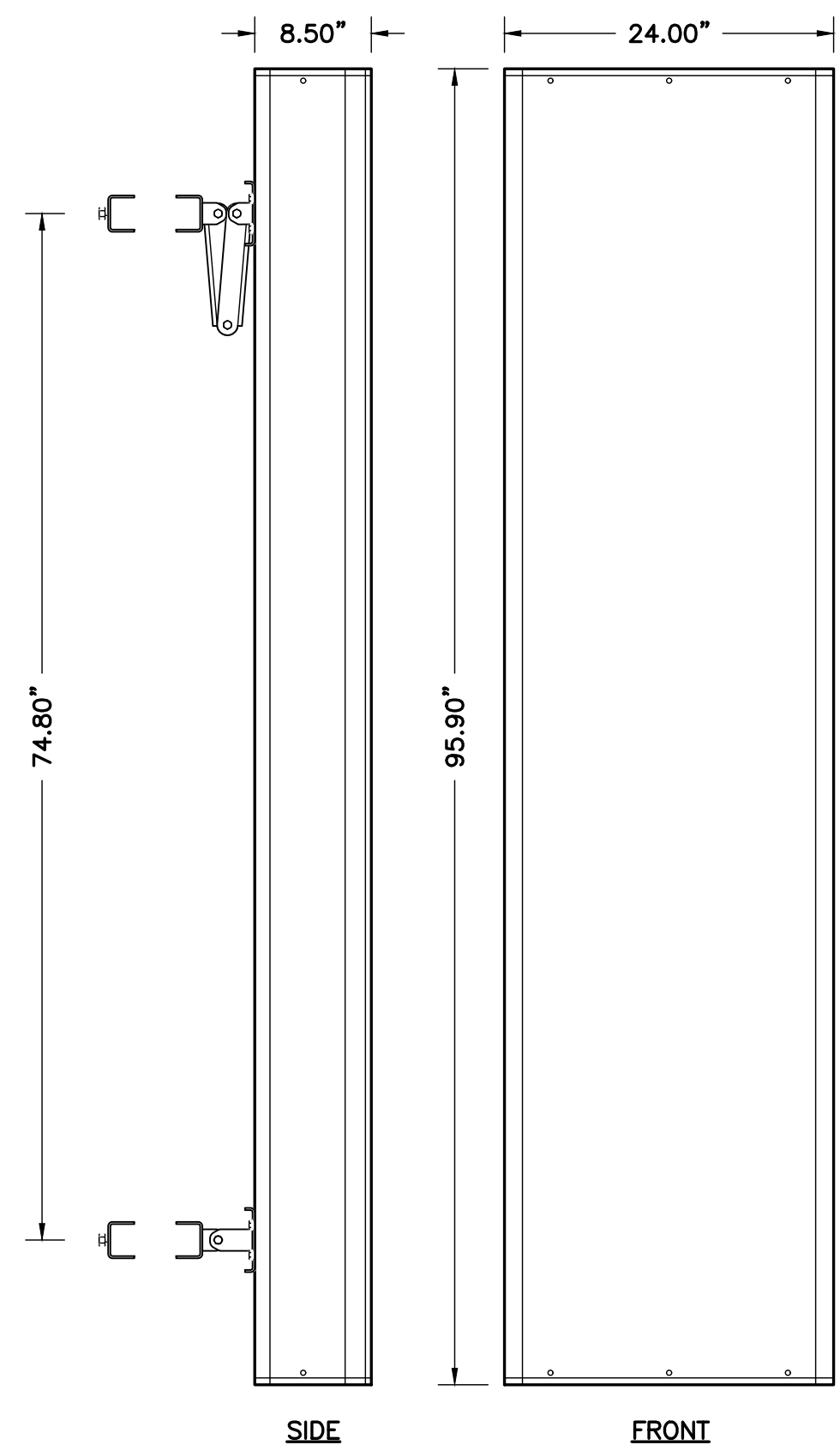
2 REMOTE RADIO UNIT (RRU)  
 A-3 NOT TO SCALE



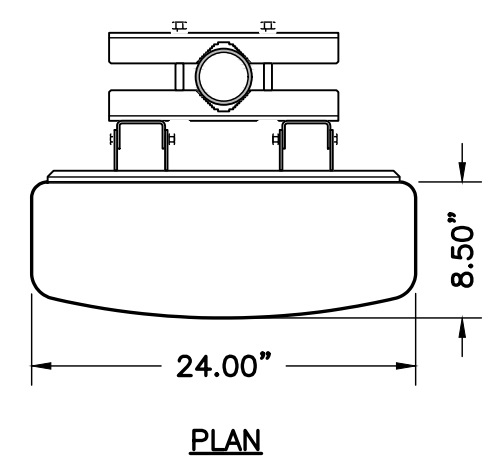
SIZE AND WEIGHT TABLE				
MANUFACTURER & MODEL NUMBER	HEIGHT	WIDTH	DEPTH	WEIGHT WITHOUT BRACKET
ERICSSON 4415	16.50"	13.50"	5.90"	46.00 LBS

**NOTE:**  
 DO NOT PAINT THE RRU. RRU SOLAR SHIELD CAN BE PAINTED PER MANUFACTURER'S METHOD OF PROCEDURE.

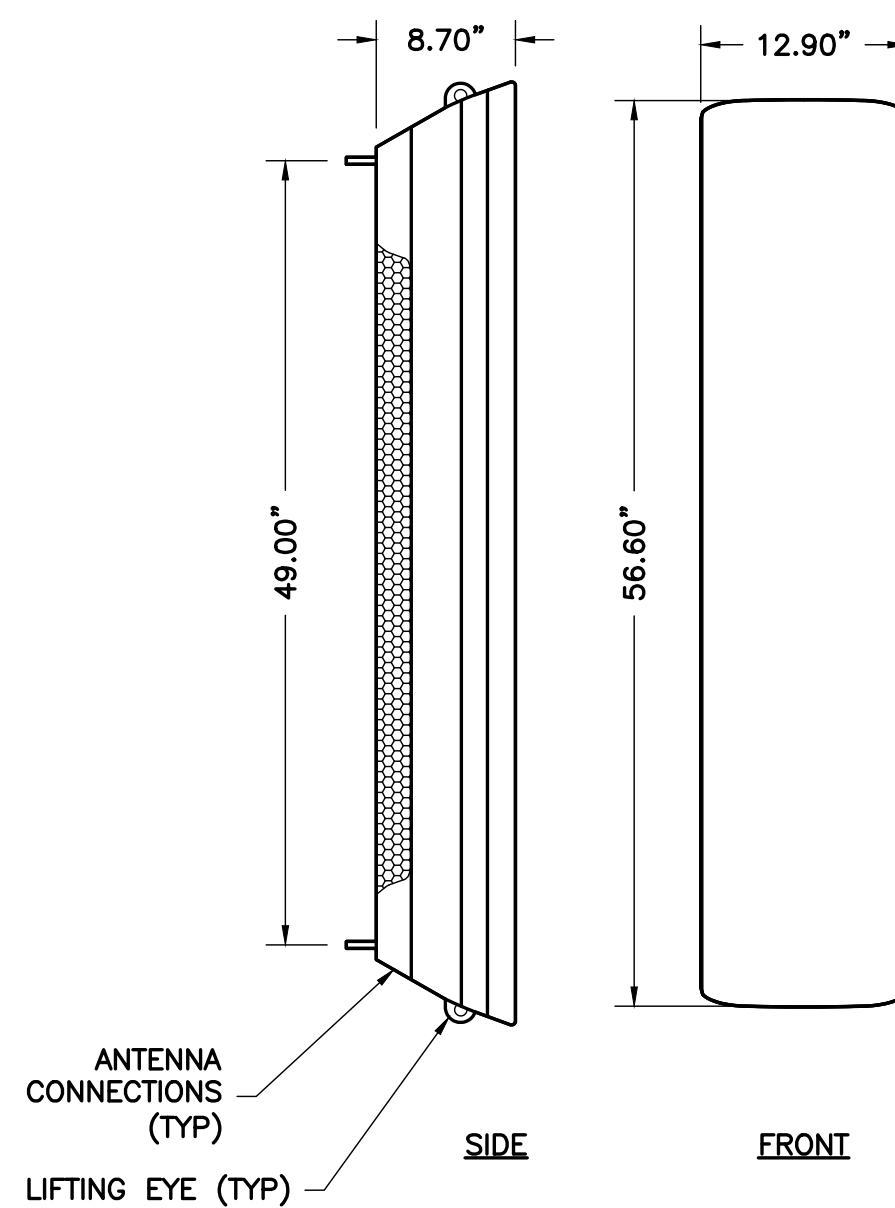
3 REMOTE RADIO UNIT (RRU)  
 A-3 NOT TO SCALE



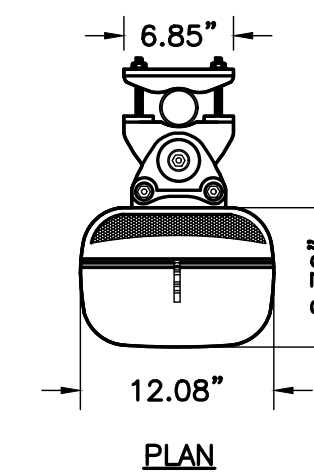
4 RFS PANEL ANTENNA  
 A-3 NOT TO SCALE



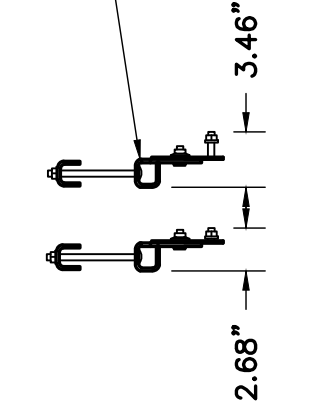
**MECHANICAL SPECIFICATIONS**  
 RFS: APXVAALL24\_43-U-NA20  
 HEIGHT: 95.90 IN  
 WIDTH: 24.00 IN  
 DEPTH: 8.50 IN  
 WEIGHT: 122.80 LBS



5 ERICSSON PANEL ANTENNA  
 A-3 NOT TO SCALE



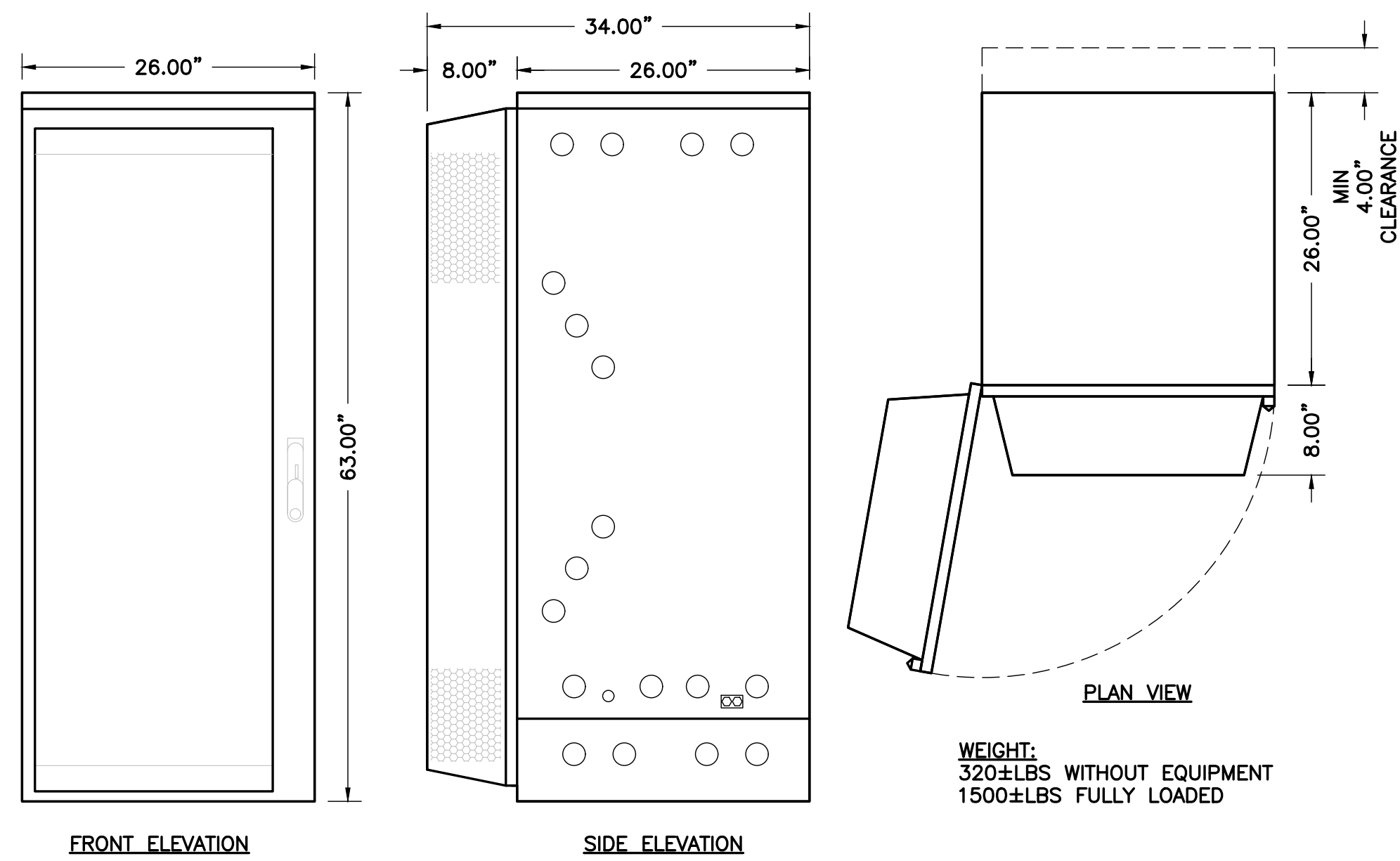
PROPOSED AIR CLAMP KIT  
 (KATHREIN PART# 85010070)



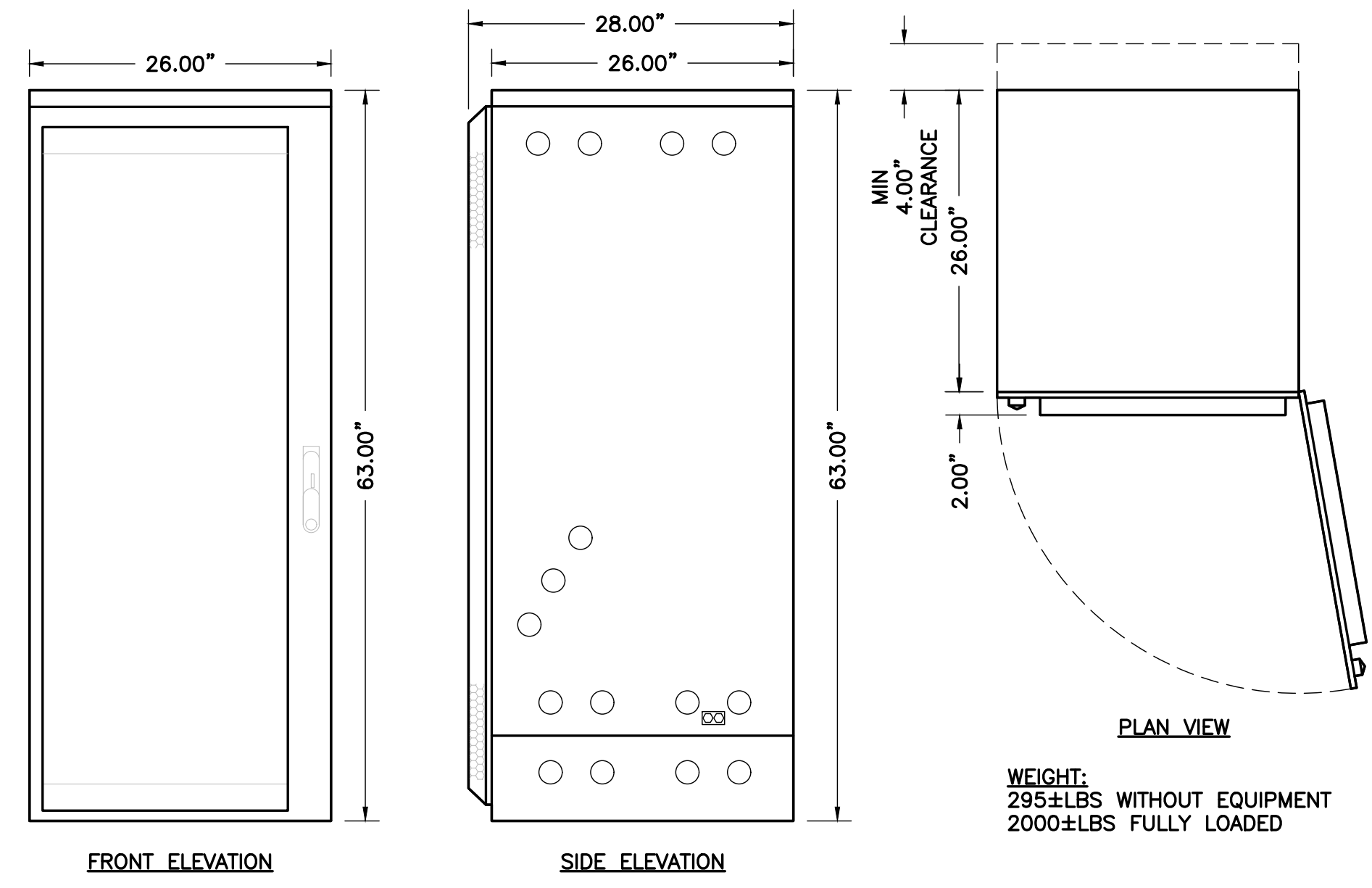
**MECHANICAL SPECIFICATIONS**  
 ERICSSON: AIR32 DB (KRD901146-1)  
 HEIGHT: 56.60 IN  
 WIDTH: 12.90 IN  
 DEPTH: 8.70 IN  
 WEIGHT: 132.20 LBS

APPLICANT	 NOW A PART OF T-Mobile APC REALTY AND EQUIPMENT COMPANY, LLC 6220 SPRINT PARKWAY OVERLAND PARK, KS 66251 (855) 848-3280																
ENGINEER	 <b>TOTALLY COMMITTED.</b> NB+C ENGINEERING SERVICES, LLC. 6095 MARSHALEE DRIVE, SUITE 300 ELKRIDGE, MD 21075 (410) 712-7092																
SITE INFORMATION	7WAC529A NTM REPL FOR WA33XC951 374 MAPLE AVE EAST VIENNA, VA 22180 TOWN OF VIENNA																
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PROFESSIONAL STAMP																	
ENGINEER	TRENT TRAVIS SNARR, P.E. VIRGINIA PROFESSIONAL ENGINEER LICENSE #049978																
SHEET TITLE	<b>ANTENNA SPECIFICATIONS &amp; DETAILS</b>																
SHEET NUMBER	<b>A-3</b>																




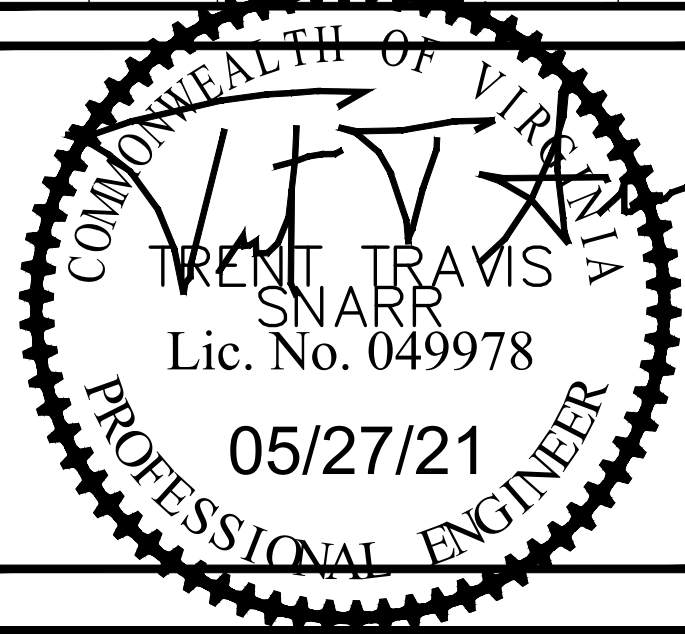




1 6160 ENCLOSURE CABINET  
A-4 NOT TO SCALE

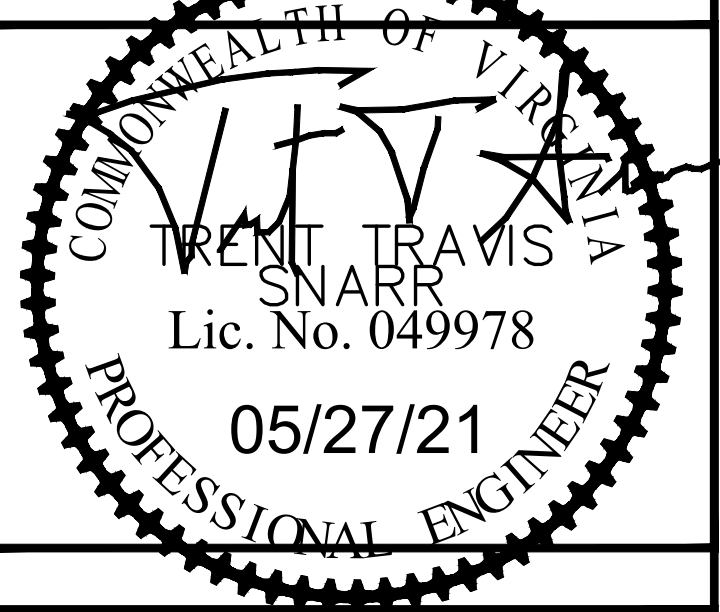


2 B160 BATTERY CABINET  
A-4 NOT TO SCALE

APPLICANT	 NOW A PART OF  T-MOBILE NORTHEAST LLC APC REALTY AND EQUIPMENT COMPANY, LLC 6220 SPRINT PARKWAY OVERLAND PARK, KS 66251 (855) 848-3280																
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ENGINEER	TRENT TRAVIS SNARR, P.E. VIRGINIA PROFESSIONAL ENGINEER LICENSE #049978																
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SHEET NUMBER	<b>A-4</b>																



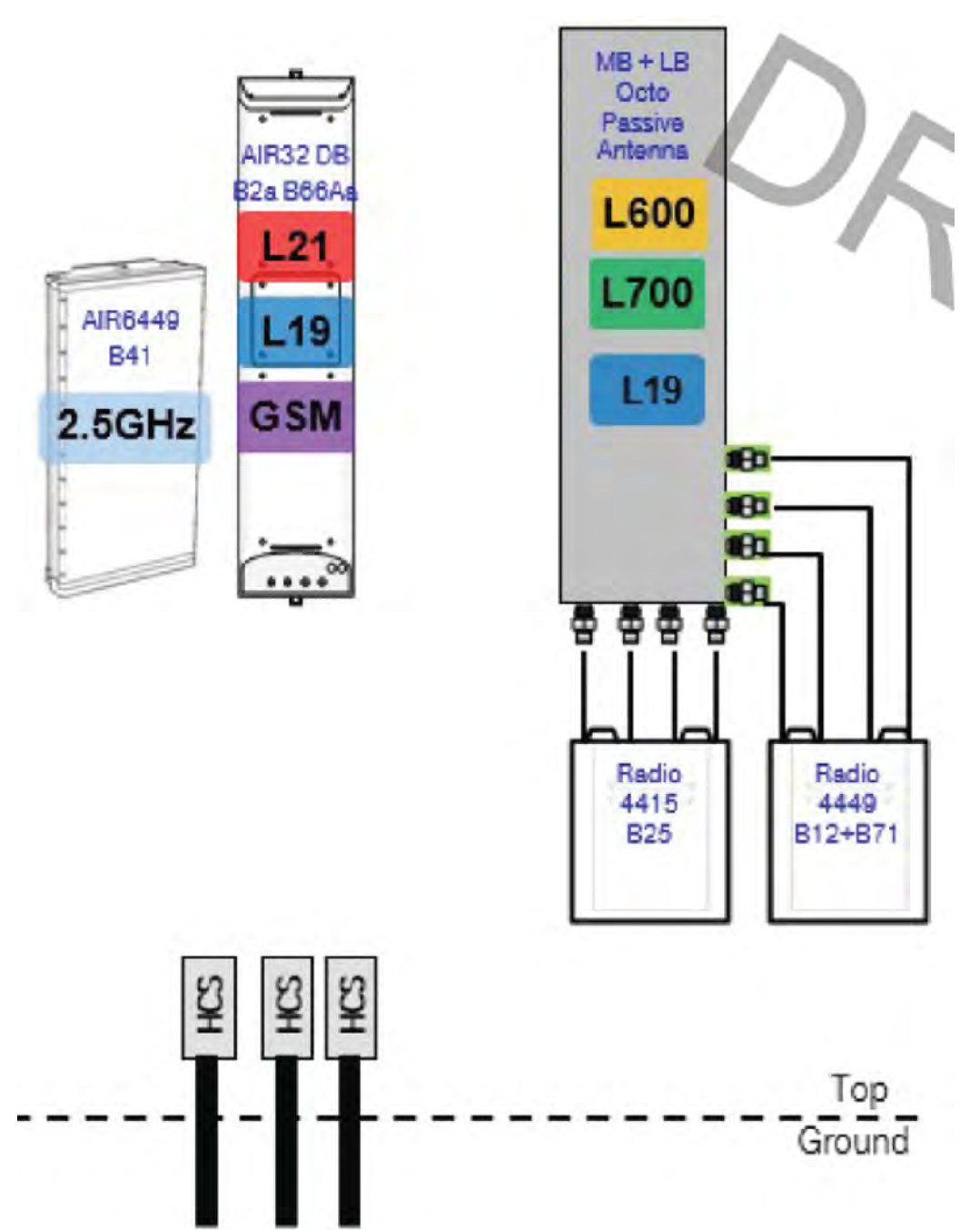
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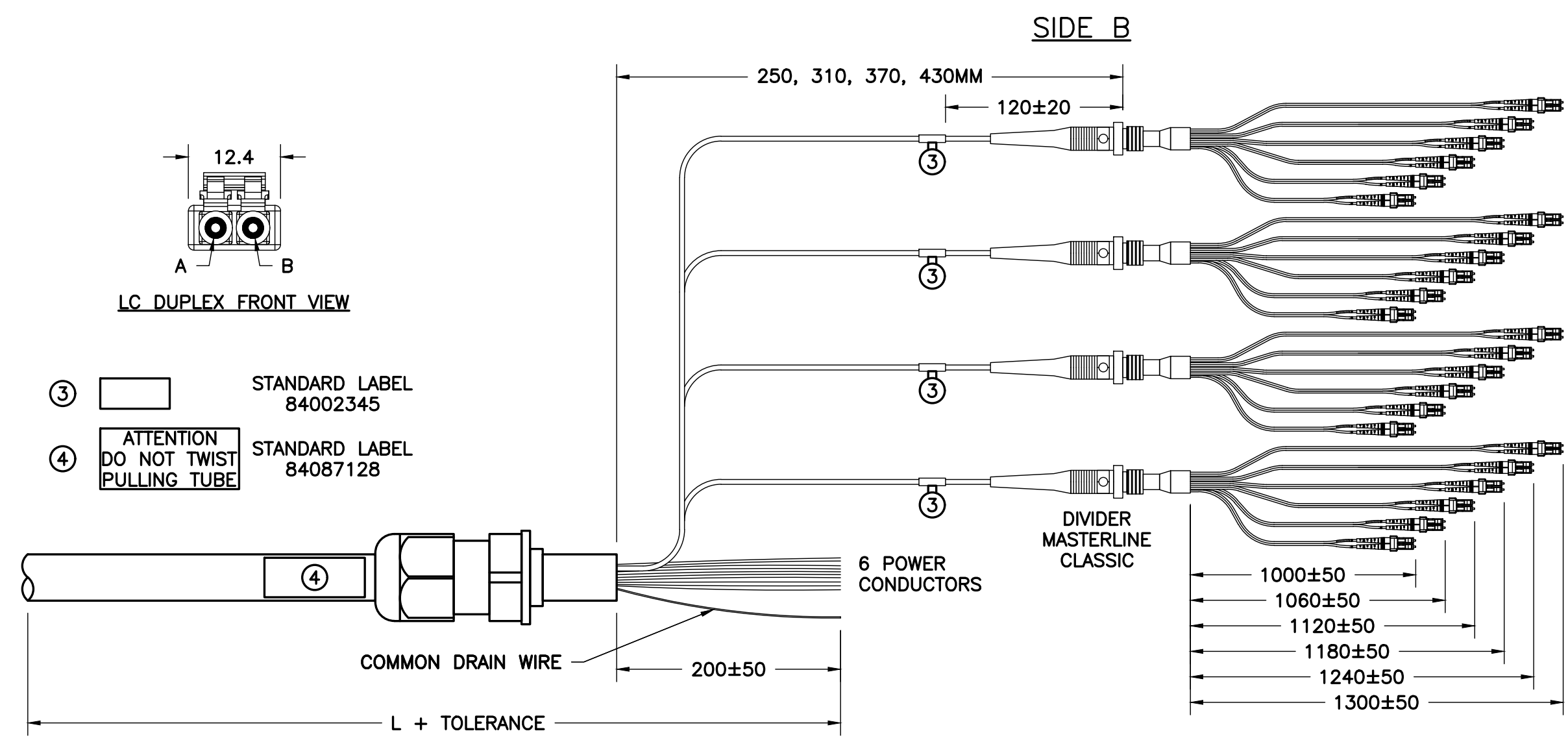
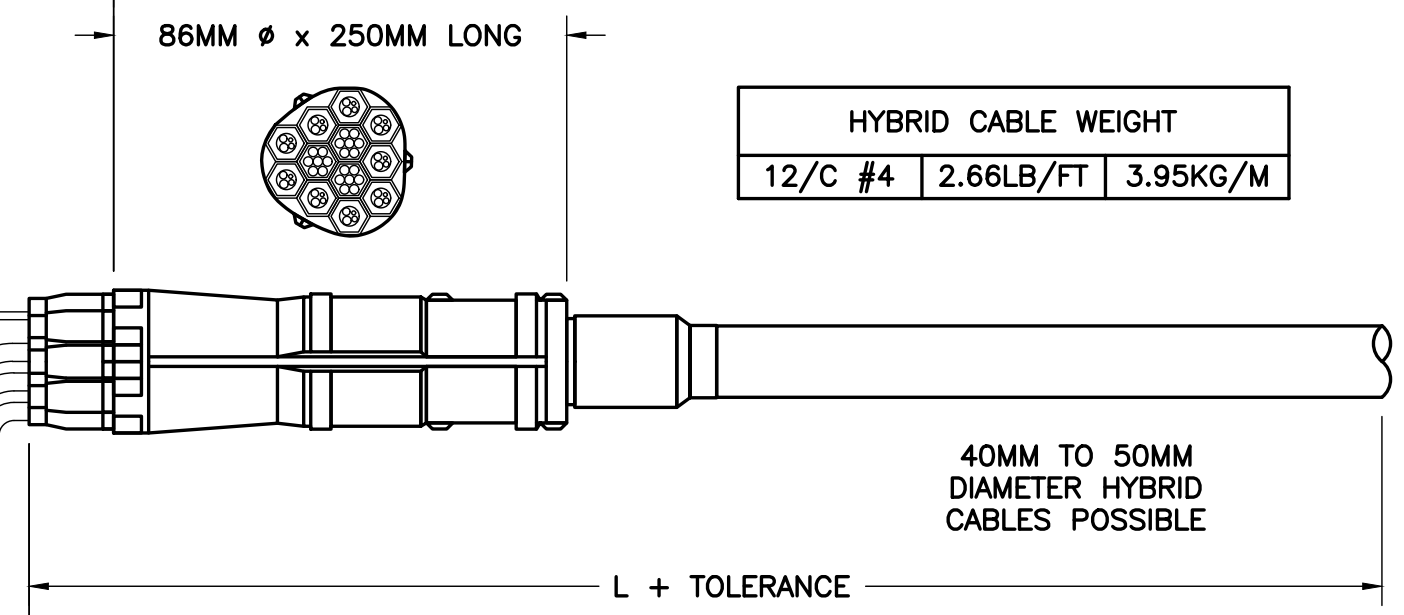
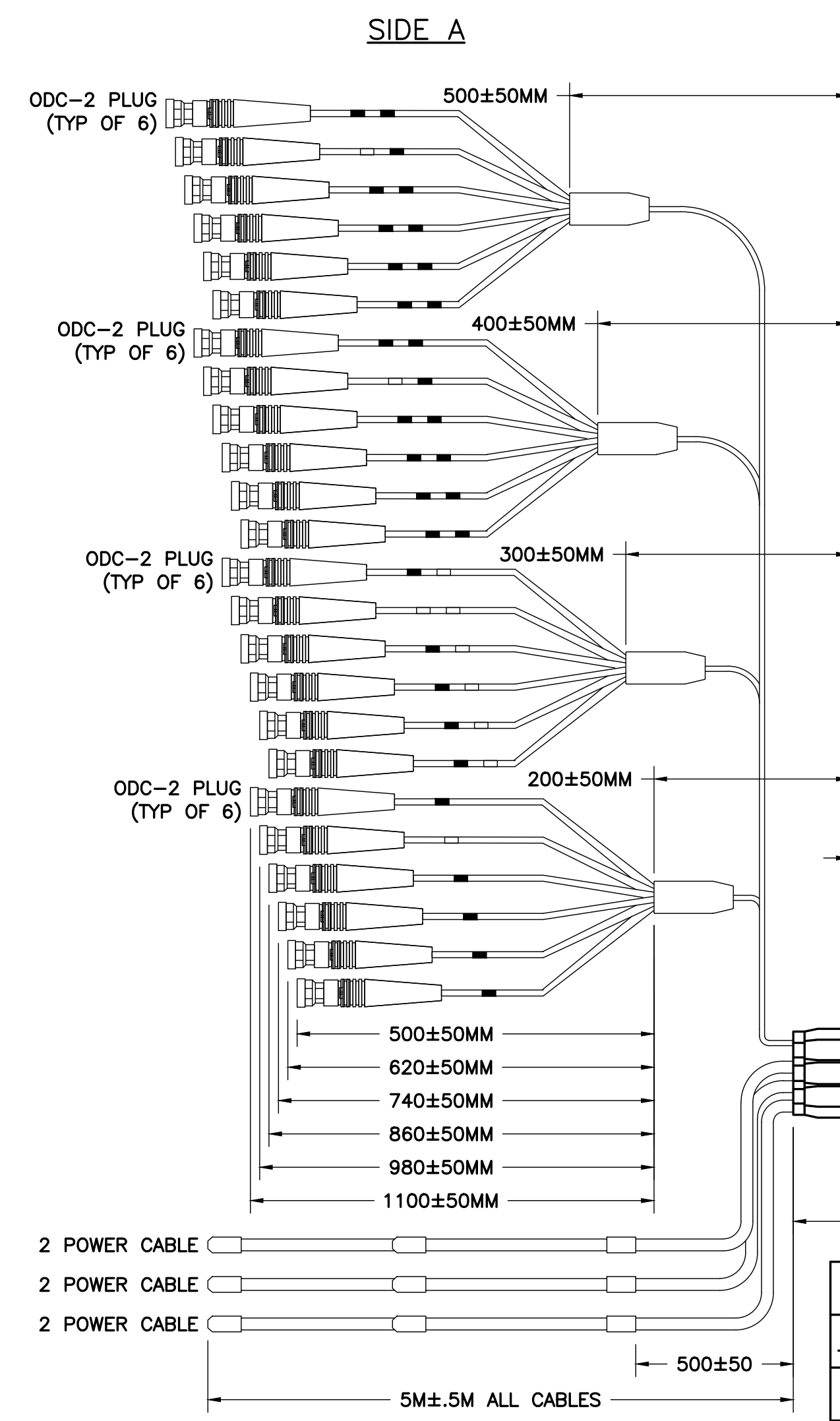
TRENT TRAVIS SNARR, P.E.  
 VIRGINIA PROFESSIONAL ENGINEER  
 LICENSE #049978

**CABLING DETAILS  
 & RF PLUMBING  
 DIAGRAM**

**A-5**



1 67D5A997DB 6160 RF DESIGN SCHEMATIC  
 A-5 NOT TO SCALE

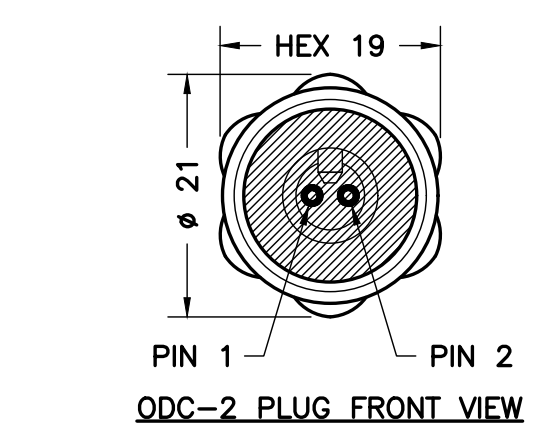


FIBER OPTIC						
RRH NO.	SIDE A	SIDE B				
NO.	ODC PLUG	PIN	PIN	COLOR LCD	LENGTH SIDE B	RUBBER GROMMETS
1	ODC-2 RED	1 B	2 A	RED (SHORT BREAKOUT)	1000 ± 50	1
2	ODC-2 GREEN	1 B	2 A	GREEN	1060 ± 50	1
3	ODC-2 BLUE	1 B	2 A	BLUE	1120 ± 50	1
4	ODC-2 YELLOW	1 B	2 A	YELLOW	1180 ± 50	1
5	ODC-2 WHITE	1 B	2 A	WHITE	1240 ± 50	1
6	ODC-2 BLACK	1 B	2 A	BLACK	1300 ± 50	1

POWER				
RRH NO.	REF HOOK UP	SIDE A	SIDE B	
		WIRE COLOR	CABLE DESIGNATOR	WIRE COLOR
1	-48V	BLACK	RED	RED
	0V	GREY		BLACK
2	-48V	BLACK	GREEN	GREEN
	0V	GREY		WHITE
3	-48V	BLACK	BLUE	BLUE
	0V	GREY		ORANGE

POWER				
RRH NO.	REF HOOK UP	SIDE A	SIDE B	
		WIRE COLOR	CABLE DESIGNATOR	WIRE COLOR
4	-48V	BLACK	YELLOW	RED
	0V	GREY		BLACK
5	-48V	BLACK	WHITE	GREEN
	0V	GREY		WHITE
6	-48V	BLACK	BLACK	BLUE
	0V	GREY		ORANGE

2 MLE HYBRID CABLE (6 POWER/24 FIBER)  
 A-5 NOT TO SCALE



TOLERANCE		ASSEMBLY LENGTH	
+80	L < 5M		
+2%	L ≥ 5M		

POWER	
LENGTH	DIAMETER
L ≤ 60M	6MM <sup>2</sup> (10AWG)
L ≥ 60M	10MM <sup>2</sup> (8AWG)