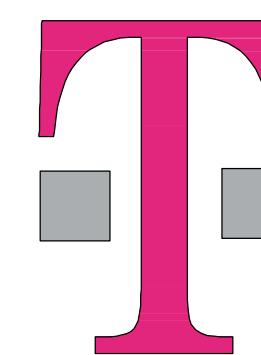


NOTE TO GENERAL CONTRACTOR:  
NO WORK IS TO BE PERFORMED ON THIS SITE WITHOUT  
REVIEW OF THE APPROVED STRUCTURAL ANALYSIS. IF  
ANY DISCREPANCIES ARE FOUND, THE GENERAL  
CONTRACTOR SHALL NOTIFY THE ENGINEER IN  
WRITING. AT NO TIME WILL ANY ADDITIONAL ANTENNAS  
BE INSTALLED WITHOUT WRITTEN CONSENT FROM  
TOWER/BUILDING ENGINEER.



# Mobile

## SHENTEL KEEP PROJECT

CONFIGURATION: 67E5D998E 6160 (NO GSM) (RAN) / 67E5998E\_1xAIR+1OP+AAV PROJECT (A&L)

NOTES ON PAGES 5 AND 6 FOR THE CONTRACTOR  
ANY QUESTIONS CONTACT CARL PAYNE WITH  
SHENTEL (TOWER OWNER) 3043823868

SHENTEL SITE ID: 68341/WA68SH341  
SHENTEL SITE NAME: BELLAIR

### SCOPE OF WORK

**TOWER:**

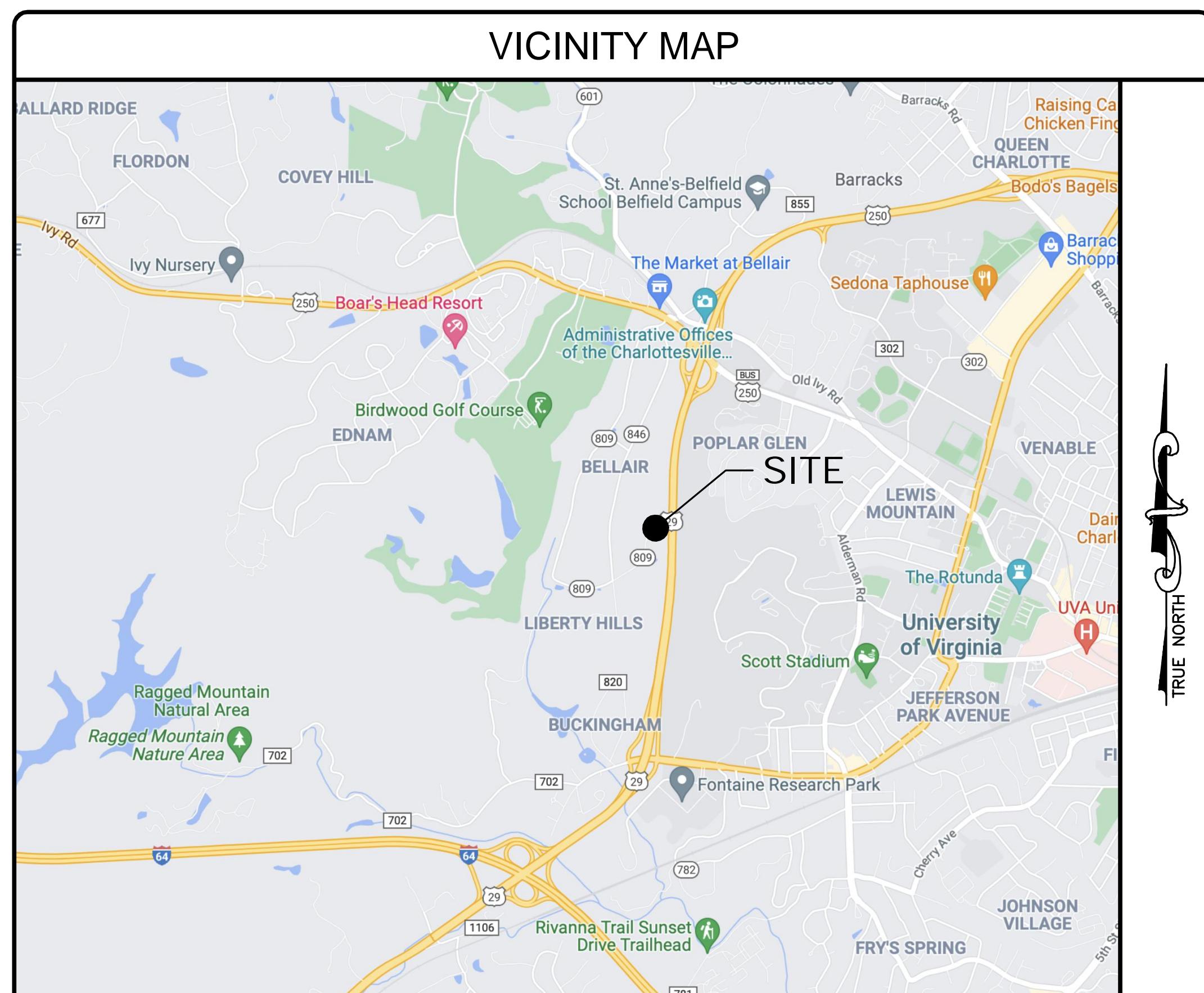
- REMOVAL OF (3) EXISTING SHENTEL ANTENNAS
- INSTALLATION OF (3) NEW T-MOBILE COMMSCOPE FFVV-65A-R2-V1 ANTENNAS @ POSITION 1
- INSTALLATION OF (3) NEW T-MOBILE ERICSSON AIR 6419 B41 ANTENNAS @ POSITION 2
- REMOVAL OF (7) EXISTING SHENTEL RRUs
- INSTALLATION OF (3) NEW T-MOBILE ERICSSON 4480 B71+B85 RRUs
- INSTALLATION OF (3) NEW T-MOBILE ERICSSON 4460 B25+B66 RRUs
- INSTALLATION OF (4) NEW T-MOBILE 6x24 HYBRID CABLES
- REMOVAL OF EXISTING SHENTEL COAX/FEEDLINES
- INSTALLATION OF (2) NEW T-MOBILE ANTENNA MOUNTS
- PROPOSED EQUIPMENT TO BE PAINTED TO MATCH TOWER - COLOR IS SHERWIN WILLIAMS UMBRA BROWN 8W400B (INDUSTRIAL AND MARINE COATING)

**GROUND:**

- REMOVAL OF EXISTING SHENTEL EQUIPMENT CABINET
- REMOVAL OF EXISTING SHENTEL FIBER DISTRIBUTION BOX
- INSTALLATION OF (1) NEW T-MOBILE 3'-0" H-FRAME EXTENSION
- INSTALLATION OF (1) NEW T-MOBILE ERICSSON 6160 ENCLOSURE & (1) NEW ERICSSON B160 BATTERY CABINET
- INSTALLATION OF (3) NEW RP 6651 INSIDE NEW ENCLOSURE
- INSTALLATION OF (1) IXRE ROUTER & (1) PSU 4813 INSIDE NEW ENCLOSURE
- REMOVAL OF (1) EXISTING SHENTEL 120/240V 200A 24 SPACE PPC
- INSTALLATION OF (1) NEW T-MOBILE 120/240V 200A 30 SPACE VERTIV PPC

### SITE INFORMATION

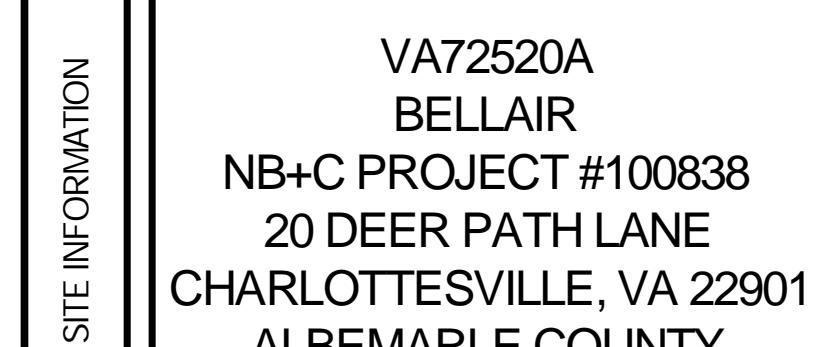
LATITUDE (NAD 83):	38.0360092°
LONGITUDE (NAD 83):	-78.52709961°
JURISDICTION:	ALBEMARLE COUNTY
ZONING DESIGNATION:	R1 - RESIDENTIAL
GROUND ELEVATION:	554.46' ± (AMSL)
PARCEL NUMBER:	076C0-02-00-00200
PARCEL AREA:	1.39± ACRES
PARCEL OWNER:	HOLMES, DAVID L OR CAROLYN C ASH LAWN 18 DEER PATH ROAD CHARLOTTESVILLE, VA 22903
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	99'-0" (AGL)
CONSTRUCTION TYPE:	IIB
USE GROUP:	U



### 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.

- 2018 BUILDING CODE
- 2017 NATIONAL ELECTRICAL CODE
- 2018 NFPA 101, LIFE SAFETY CODE
- 2018 INTERNATIONAL FIRE CODE (IFC)
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 15TH 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
- 2018 VIRGINIA CONSTRUCTION CODE



REVISIONS		
DESIGN RECORD		
5	03/29/23	REVISED
4	11/03/22	REVISED
3	10/24/22	REVISED
2	06/30/22	AAV PROJECT
1	06/14/22	JQG
0	05/24/22	RFDS
A	11/10/21	FINAL CDs
REV	DATE	DESCRIPTION

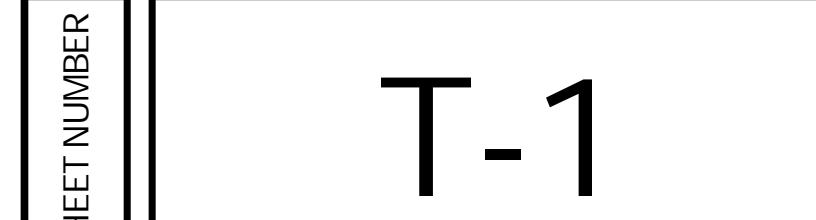
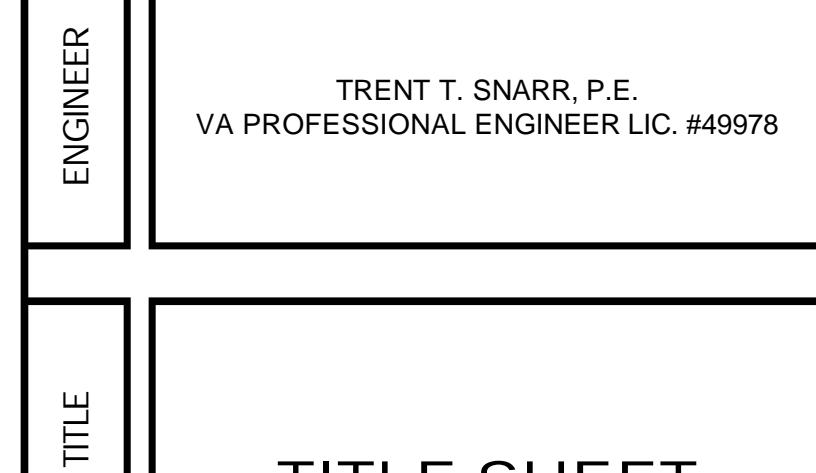
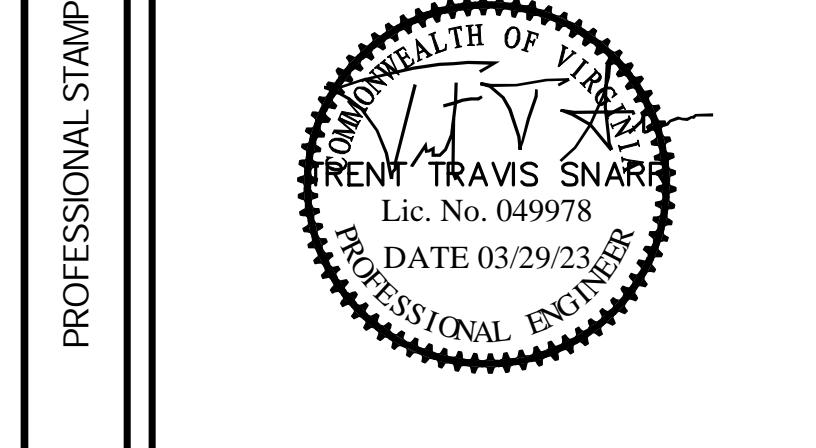


DRAWING INDEX	
T-1	TITLE SHEET
GN-1	GENERAL NOTES
Z-1	SITE PLAN
C-1	COMPOUND PLAN
C-2	EQUIPMENT PLANS
C-3	ELEVATION
A-1	ANTENNA ORIENTATION PLANS
A-2	ANTENNA SCHEDULE
A-3	ANTENNA SPECIFICATIONS & DETAILS
A-4	EQUIPMENT SPECIFICATIONS & DETAILS
A-5	ANTENNA MOUNT DETAILS
A-6	CABLING DETAILS & RF PLUMBING DIAGRAM
A-7	HYBRID COLOR CODES
A-8	HYBRID COLOR CODES
E-1	ELECTRICAL DETAILS
G-1	GROUNDING 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.

PROJECT TEAM	
APPLICANT:	T-MOBILE NORTHEAST LLC 324 MADISON MEWS NORFOLK, VA 23510 OFFICE: (757) 453-6907 FAX: (757) 589-0904
PROJECT MANAGEMENT FIRM:	NETWORK BUILDING + CONSULTING, LLC. 120 EASTSHORE DRIVE, SUITE 300 GLEN ALLEN, VA 23059 (804) 548-4079
ENGINEERING FIRM:	NB+C ENGINEERING SERVICES, LLC. 120 EASTSHORE DRIVE, SUITE 300 GLEN ALLEN, VA 23059 (804) 548-4079 JWOOD@NBCLLC.COM



## 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 OR THWN-2 THIN INSULATION.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCTION 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 DEMARCTION 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/ MONPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM 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:
  - AISC - "ALLOWABLE STRESS DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
  - AISC - "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
  - 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
OTHER STRUCTURAL SHAPES AND PLATES	FY = 50KSI
	A36, FY = 36 KSI STRUCTURAL TUBING
A500, GRADE B	
HIGH STRENGTH BOLTS	FY = 46 KSI
THREADED RODS	A325
ANCHOR BOLTS	A354, GRADE BC
PIPE (HANDRAIL)	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.

ENGINEER

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
120 EASTSHORE DRIVE, SUITE 300  
GLEN ALLEN, VA 23059  
(804) 548-4079

APPLICANT

**T-Mobile**  
T-MOBILE NORTHEAST LLC  
324 MADISON MEWS  
NORFOLK, VA 23510  
OFFICE: (757) 453-6907  
FAX: (757) 589-0904

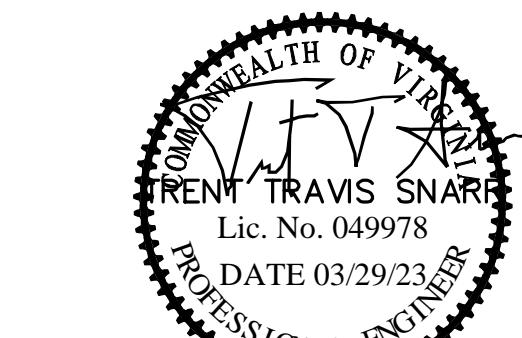
SITE INFORMATION

VA72520A  
BELLAIR  
NB+C PROJECT #100838  
20 DEER PATH LANE  
CHARLOTTESVILLE, VA 22901  
ALBEMARLE COUNTY

DESIGN RECORD

REV	DATE	DESCRIPTION	BY
5	03/29/23	REVISED	AMT
4	11/03/22	REVISED	CCC
3	10/24/22	REVISED	CCC
2	06/30/22	AAV PROJECT	JQG
1	06/14/22	RFDS	JQG
0	05/24/22	FINAL CDs	JQG
A	11/10/21	PRELIMINARY CDs	CDE

PROFESSIONAL STAMP



ENGINEER

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

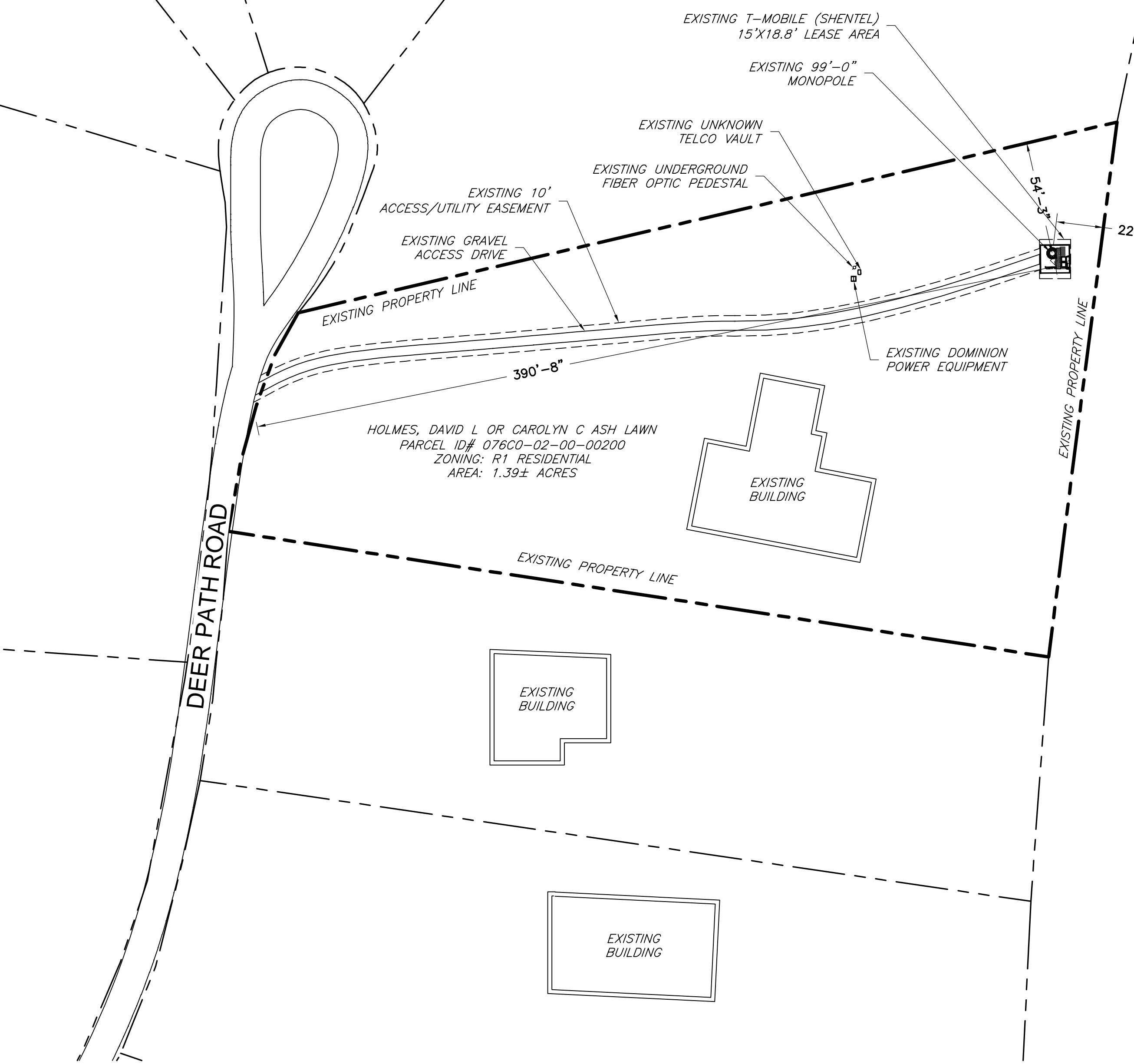
SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

TRUE NORTH



SITE PLAN  
Z-1



ZONING MAP

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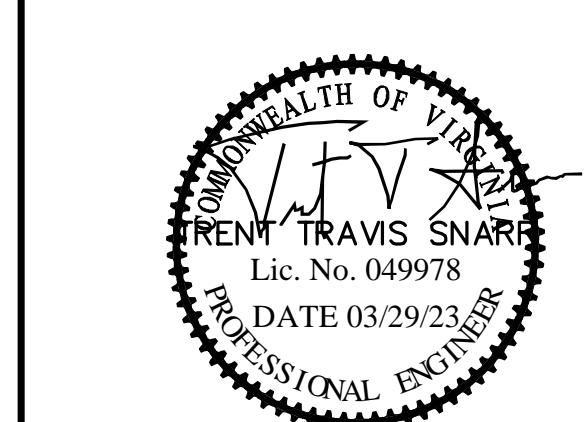
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LEGEND	
PROPERTY LINE – SUBJECT PARCEL	
PROPERTY LINE – ABUTTERS	
EXISTING ROAD	
EXISTING FENCE	
PROPOSED EASEMENT	
PROPOSED LEASE AREA	
EXISTING BUILDING	
PROPOSED FENCE	

ZONING INFORMATION		
JURISDICTION: ALBEMARLE COUNTY		
ZONING: R1		
DIMENSION	EXISTING ±	PROPOSED ±
FRONT YARD SETBACK:	390'-8"	-
SIDE YARD SETBACK:	54'-3"	-
REAR YARD SETBACK:	22'-11"	-
LOT AREA:	1.39± AC	
(ALL MEASUREMENTS ARE IN FEET ± UNLESS OTHERWISE NOTED)		
NOTES:		

GENERAL NOTES

1. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
2. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
3. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION. THERE IS NO HANDICAP ACCESS REQUIRED.
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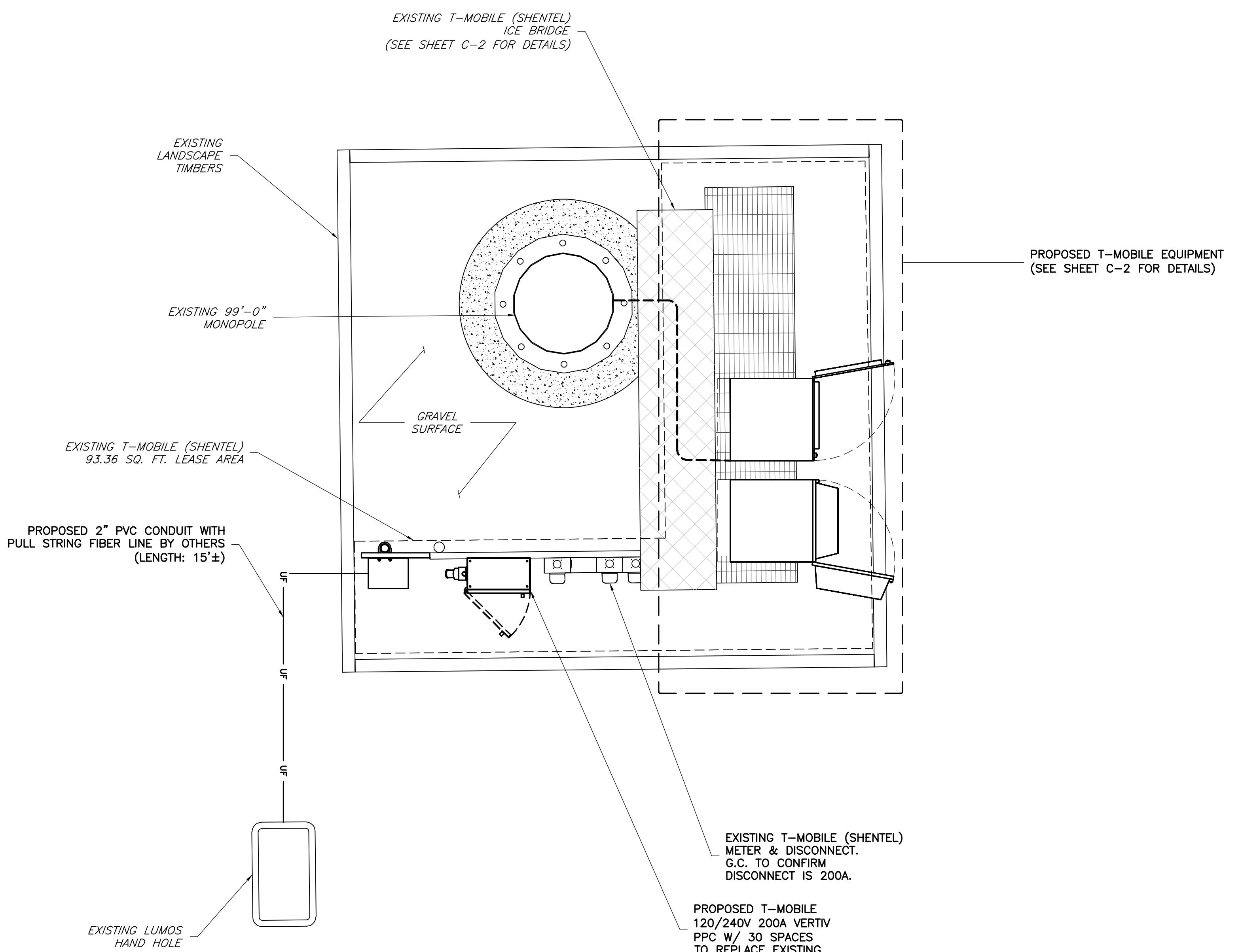


TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

SITE PLAN

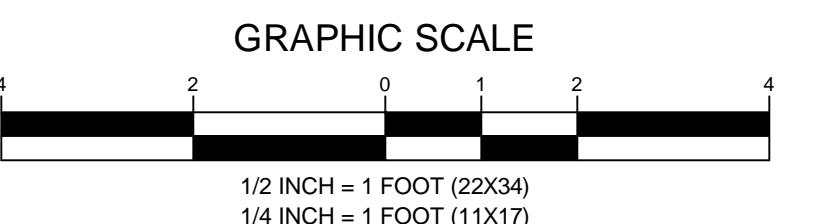
Z-1

TRUE NORTH



1  
C-1 COMPOUND PLAN

SCALE: 1/2" = 1' (22X34)  
SCALE: 1/4" = 1' (11X17)

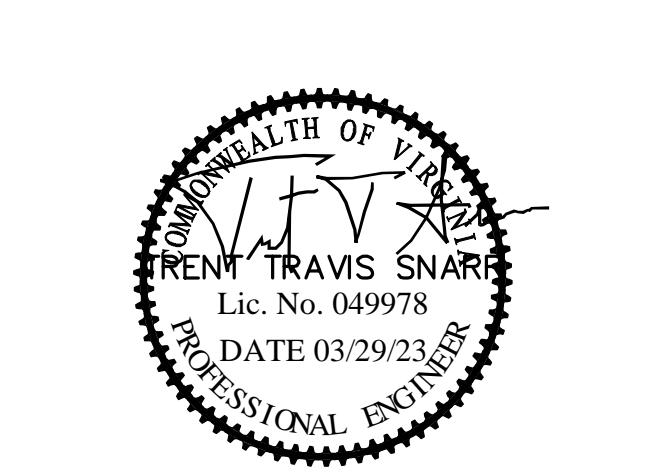


**NB+C**<sup>TM</sup>  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
120 EASTSHORE DRIVE, SUITE 300  
GLEN ALLEN, VA 23059  
(804) 548-4079

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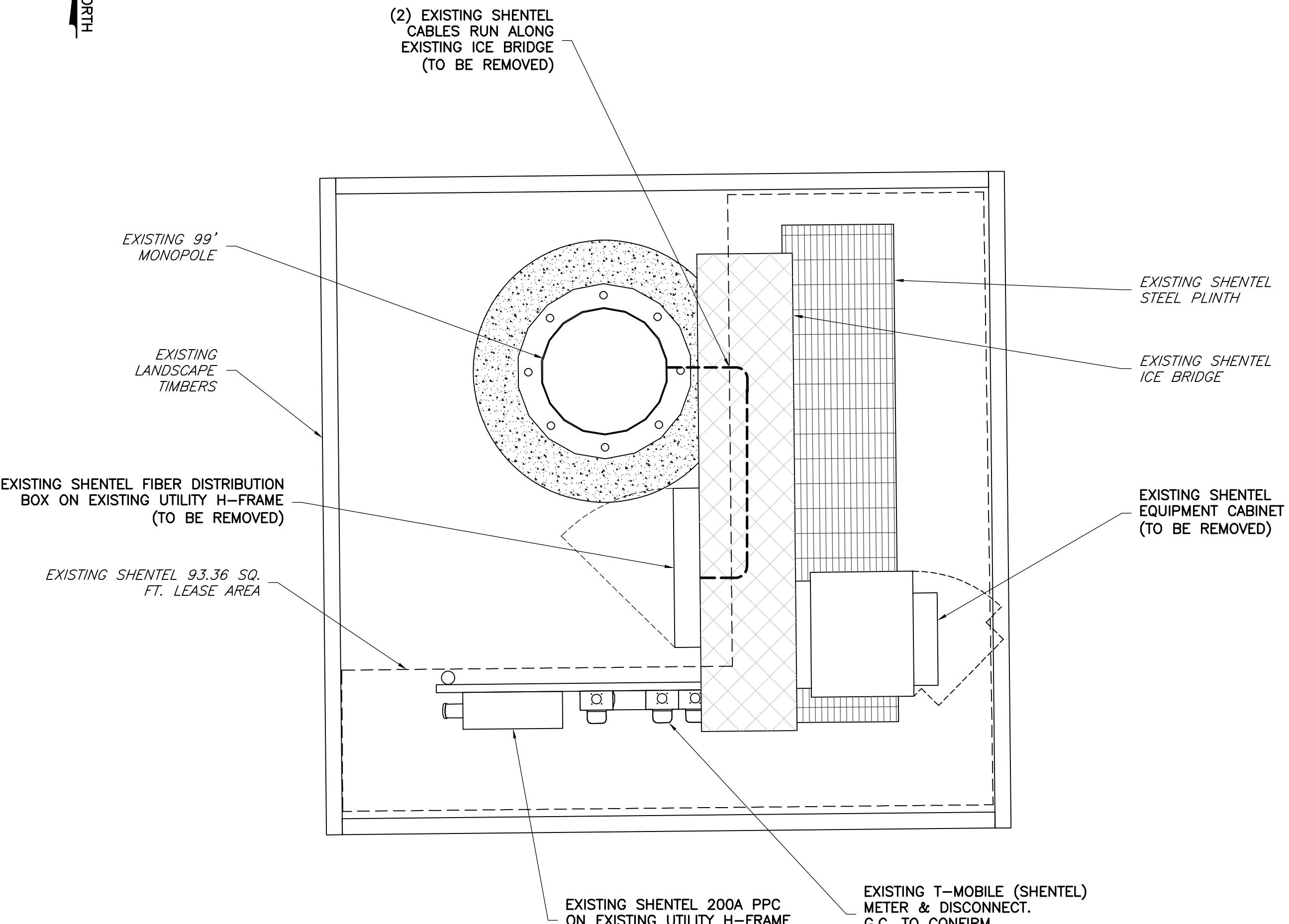


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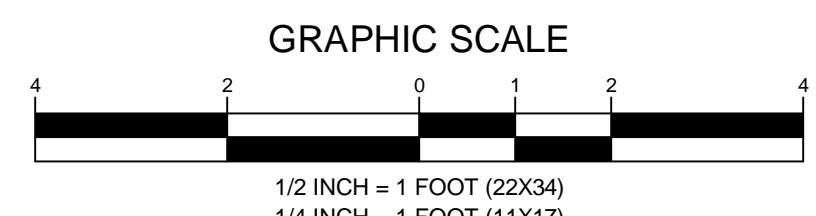
COMPOUND  
PLAN

C-1

TRUE NORTH

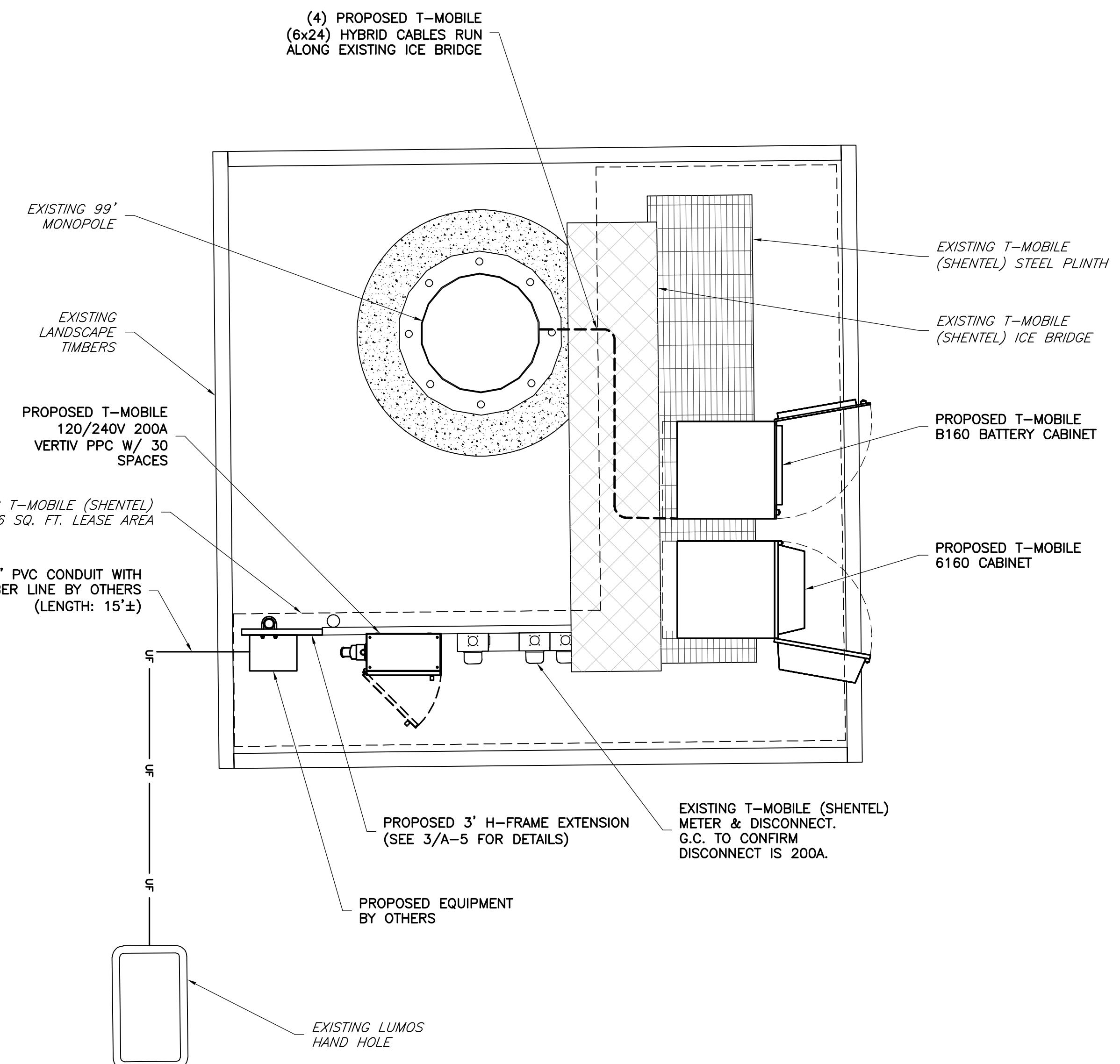


1 EXISTING EQUIPMENT PLAN  
C-2

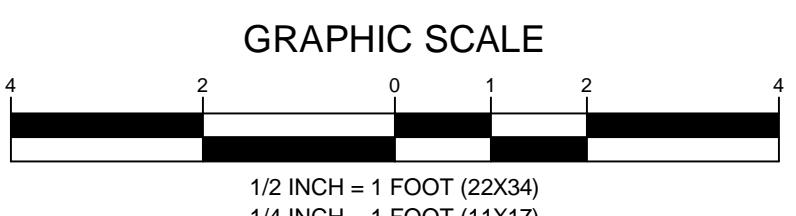


NOTE:  
ANY AREAS OUTSIDE OF THE LEASED AREA THAT  
NEED CONDUITS WILL NEED THE ROUTES APPROVED  
BY SHENTEL PRIOR TO DIGGING. ANY AREA THAT  
DIGGING HAS BEEN DONE WILL HAVE THE SOIL KEPT  
OUT OF THE SITE GRAVEL. NEW FABRIC WILL BE  
PUT BACK IN AREAS THAT DIGGING WAS DONE  
PRIOR TO REPLACING GRAVEL. SITE WILL BE  
RETURNED TO CONDITIONS AS GOOD OR BETTER  
WHEN WORK HAS FINISHED.

NOTE:  
1. FINAL LOCATION OF PROPOSED EQUIPMENT  
CABINETS TO BE DETERMINED IN THE FIELD BY THE  
G.C.  
2. PROPOSED EQUIPMENT CABINETS TO BE PAINTED  
TO MATCH.



2 PROPOSED EQUIPMENT PLAN  
C-2



**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
120 EASTSHORE DRIVE, SUITE 300  
GLEN ALLEN, VA 23059  
(804) 548-4079

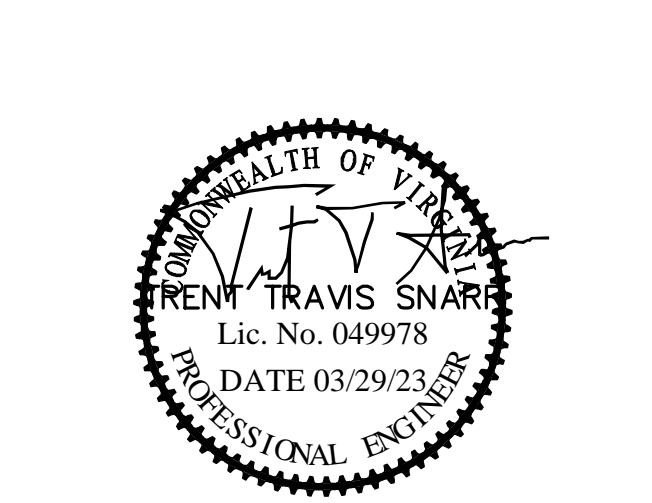
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4	11/03/22	REVISED	CCC
3	10/24/22	REVISED	CCC
2	06/30/22	AAV PROJECT	JQG
1	06/14/22	RFDS	JQG
0	05/24/22	FINAL CDs	JQG
A	11/01/21	PRELIMINARY CDs	CDE



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

EQUIPMENT  
PLANS

C-2

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

### GENERAL ANTENNA NOTES

- ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR IS TO COORDINATE AND VERIFY THE PROPOSED DOWNTILTS WITH SPRINT MANAGER PRIOR TO CONSTRUCTION.
- ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0.0'. (EXISTING GRADE)
- CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE & AZIMUTH.
- CONTRACTOR SHALL VERIFY ANTENNA TYPE AND AZIMUTH WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- ALL CABLE LENGTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- COLOR TAPE MARKINGS MUST BE 3/4" WIDE AND UV RESISTANT, SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE.
- CONTRACTOR SHALL COORDINATE COLOR CODINGS IN THE FIELD WITH SPRINT REPRESENTATIVE.



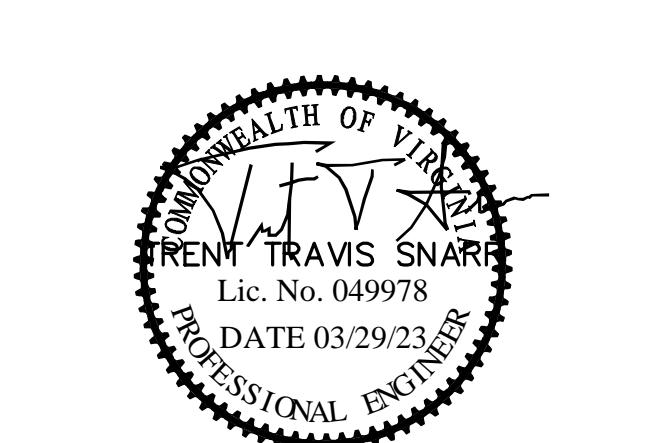
**NOTE:**  
CONTRACTOR WILL MAKE SURE SAFETY CLIMB IS NOT OBSTRUCTED, TRAPPED OR RUBBING THE MOUNTS WHEN THE WORK IS COMPLETED. ANY HARDWARE OR STANDOFF WORK (CABLE KEEPERS) NEEDED TO DO THIS WILL BE PROVIDED BY THE CONTRACTOR

**NB+C™**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
120 EASTSHORE DRIVE, SUITE 300  
GLEN ALLEN, VA 23059  
(804) 548-4079

**T-Mobile**  
T-MOBILE NORTHEAST LLC  
324 MADISON MEWS  
NORFOLK, VA 23510  
OFFICE: (757) 453-6907  
FAX: (757) 589-0904

VA72520A  
BELLAIR  
NB+C PROJECT #100838  
20 DEER PATH LANE  
CHARLOTTESVILLE, VA 22901  
ALBEMARLE COUNTY

REVISIONS			
REV	DATE	DESCRIPTION	BY
5	03/29/23	REVISED	AMT
4	11/03/22	REVISED	CCC
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2	06/30/22	AAV PROJECT	JQG
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A	11/10/21	PRELIMINARY CDs	CDE

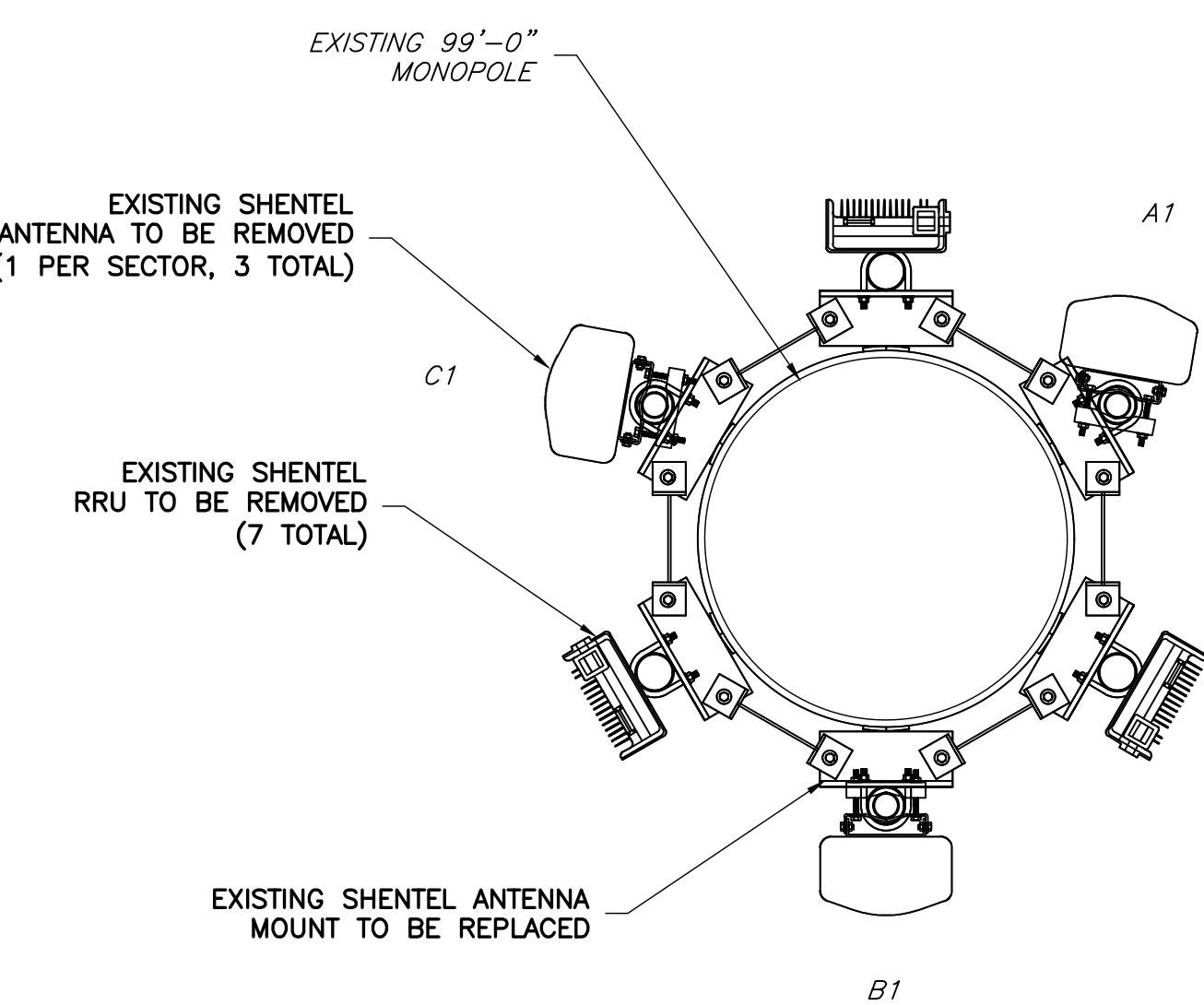


TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

ELEVATION

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

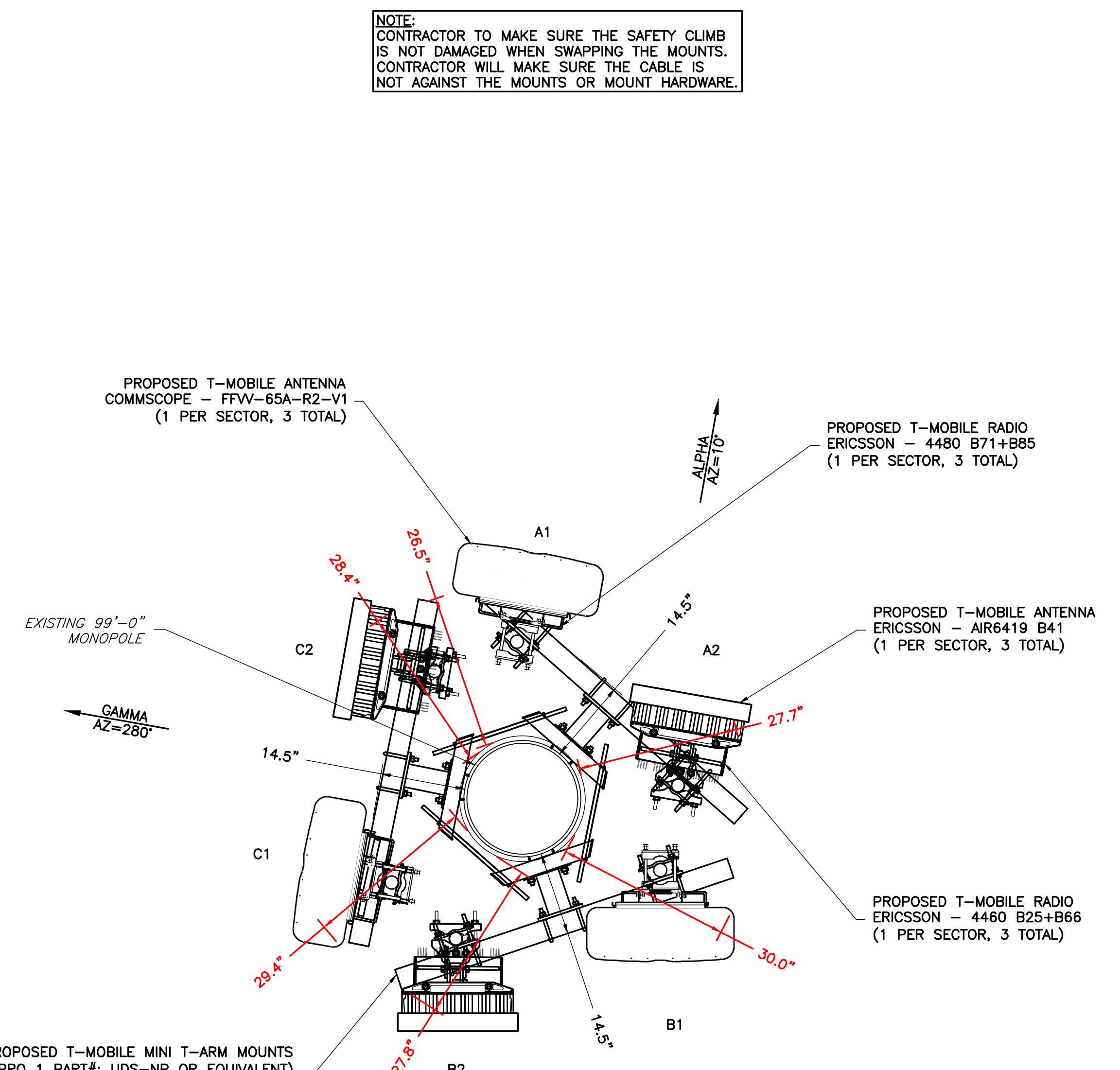
C-3



1 EXISTING ANTENNA ORIENTATION PLATE  
A-1 NOT TO SCALE

APPROX  
TRUE NORTH

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



2 PROPOSED ANTENNA ORIENTATION PLAN  
A-1 NOT TO SCALE

APPROX  
TRUE NORTH

# ANTENNA ORIENTATION PLANS

A-1

**NB+C**  
**TOTALLY COMMITTED.**

**NB+C ENGINEERING SERVICES, LLC.**  
120 EASTSHORE DRIVE, SUITE 300  
GLEN ALLEN, VA 23059  
(804) 548-4079

The image features the T-Mobile logo, which consists of a stylized 'T' icon followed by the word 'Mobile' in a large, bold, serif font. Below the logo, the text 'T-MOBILE NORTHEAST LLC' is displayed in a smaller, bold, sans-serif font.

VA72520A  
BELLAIR  
NB+C PROJECT #100838  
20 DEER PATH LANE  
CHARLOTTESVILLE, VA 22901  
ALBEMARLE COUNTY

# REVISIONS

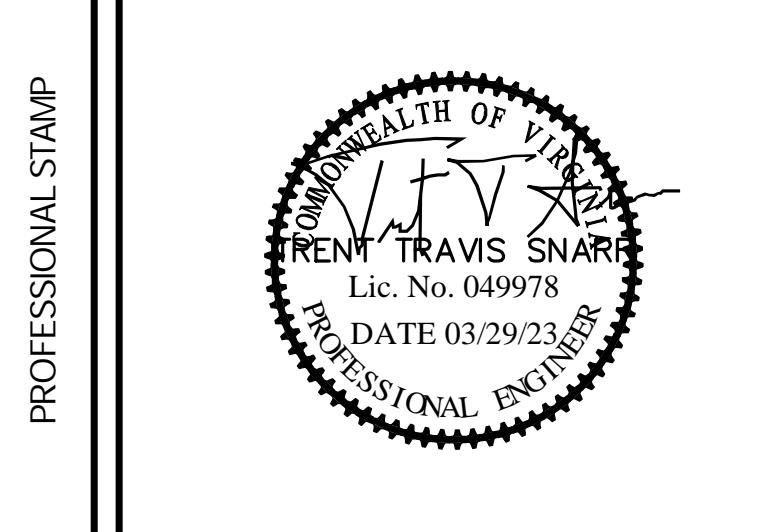
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4	11/03/22	REVISED	CCC
3	10/24/22	REVISED	CCC
2	06/30/22	AAV PROJECT	JQG
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A	11/10/21	PRELIMINARY CDs	CDE

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

# ANTENNA ORIENTATION PLANS

A-1

5	03/29/23	REVISED
4	11/03/22	REVISED
3	10/24/22	REVISED
2	06/30/22	AAV PROJECT
1	06/14/22	RFDS
0	05/24/22	FINAL CDs
A	11/10/21	PRELIMINARY CDs
REV	DATE	DESCRIPTION



ENGINEER	TRENT T. SNARR, P.E. VA PROFESSIONAL ENGINEER LIC. #49978
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SHEET NUMBER	SHEET TITLE	ANTENNA SCHEDULE
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A-2
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**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	COMMSCOPE	FFVV-65A-R2-V1	48.19"x25.20"x9.25"	95.00'	10°	6'/6'/4'/4'	0°	(1) PROPOSED 4480 B71+B85 (1) PROPOSED 4460 B25+B66	—	(1) PROPOSED (6x24) HYBRID CABLE (1) PROPOSED (6x24) HYBRID FLEX CABLE (SHARED WITH ALL SECTORS)	130.00'
A2	PROPOSED	ERICSSON	AIR6419 B41	34.50"x20.00"x8.0"	95.00'	10°	4'/4'	0°	—	—		
B1	PROPOSED	COMMSCOPE	FFVV-65A-R2-V1	48.19"x25.20"x9.25"	95.00'	180°	6'/6'/4'/4'	0°	(1) PROPOSED 4480 B71+B85 (1) PROPOSED 4460 B25+B66	—	(1) PROPOSED (6x24) HYBRID CABLE	130.00'
B2	PROPOSED	ERICSSON	AIR6419 B41	34.50"x20.00"x8.0"	95.00'	180°	4'/4'	0°	—	—		
C1	PROPOSED	COMMSCOPE	FFVV-65A-R2-V1	48.19"x25.20"x9.25"	95.00'	280°	6'/6'/4'/4'	0°	(1) PROPOSED 4480 B71+B85 (1) PROPOSED 4460 B25+B66	—	(1) PROPOSED (6x24) HYBRID CABLE	130.00'
C2	PROPOSED	ERICSSON	AIR6419 B41	34.50"x20.00"x8.0"	95.00'	280°	4'/4'	0°	—	—		

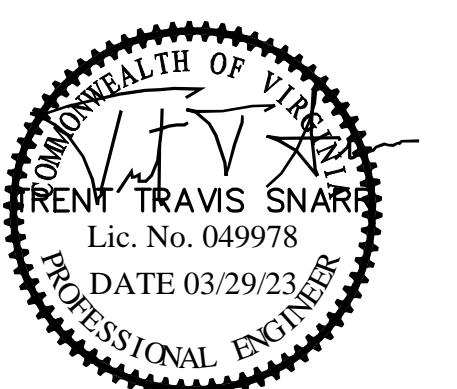
NOTES:

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  
A-2  
ANTENNA CONFIGURATION SCHEDULE  
NOT TO SCALE

**REVISIONS**

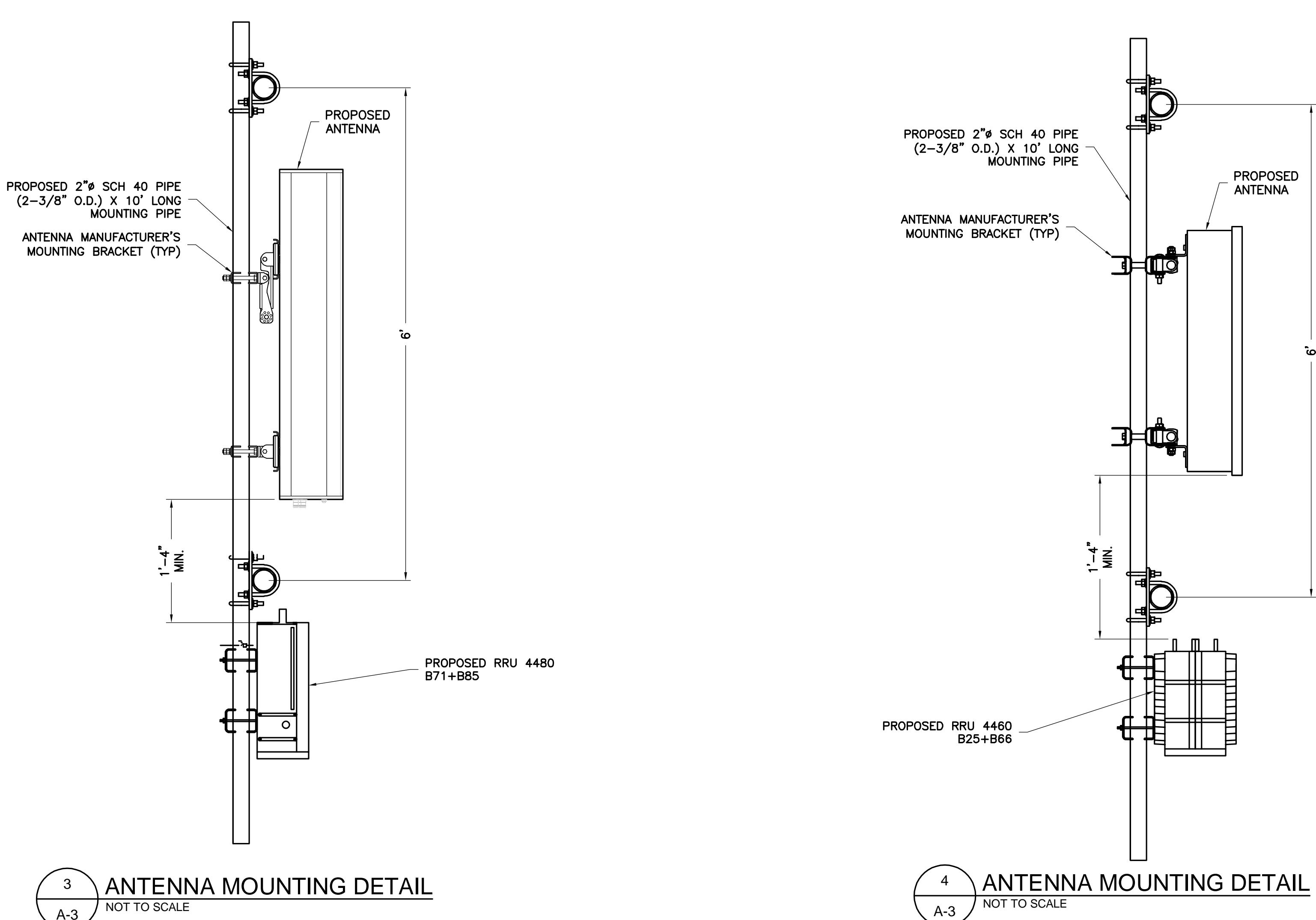
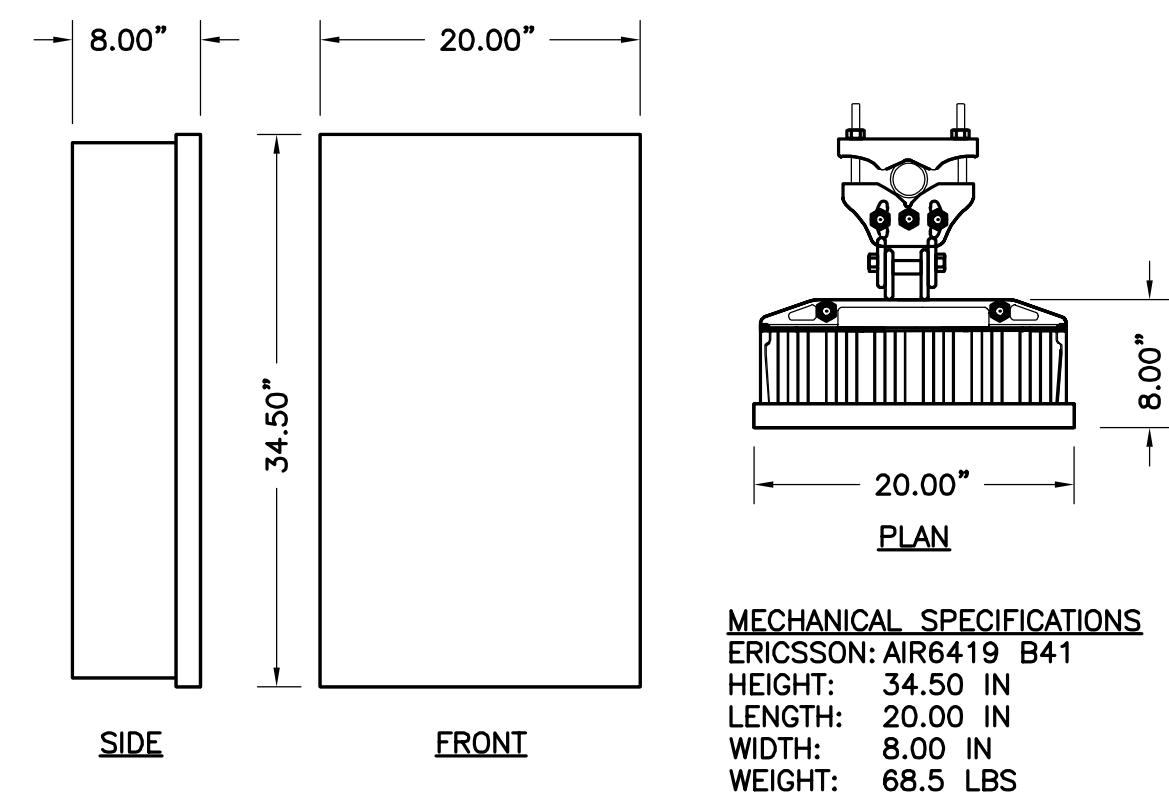
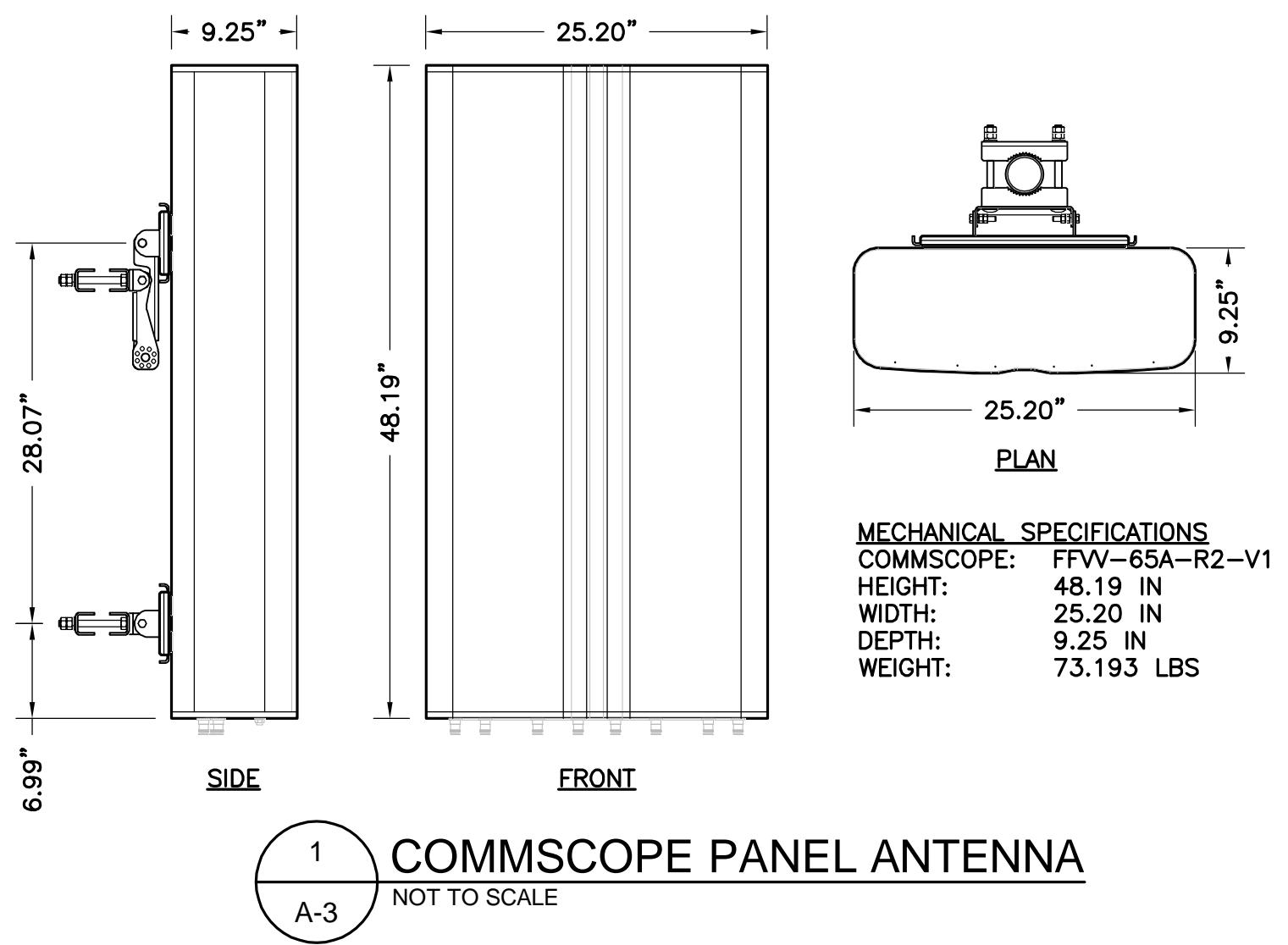
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A	11/10/21	PRELIMINARY CDs	CDE
		DESIGN RECORD	



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

**ANTENNA  
SPECIFICATIONS  
& DETAILS**

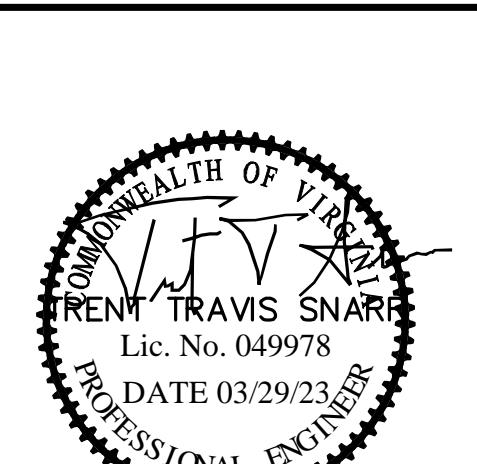
**A-3**



SHEET NUMBER	SHEET TITLE	ENGINEER	PROFESSIONAL STAMP	PROFESSIONAL RECORD

**REVISIONS**

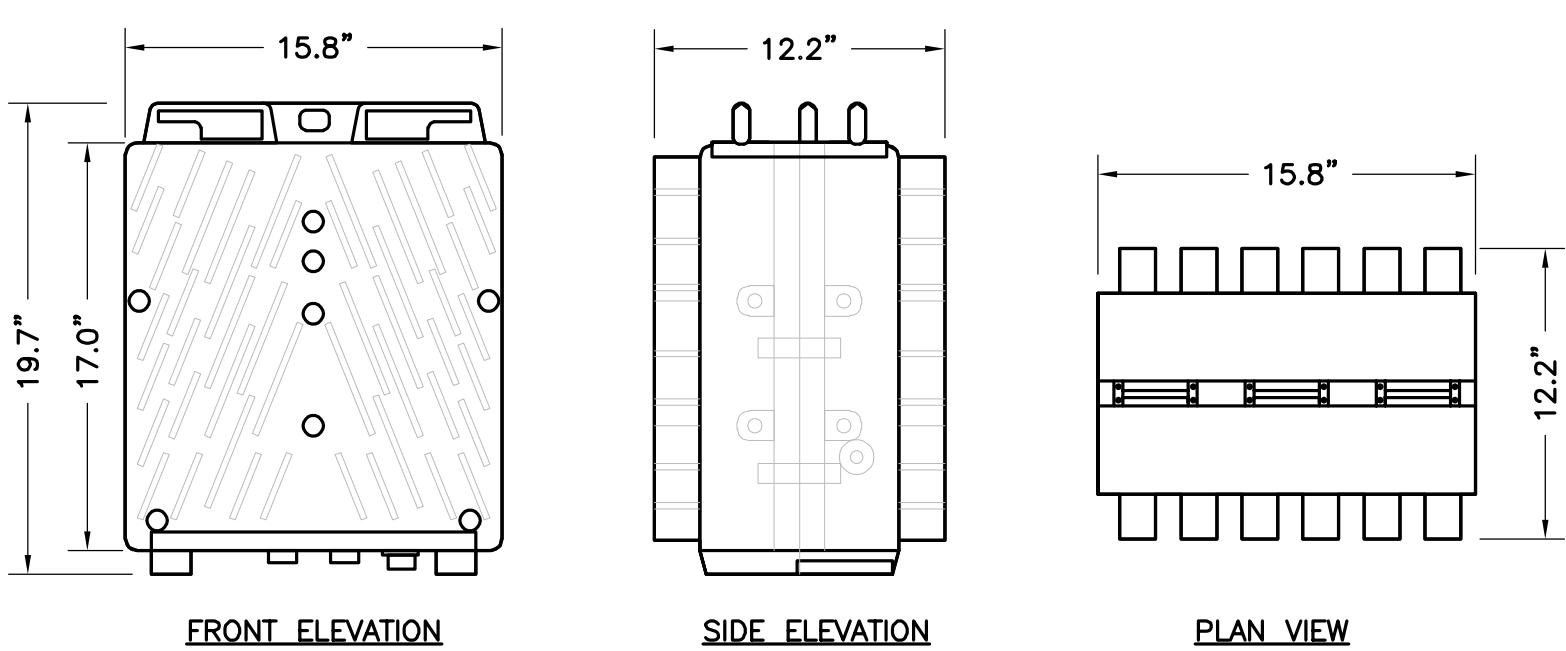
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TRENT T. SNARR, P.E.  
VA PROFESSIONAL ENGINEER LIC. #49978

**EQUIPMENT  
SPECIFICATIONS  
& DETAILS**

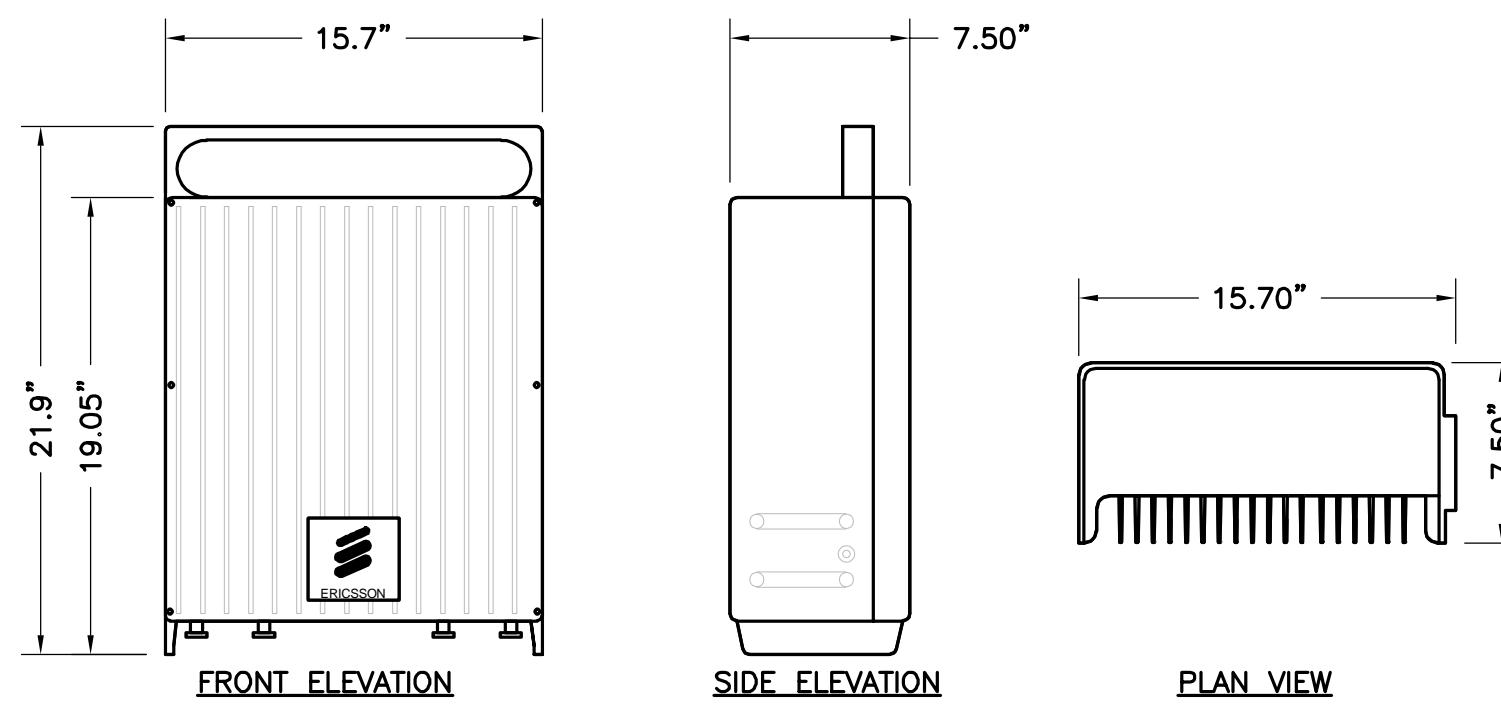
**A-4**



SIZE AND WEIGHT TABLE				
MANUFACTURER & MODEL NUMBER	HEIGHT	WIDTH	DEPTH	WEIGHT WITHOUT BRACKET
ERICSSON 4460 B25+B66	19.7"	15.8"	12.2"	109.00 LBS

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

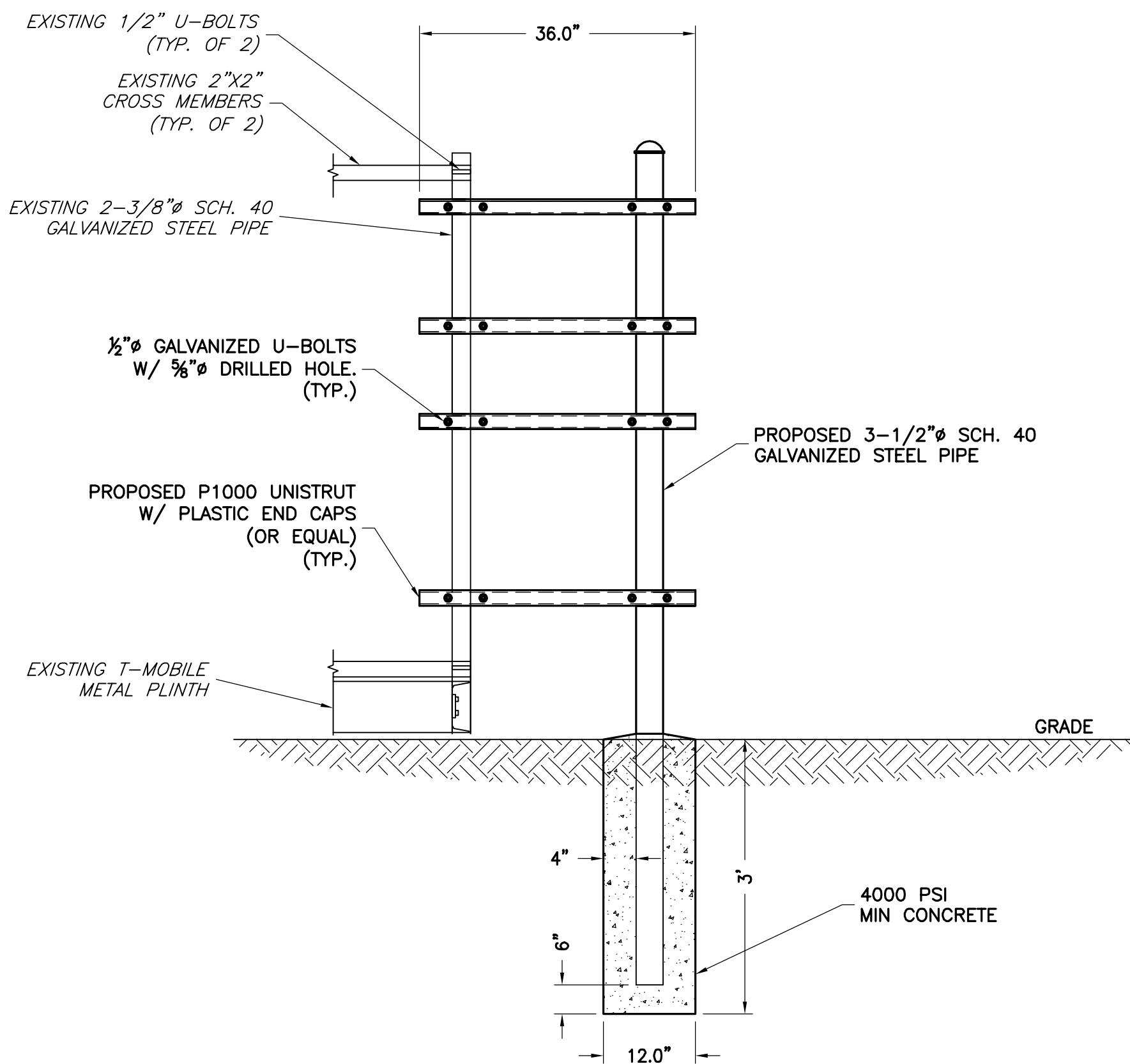
1 ERICSSON REMOTE RADIO UNIT (RRU)  
A-4 NTS



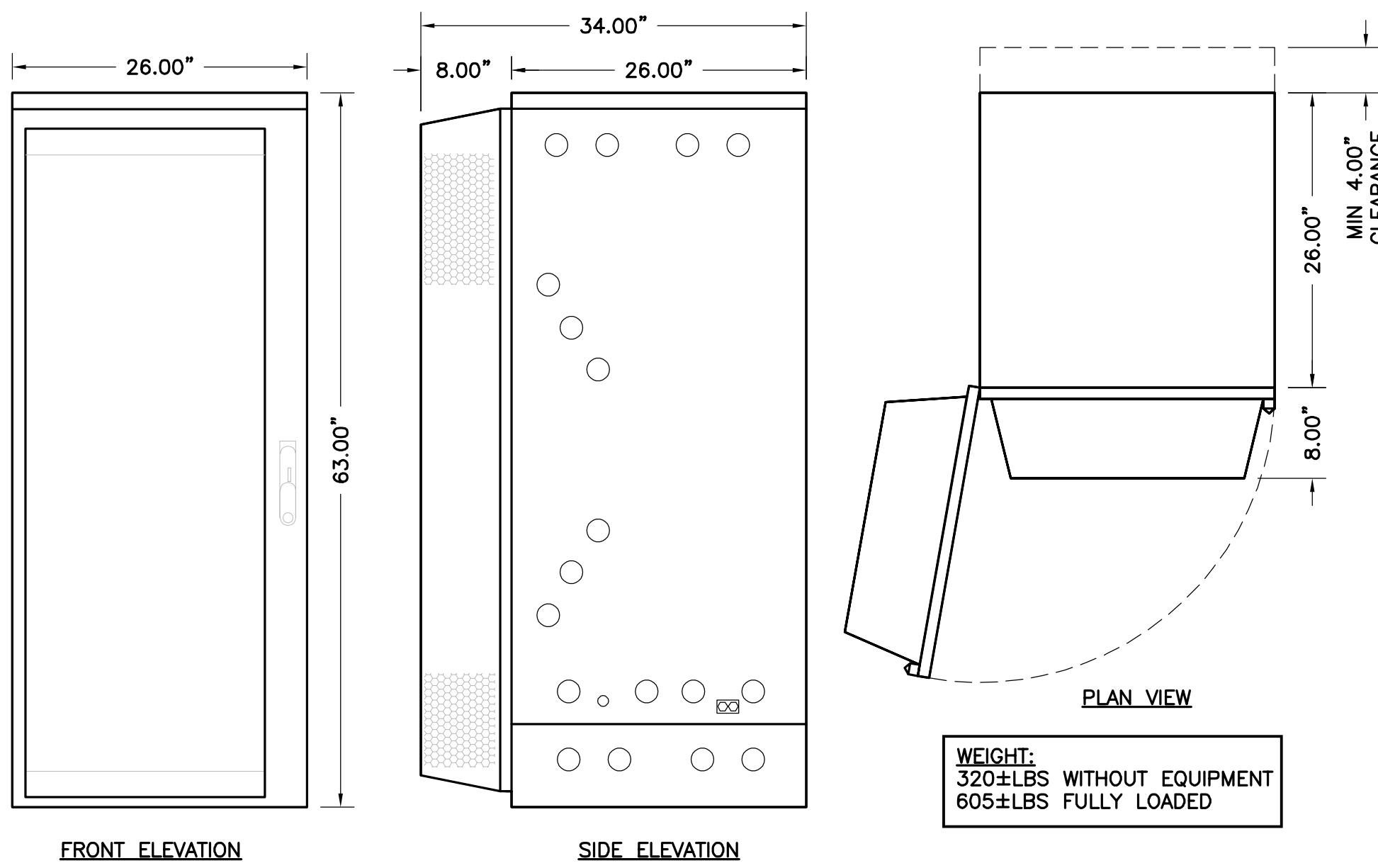
SIZE AND WEIGHT TABLE				
MANUFACTURER & MODEL NUMBER	HEIGHT	WIDTH	DEPTH	WEIGHT WITHOUT BRACKET
ERICSSON 4480 B71+B85	21.9"	15.7"	7.50"	81.00 LBS

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

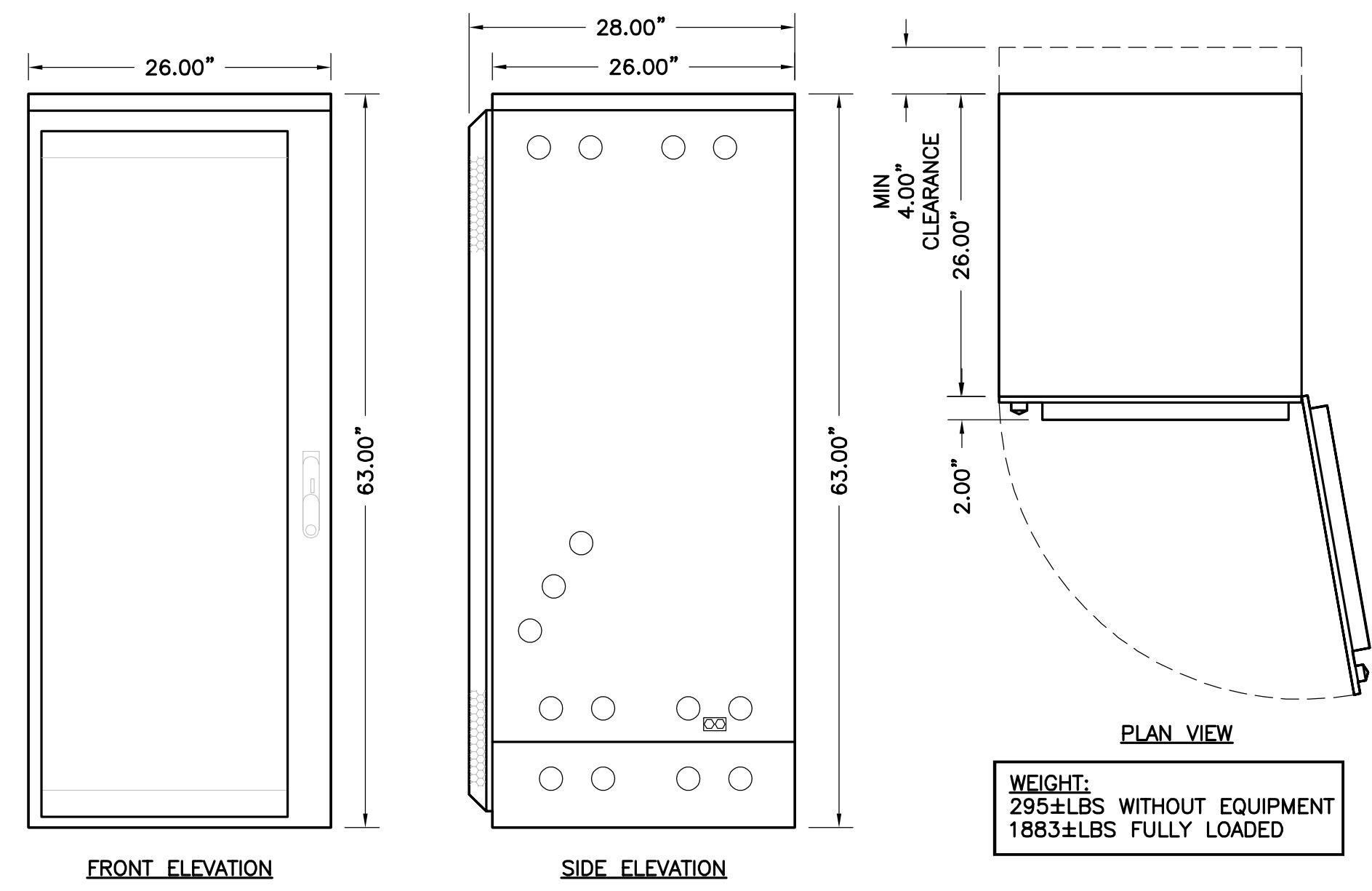
2 ERICSSON REMOTE RADIO UNIT (RRU)  
A-4 NTS



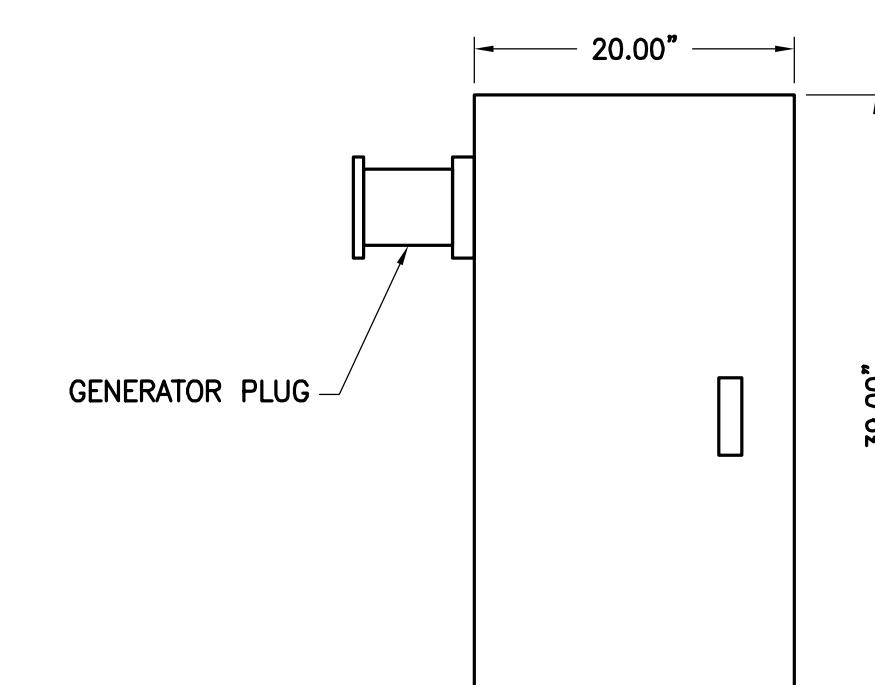
3 H-FRAME EXPANSION DETAIL  
A-4 NTS



4 6160 ENCLOSURE CABINET  
A-4 NOT TO SCALE



5 B160 BATTERY CABINET  
A-4 NOT TO SCALE



6 VERTIV PPC UNIT DETAIL  
A-4 NTS

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

ENGINEER

SHEET NUMBER