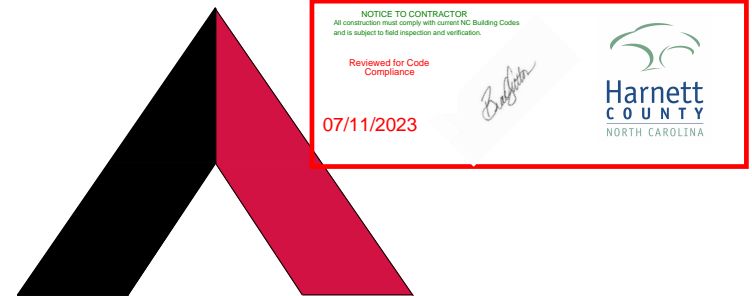
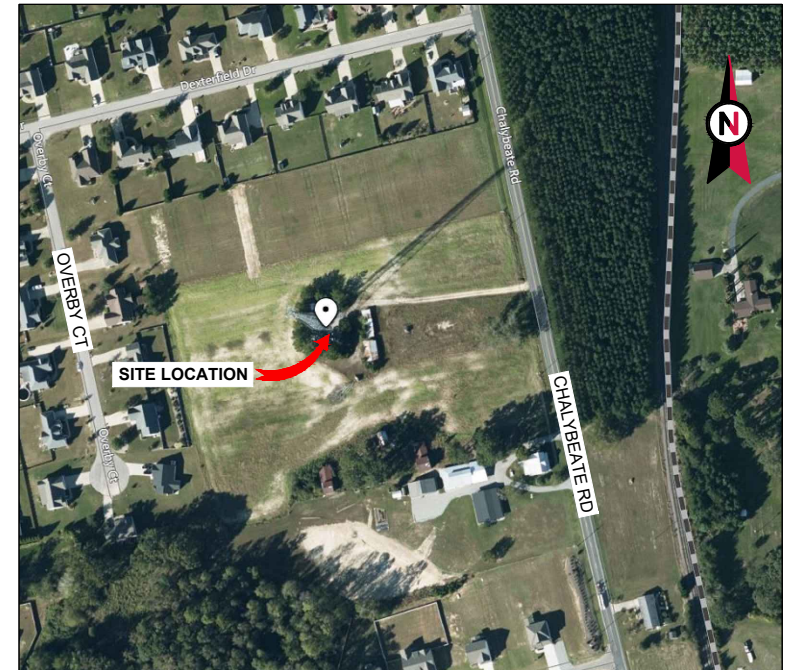


VICINITY MAP




AMERICAN TOWER®

ATC SITE NAME: CHALYBEATE SPRINGS NC
 ATC SITE NUMBER: 21268
 T-MOBILE SITE NAME: CHALYBEATE SPRINGS
 T-MOBILE SITE NUMBER: 5RA0165A
 SITE ADDRESS: 512 CHALYBEATE ROAD
 FUQUAY VARINA, NC 27526-6035



LOCATION MAP

**T-MOBILE ANCHOR ANTENNA AMENDMENT PLAN
 67D5A998E ODE+6160 CONFIGURATION**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2018 NORTH CAROLINA BUILDING CODE (NCBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) WITH NC AMENDMENTS 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 512 CHALYBEATE ROAD FUQUAY VARINA, NC 27526-6035 COUNTY: HARNETT <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 35.50235213 LONGITUDE: -78.81734339 GROUND ELEVATION: 343' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (3) ANTENNA(s), (3) RRU(s), (3) TTA(s), AND (6) 1-5/8" COAX CABLE(s) INSTALL (6) ANTENNA(s), (6) RRU(s), AND (2) 6X12 (1-5/8") FIBER CABLE(s) EXISTING (3) ANTENNA(s), AND (1) 6X12 (1-5/8") FIBER CABLE(s) TO REMAIN <u>GROUND WORK:</u> INSTALL (1) ENCLOSURE 6160 CABINET, (1) B160 BATTERY CABINET, (1) BB 6648, (1) PSU 4813, (1) XMU AND (1) IxRe ROUTER IN NEW 6160 CABINET EXISTING (1) RBS 6201 ODE CABINET TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> DELTA OAKS GROUP, PLLC 4904 PROFESSIONAL COURT RALEIGH, NC 27609 <u>PROPERTY OWNER:</u> T8 UNISON SITE MANAGEMENT LLC 512 CHALYBEATE ROAD FUQUAY VARINA, NC 27526	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).	G-001	TITLE SHEET	0	10/21/21	JL
<u>UTILITY COMPANIES</u> POWER COMPANY: PROGRESS ENERGY PHONE: (800) 452-2777 TELEPHONE COMPANY: EMBARQ PHONE: (800) 786-6272	<u>APPLICANT:</u> T-MOBILE 2105 WATER RIDGE PKWY CHARLOTTE, NC 28217	C-101 DETAILED SITE PLAN C-102 DETAILED GROUND PLAN C-201 TOWER ELEVATION C-401 ANTENNA INFORMATION & SCHEDULE C-501 CONSTRUCTION DETAILS C-502 CONSTRUCTION DETAILS E-501 GROUNDING DETAILS R-601 SUPPLEMENTAL R-602 SUPPLEMENTAL R-603 SUPPLEMENTAL R-604 SUPPLEMENTAL					
 Know what's below. Call before you dig.	<u>PROJECT LOCATION DIRECTIONS</u> FROM FAYETTEVILLE: TAKE HWY 210 NORTH THROUGH LILLINGTON TO THE INTERSECTION OF 210 AND US 401, TAKE US 401 NORTH APPROX 6 AND TURN LEFT ONTO CHALYBEATE RD., FOLLOW AROUND TO TOWER ON LEFT.						




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 RALEIGH, NC 27609
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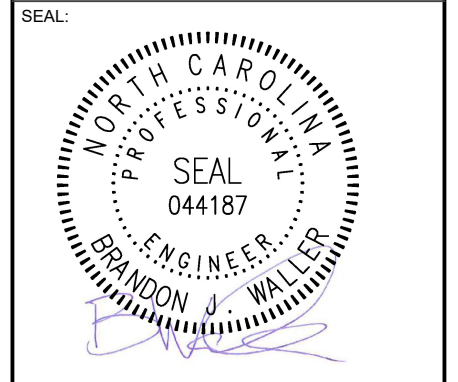

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JL	10/21/21

ATC SITE NUMBER:
21268

 ATC SITE NAME:
CHALYBEATE SPRINGS NC

 T-MOBILE SITE NAME:
CHALYBEATE SPRINGS

 SITE ADDRESS:
512 CHALYBEATE ROAD
FUQUAY VARINA, NC 27526-6035

DATE DRAWN: 10/21/21
 ATC JOB NO: 13731655_G3
 CUSTOMER ID: CHALYBEATE SPRINGS
 CUSTOMER #: 5RA0165A

TITLE SHEET

SHEET NUMBER: **G-001** REVISION: **0**

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GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
 - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ELECTRICAL NOTES:

1. ELECTRICAL DESIGN SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. STRUCTURAL DESIGN SHALL BE PERFORMED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2. ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF CONCORDIA. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUND LINES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUND LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



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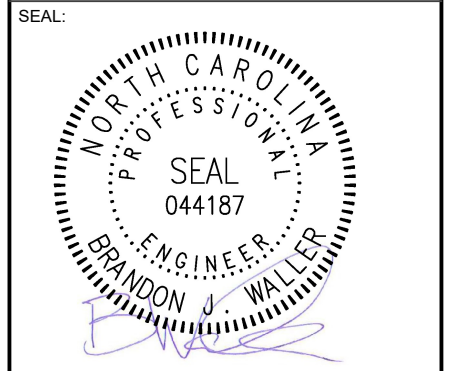
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JL	10/21/21

ATC SITE NUMBER:
21268

ATC SITE NAME:
CHALYBEATE SPRINGS NC

T-MOBILE SITE NAME:
CHALYBEATE SPRINGS

SITE ADDRESS:
 512 CHALYBEATE ROAD
 FUQUAY VARINA, NC 27526-6035



DATE DRAWN:	10/21/21
ATC JOB NO:	13731655_G3
CUSTOMER ID:	CHALYBEATE SPRINGS
CUSTOMER #:	5RA0165A

GENERAL NOTES	
SHEET NUMBER: G-002	REVISION: 0

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**2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: T-MOBILE UPGRADE PROJECT - SITE ID 5RA0165A
 Address: 512 CHALYBEATE ROAD, FUQUAY VARINA, NC 27526-6035 Zip Code 27526
 Owner/Authorized Agent: AMERICAN TOWER, LLC Phone # (919) 468 - 0112 E-Mail AE@AMERICANTOWER.COM
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City County HARNETT State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	DELTA OAKS GROUP, PLLC	BRANDON WALLER, PE	44187	(919) 342-8247	BWALLER@DELTAOAKSGROUP.COM
Civil					
Electrical					
Fire Alarm					
Plumbing					
Mechanical					
Sprinkler-Standpipe					
Structural					
Retaining Walls >5' High					
Other					

("Others" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC CODE FOR: New Construction Addition Renovation
 1st Time Interior Completion
 Shell/Core
 Phased Construction - Shell/Core
 Renovation

2018 NC EXISTING BUILDING CODE: Prescriptive Chapter 14
 Alteration: Level I Level III Change of Use
 High Change of Use

CONSTRUCTED: (date) _____ OCCUPANCY(S) (Ch. 3): _____
 RENOVATED: (date) _____ OCCUPANCY(S) (Ch. 3): _____
 RISK CATEGORY (table 1604.5) II III IV
 II III IV

BASIC BUILDING DATA

Construction Type: I-A I-B II-A II-B III-A III-B IV V-A V-B
 (check all that apply)
 Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
 Standpipes: No Yes Class I II III Wet Dry
 Fire District: No Yes (Primary) Flood Hazard Area: No Yes
 Special Inspections Required: No Yes

2018 NC Administrative Code and Policies

Appendix B for Building

FLOOR	Gross Building Area:			
	EXISTING (SQ FT)	NEW (SQ FT)	RENO/ALTER (SQ FT)	SUB-TOTAL
6 th Floor				
5 th Floor				
4 th Floor				
3 rd Floor				
2 nd Floor				
Mezzanine				
1 st Floor				
Basement				
TOTAL				

ALLOWABLE AREA

Primary Occupancy Classification: **SELECT ONE**

- Assembly A-1 A-2 A-3 A-4 A-5
- Business
- Educational
- Factory F-1 Moderate F-2 Low
- Hazardous H-1 Detonate H-2 Deflagrate H-4 Health H-5 HPM
- Institutional I-1 Condition 1 2
 I-2 Condition 1
 I-3 Condition 1 4 5
- Mercantile
- Residential R-1 R-2 R-3
- Storage S-1 Moderate Low High-piled
 Parking Garage Enclosed Repair Garage
- Utility and Miscellaneous

NOT A BUILDING

Accessory Occupancy Classification: _____

Incidental Uses (Table 509): _____

Special Uses (Chapter 4 - List Code Sections): _____

Special Provisions: (Chapter 5 - List Code Sections): _____

Mixed Occupancy: No Yes Separation: _____ Hr. Exception: _____

Non-Separated Use (508.3)

The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

Separated Use (508.4) -

See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

2018 NC Administrative Code and Policies

Appendix B for Building



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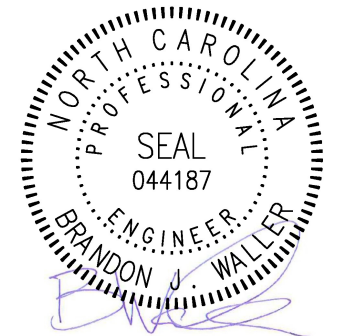
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512 CHALYBEATE ROAD
FUQUAY VARINA, NC 27526-6035

SEAL:



DATE DRAWN:	10/21/21
ATC JOB NO:	13731655_G3
CUSTOMER ID:	CHALYBEATE SPRINGS
CUSTOMER #:	5RA0165A

APPENDIX B

SHEET NUMBER: **G-003** REVISION: **0**

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STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 ⁴ AREA	(C) AREA FOR FRONTAGE INCREASE ^{1,2}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2,3}

- ¹ Frontage area increases from Section 506.3 are computed thus:
- a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
 - b. Total Building Perimeter = _____ (P)
 - c. Ratio (F/P) = _____ (F/P)
 - d. W = Minimum width of public way = _____ (W)
 - e. Percent of frontage increase $I_f = 100 [F/P - 0.25] \times W/30 = \text{_____} (\%)$
- ² Unlimited area applicable under conditions of Section 507.
- ³ Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
- ⁴ The maximum area of open parking garages must comply with Table 406.5.4
- ⁵ Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE BUILDING HEIGHT	ALLOWABLE BUILDING AREA	PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)			
Building Height in Stories (Table 504.4)			

- ¹ Provide code reference if the "Show on Plans" is based on Table 504.3 or 504.4.
- ² The maximum height of air traffic control towers with Table 412.3.1
- ³ The maximum height of open parking garages with Table 406.5.4

NOT A BUILDING

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
		REQ'D	PROVIDED (w/ REDUCTION)*				
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction including supporting beams and joists							
Floor Ceiling Assembly							
Column Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Column Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/Sleeping Unit Separation							
Incidental Use Separation							

NOT A BUILDING

* Indicate section number permitting reduction.

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET FROM PROPERTY LINES)	DEGREES OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)



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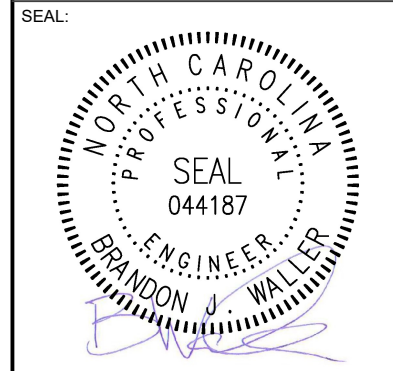
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JL	10/21/21

ATC SITE NUMBER:
21268

ATC SITE NAME:
CHALYBEATE SPRINGS NC

T-MOBILE SITE NAME:
CHALYBEATE SPRINGS

SITE ADDRESS:
512 CHALYBEATE ROAD
FUQUAY VARINA, NC 27526-6035



DATE DRAWN:	10/21/21
ATC JOB NO:	13731655_G3
CUSTOMER ID:	CHALYBEATE SPRINGS
CUSTOMER #:	5RA0165A

APPENDIX B

SHEET NUMBER: G-004	REVISION: 0
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LIFE SAFETY SYSTEM REQUIREMENTS

- Emergency Lighting: No Yes
- Exit Signs: No Yes
- Fire Alarm: No Yes
- Smoke Detection Systems: No Yes Partial _____
- Carbon Monoxide Detection: No Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: _____

- Fire and/or smoke rated wall locations (Chapter 7)
- Assumed and real property line locations (if not on the site plan)
- Exterior wall opening area with respect to distance to assumed property lines (705.8)
- Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.2)
- Occupant loads for each area
- Exit access travel distances (1017)
- Common path of travel distances (1006.2.1 & 2006.3.2(1))
- Dead end lengths (1020.4)
- Clear exit widths for each exit door
- Maximum calculated occupant load capacity each exit door based on egress width (1005.3)
- Actual occupant load for each exit door
- A separate schematic plan indicating where fire and/or roof structure is provided for purposes of occupancy separation and supporting construction and fire partition/smoke barrier.
- Location of doors with panic hardware
- Location of doors with delayed egress doors and/or delay (1010.1.9.7)
- Location of doors with electromechanical locks (1010.1.9.9)
- Location of doors equipped with panic hardware
- Location of emergency escape routes
- The square footage of each fire area
- The square footage of each smoke area
- Note any code exceptions or table notes that may have been utilized regarding the items above

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Section/Table/Note	Title

ACCESSIBLE DWELLING UNITS (SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING

(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE	
TOTAL						

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE	SPACE	WATERCLOSETS			URINALS	LAVATORIES			SHOWERS / TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
EXIST'G											
NEW											
REQ'D											

SPECIAL APPROVAL

Special approval: (Local Jurisdiction, Department of Insurance, ICC, etc., describe below)

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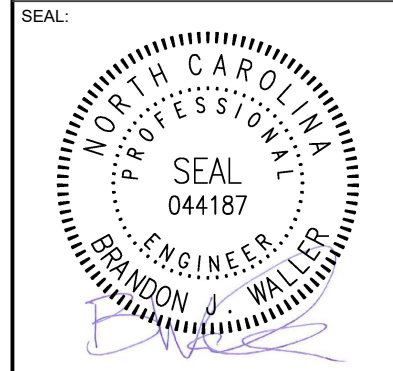
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APPENDIX B

SHEET NUMBER: G-005	REVISION: 0
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ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the North Carolina Energy Conservation Code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: No Yes (The remainder of this section is not applicable)

Exempt Building: No Yes (Provide Code or Statutory reference): _____

Climate Zone: 3A 4A 5A

Method of Compliance: Energy Code Performance Prescriptive
 ASHRAE 90.1 Performance Prescriptive
 (If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____
 Skylights in each assembly:
 U-Value of skylight: _____
 Total square footage of skylight: _____

Exterior Walls (each assembly)

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____
 Openings (windows, doors, and glazing)
 U-Value of assembly: _____
 Solar heat gain coefficient: _____
 Projection factor: _____
 Door R-Values: _____

Walls below grade (each assembly)

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____

Floors over unconditioned space (each assembly)

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____

Floors slab on grade

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____
 Horizontal/Vertical requirement: _____
 Slab Heated: _____

**2018 APPENDIX B
 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS**

STRUCTURAL DESIGN
 (PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_s) _____
 Seismic (I_e) _____

Live Loads: Roof _____ psf
 Mezzanine _____ psf
 Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Ultimate Wind Speed _____ (ASCE-7)
 Exposure Category _____

SEISMIC DESIGN CATEGORY:

Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) I II III IV
 Spectral Response Acceleration S₁ _____ %g
 Site Classification (ASCE 7) C D E F
 Data Source Presumptive Historical Data
 Basic structural system Dual w/Special Moment Frame
 Dual w/Intermediate R/C or Special Steel
 Inverted Pendulum
 Analysis Procedure: Simplified Equivalent Lateral Force Dynamic
 Architectural, Mechanical, Components anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake Wind

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) _____ psf
 Presumptive Bearing capacity _____ psf
 Pile size, type, and capacity _____

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SEAL:



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CUSTOMER #:	5RA0165A

APPENDIX B

SHEET NUMBER: **G-006** REVISION: **0**

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**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)**

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone

winter dry bulb: _____
summer dry bulb: _____

Interior design conditions

winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____

Building heating load: _____

Building cooling load: _____

Mechanical Spacing Conditioning System

Unitary

description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____

Boiler

Size category. If _____

Chiller

Size category _____ reason: _____

List equipment efficiencies: _____

**N/A
NOT A BUILDING**

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)**

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code: Prescriptive Performance
ASHRAE 90.1: Prescriptive Performance

Lighting schedule (each fixture type)

lamp type required in fixture _____
number of lamps in fixture _____
ballast type used in the fixture _____
number of ballasts in fixture _____
total wattage per fixture _____
total interior wattage specified vs. allowed (whole building or space by space) _____
total exterior wattage specified vs. allowed _____

**Additional Efficiency Package Options
(When using the 2018 NCECC; not required for _____)**

- C406.2 More Efficient Mechanical
- C406.3 Reduced Lighting Power
- C406.4 Enhanced Digital Lighting
- C406.5 On-Site Renewable Energy
- C406.6 Dedicated Outdoor Air System
- C406.7 Reduced Energy for Water Heating

**N/A
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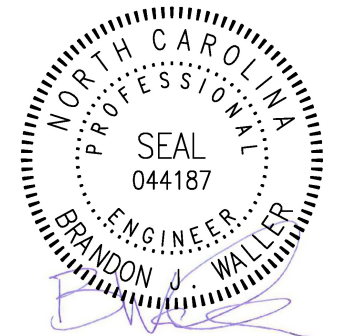
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SEAL:



DATE DRAWN:	10/21/21
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CUSTOMER #:	5RA0165A

APPENDIX B

SHEET NUMBER: **G-007** REVISION: **0**

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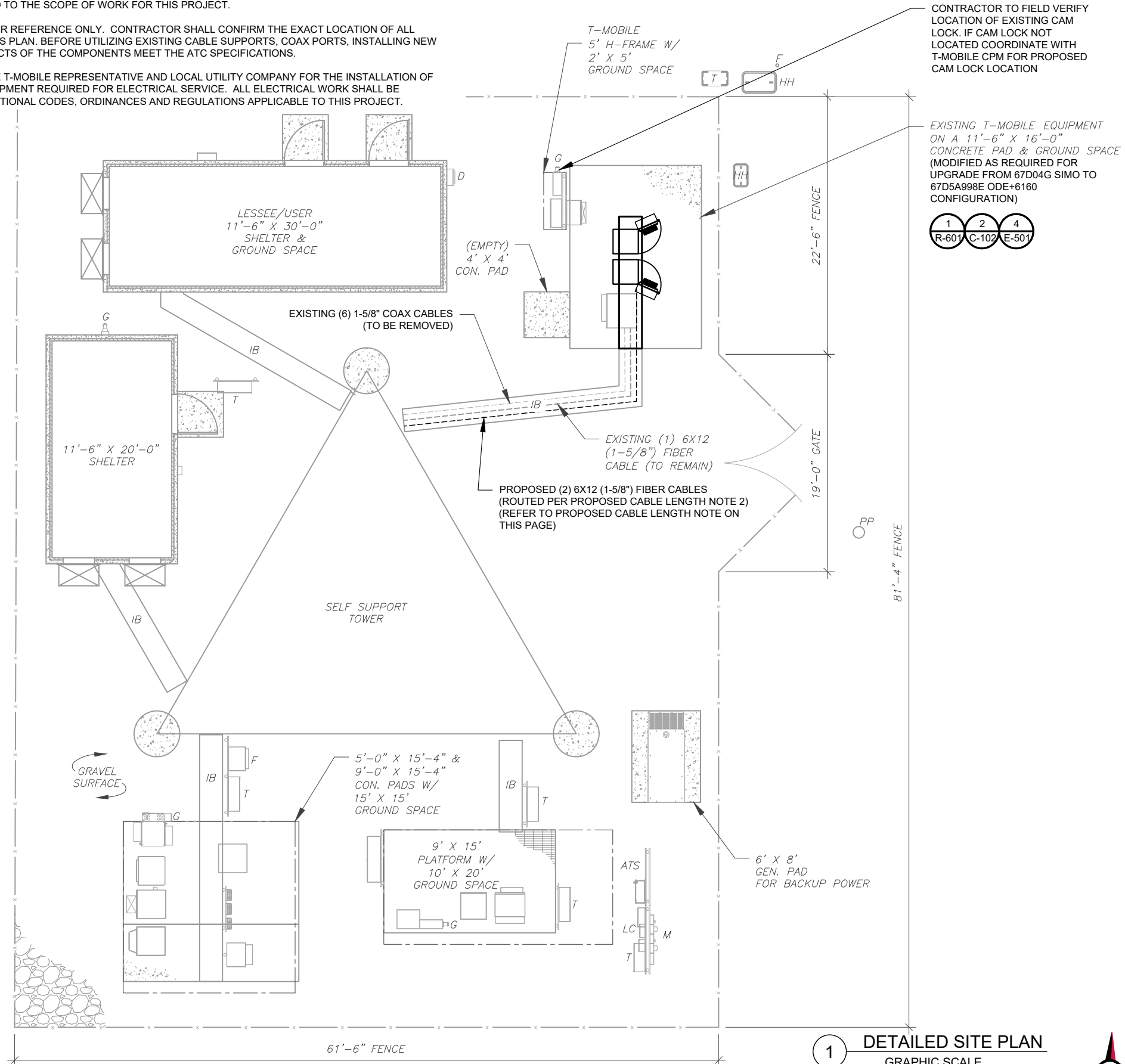
SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
x	CHAINLINK FENCE

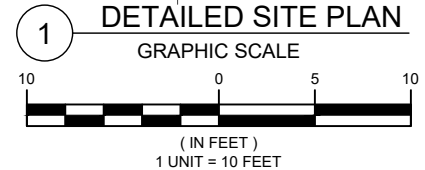
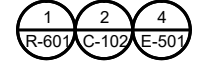
PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **340'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).



CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING CAM LOCK. IF CAM LOCK NOT LOCATED COORDINATE WITH T-MOBILE CPM FOR PROPOSED CAM LOCK LOCATION

EXISTING T-MOBILE EQUIPMENT ON A 11'-6" X 16'-0" CONCRETE PAD & GROUND SPACE (MODIFIED AS REQUIRED FOR UPGRADE FROM 67D04G SIMO TO 67D5A998E ODE+6160 CONFIGURATION)



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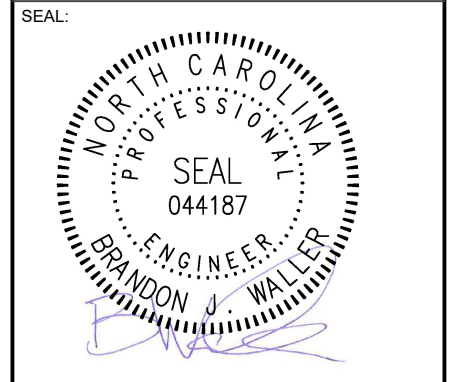
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0	FOR CONSTRUCTION	JL	10/21/21

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T-MOBILE SITE NAME:
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SITE ADDRESS:
 512 CHALYBEATE ROAD
 FUQUAY VARINA, NC 27526-6035



DATE DRAWN:	10/21/21
ATC JOB NO:	13731655_G3
CUSTOMER ID:	CHALYBEATE SPRINGS
CUSTOMER #:	5RA0165A

DETAILED SITE PLAN

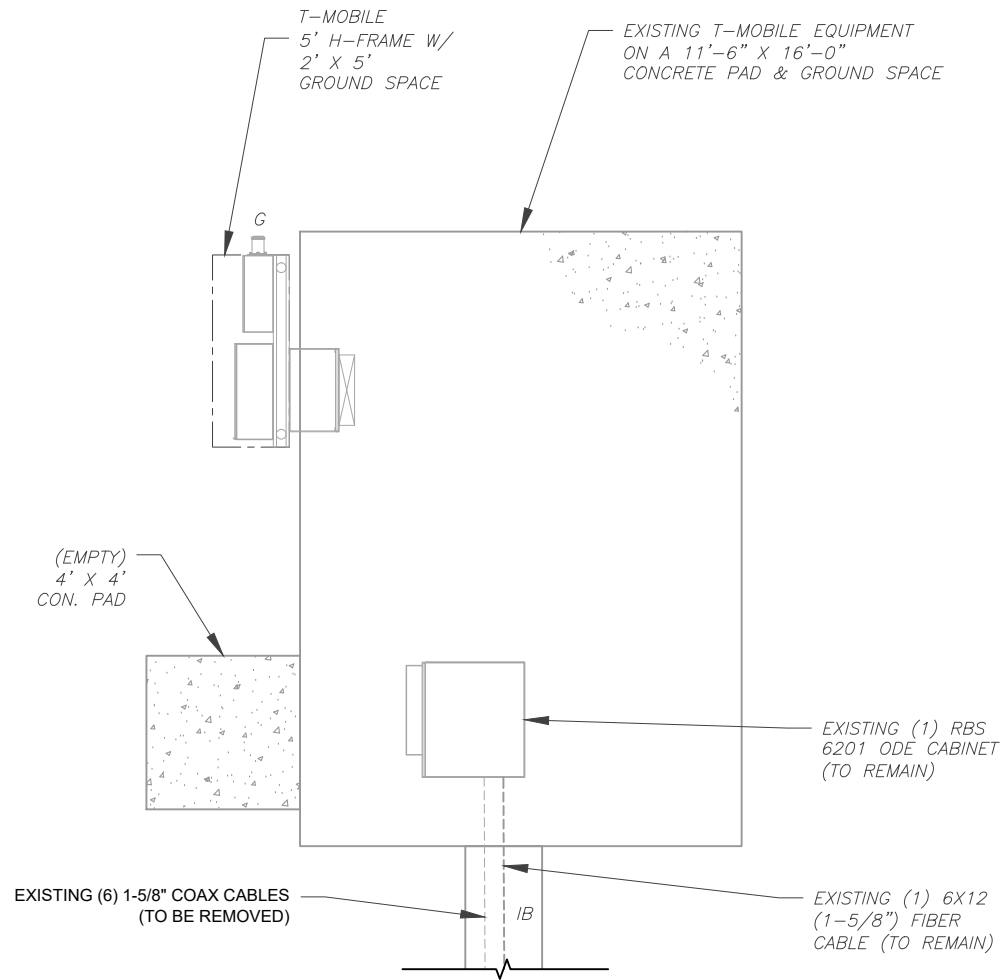
SHEET NUMBER:	REVISION:
C-101	0

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SITE PLAN NOTES:

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
4. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.

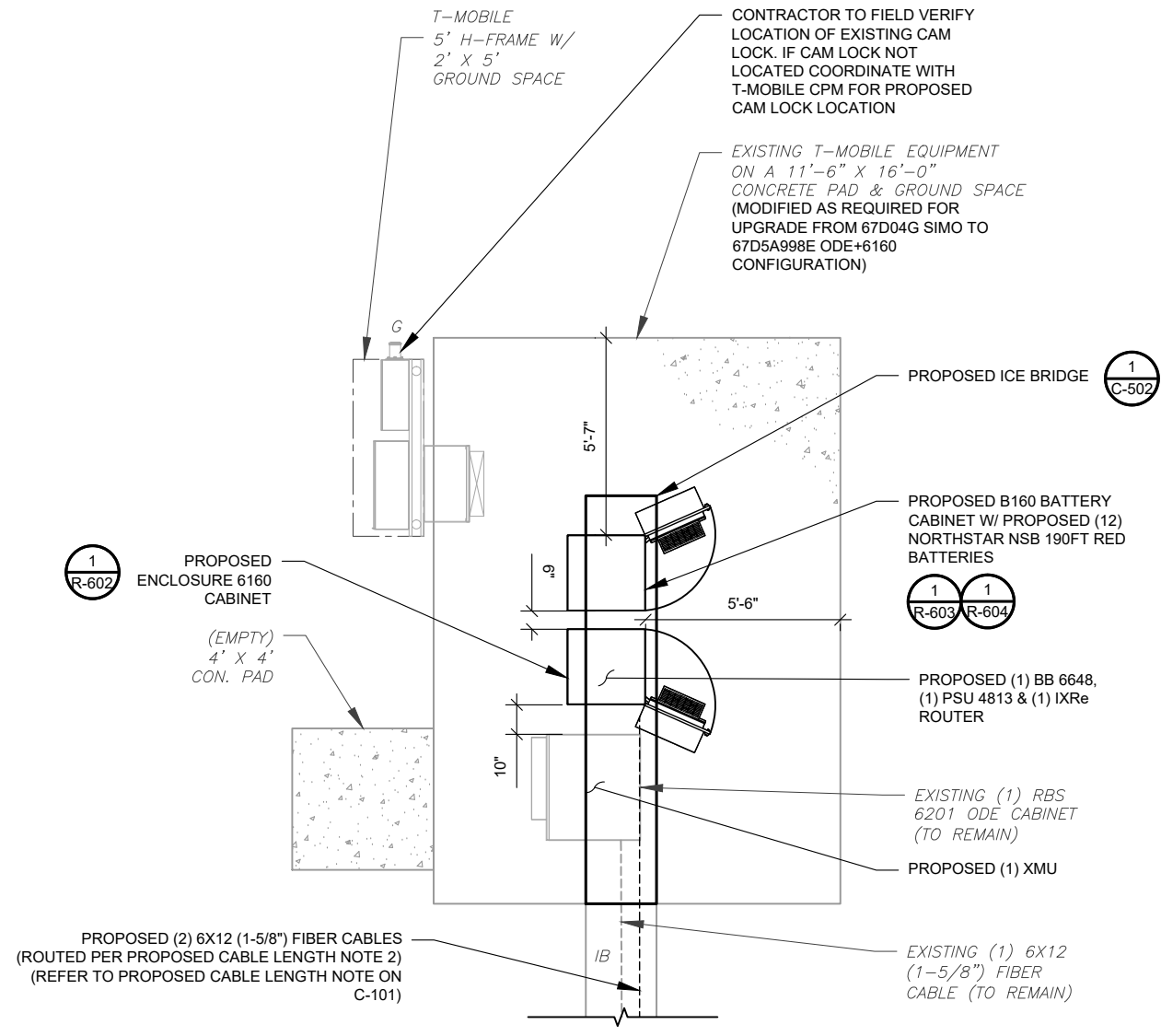
T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



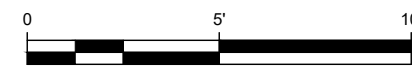
1 EXISTING GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)



2 PROPOSED GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)



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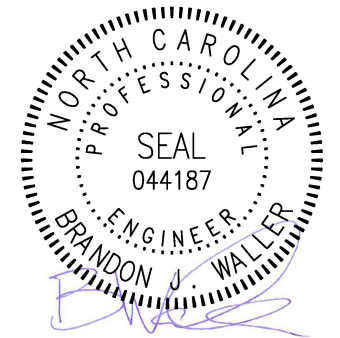
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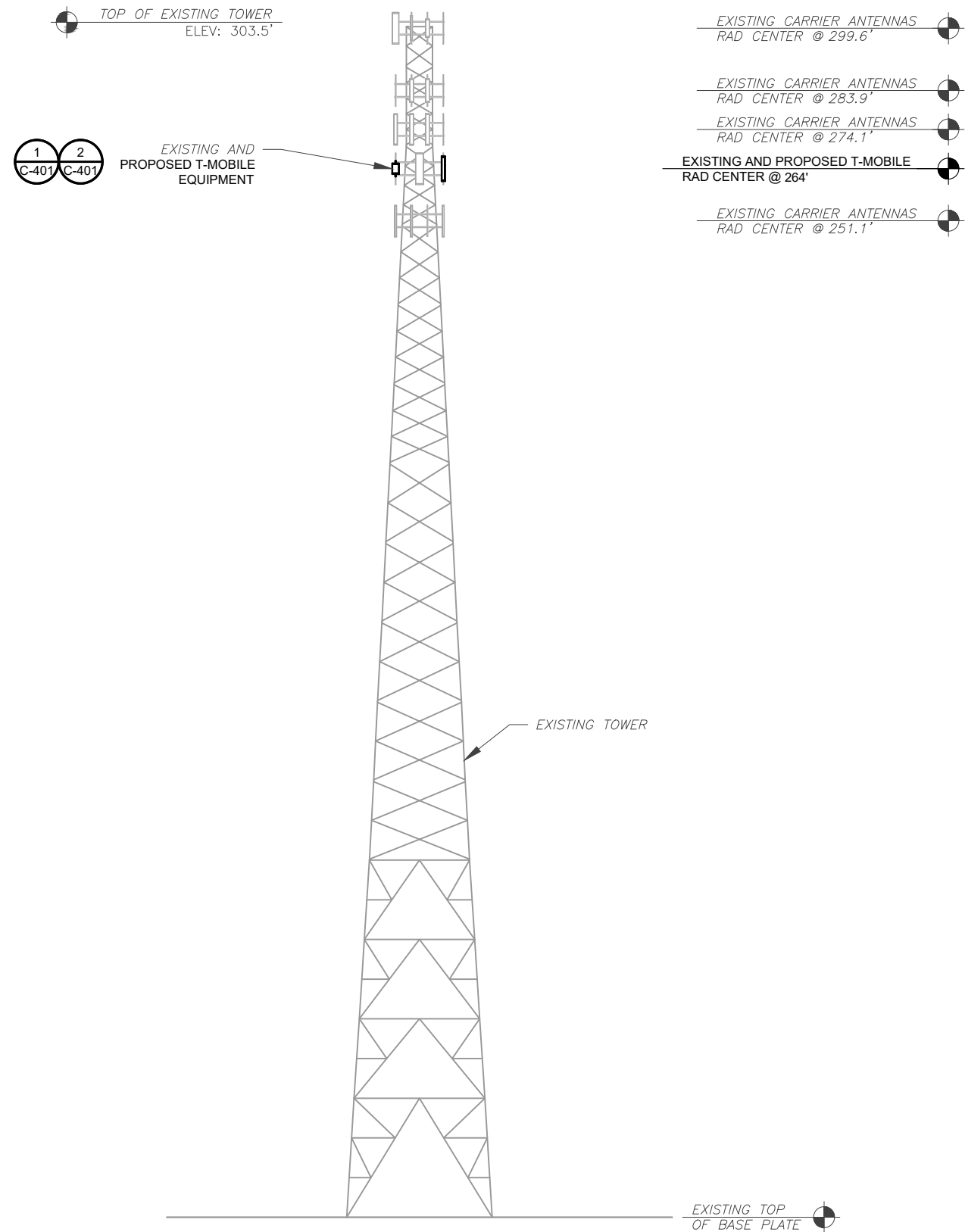


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CUSTOMER #:	5RA0165A

DETAILED GROUND
PLAN

SHEET NUMBER:	REVISION:
C-102	0

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NEITHER ATC NOR DELTA OAKS GROUP HAVE ANALYZED THE EXISTING ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.

TOWER NOTE:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
- WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
- ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

1 TOWER ELEVATION
SCALE: N.T.S.



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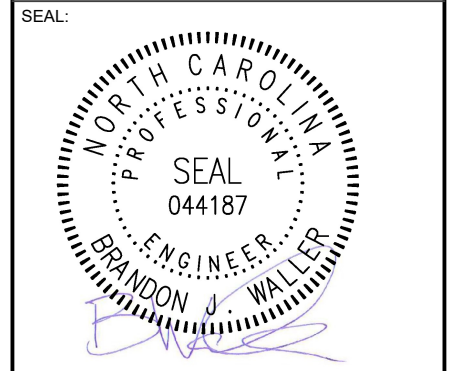
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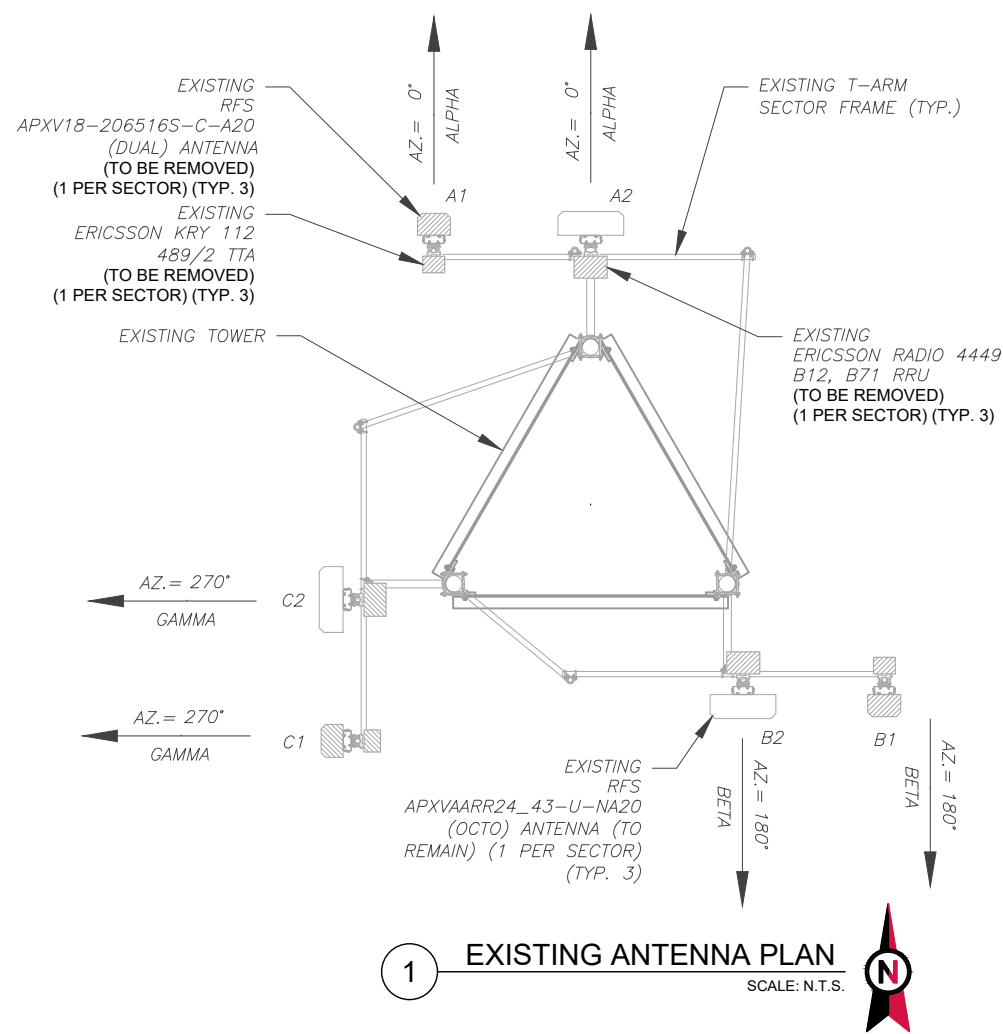


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TOWER ELEVATION

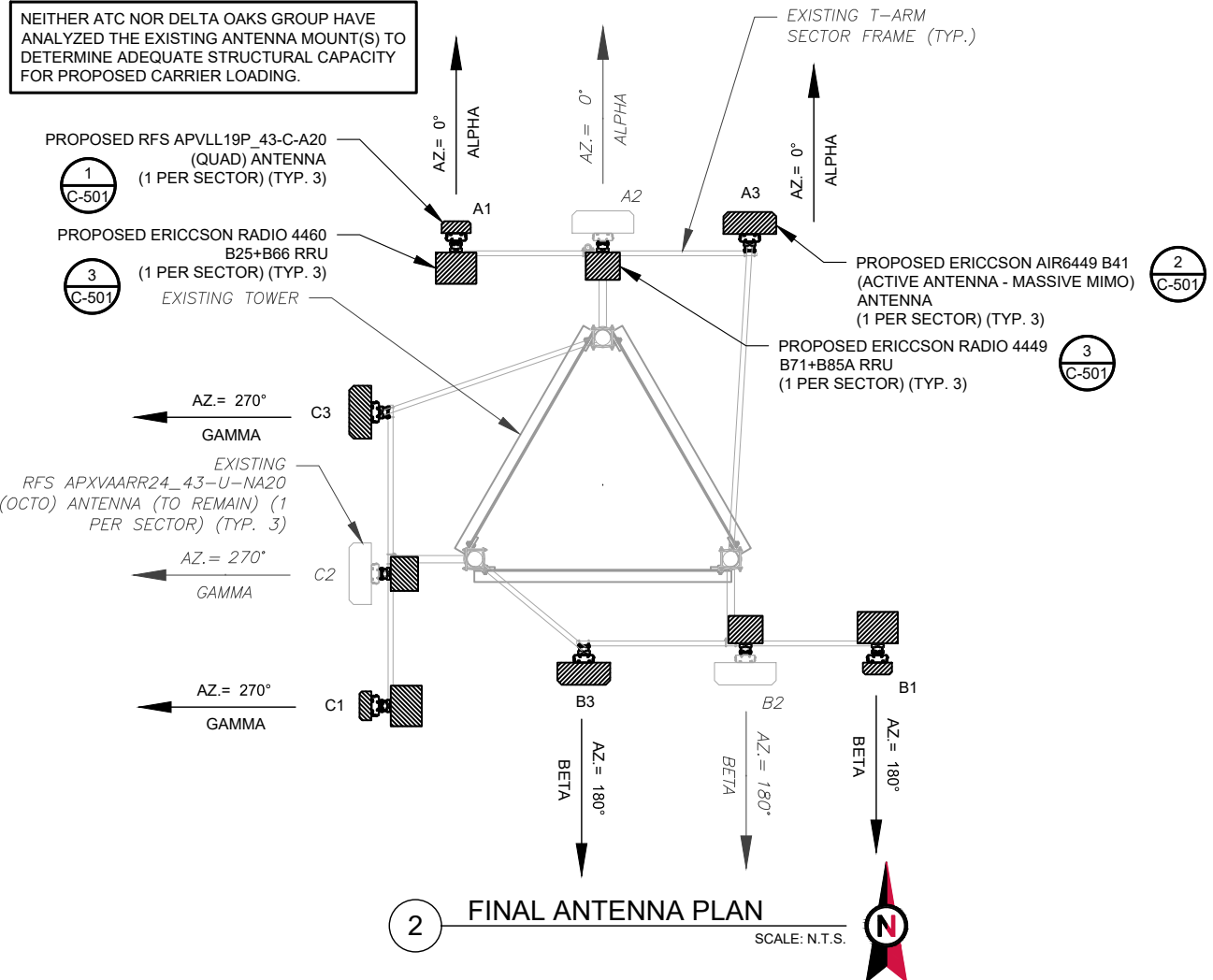
SHEET NUMBER:	REVISION:
C-201	0

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1 EXISTING ANTENNA PLAN
SCALE: N.T.S.

NEITHER ATC NOR DELTA OAKS GROUP HAVE ANALYZED THE EXISTING ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE									
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	264'	0°	A1	RFS APXV18-206516S-C-A20 (DUAL)	L1900, G1900	0°/3°	RMV	ERICSSON KRY 112 489/2	RMV
			A2	RFS APXVAARR24_43-U-NA20 (OCTO)	L600, N600	0°/2°	RMN	ERICSSON RADIO 4449 B12, B71	RMV
			A3	-	-	-	-	-	-
BETA	264'	180°	B1	RFS APXV18-206516S-C-A20 (DUAL)	L1900, G1900	0°/3°	RMV	ERICSSON KRY 112 489/2	RMV
			B2	RFS APXVAARR24_43-U-NA20 (OCTO)	L600, N600	0°/2°	RMN	ERICSSON RADIO 4449 B12, B71	RMV
			B3	-	-	-	-	-	-
GAMMA	264'	270°	C1	RFS APXV18-206516S-C-A20 (DUAL)	L1900, G1900	0°/2°	RMV	ERICSSON KRY 112 489/2	RMV
			C2	RFS APXVAARR24_43-U-NA20 (OCTO)	L600, N600	0°/3°	RMN	ERICSSON RADIO 4449 B12, B71	RMV
			C3	-	-	-	-	-	-

NOTES

- CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE									
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	264'	0°	A1	RFS APVLL19P_43-C-A20 (QUAD)	L2100, G1900, L1900	0°/3°	ADD	ERICSSON RADIO 4460 B25+B66	ADD
			A2	RFS APXVAARR24_43-U-NA20 (OCTO)	L600, N600	0°/2°	RMN	ERICSSON RADIO 4449 B71+B85A	ADD
			A3	ERICSSON AIR6449 B41 (ACTIVE ANTENNA - MASSIVE MIMO)	L2500, N2500	0°/0°	ADD	-	-
BETA	264'	180°	B1	RFS APVLL19P_43-C-A20 (QUAD)	L2100, G1900, L1900	0°/3°	ADD	ERICSSON RADIO 4460 B25+B66	ADD
			B2	RFS APXVAARR24_43-U-NA20 (OCTO)	L600, N600	0°/2°	RMN	ERICSSON RADIO 4449 B71+B85A	ADD
			B3	ERICSSON AIR6449 B41 (ACTIVE ANTENNA - MASSIVE MIMO)	L2500, N2500	0°/0°	ADD	-	-
GAMMA	264'	270°	C1	RFS APVLL19P_43-C-A20 (QUAD)	L2100, G1900, L1900	0°/3°	ADD	ERICSSON RADIO 4460 B25+B66	ADD
			C2	RFS APXVAARR24_43-U-NA20 (OCTO)	L600, N600	0°/2°	RMN	ERICSSON RADIO 4449 B71+B85A	ADD
			C3	ERICSSON AIR6449 B41 (ACTIVE ANTENNA - MASSIVE MIMO)	L2500, N2500	0°/0°	ADD	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(6) 1-5/8"	-	RMV
-	-	-	(1) 6X12 (1-5/8") FIBER	RMN

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(1) 6X12 (1-5/8") FIBER	RMN
-	-	-	(2) 6X12 (1-5/8") FIBER	ADD



DELTA OAKS GROUP
DELTA OAKS GROUP, PLLC
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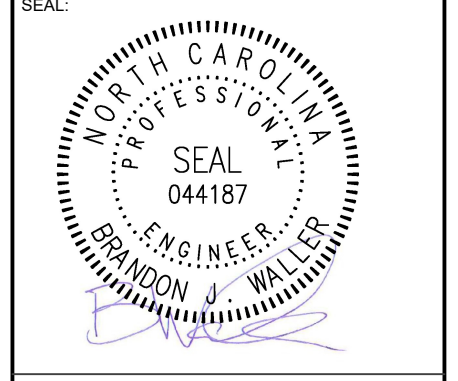
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JL	10/21/21
1			
2			
3			

ATC SITE NUMBER:
21268

ATC SITE NAME:
CHALYBEATE SPRINGS NC

T-MOBILE SITE NAME:
CHALYBEATE SPRINGS

SITE ADDRESS:
512 CHALYBEATE ROAD
FUQUAY VARINA, NC 27526-6035



T-Mobile

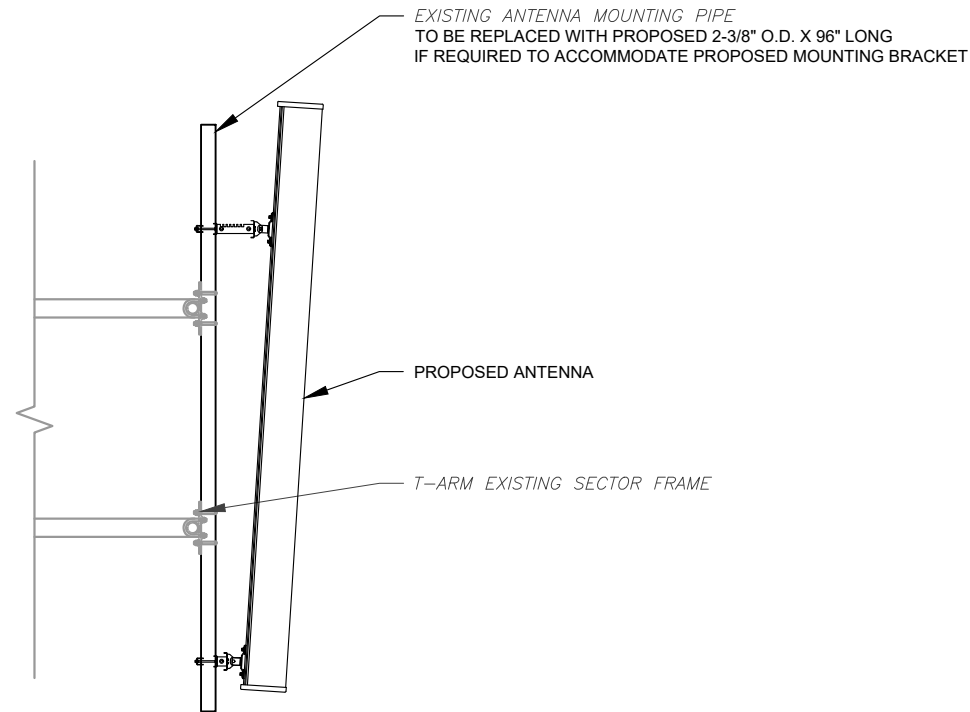
DATE DRAWN: 10/21/21
ATC JOB NO: 13731655_G3
CUSTOMER ID: CHALYBEATE SPRINGS
CUSTOMER #: 5RA0165A

ANTENNA INFORMATION & SCHEDULE

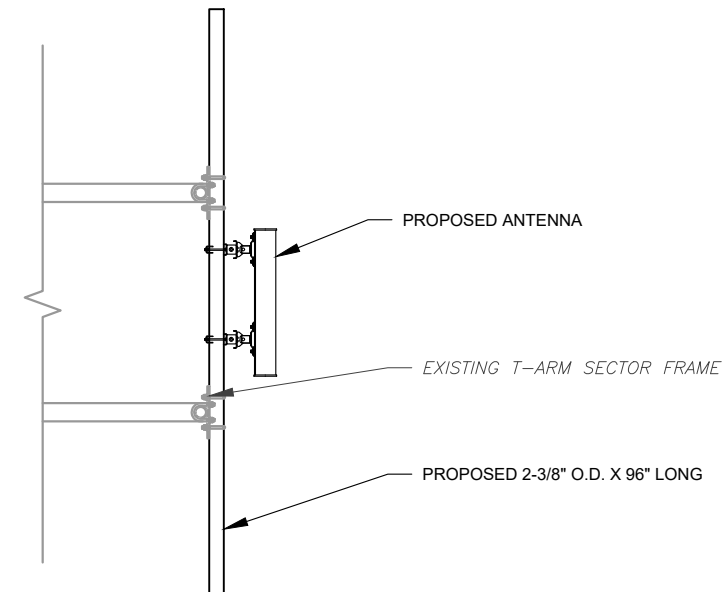
SHEET NUMBER:
C-401

REVISION:
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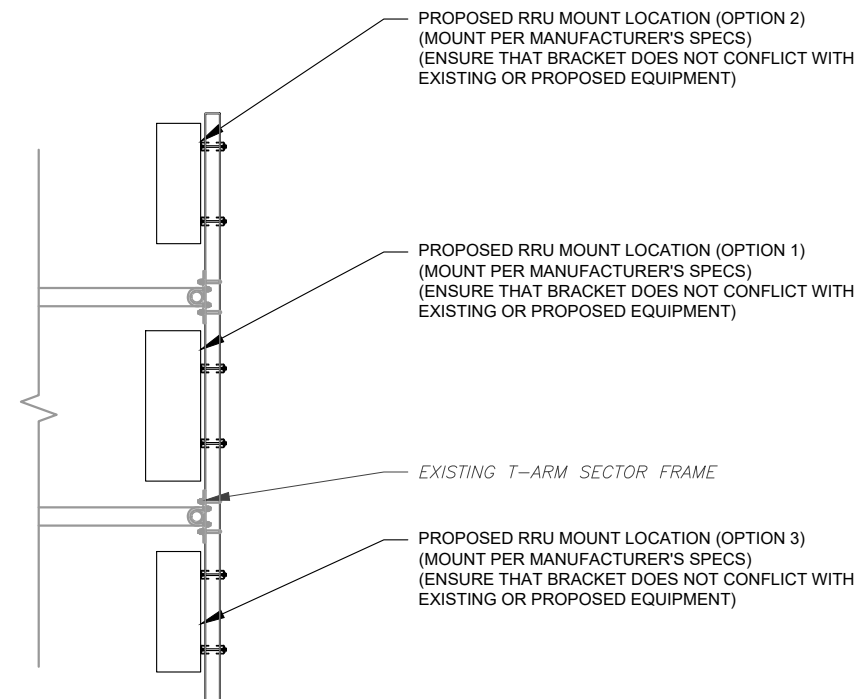
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1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



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0	FOR CONSTRUCTION	JL	10/21/21

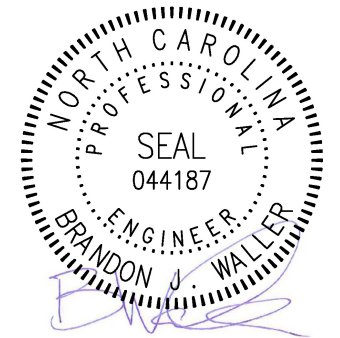
ATC SITE NUMBER:
21268

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CHALYBEATE SPRINGS NC

T-MOBILE SITE NAME:
CHALYBEATE SPRINGS

SITE ADDRESS:
512 CHALYBEATE ROAD
FUQUAY VARINA, NC 27526-6035

SEAL:

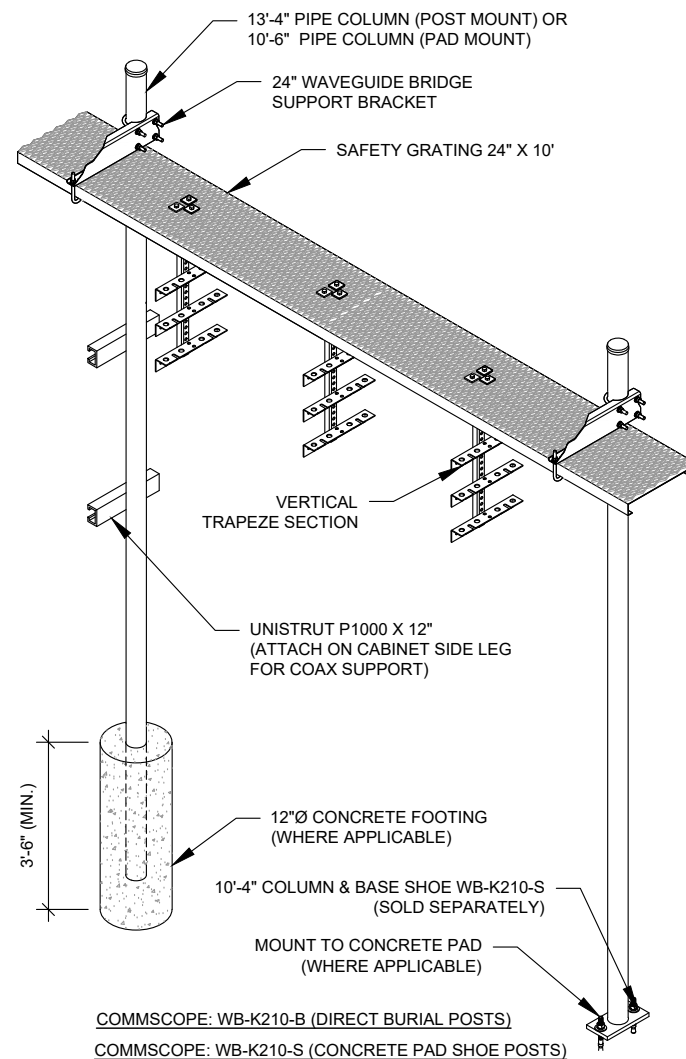


DATE DRAWN:	10/21/21
ATC JOB NO:	13731655_G3
CUSTOMER ID:	CHALYBEATE SPRINGS
CUSTOMER #:	5RA0165A

CONSTRUCTION
DETAILS

SHEET NUMBER:	REVISION:
C-501	0

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CONSTRUCTION NOTE:

1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.
2. INSTALL PER MANUFACTURES SPECIFICATION.

1 WAVEGUIDE BRIDGE KIT
SCALE: NOT TO SCALE



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0	FOR CONSTRUCTION	JL	10/21/21

ATC SITE NUMBER:
21268

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SITE ADDRESS:
512 CHALYBEATE ROAD
FUQUAY VARINA, NC 27526-6035

SEAL:

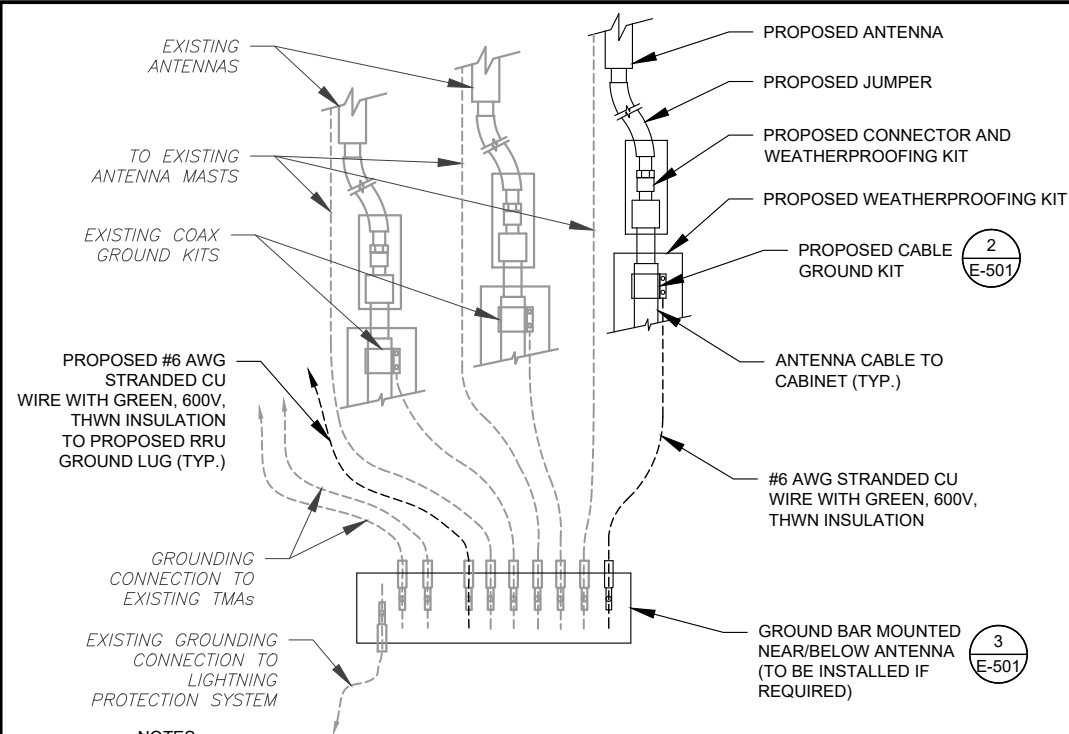


DATE DRAWN:	10/21/21
ATC JOB NO:	13731655_G3
CUSTOMER ID:	CHALYBEATE SPRINGS
CUSTOMER #:	5RA0165A

**CONSTRUCTION
DETAILS**

SHEET NUMBER:
C-502

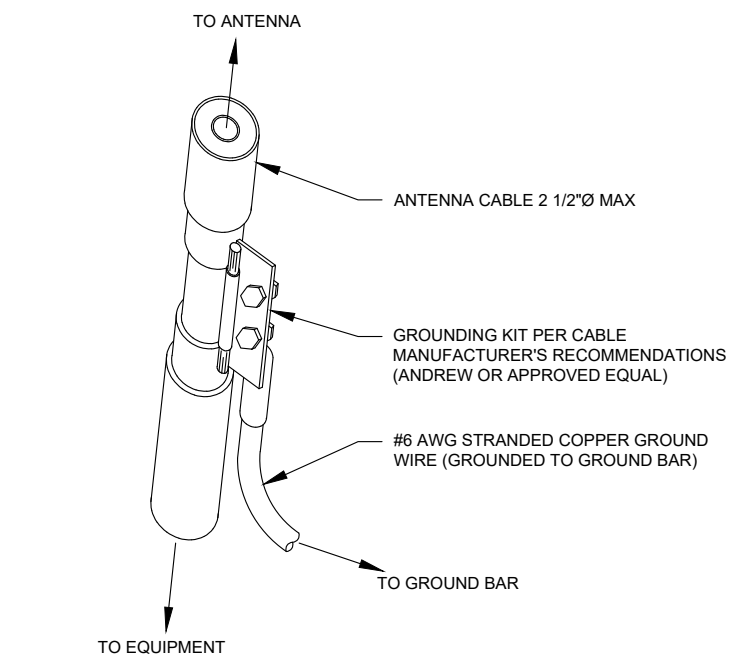
REVISION:
0



NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

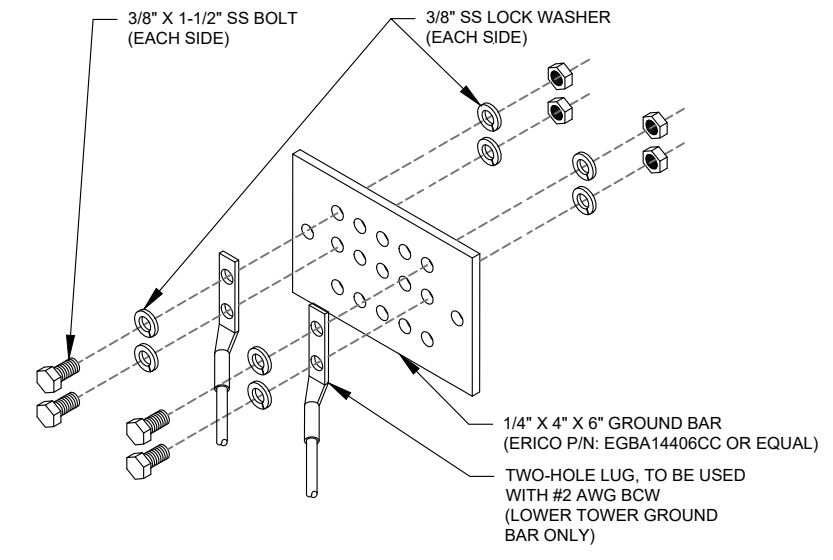
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

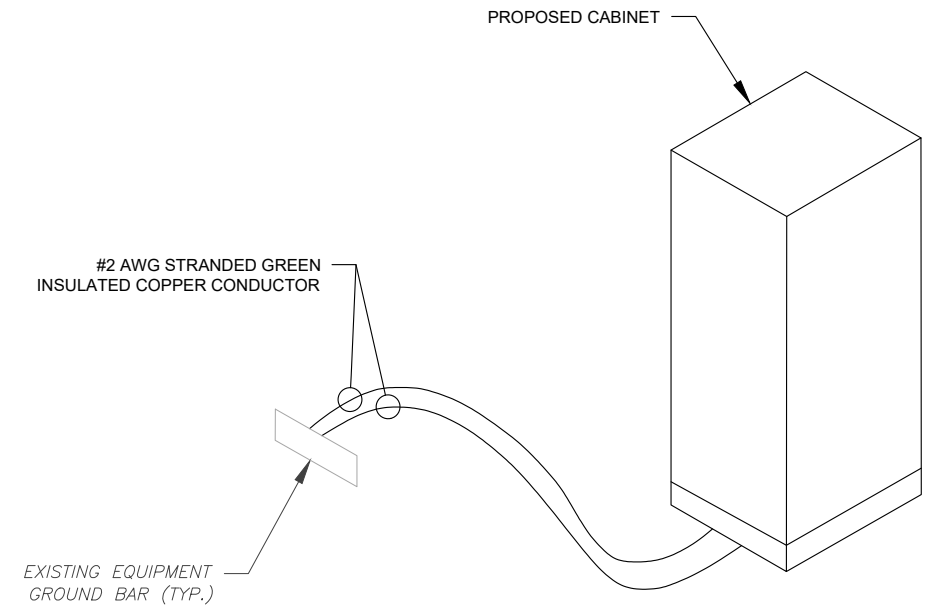
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.

ELECTRICAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
2. ATC AND DELTA OAKS GROUP HAVE NOT VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE AND LOAD CAPACITY FOR PROPOSED BREAKER. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW IN CHART.
3. FOR SPECIFIC CABINET / ANCILLARY EQUIPMENT WIRING REQUIREMENTS, THE T-MOBILE CONTRACTOR SHOULD REFERENCE DESIGN DOCUMENTS PROVIDED BY T-MOBILE FOR THIS CURRENT PROJECT CONFIGURATION, IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS & NEC STANDARDS & PRACTICES.

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	3#3 AWG	#8 AWG	1-1/4"
100/2P	3#2 AWG	#8 AWG	1-1/4"
125A/2P	3#1 AWG	#6 AWG	1-1/2"
150A/2P	3#1/0 AWG	#6 AWG	1-1/2"



4 CABINET GROUNDING DETAIL
SCALE: N.T.S.



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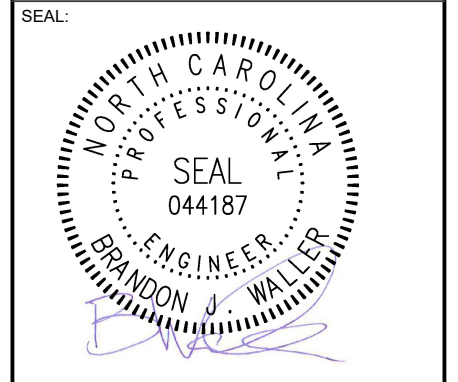
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JL	10/21/21

ATC SITE NUMBER:
21268

ATC SITE NAME:
CHALYBEATE SPRINGS NC

T-MOBILE SITE NAME:
CHALYBEATE SPRINGS

SITE ADDRESS:
512 CHALYBEATE ROAD
FUQUAY VARINA, NC 27526-6035



DATE DRAWN:	10/21/21
ATC JOB NO:	13731655_G3
CUSTOMER ID:	CHALYBEATE SPRINGS
CUSTOMER #:	5RA0165A

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

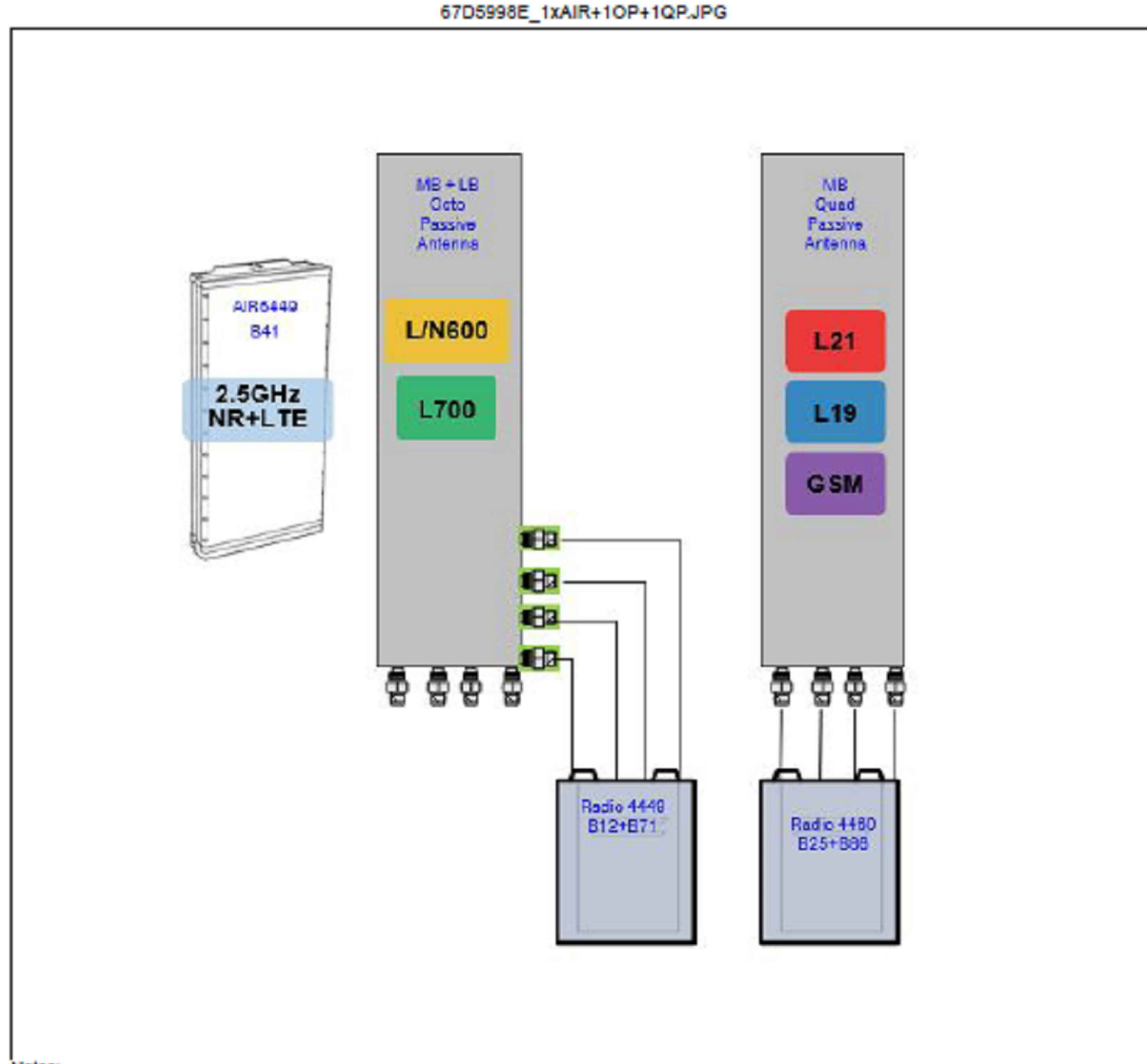
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Existing RAN Equipment	
Template: 67DD4G SIMO	
Enclosure	1
Enclosure Type	RBS 6201 ODE
Baseband	DUG20 (G1900) BB 5216 (L1900) BB 6630 (L600, N600)
Hybrid Cable System	Ericsson 6x12 HCS 4AWG 90m (L600)
Radio	RUSD1 B2 (x 6) (L1900, G1900)

Proposed RAN Equipment			
Template: 67D5A998E ODE+6160			
Enclosure	1	2	3
Enclosure Type	RBS 6201 ODE	Enclosure 6160	B160
Baseband	DUG20 (G1900) BB 6630 (L600, N600) BB 5216 (L2100, L1900)	BB 6648 (L2500, N2500)	
Hybrid Cable System	Ericsson 6x12 HCS 4AWG 90m (x 3)	PSU 4813 vR2A (KIT)	
Multiplexer	XMU		
Radio	RUSD1 B2 (x 6)		
Transport System		CSR IXRe V2 (Gen2)	

RAN Scope of Work:
 Install (1) BB6648, (1) PSU4813, (1) IXRe Router, (2) 6x12 4AWG 90m & (1) XMU.

1 CABINET CONFIGURATION
 SCALE: NOT TO SCALE



Notes:

2 ANTENNA CONFIGURATION
 SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER: R-601
 REVISION: 0

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Enclosure 6160 AC

The Enclosure 6160 is a multi-purpose site cabinet designed to support a multitude of equipment such as ERS Baseband, Transport, Li-Ion battery and 3PP vendor equipment. It also provides a highly capable power system and battery back-up - all in a streamlined design and minimized footprint to support cost efficient expansion of mobile broadband.

Being an all-in-one enclosure, the Enclosure 6160 is a very fitting choice for all types of sites where the capacity need is large or room for future expansion is needed. It is ideally used for modernizing existing sites or in greenfield scenarios to match both current and future needs.

With a robust design, IP65 compliance and a sealed Heat Exchanger (HEX) climate system the Enclosure 6160 ensures optimal environmental protection of the active equipment - enabling them for a long-lasting service. The complete system is also integrated and verified for the entire Ericsson Radio System and ensures best-in-class service.

The power system offers 31,5kW of power in total and provides 24kW of -48V DC power for both internal and external consumers.

The equipment space allows 19U of rack space ensuring well enough capacity for existing need and future expansion.

One of the main advantages of the Enclosure 6160 is its default integration with ENM - allowing for advanced remote monitoring and control such a fault management (alarms), inventory management and performance measurements. The cabinet also provides an open O&M interface for integration to 3PP O&M systems.



Preliminary technical specification for Enclosure 6160 AC

CAPACITY

Rack space user equipment	19U (19" rack)
Hardware capabilities	Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option

MECHANICAL SPECIFICATION

Weight	145 kg (excluding active equipment) 320 lbs (excluding active equipment)
Dimension (H x W x D)	1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame)
Base frame height	150 mm 6 in.
Mounting position	Ground
Enclosure material	Aluminum
Color	Power paint NCS 2002-B
Door	Front access
Rack type	19" (IEC 60297-3-100)
Locking type	Pad lock or Cylinder

POWER SYSTEM

Input voltage	3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC
Input power	<33kW
Output load (-48VDC)	24kW
Total capacity (-48VDC)	31.5kW
AC SPD	Class 2/Type 2
DC SPD	Class 2/Type 2
PSU Slots	9x
Service outlet	Optional
Priority load	8x Circuit Breaker
LLVD 1	6x Circuit Breaker
LLVD 2	6x Circuit Breaker
CB ratings	3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A
Battery Interface	2x Circuit Breaker
Battery Circuit Breaker rating	125A 2pol (200A)
PSU capacity	3500W

SUPPLEMENTAL

SHEET NUMBER:

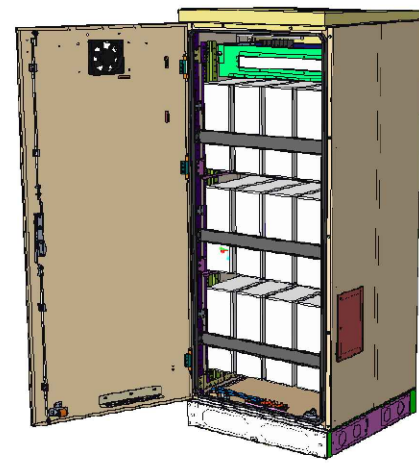
R-602

REVISION:

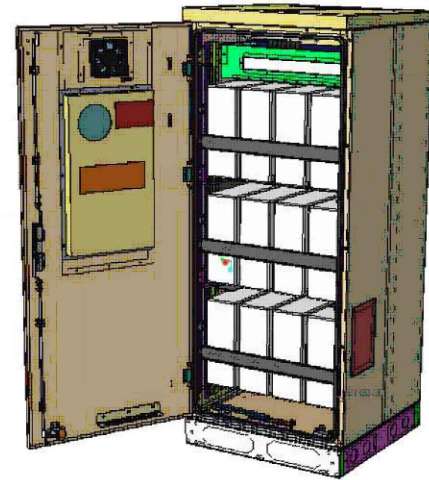
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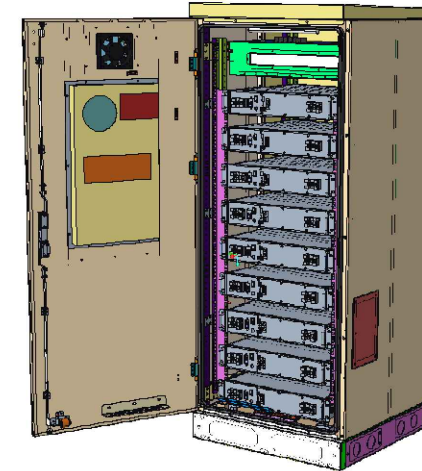
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

PA1 | 2019-02-03 | Ericsson Confidential | Page 1

Enclosure B160

Capacity

- VRLA 12V: 100Ah / 150Ah / 170Ah / 190Ah / 210Ah
- Li-Ion: 24U 19" / 23"
- Sodium-Nickel: 3x FIAMM

Electrical specification

- DC Output: -48VDC/200A
- Battery breakers: 2x 125/2p
- Alarms: Door open, Climate failure, MCB Connection

Mechanical specification

- Weight: 134kg
- Dimensions: 63 x 26 x 26 in. (incl. Base frame)
- Base frame height: 6 in.
- Material: Galvanized steel (180g/m²)
- Color: Powder paint NCS 2002-B
- Door: Front access
- Locking type: Pad lock / cylinder

Environmental specification

- Ingress protection: VRLA/Sodium IP44
Li-Ion IP55
 - Relative humidity: 15-100%
- ## Climate system
- Air Conditioner
 - Fan type: DC
 - Cooling capacity: 500W @L35/L35
 - Convection cooling
 - Emergency fan

PA1 | 2019-02-03 | Ericsson Confidential | Page 2

SUPPLEMENTAL

SHEET NUMBER:
R-603

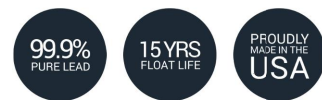
REVISION:
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NSB 190FT RED

Pure Lead - Long Life



The NSB RED Battery® delivers long life for reliable and unreliable grid conditions.

- Pure lead electrochemistry greatly increases temp and corrosion resistance, while reducing component aging
- Thin plates deliver large surface area, high power density and low resistance
- Design life 15+ years at 20°C (68°F)
- EUROBAT design life definition: Very Long Life (12+ years)
- Fast recharging
- Operating temperature range -40°C to +65°C (-40°F to 149°F)
- State-of-the-art automated manufacturing ensures consistency and reliability
- Shelf life of up to 24 months
- Advanced 3 stage terminal design to ensure leak-free operation - brass terminals provide maximum performance
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
- Non-halogenated, thermally sealed plastic casing
- Flame retardant (UL 94 V0) and LOI of at least 28%
- Approved as non-hazardous cargo for ground, sea, and air transport - DOT 49CFR173.159(d), (i) and (ii)

Release date: 2017-10-06



northstarbattery.com

NSB 190FT RED Nominal Technical Specifications

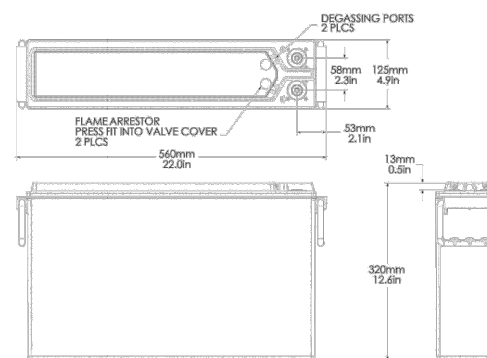
Dimensions

Height	12.6 in	Width	4.9 in
Length	22 in	Weight	123 lbs

Electrical

Terminal	Female M8 x 1.25
Terminal torque	8.0 Nm (71 in-lbs)
1 hr capacity to 1.70VPC @ 20/25°C (68/77°F)	123 / 129 Ah
3 hr capacity to 1.75VPC @ 20/25°C (68/77°F)	160 / 164 Ah
8 hr capacity to 1.75VPC @ 20/25°C (68/77°F)	183 / 186 Ah
10 hr capacity to 1.80VPC @ 20/25°C (68/77°F)	187 / 190 Ah
Float voltage @ 20/25°C (68/77°F)	2.28 / 2.27 VPC
Impedance (1Khz)	2.8 mΩ @ 25°C (77°F)
Conductance	1900 S
Short circuit current	5000 A
Operation temperature range	-40°C to +65°C
Nominal voltage	12 V

Technical Drawing



All NorthStar batteries are compliant with: Telcordia SR4228, IEC 60896; Bellcore GR-63-Core, Issue 1; British, German, and Russian telecom standards; UL approved and UN2800 certified. NorthStar is registered to ISO 9001 and ISO 14001.

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Kuala Lumpur, Malaysia
asia@northstarbattery.com
Tel: +60 3 6419 0711

Release date: 2017-10-06

SUPPLEMENTAL

SHEET NUMBER:

R-604

REVISION:

0

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