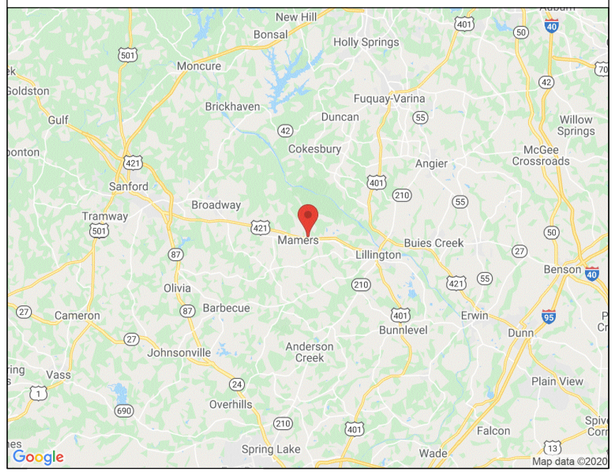
LOCATION MAP



SBA

T-Mobile®

SITE NAME: MAMERS
SITE NUMBER: NC40177-T

SITE NAME: L-SPRINT RA73XC047
SITE NUMBER: 5RA0821A
DESCRIPTION: 67D5A97DB_B25
SPRINT KEEP
190' RAD CENTER

PROJECT DIRECTORY

APPLICATION/
PROPERTY OWNER: SBA COMMUNICATIONS CORPORATION
8051 CONGRESS AVE.
BOCA RATON, FL 33487-2797
MACKENZIE CLIFFORD
MCLIFFORD@SBASITE.COM
704.527.0003 x2106

ENGINEERING: P. MARSHALL & ASSOCIATES
3545 WHITEHALL PARK DRIVE SUITE 450
CHARLOTTE, NORTH CAROLINA 28273
TREVOR MCALLISTER
(E) TMCALLISTER@PMASS.COM
(P) 478-542-3291

CONSTRUCTION: P. MARSHALL & ASSOCIATES
3545 WHITEHALL PARK DRIVE SUITE 450
CHARLOTTE, NORTH CAROLINA 28273
MARK MINTON
(E) MMINTON@PMASS.COM
(P) 865-556-5283

CALL BEFORE YOU DIG

CALL NORTH CAROLINA
ONE CALL
(800) 632-4949
CALL 3 WORKING DAYS
BEFORE YOU DIG!

811

PROJECT SUMMARY

SCOPE OF WORK

PROPOSED WORK WILL CONSIST OF PREPARATION AND INSTALLATION OF CELLULAR COMMUNICATION CARRIER EQUIPMENT, WHERE ALL WORK SHALL BE CONTAINED WITHIN COMPOUND & SHALL NOT ADVERSELY IMPACT THE SURROUNDING ADJACENT PARCELS. NO GRADING IS REQUIRED. NO NEW BUILDING BEING CONSTRUCTED, AND NO ELECTRICAL SERVICE UPGRADE IS REQUIRED. ALL PROPOSED CONSTRUCTION WILL BE CONTAINED WITHIN THE LIMITS OF THE EXISTING FENCED TELECOM COMPOUND OR WITHIN PROPOSED UTILITY EASEMENT. WORK WILL INCLUDE, BUT NOT LIMITED TO; ANTENNA SWAP & INSTALL, MOUNT WORK, CABLE REMOVAL/ INSTALLATION, AND CABINET INSTALLATION WITHIN EXISTING EQUIPMENT LEASE AREA.

CODES

ALL CONSTRUCTION SPECIFIED ON DOCUMENTS SUBMITTED FOR BUILDING PERMIT SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING & ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES :

- 2018 NORTH CAROLINA BUILDING CODE (2015 IBC)
- 2018 NORTH CAROLINA FIRE CODE
- 2018 NORTH CAROLINA PLUMBING CODE
- 2018 NORTH CAROLINA MECHANICAL CODE
- 2018 NORTH CAROLINA ENERGY CONSERVATION CODE
- 2017 NORTH CAROLINA ELECTRICAL CODE - NFPA 70

ANSI/ TIA

- TIA-222-G, TIA-598-C, TIA-6087-B, TIA-569-B, TIA-568-C
- TIA-1019-A

SITE DESIGN SUMMARY:

- WIND LOAD DESIGN: 117___mph
- EXPOSURE CATEGORY: B_____
- OCCUPANCY: U_____
- CONSTRUCTION TYPE: II-A___

- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED.
- FACILITY HAS NO SANITARY OR POTABLE WATER
- THERE IS "NO EMERGENCY RESPONSE EQUIPMENT ON THE TOWER AND EXISTING &/OR PROPOSED EQUIPMENT WILL NOT INTERFERE WITH COUNTY EMERGENCY COMMUNICATIONS AND THAT, IF SUCH, INTERFERENCE IS FOUND TO EXIST, THEN APPLICANT WILL TAKE WHATEVER STEPS NECESSARY TO CORRECT INTERFERENCE."

FEMA PANEL:
THIS SITE IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN PER FIRM PANEL: 3720062000J. DATED: 10/03/2006.

SITE SUMMARY

SITE ADDRESS:	40 RAVEN ROCK RD LILLINGTON, NC 27546
SBA NUMBER:	NC40177-T
SBA NAME:	MAMERS
TOWER TYPE:	MONOPOLE
COMPANY:	SBA
CARRIER:	T-MOBILE
TENANT ID/NAME:	5RA0821A

JURISDICTION:	HARNETT COUNTY
PARCEL #:	130620009702
ZONING:	RA-30
ACREAGE:	
(E) IMPERVIOUS:	3600 ± SQFT.
(P) IMPERVIOUS:	0 SQFT.
COMPOUND SIZE:	3600 ± SQFT.

UTILITIES:

POWER COMPANY: SOUTH RIVER EMC

TELCO COMPANY: CENTURY LINK

SITE LATITUDE(NAD83): 35.41925 (35° 25' 9.2994")
SITE LONGITUDE(NAD83): -78.919083 (-78° 55' 8.6988")

GND ELEVATION (NAVD88): 292'
TOWER HEIGHT (AGL.) 195'

SHEET INDEX

NORTH CAROLINA PROFESSIONAL SEAL 024136 ENGINEER PATRICK W MARSHALL
12/30/20

T-Mobile

SBA COMMUNICATIONS CORP.
5900 BROKEN SOUND PKWY NW
BOCA RATON, FL 33487

P. MARSHALL & ASSOCIATES

LOCATION:
40 RAVEN ROCK RD
LILLINGTON, NC 27546

SBA:
MAMERS
NC40177-T

T-MOBILE:
L-SPRINT RA73XC047
5RA0821A

SITE TYPE:
195' MONOPOLE
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.41925
LONG: -78.919083

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0042

TITLE SHEET & PROJECT INFORMATION

T-1

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: MT MORIAH -5RA0039A

Address: 2883 MT MORIAH ROAD DURHAM, NC 27707 Zip Code _____

Owner/Authorized Agent: MACKENZIE CLIFFORD Phone # (704) 527 - 0003 x 2106 E-Mail MCLIFFORD@SBASITE.COM

Owned By: ☐ City/County ☒ Private ☐ State

Code Enforcement Jurisdiction: ☐ City_____ ☒ County DURHAM COUNTY ☐ State

CONTACT: _____

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural				( )	
Civil	P. MARSHALL & ASSOCIATES	PATRICK MARSHALL	024136	(678) 280-2325	
Electrical				( )	
Fire Alarm				( )	
Plumbing				( )	
Mechanical				( )	
Sprinkler-Standpipe				( )	
Structural				( )	
Retaining Walls >5' High				( )	
Other	P. MARSHALL & ASSOCIATES	TREVOR MCALLISTER		(478) 542-3291	TMCALLISTER@PMASS.COM

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

2018 NC BUILDING CODE: ☐ New Building ☐ Shell/Core ☐ 1st Time Interior Completions
☒ Addition ☐ Phased Construction – Shell Core

2018 NC EXISTING BUILDING CODE: ☐ Prescriptive ☒ Alteration Level I ☐ Historic Property
(check all that apply) ☐ Repair ☐ Alteration Level II ☐ Change of Use
☐ Chapter 14 ☐ Alteration Level III

CONSTRUCTED: (date) _____ **CURRENT OCCUPANCY(S)** (Ch. 3): _____

RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3): _____

OCCUPANCY CATEGORY (Table 1604.5): **Current:** UTILITY **Proposed:** UTILITY

BASIC BUILDING DATA

Construction Type: ☐ I-A ☒ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ I-B ☐ II-B ☐ III-B ☐ V-B

Sprinklers: ☒ No ☐ Partial ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☒ No Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Primary Fire District: ☒ No ☐ Yes **Flood Hazard Area:** ☐ No ☐ Yes

Special Inspections Required: ☐ No ☐ Yes

GROSS BUILDING AREA TABLE

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor			
Basement			
TOTAL			

ALLOWABLE AREA

Primary Occupancy Classification(s):

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-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-1 Condition ☐ 1 ☐ 2
I-2 Condition ☐ 1 ☐ 2
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☒

Accessory Occupancy Classification(s): _____ _____

Incidental Uses (Table 509): _____ _____

This separation is not exempt as a Non-Separated [illegible]s).

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

Special Provisions: (Chapter 5 – List Code _____

Mixed Occupancy: Select one Se[illegible] _____

Select one

Actual Area of Oc[illegible] *[illegible]of Occupancy B* ≤ 1
Allowable Area o[illegible] *Area of Occupancy B*

_____ _____ + ... = _____ ≤ 1.00

N/A NOT A BUILDING

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]

[1] Frontage area increases from Section 506.2 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)

[2] Unlimited area applicable under conditions of Section 507.

[3] Maximum Building Area = total number of stories in the building x D (maximum3 stories) (506.2).

[4] The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.

[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

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T-MOBILE:
L-SPRINT RA73XC047
5RA0821A

SITE TYPE:
195' MONOPOLE
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.41925
LONG: -78.919083

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0042

APPENDIX B

T-1A

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)			
Building Height in Stories (Table 504.4)			

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/_____* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
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							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns 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							

* Indicate section number permitting reduction

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 REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACC… REGULAR W… 5' ACCE…	…ED …H …CESS …E	TOTAL # ACCESSIBLE PROVIDED
TOTAL					

…UIREMENTS
…02.1)

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

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

PERCENTAGE OF WALL OPENING CALCULATIONS

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

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting:	☐ Yes	☐ No
Exit Signs:	☐ Yes	☐ No
Fire Alarm:	☐ Yes	☐ No
Smoke Detection Systems:	☐ Yes	☐ No
Carbon Monoxide Detection:	☐ Yes	☐ No

LIFE SAFETY PLAN REQUIREM…

Life Safety Plan Sheet #: _____

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if no…
- ☐ Exterior wall opening area with respect to …
- ☐ Occupancy Use for each area as it rel… …1.2)
- ☐ Occupant loads for each area
- ☐ Exit access travel distance…
- ☐ Common path of trav…
- ☐ Dead end lengths (…
- ☐ Clear exit widths for …
- ☐ Maximum calculated o… …xit door can accommodate based on egress width (1005.3)
- ☐ Actual occupant load for …
- ☐ A separate schematic plan i… …re fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separa…
- ☐ Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (202)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy 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: Select one

Exempt Building: Select one Provide code or statutory reference:

Climate Zone: Select one

Method of Compliance: Select one
(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 skylights in each asse…

Exterior Walls (each assembly)
Description of assembly:
U-Value of total assembl…
R-Value of insulation…
Openings (windo…
U-V…
___
_____

Walls below grade
Description o… _____
U-Value of tota… _____
R-Value of insul… _____

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: _____

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SBA:
MAMERS
NC40177-T

T-MOBILE:
L-SPRINT RA73XC047
5RA0821A

SITE TYPE:
195' MONOPOLE
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.41925
LONG: -78.919083

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0042

APPENDIX B

T-1B

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON SHEET 1 OR 2 OF THE STRUCTURAL SHEETS)

DESIGN LOADS:

Importance Factors: Wind (I_W) _____
Snow (I_S) _____
Seismic (I_E) _____

Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____

Ground Snow Load: _____ psf

Wind Load: Basic Wind S
Exposur

N/A NOT A BUILDING

SEISMIC DESIGN CAT ☐ B ☐ C ☐ D
Provide the following Seism
Occupancy Catego ☐ I ☐ II ☐ III ☐ IV
Spectral Response Ac _____%g S_1_____%g
Site Classification (AS ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data ource: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system (check one)
☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ 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 _____

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: _____

N/A NOT A BUILDING

Building heating load:

Building cooling load: ___

Mechanical Spacing Conditioni
Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category. If oversized, state reason.: _____
Chiller
Size category. If oversized, state reason.: _____

List equipment efficiencies: _____

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: Select one

Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixt
number of ballasts in fi
total wattage per fi
total interior wattage .e building or space by space)
total exterior wattage

N/A NOT A BUILDING

Additional Prescriptive Complia
☐ 506.2.1 More Efficient M chanical Equipment
☐ 506.2.2 Reduced Lighting Power Density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems

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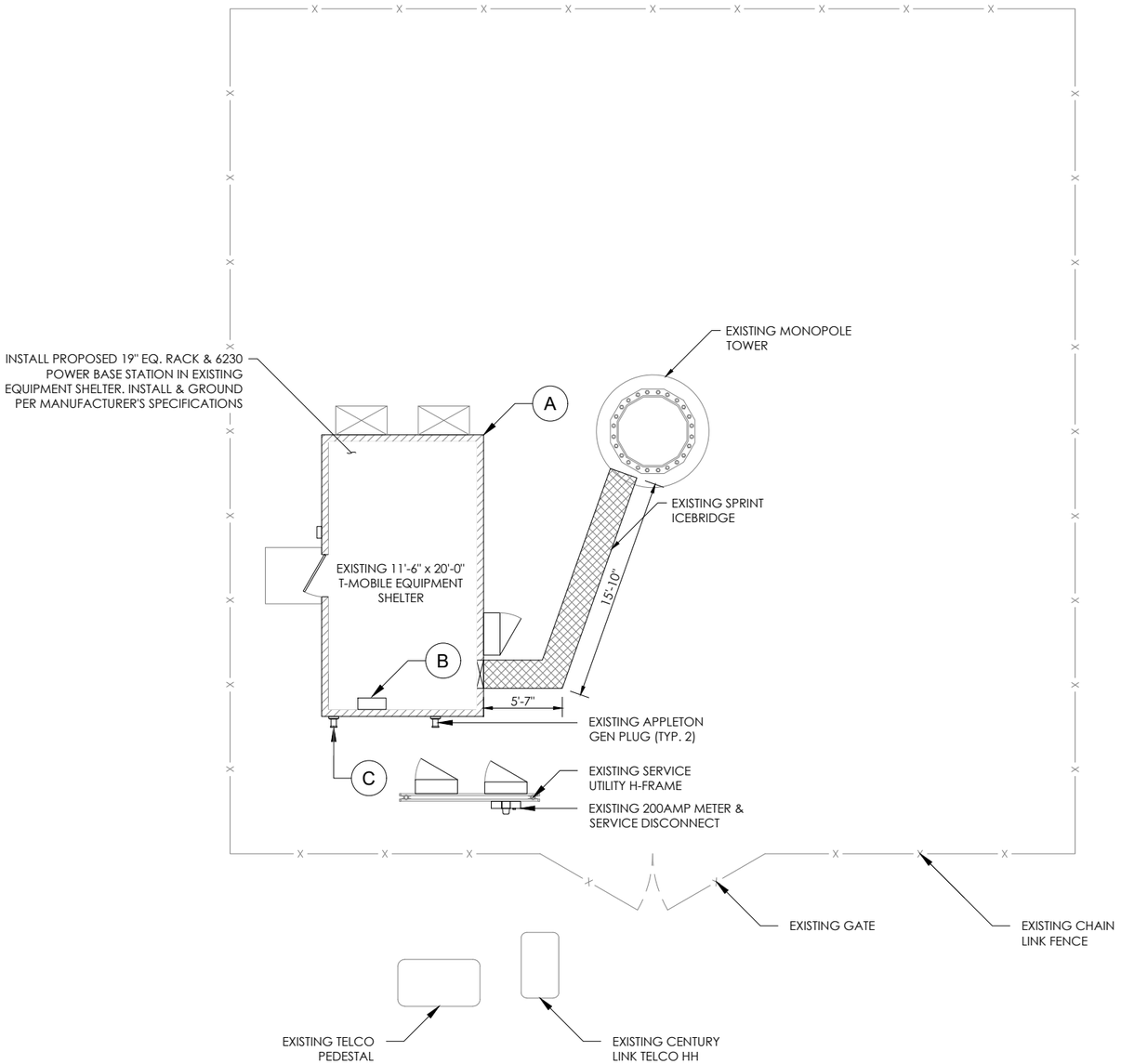
APPENDIX B

T-1C



GENERAL NOTES

1. ALL MATERIAL AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY. FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND OF QUALITY OF MATERIAL AND EQUIPMENT BEING SUBSTITUTED.
2. ACCESS TO PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS WITH THE LEASING AGENT FOR APPROVAL.
3. CONTRACTOR SHALL HAVE PRESENT ON SITE CURRENT CARRIER SUPPLIED INFORMATION PRIOR TO COMMENCE OF WORK; IE. RFDS, DESIGN DOCUMENTS SPECIFIC TO SITE AND CONFIGURATION. NOTIFY CONSTRUCTION MANAGER OF ANY DISCREPANCY PRIOR TO ARRIVAL AT SITE.
4. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTION SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
5. ALL DAMAGE TO EXISTING UNDERGROUND, OVERHEAD OBSTACLES AND/OR EXISTING EQUIPMENT, PAD OR SHELTERS SHALL BE REPLACED BACK TO FULL ORIGINAL OR BETTER CONDITION & SHALL MATCH EXISTING CONDITIONS BY REPAIRS AT GENERAL CONTRACTOR EXPENSE.
6. THE EXISTING TREES AND VEGETATION ARE SUFFICIENT TO PROVIDE THE REQUIRED SCREENING PER LOCAL ORDINANCE. IF THE VEGETATION IS REMOVED OR DAMAGED, NEW LANDSCAPING/ SCREENING WILL BE INSTALLED TO MEET LOCAL ORDINANCE REQUIREMENTS.

KEYED NOTES

A. REMOVE ALL EXISTING NOT-IN-USE EQUIPMENT FROM EXISTING SHELTER. LEAVE EXISTING POWER PANEL, DISCONNECT, AND ALL EQUIPMENT REQUIRED TO CONTINUE SERVICING EXISTING B-25 TOWER TOP RADIO. RE-USE ALL EXISTING GROUND HALOS/BARS AND COAX PORTS. CABLE TRAYS TO REMAIN.

B. APPROXIMATE LOCATION OF EXISTING POWER PANEL. REMOVE EXISTING BREAKERS NOT UTILIZED BY B25 RADIO EQUIPMENT AND INSTALL PROPOSED BREAKERS FOR PROPOSED EQUIPMENT.

C. REPLACE EXISTING APPLETON GEN PLUGS AND INSTALL PROPOSED CAM-LOC PLUGS.

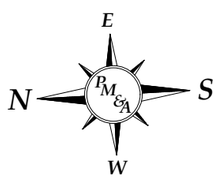
GRAPHIC SCALE

SITE PLAN

5' 2.5' 0 5'

1"=5'-0" (FULL SIZE)
1"=10'-0" (11x17)

NORTH ARROW



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P. MARSHALL & ASSOCIATES

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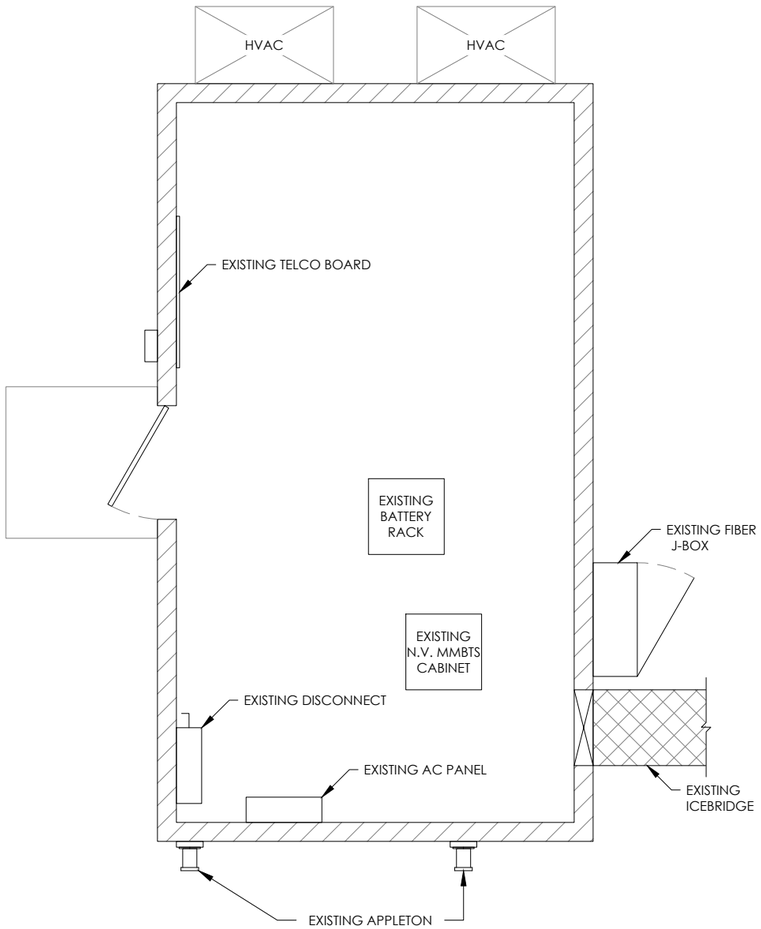
JOB#: 20ASBTMMNC-0042

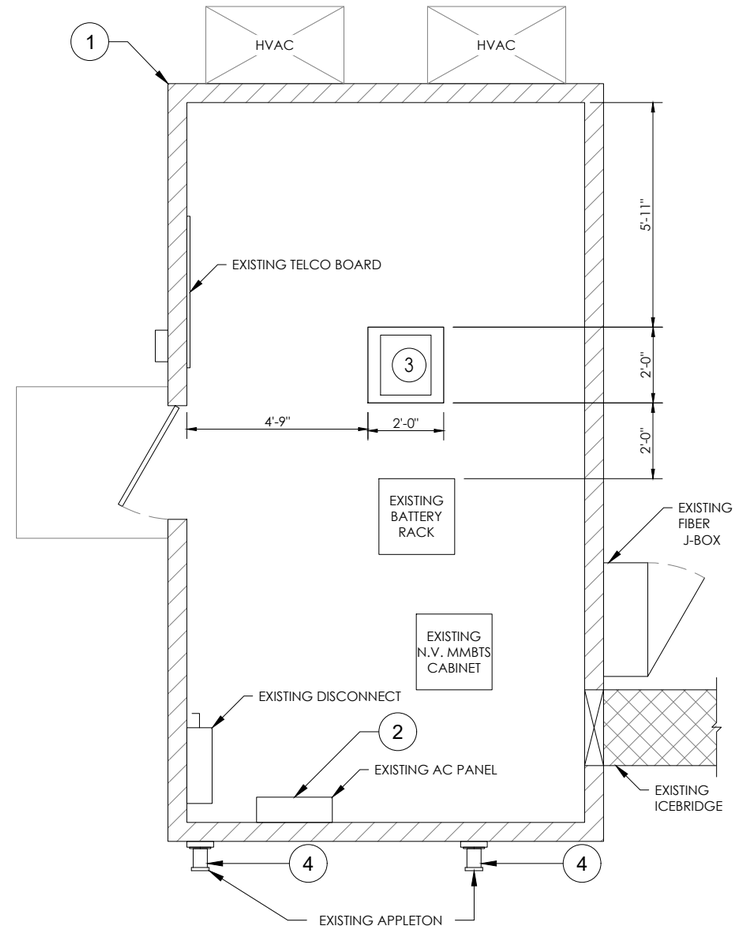
NORTH CAROLINA PROFESSIONAL SEAL 024136 ENGINEER PATRICK W MARSHALL
12/30/20

SITE PLAN

C-1



1 EXISTING EQUIPMENT PLAN
SCALE: SEE GRAPHIC SCALE



2 PROPOSED EQUIPMENT PLAN
SCALE: SEE GRAPHIC SCALE

GENERAL NOTES

1. REMOVE ALL EXISTING NOT-IN-USE EQUIPMENT FROM EXISTING SHELTER. LEAVE EXISTING POWER PANEL, DISCONNECT, AND ALL EQUIPMENT REQUIRED TO CONTINUE SERVICING EXISTING B-25 TOWER TOP RADIO. RE-USE ALL EXISTING GROUND HALOS/BARS AND COAX PORTS. CABLE TRAYS TO REMAIN.
2. EXISTING POWER PANEL. REMOVE EXISTING BREAKERS NOT UTILIZED BY B25 RADIO EQUIPMENT AND INSTALL PROPOSED BREAKERS FOR PROPOSED EQUIPMENT.
3. PROPOSED 19" RACK WITH 6230 PP, AND RBS 6601. SEE RFDS FOR FULL EQUIPMENT LIST.
4. REPLACE EXISTING APPLETON GEN PLUGS AND INSTALL PROPOSED CAM-LOC PLUGS.

EQUIPMENT NOTE

THE CABINETS ARE CONSTRUCTED OF NONCOMBUSTIBLE MATERIALS TO MEET THE REQUIREMENTS OF THE CURRENT NFPA 37 EDITION 2018. CABINET CONSTRUCTION THAT PASSED A SIMULATED BRUSH FIRE TEST TO DEMONSTRATE COMPLIANCE TO TELCORDIA GR-487-CORE SECTION 3.39 FIRE RESISTANCE REQUIREMENT R3-265. REFER TO THE NATIONAL TECHNICAL SYSTEMS (NTS) REPORT NO. PR067628-GR487.

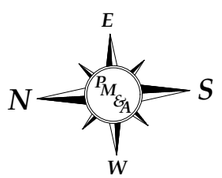
GRAPHIC SCALE

SITE PLAN

2' 1' 0 2'

1"=2'-0" (FULL SIZE)
1"=4'-0" (11x17)

NORTH ARROW



T-Mobile

SBA COMMUNICATIONS CORP.
5900 BROKEN SOUND PKWY NW
BOCA RATON, FL 33487

P. MARSHALL & ASSOCIATES

LOCATION:
40 RAVEN ROCK RD
LILLINGTON, NC 27546

SBA:
MAMERS
NC40177-T

T-MOBILE:
L-SPRINT RA73XC047
5RA0821A

SITE TYPE:
195' MONOPOLE
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

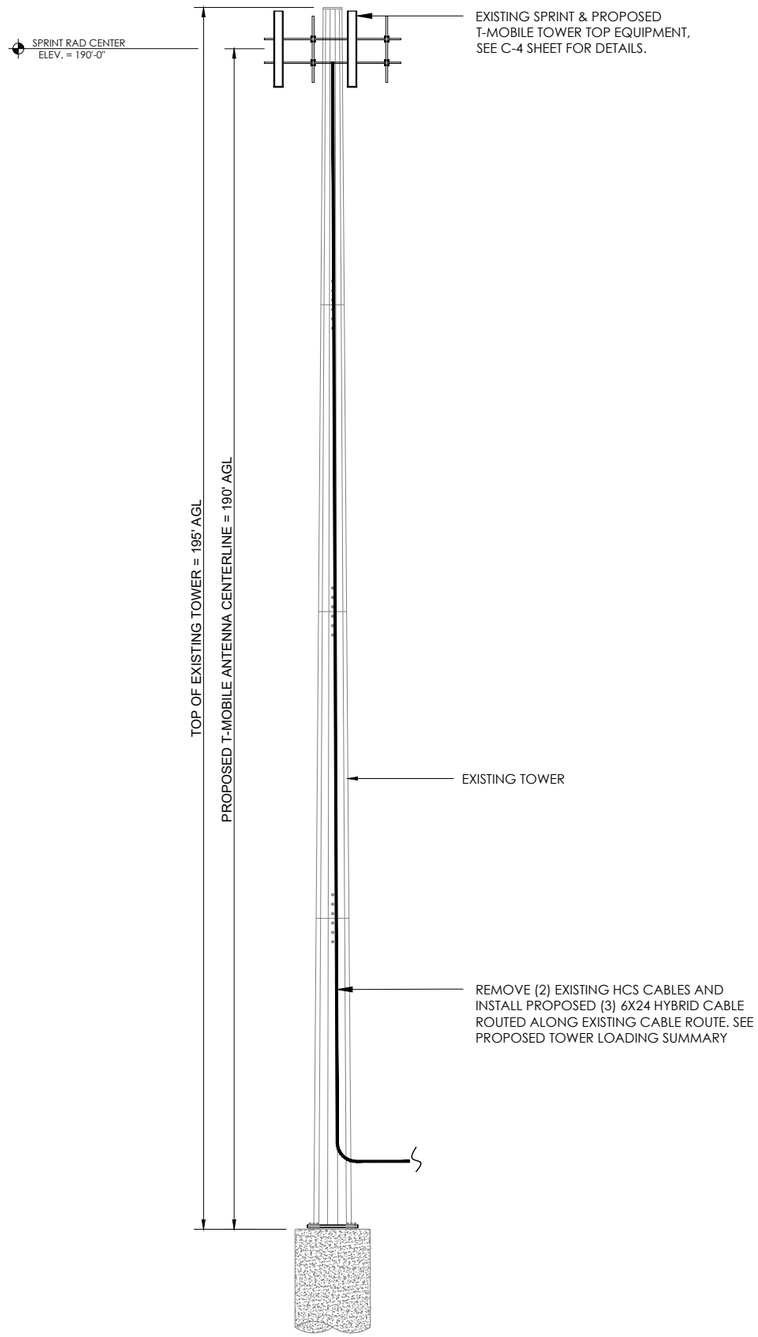
SITE COORDINATES
LAT: 35.41925
LONG: -78.919083

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0042

NORTH CAROLINA PROFESSIONAL SEAL 024138 LICENSED ENGINEER PATRICK W MARSHALL
12/30/20

EXISTING EQUIPMENT PLAN

C-2



TOWER ELEVATION

NOT TO SCALE

GENERAL NOTES

1. PM&A HAS NOT PERFORMED A TOWER STRUCTURAL ANAYSIS FOR THIS PROJECT. REFER TO TOWER STRUCTURAL ANALYSIS BY OTHERS FOR PROPOSED ANTENNA CABLE LOADING DETAILS
2. TOWER ELEVATION SHOWN IS NOT DRAWN TO SCALE AND IS ONLY INTENDED FOR REFERENCE PURPOSES. REFER TO ORIGINAL TOWER DESIGN FOR ADDITIONAL INFORMATION.
3. ALL TOWER DIMENSIONS SHALL BE VERIFIED WITH THE PLANS PRIOR TO COMMENCING CONSTRCTION. NOTIFY TH EENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED.
4. ALL HARDWARE ASSEMBLE MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
5. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND OF QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
6. CONTRACTOR TO REFER TO THE MOUNT ANALYSIS FOR THIS PROJECT.

FINISH NOTES:

TOWER-	GALVANIZED
TOWER MOUNTS-	GALVANIZED
ANTENNA-	NEUTRAL (MANUFACTURER FINISH)
FOUNDATIONS-	UNPAINTED CONCRETE
ICE BRIDGE-	GALVANIZED
CABLES-	BLACK
BASE CABINETS/EQUIPMENT-	NEUTRAL (MANUFACTURER FINISH)

TOWER LOADING SUMMARY

EXISTING	REMOVE	EQUIPMENT	ADD	TOTAL
6	6	ANTENNA	9	9
0	0	TMA	0	0
9	6	RADIOS	3	6
0	0	COAX	0	0
4	2	HYBRIDS	3	5

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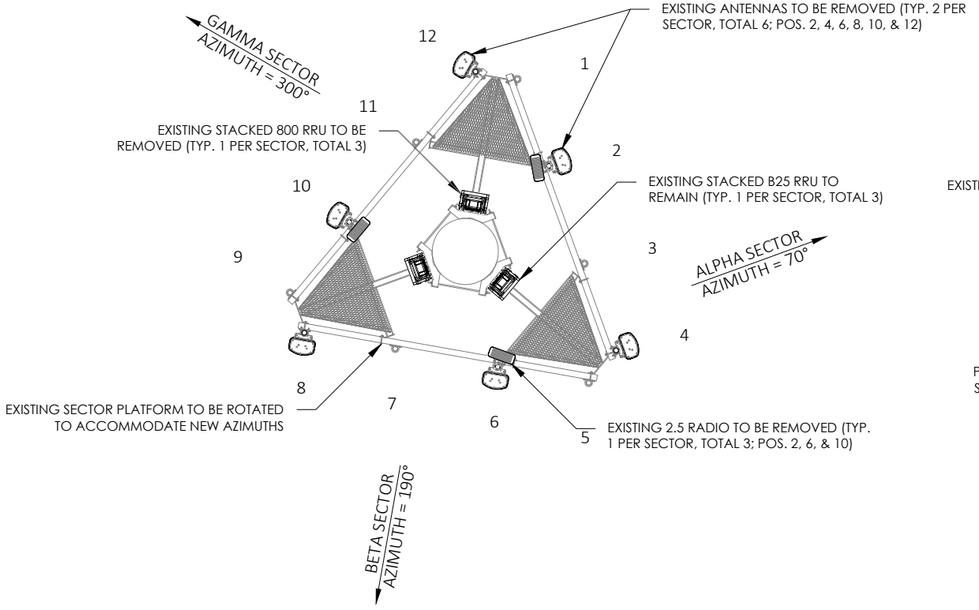
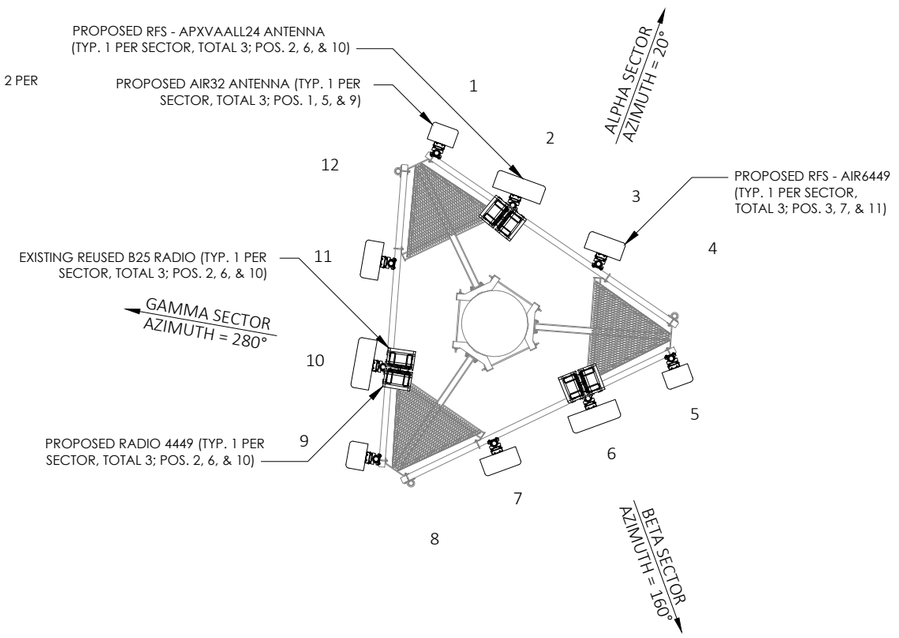
NORTH CAROLINA PROFESSIONAL SEAL 024138 ENGINEER PATRICK W MARSHALL
12/30/20

TOWER ELEVATION

C-3



N
EXISTING ANTENNA PLAN
NOT TO SCALE



N
FINAL ANTENNA PLAN
NOT TO SCALE

PROPOSED ANTENNA SCHEDULE

SECTOR	MARK	AZIMUTH	ANTENNA MODEL	RADIO MODEL	CABLE DESCRIPTION
ALPHA	1	20°	ERICSSON - AIR32 KRD901146-1_B66A_B2A (OCTO) (P)	-	(1) 1 1/2" 6x12 HCS (EXISTING TO REMAIN)
ALPHA	2	20°	RFS - APXVAALL24_43-U-NA20 (OCTO) (P)	(1) B25 4TRT RRU (E) (1) RADIO 4449 B71+B85 (P)	(1) ERICSSON 6x24 HCS 4AWG 80M (263') (P)
ALPHA	3	20°	ERICSSON - AIR6449 B41 (MASSIVE MIMO) (P)	-	-
-	4	-	-	-	-
BETA	5	160°	ERICSSON - AIR32 KRD901146-1_B66A_B2A (OCTO) (P)	-	(1) 1 1/2" 6x12 HCS (EXISTING TO REMAIN)
BETA	6	160°	RFS - APXVAALL24_43-U-NA20 (OCTO) (P)	(1) B25 4TRT RRU (E) (1) RADIO 4449 B71+B85 (P)	(1) ERICSSON 6x24 HCS 4AWG 80M (263') (P)
BETA	7	160°	ERICSSON - AIR6449 B41 (MASSIVE MIMO) (P)	-	-
-	8	-	-	-	-
GAMMA	9	280°	ERICSSON - AIR32 KRD901146-1_B66A_B2A (OCTO) (P)	-	-
GAMMA	10	280°	RFS - APXVAALL24_43-U-NA20 (OCTO) (P)	(1) B25 4TRT RRU (E) (1) RADIO 4449 B71+B85 (P)	(1) ERICSSON 6x24 HCS 4AWG 80M (263') (P)
GAMMA	11	280°	ERICSSON - AIR6449 B41 (MASSIVE MIMO) (P)	-	-
-	12	-	-	-	-

ANTENNA NOTE

CONTRACTOR TO ROTATE THE ANTENNAS AND OR MOUNTS TO OBTAIN NEW AZIMUTHS. REFER TO FINAL RF DOCUMENTS TO CONFIRM NEW AZIMUTHS

(E)- EXISTING
(P) - PROPOSED

GC TO PROVIDE POST CONSTRUCTION DOCUMENTATION ON ALL ANTENNA AZIMUTHS AND COLOR CODING FOR CABLES.

EQUIPMENT NOTES

1. THE HYBRID CABLE LENGTH SHOWN IS ONLY AN ESTIMATE AND SHOULD NOT BE USED FOR ORDERING MATERIALS. CONFIRM THE REQUIRED HYBRID CABLE LENGTH WITH T-MOBILE PRIOR TO ORDERING OR INSTALLATION.
2. THE CONTRACTOR SHALL TEST THE OPTICAL FIBER AFTER INSTALLATION IN ACCORDANCE WITH T-MOBILE STANDARDS AND SUPPLY THE RESULTS TO T-MOBILE.
3. THE CONTRACTOR SHALL CONFIRM THE TOWER TOP EQUIPMENT LIST ABOVE WITH THE FINAL T-MOBILE RFDS PRIOR TO INSTALLATION.
4. ALL PROPOSED ANTENNA CABLES SHALL BE COLOR CODED PER T-MOBILE MARKET STANDARDS.
5. REFER TO ERICSSON EQUIPMENT INSTALLATION STANDARDS FOR ADDITIONAL INFORMATION.
6. REFER TO EQUIPMENT MANUFACTURER'S SPECIFICATION SHEETS FOR ADDITIONAL INFORMATION NOT LISTED ABOVE.
7. CONTRACTOR TO FIELD COORDINATE EXACT LOCATION OF PROPOSED EQUIPMENT WITH EXISTING CONDITIONS ON SITE.
8. PROPOSED EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE FASTENERS SHALL BE HIGH STRENGTH (A325, A36)
9. DRILLING OF EXISTING STEEL MEMBERS IS NOT PERMITTED.
10. BOND PROPOSED EQUIPMENT TO EXISTING SECTOR GROUND BAR PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ADDITIONAL SECTOR GROUND BARS AS REQUIRED.
11. ALL ANTENNAS, CABLES, AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
12. CONTRACTOR TO CONTACT T-MOBILE FOR UP-TO-DATE RF DESIGN DATA. NOTIFY ENGINEER IF CONFLICT EXISTS.

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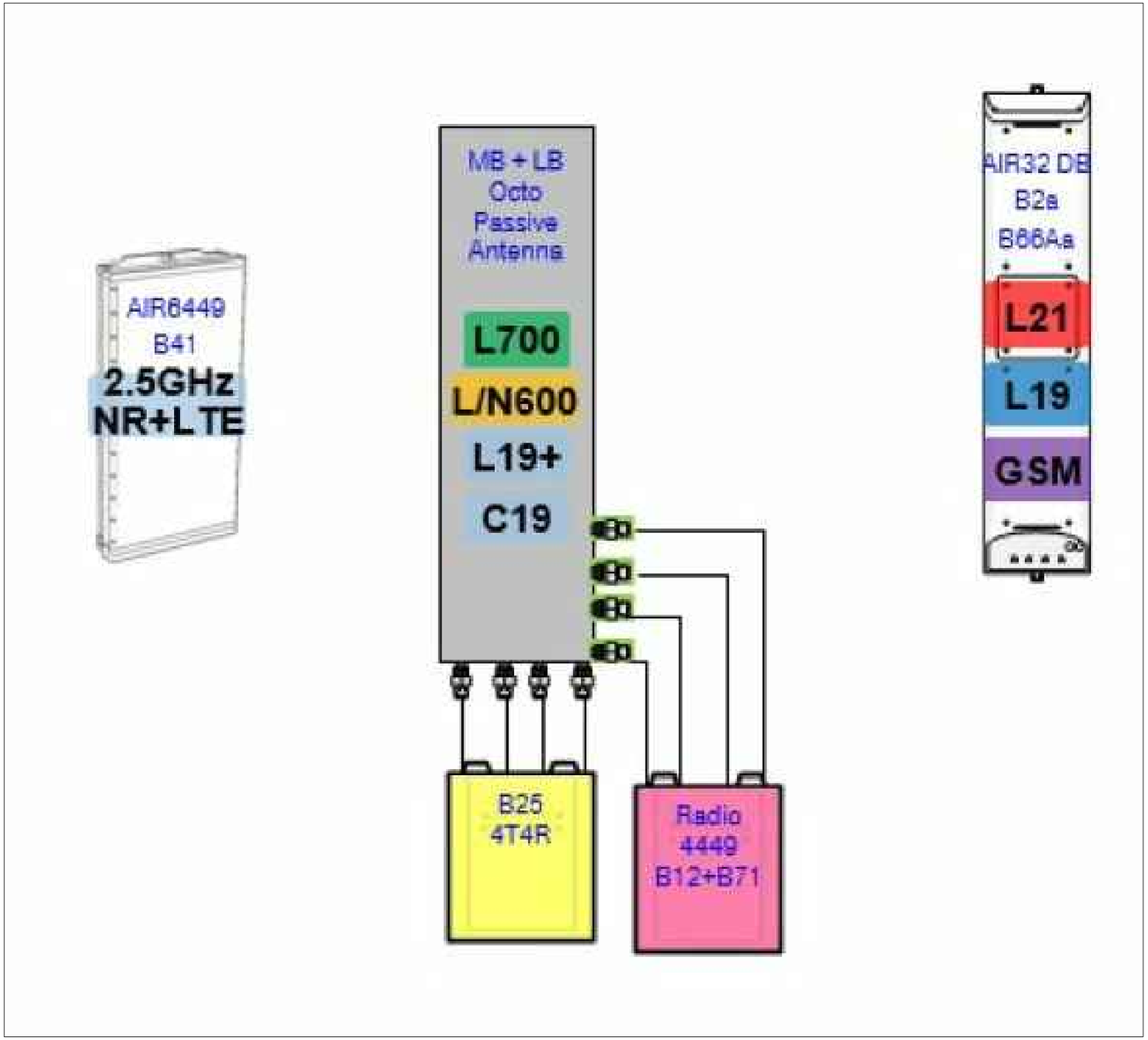
NORTH CAROLINA PROFESSIONAL SEAL 024138 ENGINEER PATRICK W MARSHALL
12/30/20

ANTENNA ORIENTATION & CABLE SCHEDULE

C-4

PROPOSED RF CONFIGURATION: 67D5A97DB_B25



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PLUMBING DIAGRAM

C-5

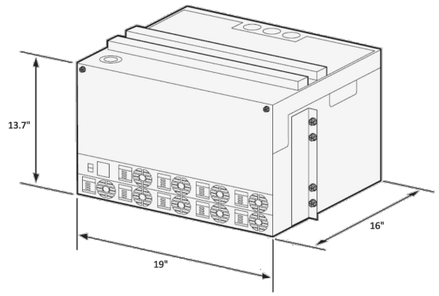

Figure 1

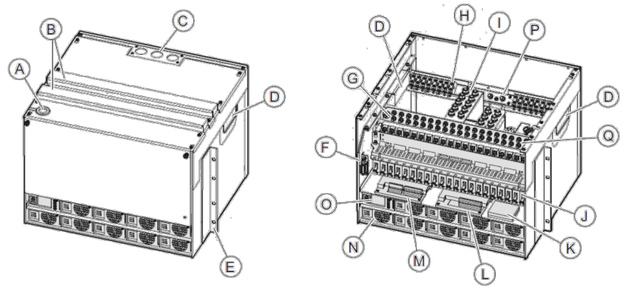

Figure 2

Feature	Unit
A	Alarm circuit breaker cable, temperature sensor, SCU power cable
B	Cable routing
C	AC cable interface
D	Battery cable inlet
E	Adaptor bracket for wall mounting kit
F	RTN alarm
G	0 V bus bar DC connection
H	AC input
I	0 V/RTN for battery cables
J	DC distribution circuit breaker
K	DC SPD
L	Extended interface board (EIB)
M	Interface board (IB2)
N	Rectifier
O	Power controller unit (PCU)
P	AC grounding
Q	-48 VDC distribution

3 6230 Placement

The 6230 arrives mounted on top of the prescribed Ericsson battery rack (Figure 3), which is to be bolted down onto the floor. Clearance at the top shall be provided to enable cabling for AC feed, DC loads, SPD, and battery cables. Front clearance shall allow work space for loading/unloading of 190 Ahr batteries (22"x5"x12" each). If desired, any of the battery shelves can be converted for user equipment by installing optional rack kit to provide up to 8U each.

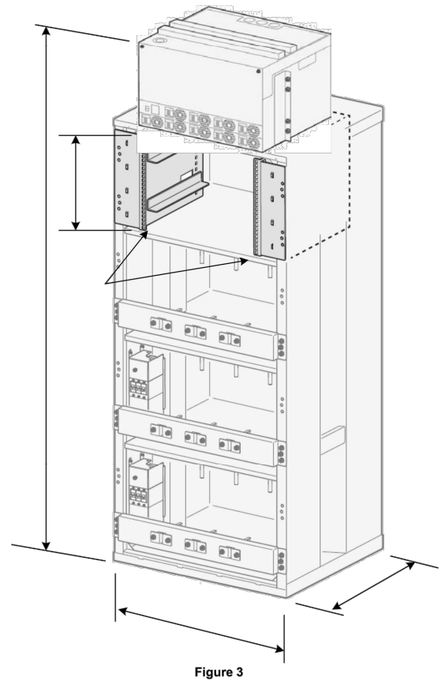

Figure 3

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T-MOBILE:
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5RA0821A

SITE TYPE:
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0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
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JOB#: 20ASBTMMNC-0042

NORTH CAROLINA PROFESSIONAL SEAL 024136 ENGINEER PATRICK W MARSHALL

EQUIPMENT SPECS

C-6

EQUIPMENT NOTES

DEMO NOTES:

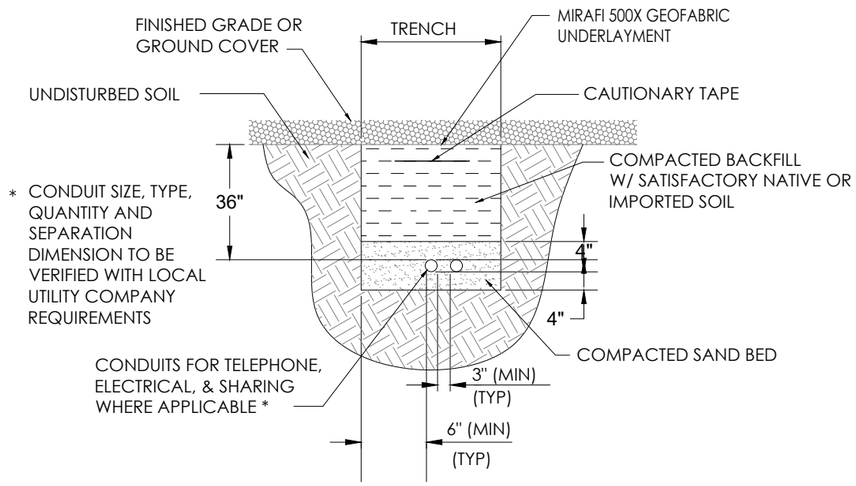
1. REWORK ALL TERMINATION, ELECTRICAL CONNECTORS, CONDUCTORS, CONDUITS, ETC. TO FACILITATE NEW WORK.
2. VERIFY LOCATION IN THE FIELD OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING. COORDINATE WITH PUBLIC UTILITIES AS NECESSARY TO COMPLETE REQUIRED WORK AS INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR / REPLACEMENT OF ALL DAMAGED UTILITIES AT THE EXPENSE OF THE CONTRACTOR.
3. DEMOLITION IS INCLUDED TO GIVE A COMMON BASIS FOR QUOTATIONS AND MAY NOT SHOW EVERY ITEM TO BE DEMOLISHED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO DETERMINE THE EXACT EXTENT OF WORK, COORDINATION, DEMOLITION, TEMPORARY FACILITIES, UTILITIES, ETC. NECESSARY TO COMPLETE THE PROJECT AS INDICATED ON THE CONTRACT DOCUMENTS.
4. PROTECT NETWORK EQUIPMENT, RECTIFIERS, FIBER CABLE, RACEWAYS, UTILITIES, BUILDING SYSTEMS, ETC. FROM DAMAGE.
5. EQUIPMENT DESIGNATED TO BE RELOCATED SHALL BE CLEANED, STORED AND PROTECTED FROM DAMAGE UNTIL REINSTALLED. REPLACE ALL EQUIPMENT DAMAGED DURING RELOCATING.
6. PROVIDE TEMPORARY POWER TO ALL ESSENTIAL SYSTEMS AS REQUIRED TO FACILITATE DEMOLITION. PROVIDE TEMPORARY COOLING UNITS AS REQUIRED.
7. MAINTAIN CIRCUIT CONTINUITY TO EXISTING CIRCUITS AND EQUIPMENT TO REMAIN OR TO BE RELOCATED.
8. WHERE ALLOWED BY CODE IT IS PERMISSIBLE TO REUSE EXISTING CONDUIT. PROVIDE NEW CONDUIT AND CONDUCTORS FOR NEW CIRCUITS AND THE EXTENSION OF EXISTING CIRCUITS.
9. PROVIDE EQUIPMENT PROTECTION ABOVE ALL NETWORK EQUIPMENT (INCLUDING BUT NOT LIMITED TO CABLING, BUS, CABLE TRAY, EQUIPMENT BAYS, RECTIFIERS, BATTERIES, INVERTERS, DISTRIBUTION PANELS, ETC.) WHEN WORKING ABOVE ALL EQUIPMENT. ALL PROTECTION SHALL BE COORDINATED WITH THE SWITCH MANAGER TO ENSURE THAT THE PROTECTION WILL NOT BLOCK ACCESS TO EQUIPMENT OR CAUSE OVERHEATING. PROVIDE TEMPORARY COOLING AS REQUIRED.
10. PROVIDE APPROPRIATE SEALING AND PATCHING OF ANY BUILDING PENETRATIONS AFTER REMOVAL OF ELECTRICAL DEVICES, EQUIPMENT, ETC. MATCH EXISTING WALLS. SEE ARCHITECTURE.

GENERAL NOTES:

1. IT IS CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE & DETERMINE THE EXACT EXTENT OF WORK, COORDINATION, DEMOLITION, TEMPORARY FACILITIES, UTILITIES, ETC. NECESSARY TO COMPLETE THE PROJECT AS INDICATED ON THE CONTRACT DOCUMENTS.
2. VERIFY LOCATION IN THE FIELD OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING. COORDINATE WITH PUBLIC UTILITIES AS NECESSARY TO COMPLETE REQUIRED WORK AS INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT OF ALL DAMAGED UTILITIES AT THE EXPENSE OF THE CONTRACTOR.
3. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER & BC.
4. PROVIDE 2-HOLE LUGS CAPABLE OF ACCEPTING MULTIPLE CRIMPS FOR ALL POWER & GROUNDING CONNECTIONS TO A BUS OR WHERE FEASIBLE. USE MANUFACTURER'S COMPRESSION TOOL WITH PROPER DIE FOR EACH CONNECTOR. MANUFACTURER'S EMBOSSED CODING SYSTEM IS REQUIRED. A UNIVERSAL OR DIE-LESS TYPE CRIMPING TOOL SHALL NOT BE USED. PROVIDE LUGS WITH INSPECTOR HOLE FOR ALL INTERIOR INSTALLATIONS. PROVIDE CLOSED LUGS (NO INSPECTION HOLE) FOR EXTERIOR OR UNDERGROUND CONNECTIONS.
5. FEEDER CIRCUITS, GROUND LEADS, & DEDICATED EQUIPMENT CIRCUITS SHALL NOT BE SPLICED.
6. VERIFY LASHING REQUIREMENTS FOR SERVICE ENTRANCE & MAIN DISTRIBUTION EQUIPMENT WITH MANUFACTURER. INSTALL LASHING PER MANUFACTURER'S REQUIREMENTS.

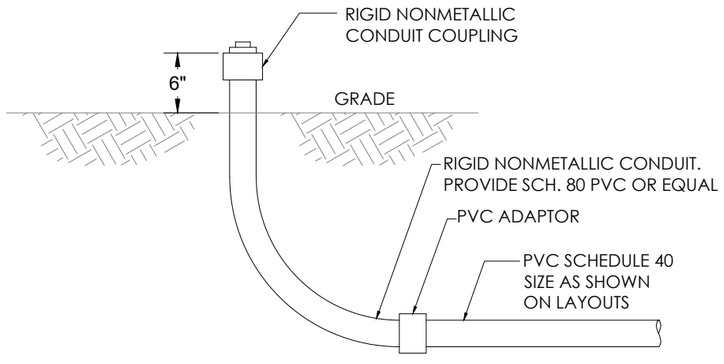
COMPRESSION LUG NOTES:

REFER TO SPECIFICATION SECTION 260519 & NSTD516 REGARDING REQUIREMENTS FOR A SAMPLE COMPRESSION LUG SUBMITTAL ON ALL PROJECTS. FAILURE TO PROVIDE CORRECT LUGS & SUBMIT A SAMPLE COMPRESSION LUG TO VZW PRIOR TO INSTALLATION OF ANY LUGS MAY RESULT IN REJECTION OF THE INSTALLATION & REPLACEMENT OF ALL LUGS & ASSOCIATED CABLE, WHERE REQUIRED, AT NO COST TO T-MOBILE.



TRENCH DETAIL

SCALE: NTS



UNDERGROUND CONDUIT STUB-UP

SCALE: NTS

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JOB#: 20ASBTMMNC-0042

NORTH CAROLINA PROFESSIONAL SEAL 024130 ENGINEER PATRICK W MARSHALL

ELECTRICAL DETAILS

E-1

T-MOBILE SITE #: 5RA0821A			LOCATION:	VOLTAGE: 240/120 1Ø							MOUNTING / ENCLOSURE: EXISTING / NEMA 3R			
PROPOSED			SHELTER INTERIOR	MAIN C/B: 200 AMPS							AVAIL. FAULT CURRENT: EXISTING			
12/4/2020				BUS RATING: 200 AMPS							SHORT CIRCUIT RATING: EXISTING			
AMPS/ POLES	WIRE & CONDUIT	TYPE	DESCRIPTION	KVA	CKT	A		B	CKT	KVA	DESCRIPTION	TYPE	WIRE & CONDUIT	AMPS/ POLES
60/2	EXISTING	EQ	SURGE ARRESTOR	0.10	1	3.70			2	3.60	AC #1	EQ	EXISTING	30/2
-	-	EQ	-	0.10	3			3.70	4	3.60	-	EQ	-	-
30/2	EXISTING	AC	AC#2	3.60	5	3.78			6	0.18	INT. RECEPTICALS	R	EXISTING	20/1
-	-	AC		3.60	7			3.78	8	0.18	EXT. RECEPTACLES	R	EXISTING	20/1
20/1	EXISTING	L	LIGHTS	0.50	9	1.63			10	**1.13**	**(P) 6230 RECT. #4**	EQ	**(3) #10 AWG, (1) #12G, 1/2"C**	**25/2**
25/2	**3#10, (1) 12G, 1/2" C**	EQ	**(P) 6230 RECT. #1**	1.13	11			2.26	12	**1.13**	-	EQ	-	-
-	-	EQ	-	1.13	13	2.26			14	**1.13**	**(P) 6230 RECT #5**	EQ	**(3) #10 AWG, (1) #12G, 1/2"C**	**25/2**
25/2	**3#10, (1) 12G, 1/2" C**	EQ	**(P) 6230 RECT. #2**	1.13	15			2.26	16	**1.13**	-	EQ	-	-
-	-	EQ	-	1.13	17	2.26			18	**1.13**	**(P) 6230 RECT #6**	EQ	**(3) #10 AWG, (1) #12G, 1/2"C**	**25/2**
25/2	**3#10, (1) 12G, 1/2" C**	EQ	**(P) 6230 RECT. #3**	1.13	19			2.26	20	**1.13**	-	EQ	-	-
-	-	EQ	-	1.13	21	1.23			22	**0.10**	**SMOKE DETECTOR**	EQ	**EXISTING**	**20/1**
			SPACE		23				24		SPACE			
			PHASE TOTAL	14.9		14.3				KVA				

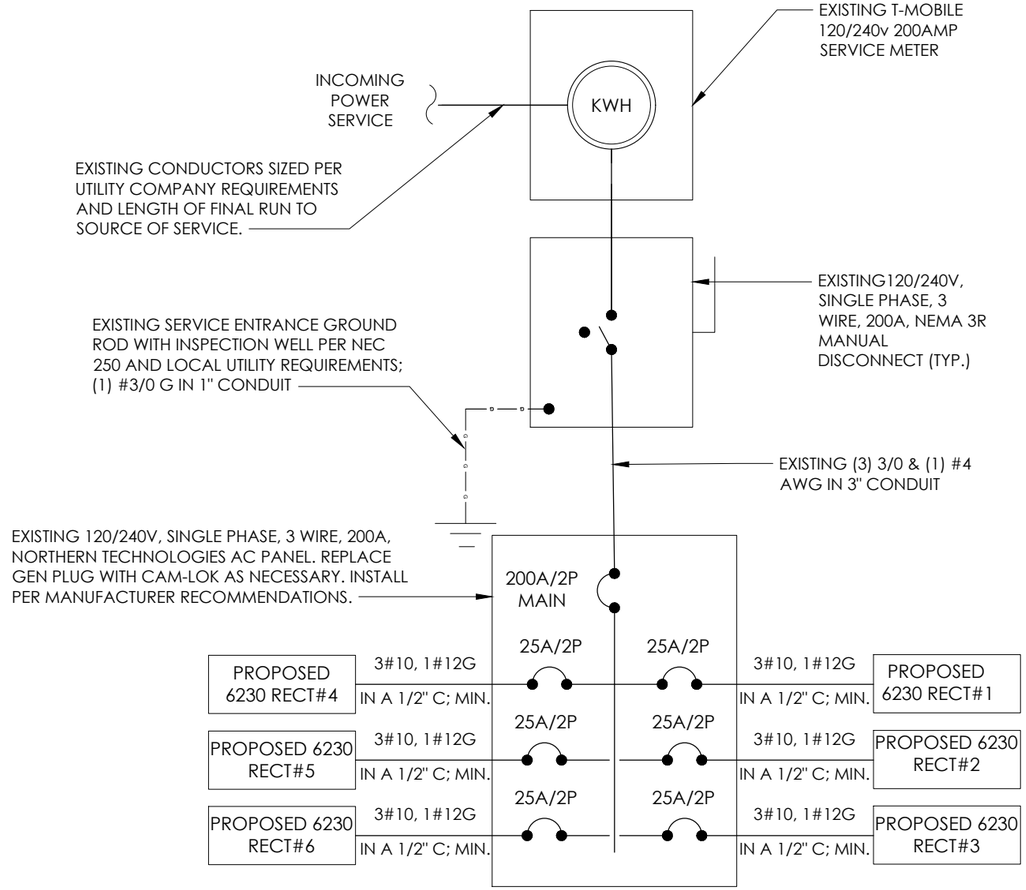
TOTAL CONNECTED LOAD	29.1 kVA	121 A
TOTAL DEMAND LOAD	29.2 kVA	122 A

LOAD TYPE	DESCRIPTION	CONN. LOAD KVA	CONN. LOAD AMPS	DEMAND FACTOR	DESIGN LOAD KVA	DESIGN LOAD AMPS
L	LIGHTING	0.5	2.1	1.25	0.6	2.6
R	RECEPTACLE	0.4	1.5	NEC	0.4	1.5
M	MOTOR	0.0	0.0	NEC	0.0	0.0
H	HEATING	0.0	0.0	1.00	0.0	0.0
AC	HVAC	7.2	30.0	1.00	7.2	30.0
EQ	EQUIPMENT	21.1	87.8	1.00	21.1	87.8
E	EXISTING	0.0	0.0	1.25	0.0	0.0

* ALL EQUIPMENT LOADS CONSIDERED CONTINUOUS LOADS

NOTES:
DEPICTED LOAD BASED ON ASSUMPTIONS OF EQUIPMENT INSTALLED AND WAS NOT V.I.F. NOTIFY E.O.R. OF ANY DISCREPANCIES PRIOR TO INSTALLATION OF PROPOSED EQUIPMENT.

1 PROPOSED PANEL SCHEDULE
SCALE: NOT TO SCALE



2 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

GENERAL ELECTRICAL NOTES

1. NO SITE SPECIFIC LOAD STUDY WAS ACQUIRED. DEMAND LOADING KVA SHOWN AS ASSUMPTIONS PER MANUFACTURER SPECIFICATION DOCUMENTS & INDUSTRY STANDARD. WHEN OVERAGES ARE VERIFIED ON SITE, ALL DISCREPANCY SHALL BE BROUGHT TO THE ENGINEER OF RECORD PRIOR TO COMMENCING WORK.
2. ELECTRICAL SERVICE SHALL BE 200A, 240/120v, 1 P, 3W
3. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDER PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.
4. CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH POWER COMPANY AND ENSURE ALL ELECTRICAL EQUIPMENT IS SUITABLE FOR AVAILABLE FAULT CURRENT.CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY AND CALCULATE SHORT CIRCUIT FAULT CURRENT AND ARC FLASH AND PROVIDE LABELS ON ELECTRICAL EQUIPMENT PER THE N.E.C. AND LOCAL JURISDICTION. CONTRACTOR SHALL PROVIDE EQUIPMENT RATED FOR FAULT CURRENT.
5. CONTRACTOR SHALL COORDINATE UTILITY SERVICES WITH LOCAL UTILITY COMPANIES. VERIFY ALL REQUIREMENTS WITH UTILITY COMPANY STANDARDS. THE MAXIMUM 12-MONTH DEMAND LOAD WAS NOT AVAILABLE AT TIME OF PRINTING. CONTRACTOR SHALL COORDINATE WITH POWER CO., OBTAIN MAXIMUM DEMAND LOAD, MULTIPLY VALUE BY 1.25, ADD ALL NEW LOADS & VERIFY NEW MAXIMUM DEMAND LOAD DOES NOT OVERLOAD ANY PORTION OF THE EXISTING ELECTRICAL SYSTEM. CONTACT EOR IF OVERLOAD IS POSSIBLE BEFORE START OF WORK.
6. ONE-LINE DIAGRAM IS SCHEMATIC ONLY AND NOT INDICATIVE OF ACTUAL EQUIPMENT LAYOUT. CONTRACTOR IS RESPONSIBLE FOR LOADING ON ALL PANELS AND FEEDERS PER THE N.E.C. CONTRACTOR SHALL ENSURE CONTINUITY OF EXISTING CIRCUITS TO REMAIN. ELECTRICAL CONTRACTOR SHALL VERIFY THAT ALL EXISTING AND PROPOSED LOADS PLACED ON EXISTING PANELS DO NOT EXCEED THE MAXIMUM LOADING REQUIRED PER THE LATEST EDITION OF THE N.E.C. NOTIFY EOR IF OVERLOAD IS POSSIBLE
7. 6230 ENCLOSURE CONFIGURATION INCLUDES (6) 3500W RECTIFIERS. LOAD PROVIDED IN PANEL SCHEDULE IS BASED ON THIS CONFIGURATION. IF ADDITIONAL RECTIFIERS ARE REQUIRED, ENGINEER OF RECORD SHALL BE CONTACTED TO DETERMINE ADEQUACY OF EXISTING PANEL FOR ADDITIONAL LOAD
8. CONTRACTOR SHALL FIELD VERIFY EXISTING AC PANEL MODEL AND ENSURE SUFFICIENT BREAKER SPACE IS AVAILABLE. CONTACT EOR IF DISCREPANCIES ARE FOUND.
9. CONTRACTOR TO FIELD VERIFY ALL EQUIPMENT RATINGS AND WIRE SIZES. IF ANY DISCREPANCIES EXIST, CONTACT ENGINEER PRIOR TO ROUGH IN.

T-Mobile

SBA COMMUNICATIONS CORP.
5900 BROKEN SOUND PKWY NW
BOCA RATON, FL 33487

P. MARSHALL & ASSOCIATES

LOCATION:
40 RAVEN ROCK RD
LILLINGTON, NC 27546

SBA:
MAMERS
NC40177-T

T-MOBILE:
L-SPRINT RA73XC047
5RA0821A

SITE TYPE:
195' MONOPOLE
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

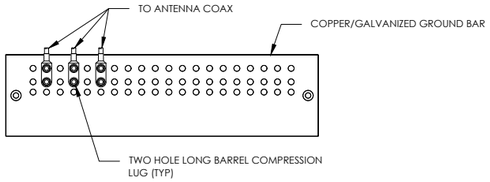
SITE COORDINATES
LAT: 35.41925
LONG: -78.919083

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0042

NORTH CAROLINA PROFESSIONAL SEAL 024136 ENGINEER PATRICK W MARSHALL

PANEL SCHEDULE & ONE-LINE DIAGRAM

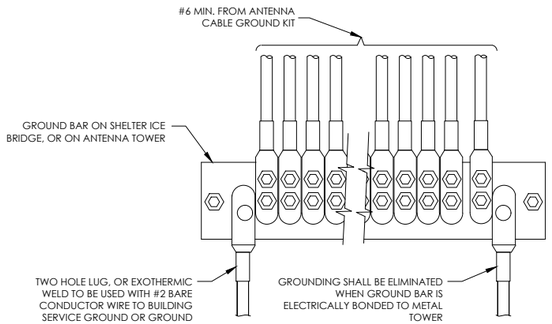
E-2

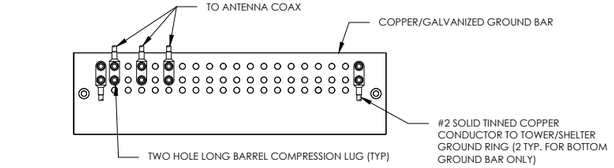


NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL.

1 ANTENNA GROUND BAR DETAIL
SCALE: NOT TO SCALE

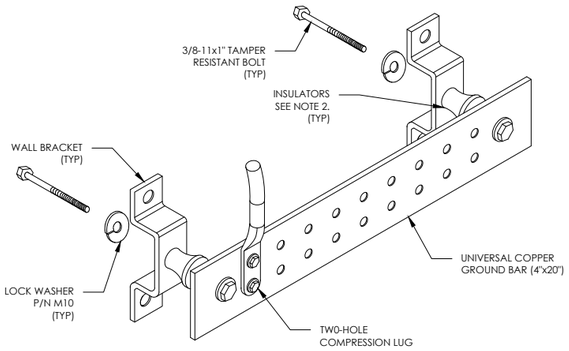




NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE

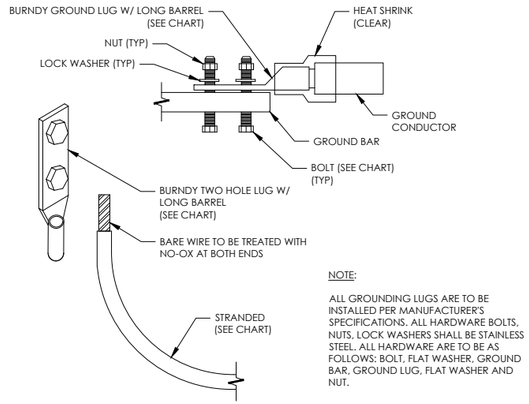


NOTES:

1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.

2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

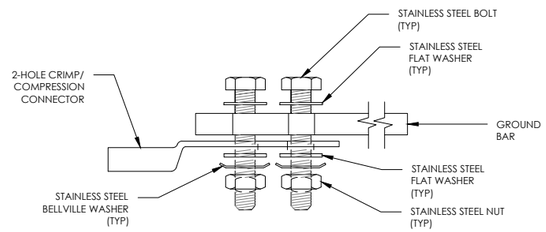
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



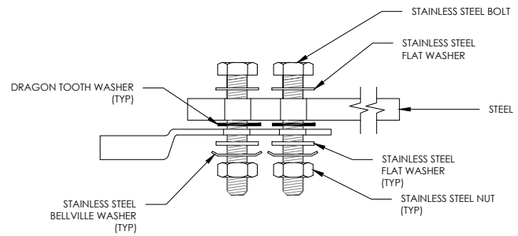
NOTE:

ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

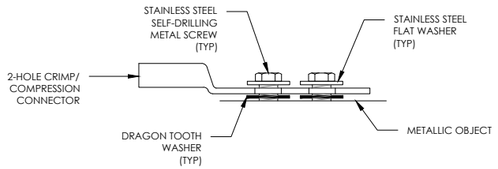
3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS



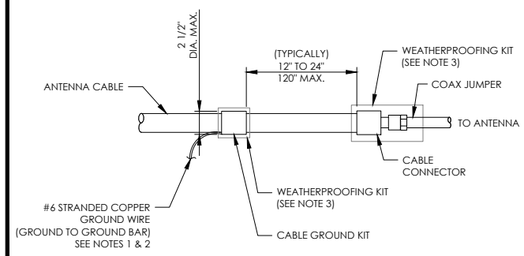
SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE

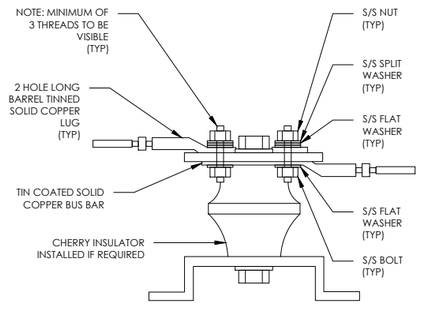


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE

5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 024136 ENGINEER PATRICK W MARSHALL

12/30/20

GROUNDING DETAILS

G-1