

SITE NAME: OLIVIA
 SITE NUMBER: NC01659-B



SITE NAME: L-SPRINT RA33XC275
 SITE NUMBER: 5RA0882A
 DESCRIPTION: 67D5A97DB_B25
 SPRINT KEEP
 250' RAD CENTER



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



LOCATION:
 696 CLAUDE-WHITE
 ROAD/SR 1001
 LEMON SPRINGS, NC 28236
 SBA:

OLIVIA
 NC01659-B

T-MOBILE:
 L-SPRINT RA33XC275
 5RA0882A

SITE TYPE:
 265' SELF SUPPORT
 T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
 LAT: 35.311417
 LONG: -79.15375

DRAWN: RSW
 CHECKED: PWM
 JOB#: 20ASBTMMNC-0054

**TITLE SHEET &
 PROJECT
 INFORMATION**

T-1

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
 TMCALLISTER@PMASS.COM
 478-542-3291

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

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: C
- 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: 3710954600L, DATED: 10/17/2006.

SITE SUMMARY

SITE ADDRESS: 696 CLAUDE-WHITE ROAD/SR 1001
 LEMON SPRINGS, NC 28236

SBA NUMBER: NC01659-B
 SBA NAME: OLIVIA

TOWER TYPE: SELF SUPPORT
 COMPANY: SBA
 CARRIER: T-MOBILE
 TENANT ID/NAME: 5RA0882A

JURISDICTION: HARNETT COUNTY
 PARCEL #: 9556.00-37-5397
 ZONING: V-B

ACREAGE:
 (E) IMPERVIOUS: NA
 (P) IMPERVIOUS: 0 SQFT.
 COMPOUND SIZE: ± SQFT.

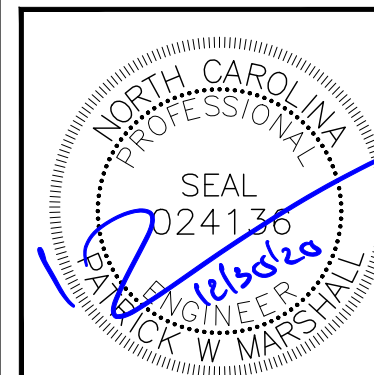
UTILITIES:
 POWER COMPANY: CENTRAL EMC
 TELCO COMPANY: WINDSTREAM

SITE LATITUDE(NAD83): 35.311417 (35° 18' 41.10")
 SITE LONGITUDE(NAD83): -79.15375 (-79° 9' 13.50")

GND ELEVATION (NAVD88): 462'
 TOWER HEIGHT (AGL.) 265'

SHEET INDEX

- T-1 TITLE SHEET
- T-1A APPENDIX B
- T-1B APPENDIX B
- T-1C APPENDIX B
- C-1 SITE PLAN
- C-2 EQUIPMENT PLAN
- C-3 TOWER ELEVATION
- C-4 ANTENNA ORIENTATION & CABLE SCHEDULE
- C-5 PLUMBING DIAGRAM
- C-6 EQUIPMENT SPECS
- E-1 ELECTRICAL DETAILS
- E-2 PANEL SCHEDULE & ONE-LINE DIAGRAM
- G-1 GROUNDING DETAILS



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 ONE CALL
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 CALL 3 WORKING DAYS
 BEFORE YOU DIG!



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: L-SPRINT RA33XC275- 5RA0882A
 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 GRANVILLE 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
3 rd Floor			
2 nd Floor			
Mezzanine			
1 st 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 Use (see exceptions).

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

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

Mixed Occupancy: Select one Separation: Select one Exception: _____

Select one

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

$$+ \dots = \dots \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(C) AREA FOR FRONTAGE INCREASE ^{1,5}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2,3}

N/A NOT A BUILDING

¹ Frontage area increases from Section 506.2 are computed thus:

- Perimeter which fronts a public way or open space having 20 feet minimum width = (F)
- Total Building Perimeter = (P)
- Ratio (F/P) = (F/P)
- 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 (maximum 3 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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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)			

* 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		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # 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							
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		# OF ACCESSIBLE SPACES	ACCESSIBLE	TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED			
TOTAL					

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

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 REQUIREMENTS*

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
 Occupant loads for each area
 Exit access travel distance
 Common path of travel
 Dead end lengths
 Clear exit widths for
 Maximum calculated occupant load
 Actual occupant load for each area
 A separate schematic plan is provided for each fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
 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 assembly: _____

Exterior Walls (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows, doors, etc.): _____

Walls below grade
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: _____



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P. MARSHALL & ASSOCIATES

LOCATION:
696 CLAUDE-WHITE
ROAD/SR 1001
LEMON SPRINGS, NC 28236

SBA:
OLIVIA
NC01659-B

T-MOBILE:
L-SPRINT RA33XC275
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SITE TYPE:
265' SELF SUPPORT
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
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SITE COORDINATES
LAT: 35.311417
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APPENDIX B



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



LOCATION: 696 CLAUDE-WHITE ROAD/SR 1001 LEMON SPRINGS, NC 28236 SBA: OLIVIA NC01659-B T-MOBILE: L-SPRINT RA33XC275 5RA0882A SITE TYPE: 265' SELF SUPPORT T-MOBILE SPRINT KEEP

Table with 3 columns: REV, DATE, DESCRIPTION. Row 1: 0, 12/30/20, FOR CONSTRUCTION

SITE COORDINATES LAT: 35.311417 LONG: -79.15375

DRAWN: RSW CHECKED: PWM JOB#: 20ASBTMMNC-0054

APPENDIX B

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 (Iw) _____ Snow (Is) _____ Seismic (Ie) _____ Live Loads: Roof _____ psf Mezzanine _____ psf Floor _____ psf Ground Snow Load: _____ psf Wind Load: Basic Wind _____ Exposure _____ SEISMIC DESIGN CATEGORY: Provide the following Seismic Occupancy Category: Spectral Response Acceleration Category: Site Classification (ASCE): Basic structural system (check one): Analysis Procedure: Architectural, Mechanical, Components anchored? 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 _____

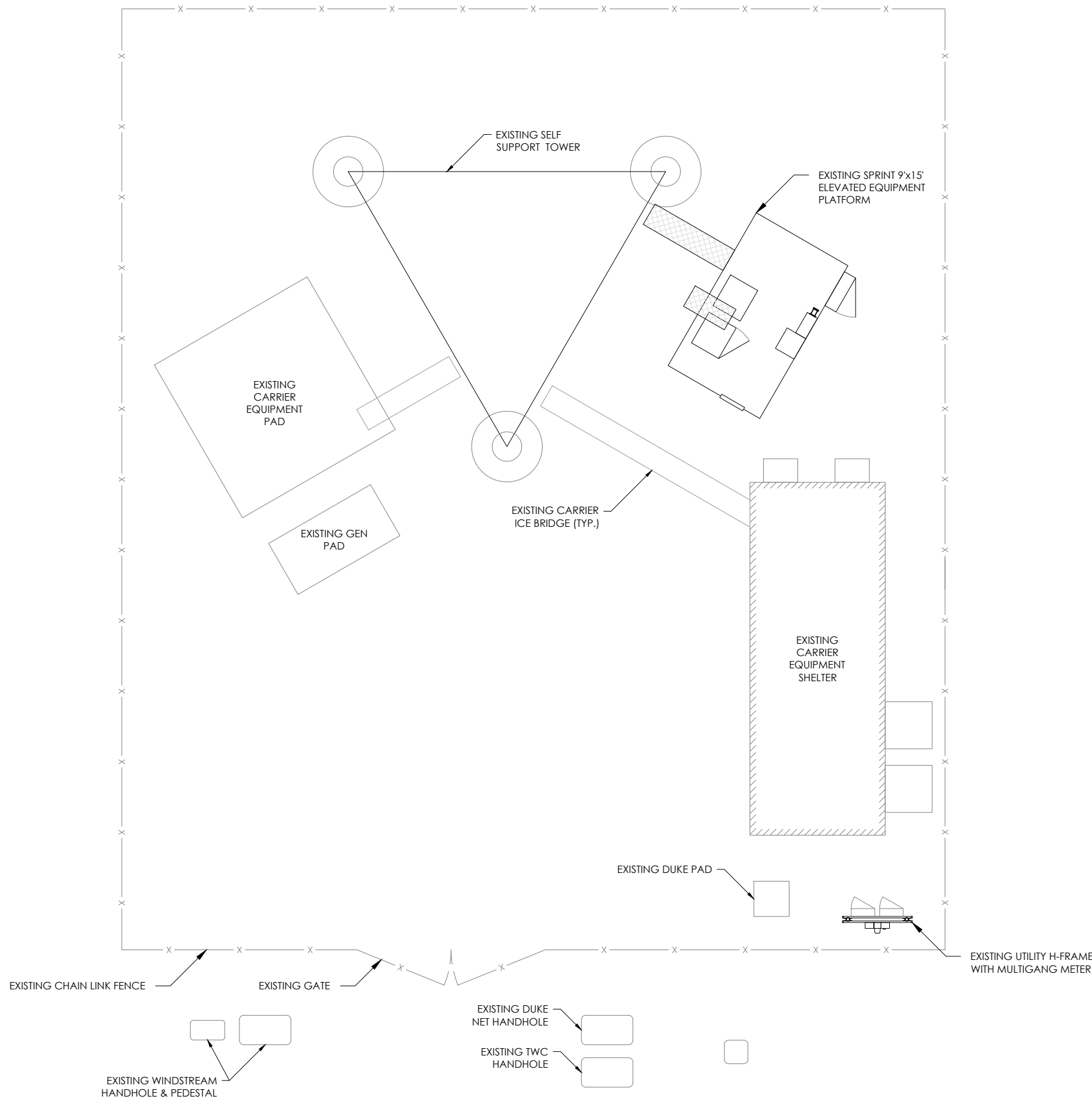
N/A NOT A BUILDING

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 Conditions: 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: _____

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: Select one 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 _____ (per building or space by space) total exterior wattage _____ Additional Prescriptive Compliance: 506.2.1 More Efficient Mechanical 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

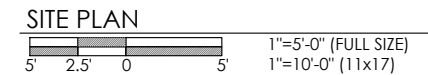
N/A NOT A BUILDING



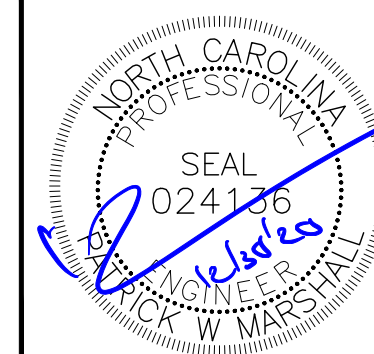
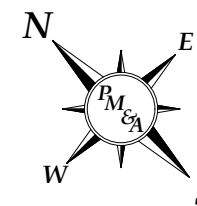
GENERAL NOTES

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.

GRAPHIC SCALE



NORTH ARROW



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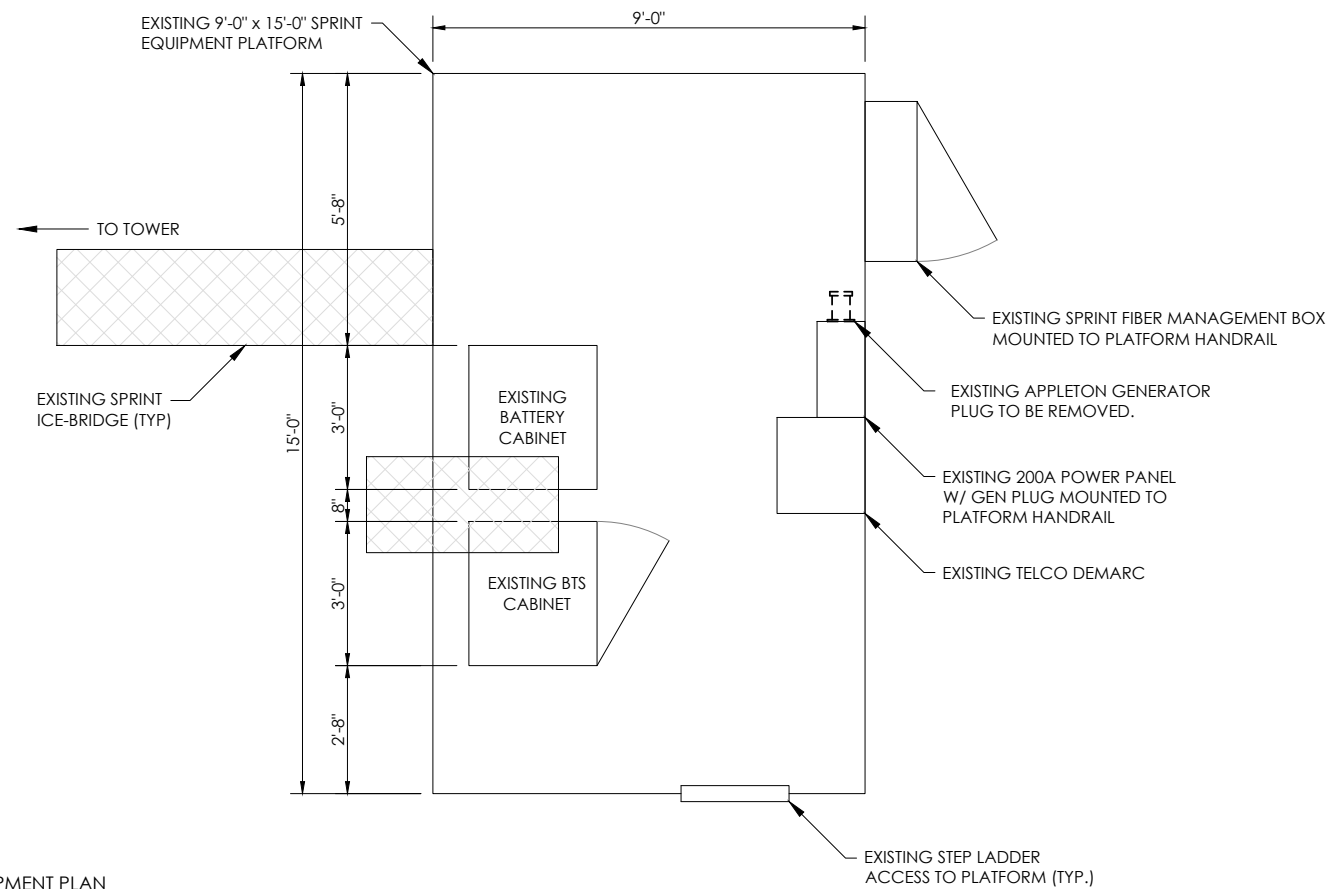
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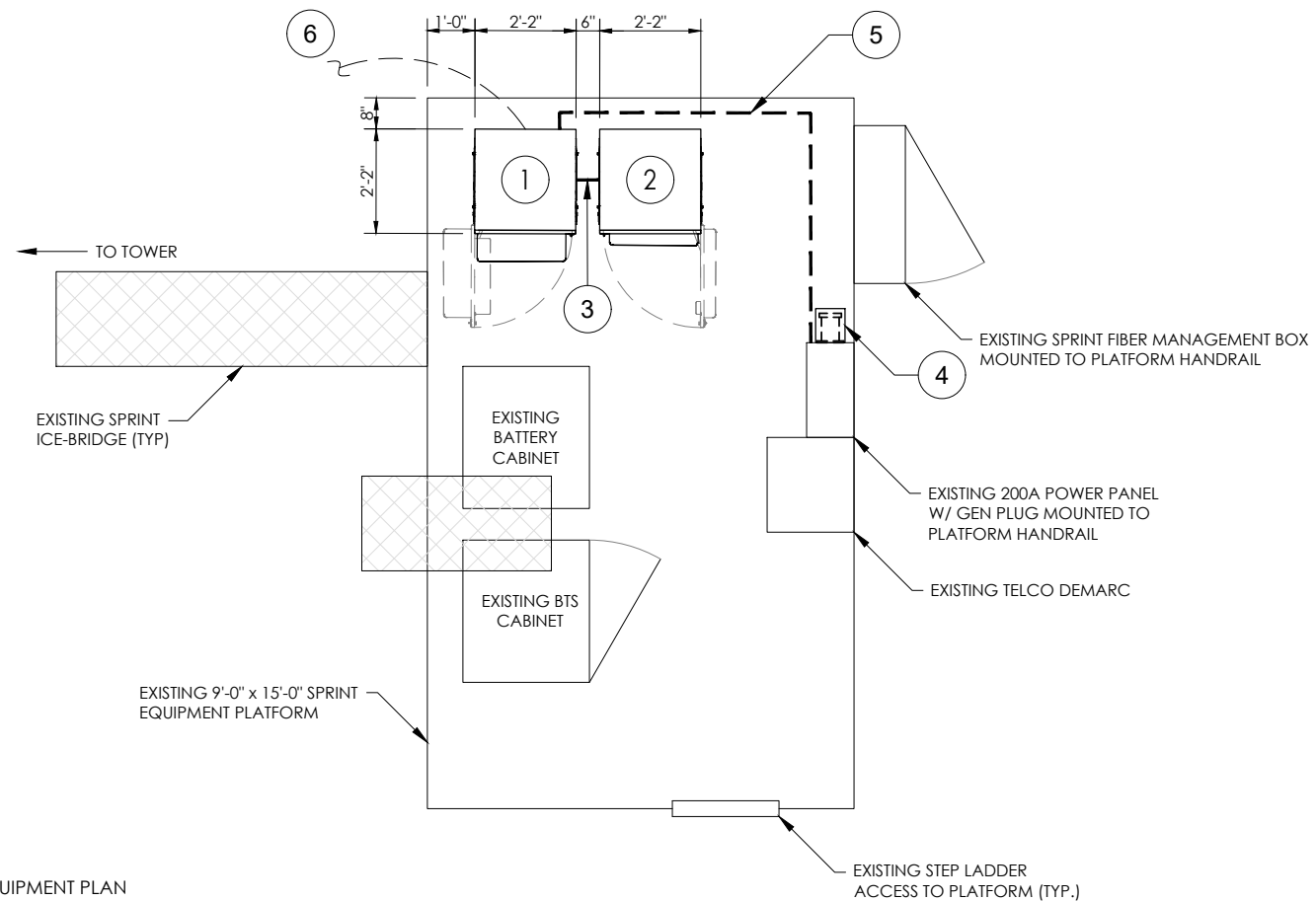
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JOB#: 20ASBTMMNC-0054

SITE PLAN

C-1



1 EXISTING EQUIPMENT PLAN
SCALE: SEE GRAPHIC SCALE



2 PROPOSED EQUIPMENT PLAN
SCALE: SEE GRAPHIC SCALE

GENERAL NOTES

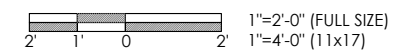
1. PROPOSED ENCLOSURE 6160 CABINET ATTACHED TO PLATFORM AT EACH CORNER PER MANUFACTURER'S SPECIFICATIONS. GROUND CABINET WITH MECHANICAL 2-LUG CONNECTION & #2 TINNED SOLID COPPER IN 3/4" NON METALLIC FLEX. CONDUIT TO EXISTING EQ. GROUND (TYP)
2. PROPOSED ENCLOSURE B160 BATTERY CABINET ATTACHED TO PLATFORM AT EACH CORNER PER MANUFACTURER'S SPECIFICATIONS. GROUND CABINET WITH MECHANICAL 2-LUG CONNECTION & #2 TINNED SOLID COPPER IN 3/4" NON METALLIC FLEX. CONDUIT TO EXISTING EQ. GROUND. (TYP)
3. PROPOSED (2) 3" PVC SCH. 80 RIGID CONDUIT WITH PULLSTRINGS FROM PROPOSED ENCLOSURE 6160 CABINET TO PROPOSED ENCLOSURE B160 BATTERY CABINET.
4. EXISTING PPC CABINET ATTACHED TO EXISTING HANDRAIL. REMOVE EXISTING APPLE-TON GENERATOR PLUG & INSTALL PROPOSED CAM-LOC GENERATOR PLUG. MAINTAIN 36"x48" CLEARANCE IN FRONT OF PANEL. GROUND PER MANUFACTURER DETAILS.
5. PROPOSED (1) 3" PVC SCH. 80 NONFLEX CONDUIT WITH FROM EXISTING PPC TO PROPOSED ENCLOSURE 6160 CABINET.
6. PROPOSED (1) 3" PVC SCH. 80 NONFLEX CONDUIT FROM PROPOSED 6160 CABINET FOR TELCO/FIBER CONNECTIVITY. FINAL CONNECTION REQUIREMENTS TBD.

EQUIPMENT NOTE

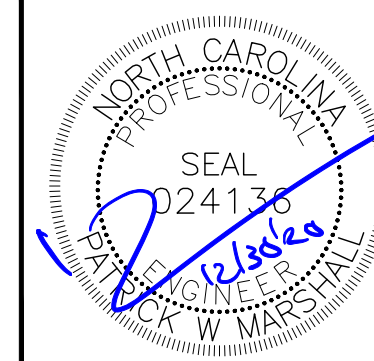
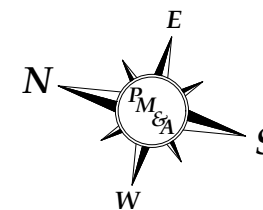
THE CABINETS ARE CONSTRUCTED OF NONCOMBUSTIBLE MATERIALS TO MEET THE REQUIREMENTS OF THE CURRENT NFPA 37 EDITION 2018. CABINET CONSTRUCTION THAT PASSED A SIMULATED BRUSH FIRE TEST TO DEMONSTRATE COMPLIANCE TO TELCORDIA GR-487-CORE SECTION 3.39 FIRE RESISTANCE REQUIREMENT R3-265. REFER TO THE NATIONAL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

GRAPHIC SCALE

SITE PLAN



NORTH ARROW



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P. MARSHALL & ASSOCIATES

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SITE TYPE:
265' SELF SUPPORT T-MOBILE SPRINT KEEP

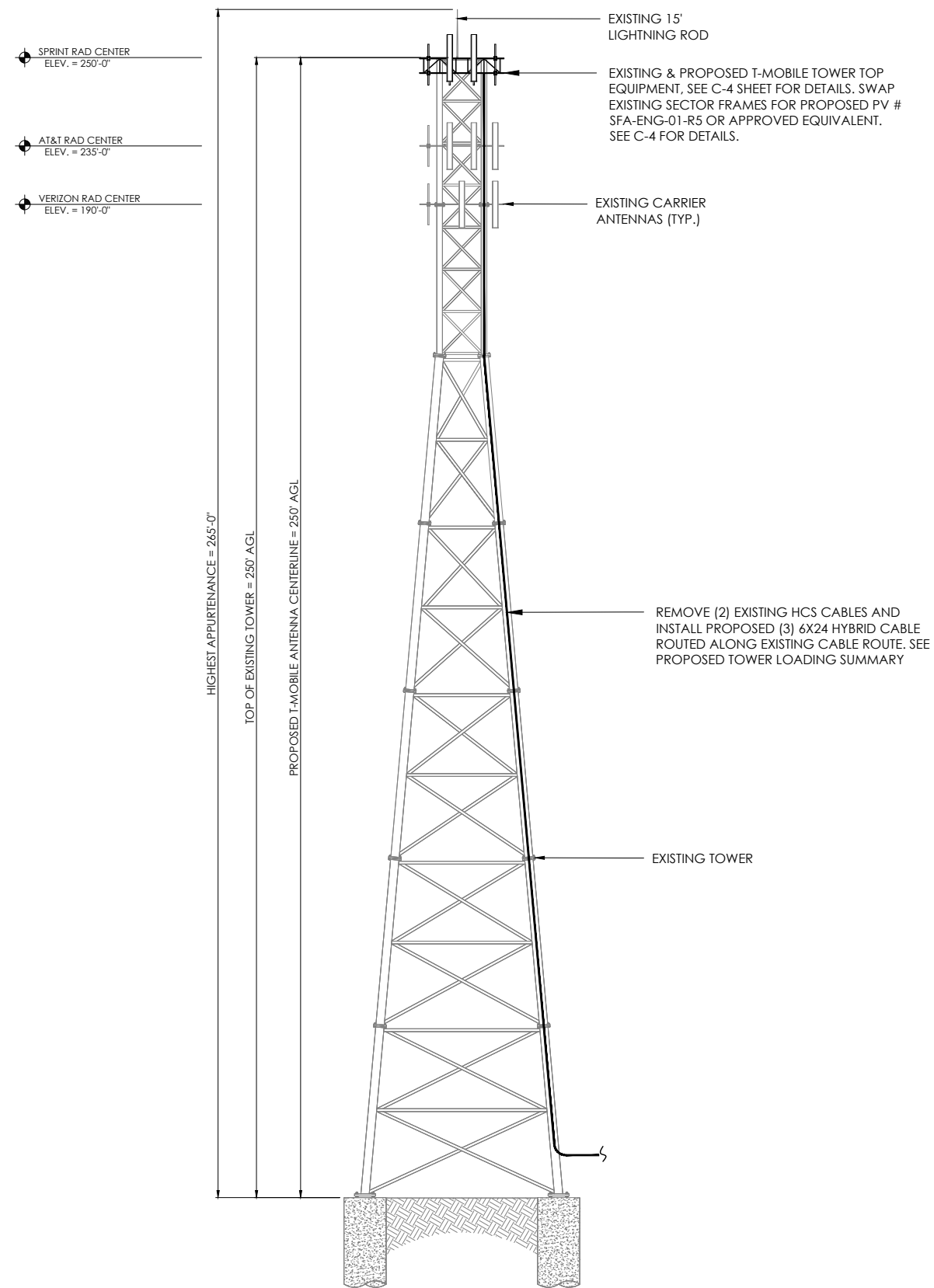
REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.311417
LONG: -79.15375

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0054

EXISTING EQUIPMENT PLAN

C-2



GENERAL NOTES

1. PM&A HAS NOT PERFORMED A TOWER STRUCTURAL ANALYSIS 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 CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED.
4. ALL HARDWARE ASSEMBLY 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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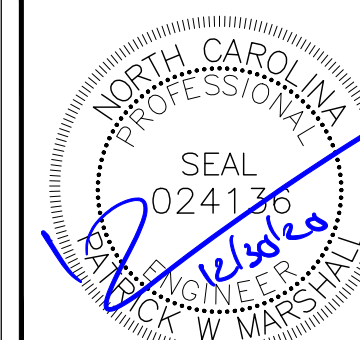
LOCATION:
696 CLAUDE-WHITE
ROAD/SR 1001
LEMON SPRINGS, NC 28236
SBA:
OLIVIA
NC01659-B
T-MOBILE:
L-SPRINT RA33XC275
5RA0882A

SITE TYPE:
265' SELF SUPPORT
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

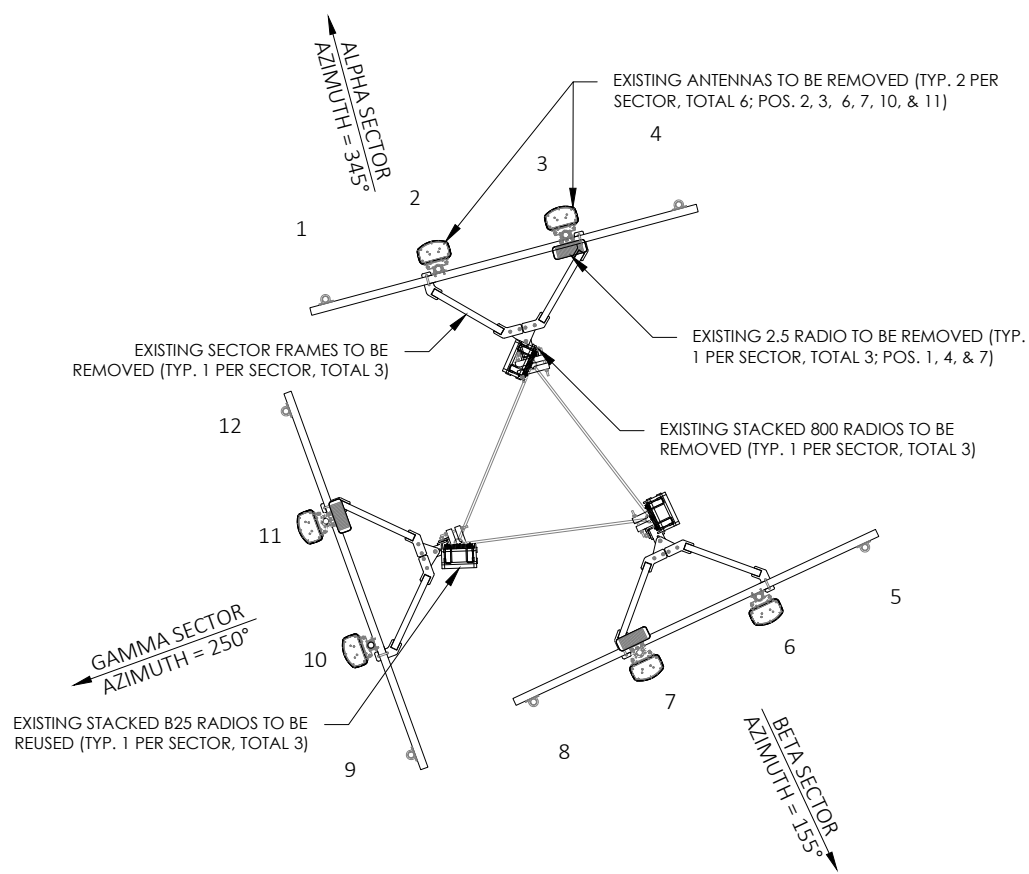
SITE COORDINATES
LAT: 35.311417
LONG: -79.15375

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0054

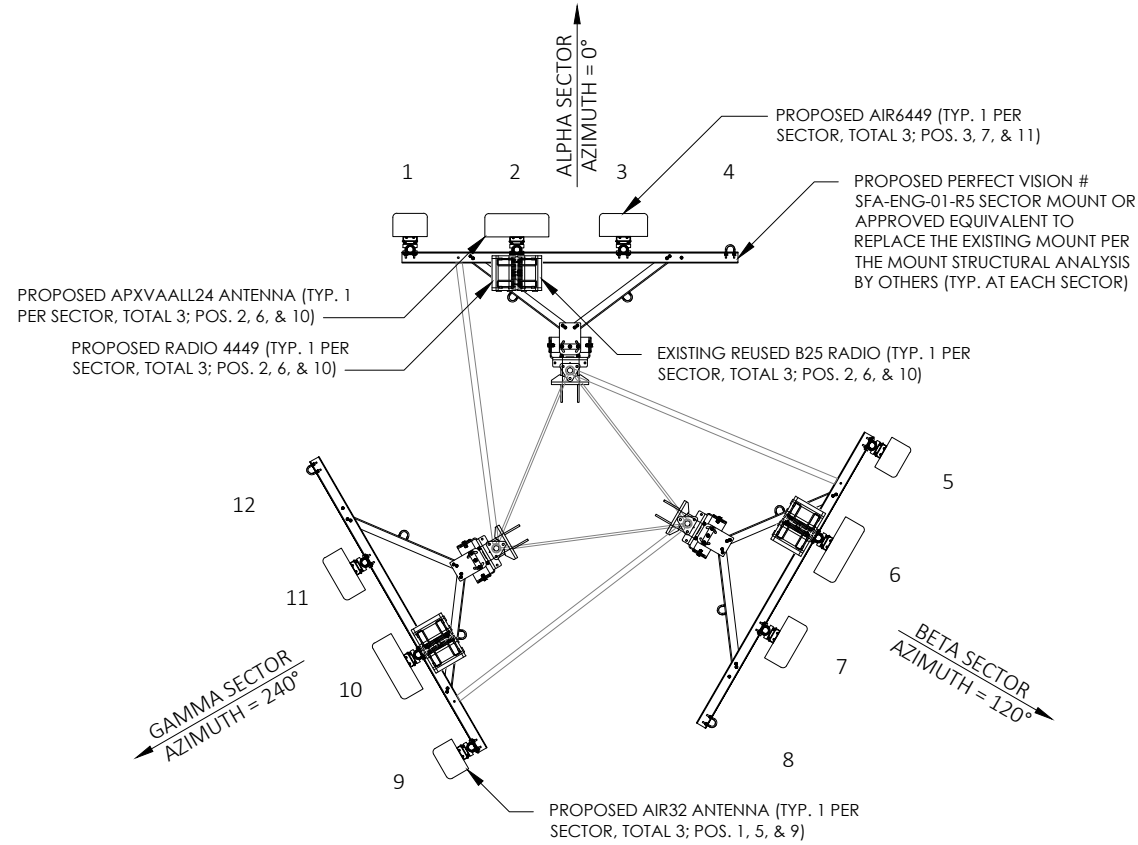


TOWER ELEVATION

C-3



EXISTING ANTENNA PLAN
NOT TO SCALE



FINAL ANTENNA PLAN
NOT TO SCALE

PROPOSED ANTENNA SCHEDULE

SECTOR	MARK	AZIMUTH	ANTENNA MODEL	RADIO MODEL	CABLE DESCRIPTION
ALPHA	1	0°	ERICSSON - AIR32 KRD901146-1_B66A_B2A (OCTO) (P)	-	(1) 1 1/2" 6x12 HCS (EXISTING TO REMAIN)
ALPHA	2	0°	RFS - APXVAALL24_43-U-NA20 (OCTO) (P)	(1) B25 4TRT RRU (E) (1) RADIO 4449 B71+B85 (P)	(1) ERICSSON 6x24 HCS 4AWG 90M (295') (P)
ALPHA	3	0°	ERICSSON - AIR6449 B41 (MASSIVE MIMO) (P)	-	-
-	4	-	-	-	-
BETA	5	120°	ERICSSON - AIR32 KRD901146-1_B66A_B2A (OCTO) (P)	-	(1) 1 1/2" 6x12 HCS (EXISTING TO REMAIN)
BETA	6	120°	RFS - APXVAALL24_43-U-NA20 (OCTO) (P)	(1) B25 4TRT RRU (E) (1) RADIO 4449 B71+B85 (P)	(1) ERICSSON 6x24 HCS 4AWG 90M (295') (P)
BETA	7	120°	ERICSSON - AIR6449 B41 (MASSIVE MIMO) (P)	-	-
-	8	-	-	-	-
GAMMA	9	240°	ERICSSON - AIR32 KRD901146-1_B66A_B2A (OCTO) (P)	-	-
GAMMA	10	240°	RFS - APXVAALL24_43-U-NA20 (OCTO) (P)	(1) B25 4TRT RRU (E) (1) RADIO 4449 B71+B85 (P)	(1) ERICSSON 6x24 HCS 4AWG 90M (295') (P)
GAMMA	11	240°	ERICSSON - AIR6449 B41 (MASSIVE MIMO) (P)	-	-
-	12	-	-	-	-

ANTENNA NOTE

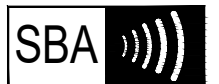
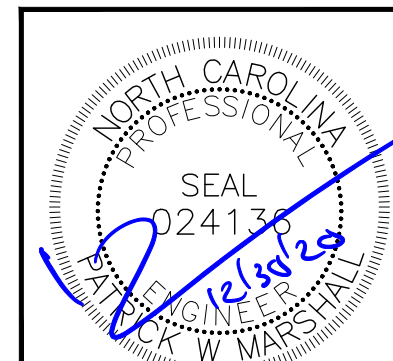
CONTRACTOR TO ROTATE THE ANTENNAS AND OR MOUNTS TO OBTAIN NEW AZIMUTHS. REFER TO FINAL RF DOCUMENTS TO CONFIRM NEW AZIMUTHS

(E)- EXISTING
(P) - PROPOSED

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

EQUIPMENT NOTES

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



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5900 BROKEN SOUND PKWY NW
BOCA RATON, FL 33487



P. MARSHALL & ASSOCIATES

LOCATION:
696 CLAUDE-WHITE
ROAD/SR 1001
LEMON SPRINGS, NC 28236

SBA:
OLIVIA
NC01659-B
T-MOBILE:
L-SPRINT RA33XC275
5RA0882A

SITE TYPE:
265' SELF SUPPORT
T-MOBILE SPRINT KEEP

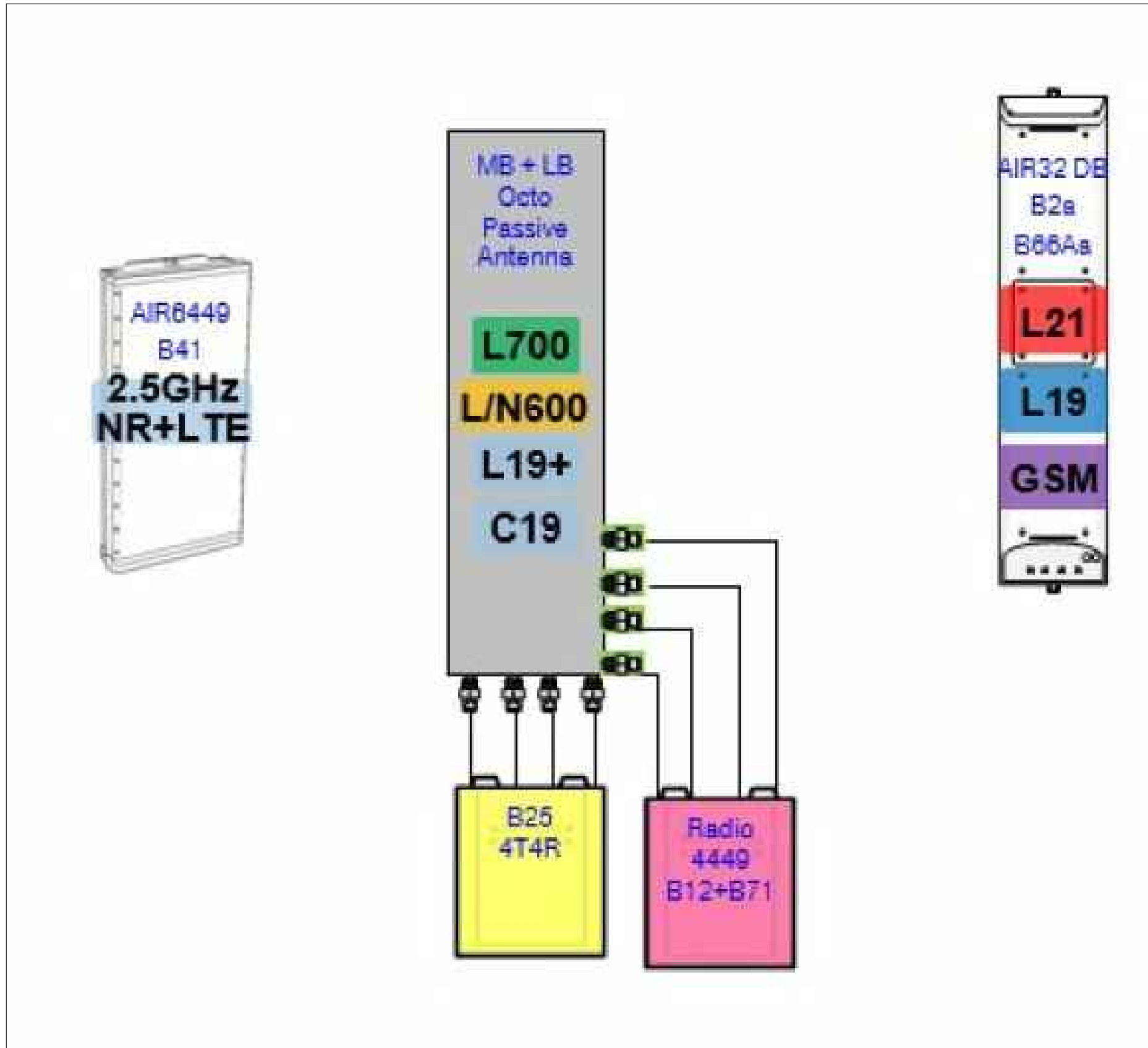
REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.311417
LONG: -79.15375

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBMMNC-0054

**ANTENNA
ORIENTATION &
CABLE SCHEDULE**

PROPOSED RF CONFIGURATION: 67D5A97DB_B25



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BOCA RATON, FL 33487



P. MARSHALL & ASSOCIATES

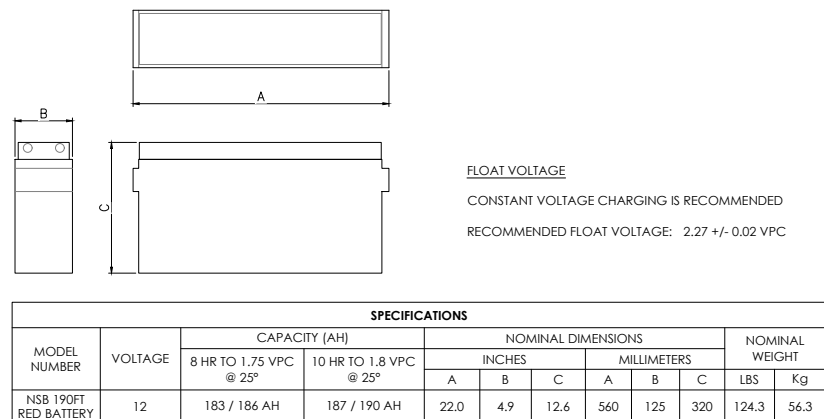
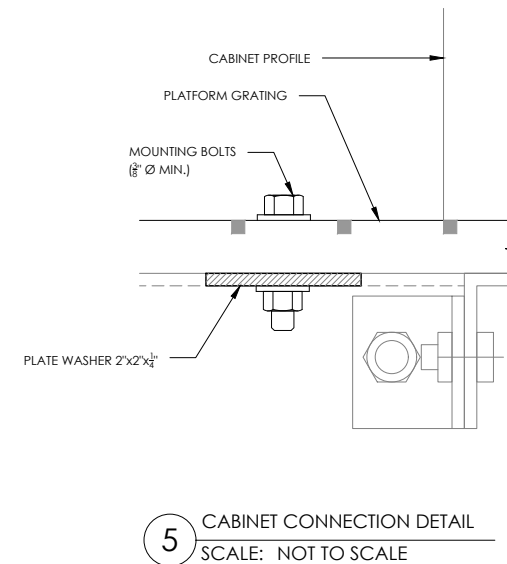
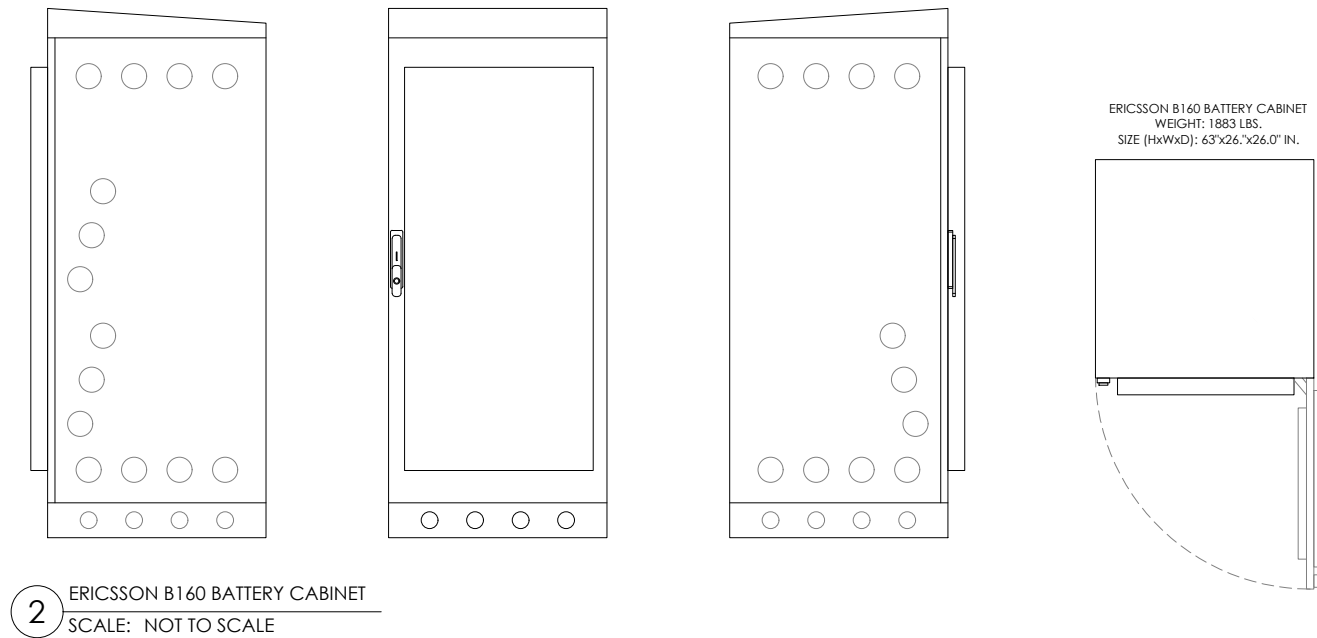
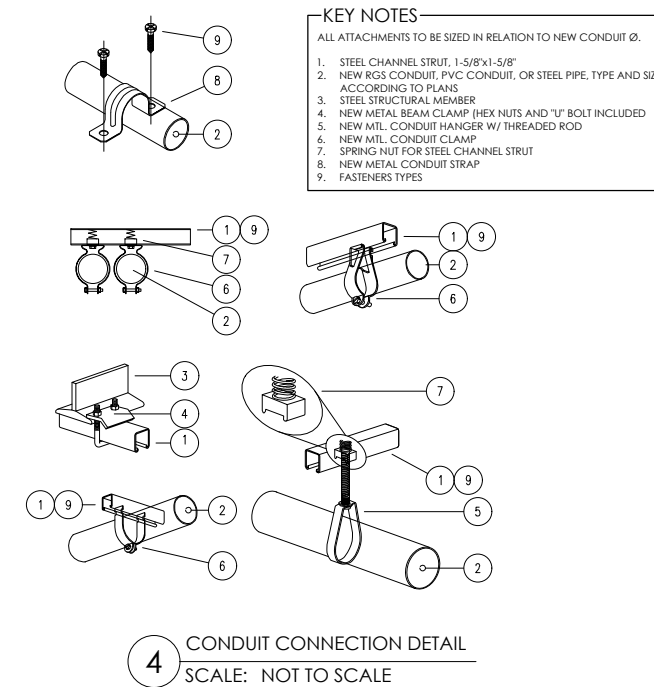
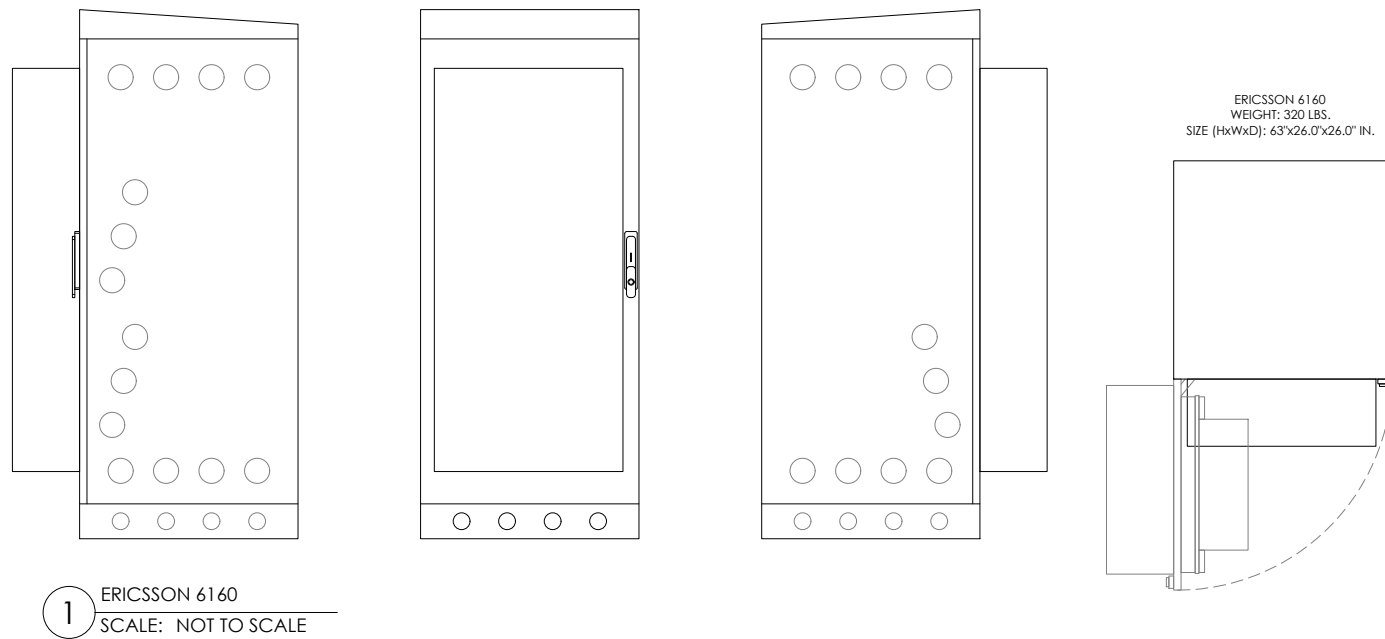
LOCATION:
696 CLAUDE-WHITE
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T-MOBILE:
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JOB#: 20ASBTMMNC-0054

**PLUMBING
DIAGRAM**



ELECTRICAL DATA		
MODEL NUMBER	SHORT CIRCUIT CURRENT	INTERNAL RESISTANCE (mOhms)
NSB 190FT RED BATTERY	5000 A	2.8

CHAPTER 12, SECTION 1206
ELECTRICAL ENERGY STORAGE SYSTEM
1206.2 SCOPE:
STATIONARY STORAGE BATTERY SYSTEMS HAVING CAPACITIES EXCEEDING THE VALUES SHOWN IN TABLE 1206.2 SHALL COMPLY W/ SECTION 1206.2.1 THROUGH 1206.2.12.6, AS APPLICABLE.

BATTERY STORAGE SYSTEM THRESHOLD QTY'S	
CATTERY TECHNOLOGY	CAPACITY ALLOWED
LEAD ACID, ALL TYPES	70 kWh (252 MEGAJOULES)

AH = VOLTAGE (AH)/1000					
VOLTS	AH	kWh	NO. OF BATTERIES	TOTAL kWh	
12	190	1000	2.28	12	27.36

CONCLUSIONS:
27.36 < 70 kWh SECTION 1206.2 DOES NOT APPLY

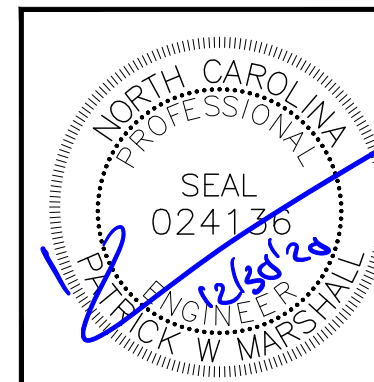
TOTAL BATTERY WEIGHT (12 BATTERIES): 1,491.6 LBS
TOTAL GALLONS - ELECTROLYTE & ACID (12 BATTERIES): 33.36

NSB 190FT RED BATTERY LEAD & ACID WEIGHTS (12-VOLT MODULE):

ELECTROLYTE	WEIGHT	/KG	
		/LBS	/LITERS
ACID	VOLUME	/LITERS	7.8
		/GALLONS	2.08
ACID	WEIGHT	/KG	4.8
		/LBS	10.5
LEAD	VOLUME	/LITERS	2.6
		/GALLONS	0.7
LEAD	WEIGHT	/KG	17.9
		/LBS	39.4
LEAD OXIDE	VOLUME	/KG	23.3
		/LBS	51.2
TOTAL WEIGHT	WEIGHT	/KG	56.3
		/LBS	124.3

BATTERY CABINET NOTE

THE BATTERIES INSTALLED IN THE CABINET ARE VALVE REGULATED LEAD-ACID (VRLA) CELLS BATTERY STRINGS; NORTHSTAR NSB 190FT RED. ALL NORTHSTAR BATTERIES ARE COMPLIANT WITH: TELCORDIA SR4228, IEC 60896; BELLCORE GR-63-CORE, ISSUE 1; UL APPROVED AND UN2800 CERTIFIED. NORTHSTAR IS REGISTERED TO ISO 9001 AND ISO 14001. ERICSSON CABINET PROVIDES REQUIRED VENTILATION, SMOKE, SEISMIC & ADDITIONAL SIGNAGE TO MEET ALL IFC SECTION 608 REQUIREMENTS.



T-Mobile



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BOCA RATON, FL 33487



LOCATION:
696 CLAUDE-WHITE
ROAD/SR 1001
LEMON SPRINGS, NC 28236

SBA:
OLIVIA
NC01659-B

T-MOBILE:
L-SPRINT RA33XC275
5RA0882A

SITE TYPE:
265' SELF SUPPORT
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.311417
LONG: -79.15375

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0054

EQUIPMENT
SPECS

C-6

EQUIPMENT NOTES

DEMO NOTES:

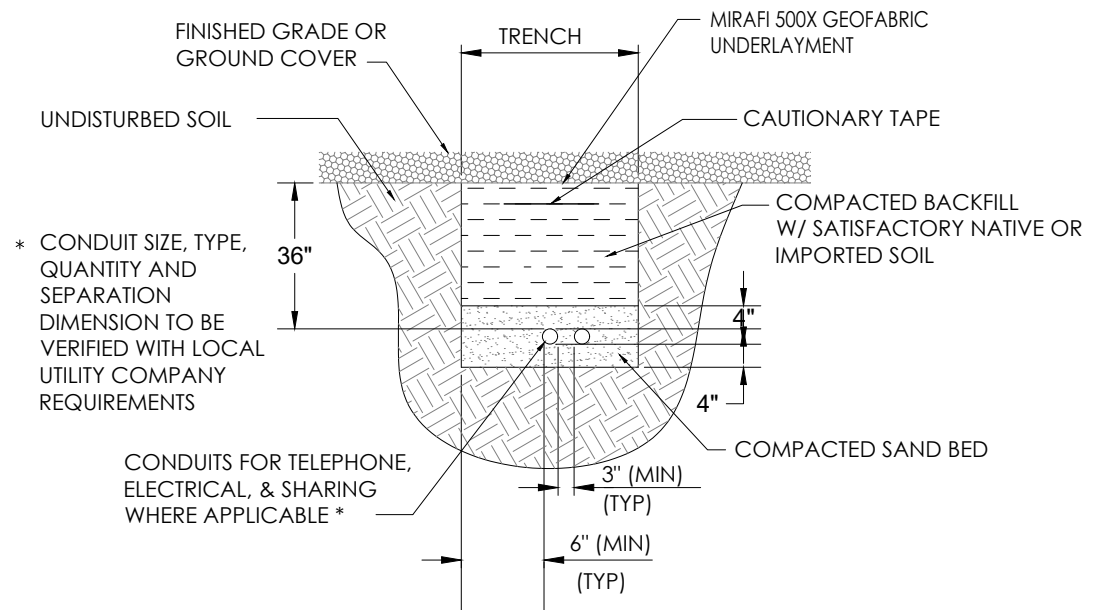
1. REWORK ALL TERMINATION, ELECTRICAL CONNECTORS, CONDUCTORS, CONDUITS, ETC. TO FACILITATE NEW WORK.
2. VERIFY LOCATION IN THE FIELD OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING. COORDINATE WITH PUBLIC UTILITIES AS NECESSARY TO COMPLETE REQUIRED WORK AS INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR 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.

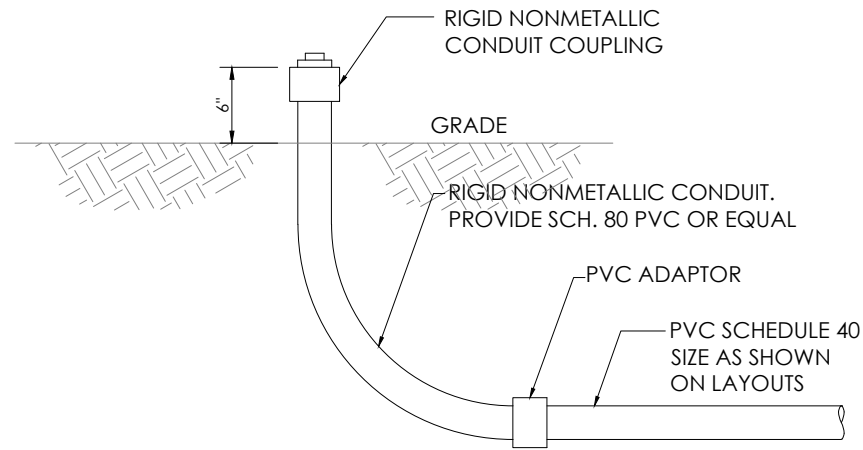
COMPRESSION LUG NOTES:

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

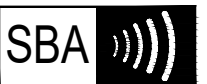
SCALE: NTS



UNDERGROUND CONDUIT SUB-UP

SCALE: NTS

T-Mobile



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BOCA RATON, FL 33487



LOCATION:
696 CLAUDE-WHITE
ROAD/SR 1001
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SBA:
OLIVIA
NC01659-B

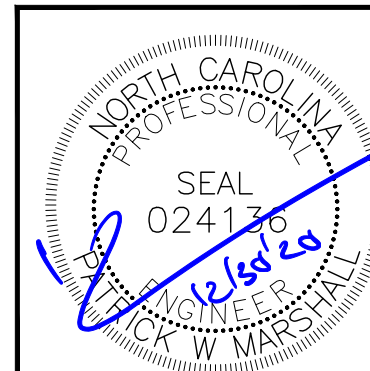
T-MOBILE:
L-SPRINT RA33XC275
5RA0882A

SITE TYPE:
265' SELF SUPPORT
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.311417
LONG: -79.15375

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0054



**ELECTRICAL
DETAILS**

E-1

T-MOBILE SITE # 5RA0834A		LOCATION:		VOLTAGE: 240/120 1Ø		MOUNTING / ENCLOSURE: EXISTING / NEMA 3R							
EXISTING		PLATFORM HANDRAIL		MAIN C/B: 200 AMPS		AVAIL. FAULT CURRENT: EXISTING							
12/3/2020				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
100/2	EXISTING	EQ	MMBTS ALU	10.00	1	10.10		2	0.10	SURGE	EQ	EXISTING	30/2
-	-	EQ	-	10.00	3	-	10.10	4	0.10	-	EQ	-	-
			SPACE		5	2.40		6	2.40	TELCO	E	EXISTING	10/1
			SPACE		7	-	0.18	8	0.18	GFCI	R	EXISTING	20/1
			SPACE		9	0.50		10	0.50	LIGHT	L	EXISTING	20/1
			SPACE		11	-		12	0.00	SPARE RF CABINET	R	EXISTING	20/1
			SPACE		13	-		14	-	SPACE			
			SPACE		15	-		16	-	SPACE			
			SPACE		17	-		18	-	SPACE			
			SPACE		19	-		20	-	SPACE			
			SPACE		21	-		22	-	SPACE			
			SPACE		23	-		24	-	SPACE			
PHASE TOTAL				13.0		10.3							
TOTAL CONNECTED LOAD				23.3 kVA		97 A							
TOTAL DEMAND LOAD				24.0 kVA		100 A							

LOAD TYPE	DESCRIPTION	CONN. LOAD KVA	LOAD AMPS	DEMAND FACTOR	DESIGN LOAD KVA	DESIGN LOAD AMPS
L	LIGHTING	0.5	2.1	1.25	0.6	2.6
R	RECEPTACLE	0.2	0.8	NEC	0.2	0.8
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	0.0	0.0	1.00	0.0	0.0
EQ	EQUIPMENT	20.2	84.2	1.00	20.2	84.2
E	EXISTING	2.4	10.0	1.25	3.0	12.5

* 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 EXISTING PANEL SCHEDULE
SCALE: NOT TO SCALE

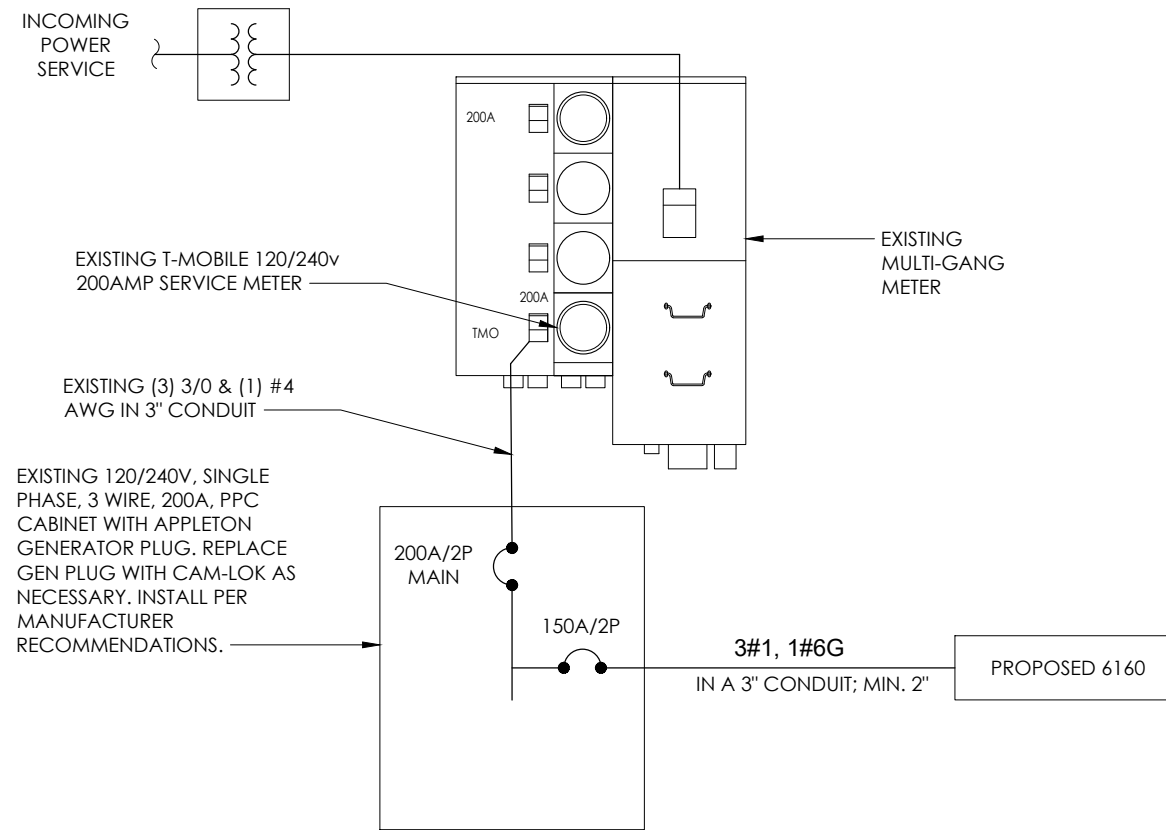
T-MOBILE SITE # 5RA0834A		LOCATION:		VOLTAGE: 240/120 1Ø		MOUNTING / ENCLOSURE: EXISTING / NEMA 3R							
PROPOSED		PLATFORM HANDRAIL		MAIN C/B: 200 AMPS		AVAIL. FAULT CURRENT: EXISTING							
12/4/2020				BUS RATING: 200 AMPS		SHORT CIRCUIT RATING: EXISTING							
AMPS/POLES	WIRE & CONDUIT	TYPE	DESCRIPTION	KVA	CKT	A	B	CKT	KVA	DESCRIPTION	TYPE	WIRE & CONDUIT	AMPS/POLES
100/2	EXISTING	EQ	MMBTS ALU	10.00	1	10.10		2	0.10	SURGE	EQ	EXISTING	30/2
-	-	EQ	-	10.00	3	-	10.10	4	0.10	-	EQ	-	-
			SPACE		5	1.20		6	1.20	TELCO	E	EXISTING	10/1
			SPACE		7	-	0.18	8	0.18	GFCI	R	EXISTING	20/1
			SPACE		9	0.50		10	0.50	LIGHT	L	EXISTING	20/1
			SPACE		11	-		12	0.00	SPARE RF CABINET	R	EXISTING	20/1
			SPACE		13	7.09		14	7.09	PROPOSED 6160	EQ	(3) #1 AWG, (1) #6 GND, 2" C	125/2
			SPACE		15	-	7.09	16	7.09	-	EQ	-	-
			SPACE		17	-		18	-	SPACE			
			SPACE		19	-		20	-	SPACE			
			SPACE		21	-		22	-	SPACE			
			SPACE		23	-		24	-	SPACE			
PHASE TOTAL				18.9		17.4							
TOTAL CONNECTED LOAD				36.3 kVA		151 A							
TOTAL DEMAND LOAD				36.7 kVA		153 A							

LOAD TYPE	DESCRIPTION	CONN. LOAD KVA	LOAD AMPS	DEMAND FACTOR	DESIGN LOAD KVA	DESIGN LOAD AMPS
L	LIGHTING	0.5	2.1	1.25	0.6	2.6
R	RECEPTACLE	0.2	0.8	NEC	0.2	0.8
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	0.0	0.0	1.00	0.0	0.0
EQ	EQUIPMENT	34.4	143.3	1.00	34.4	143.3
E	EXISTING	1.2	5.0	1.25	1.5	6.3

* 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.

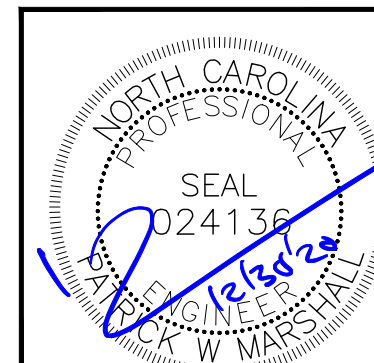
2 PROPOSED PANEL SCHEDULE
SCALE: NOT TO SCALE



3 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

GENERAL ELECTRICAL NOTES

- 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.
- ELECTRICAL SERVICE SHALL BE 200A, 240/120V, 1 P, 3W
- FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDER PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.
- 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.
- 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.
- 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
- 6160 ENCLOSURE STANDARD CONFIGURATION INCLUDES (4) 3500W RECTIFIERS. LOAD PROVIDED IN PANEL SCHEDULE IS BASED ON STANDARD (4) PLUS ADDITIONAL (3) CONFIGURATION. IF ADDITIONAL RECTIFIERS ARE REQUIRED, ENGINEER OF RECORD SHALL BE CONTACTED TO DETERMINE ADEQUACY OF EXISTING PANEL FOR ADDITIONAL LOAD
- CONTRACTOR SHALL FIELD VERIFY EXISTING AC PANEL MODEL AND ENSURE 125A, 2P, 2-POSITION BREAKER IS COMPATIBLE, CONTACT EOR IF DISCREPANCIES ARE FOUND.
- CONTRACTOR TO FIELD VERIFY ALL EQUIPMENT RATINGS AND WIRE SIZES. IF ANY DISCREPANCIES EXIST, CONTACT ENGINEER PRIOR TO ROUGH IN.



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



LOCATION:
696 CLAUDE-WHITE ROAD/SR 1001
LEMON SPRINGS, NC 28236
SBA:
OLIVIA
NC01659-B
T-MOBILE:
L-SPRINT RA33XC275
5RA0882A

SITE TYPE:
265' SELF SUPPORT
T-MOBILE SPRINT KEEP

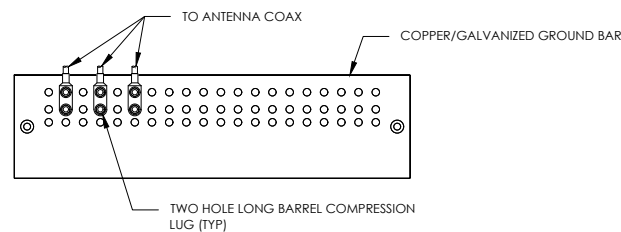
REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.311417
LONG: -79.15375

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBTMMNC-0054

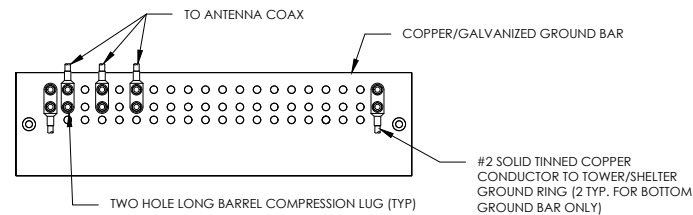
PANEL SCHEDULE & ONE-LINE DIAGRAM

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.

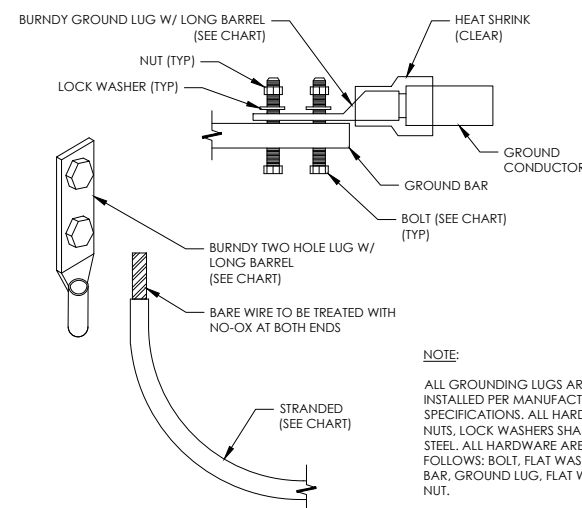
1 ANTENNA GROUND BAR DETAIL
SCALE: NOT TO SCALE



- 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.

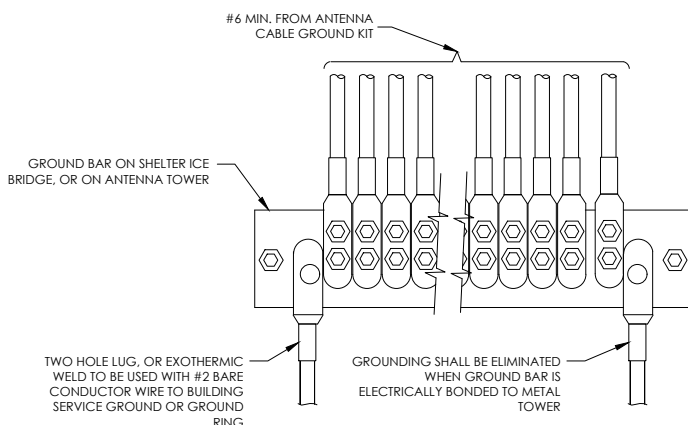
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE

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



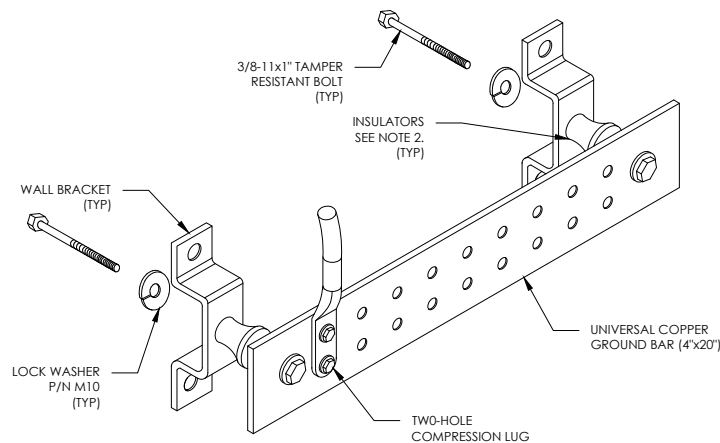
NOTE:
ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



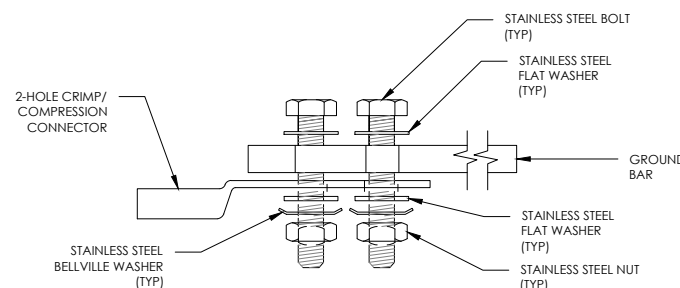
GROUNDING SHALL BE ELIMINATED WHEN GROUND BAR IS ELECTRICALLY BONDED TO METAL TOWER

4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE

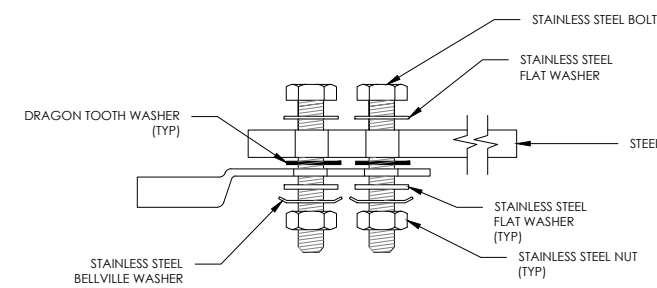


- NOTES:
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
 2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

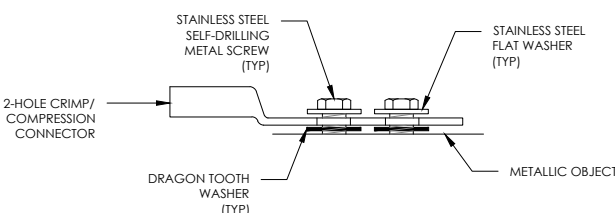
5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



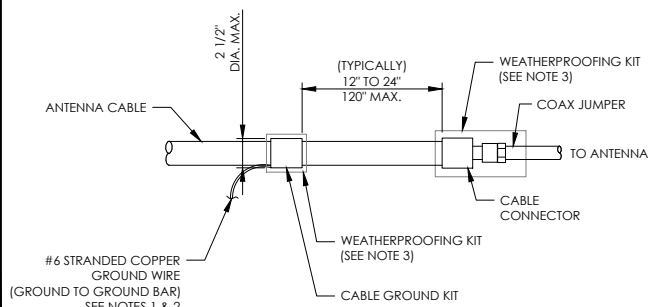
SINGLE CONNECTOR AT GROUND BARS



SINGLE CONNECTOR AT STEEL OBJECTS

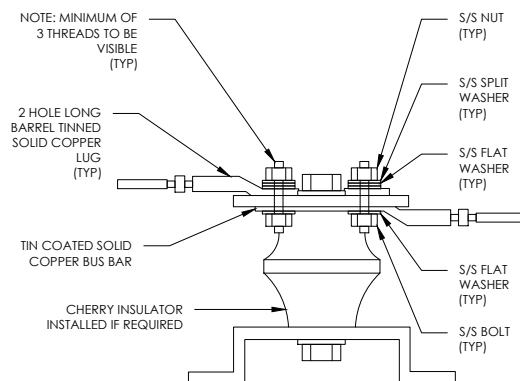


SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS



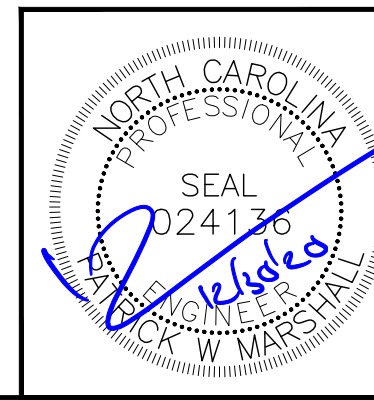
- NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



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



P. MARSHALL & ASSOCIATES

LOCATION:
696 CLAUDE-WHITE
ROAD/SR 1001
LEMON SPRINGS, NC 28236

SBA:
OLIVIA
NC01659-B
T-MOBILE:
L-SPRINT RA33XC275
5RA0882A

SITE TYPE:
265' SELF SUPPORT
T-MOBILE SPRINT KEEP

REV	DATE	DESCRIPTION
0	12/30/20	FOR CONSTRUCTION

SITE COORDINATES
LAT: 35.311417
LONG: -79.15375

DRAWN: RSW
CHECKED: PWM
JOB#: 20ASBMMNC-0054

GROUNDING
DETAILS

G-1