

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED

Limited building only review
Permit holder responsible for full compliance with the code

10/16/2020



T-Mobile South, LLC

MINGO SWAMP

5RA0613A

ANCHOR 2020 PROJECT

200 FARMVIEW RD
DUNN, NC 28334

DIRECTIONS TO THE SITE

FROM DOWNTOWN RALEIGH, NC
HEAD NORTH ON S WILMINGTON ST TOWARD NEW BERN PL. @ 1 MILE. TURN LEFT ONTO S EDENTON ST (0.3 MILE). TURN LEFT ONTO US-401 S/US TO EN DAWSON ST (2.1 MILE). USE THE LEFT 2 LANES TO TURN LEFT TO MERGE ONTO I-40 E/US-54 E (0.3 MILE). MERGE ONTO I-40 E/US-54 E @ 0.8 MILES. KEEP RIGHT AT THE FORK TO CONTINUE ON I-40 E. FOLLOW SIGNS FOR BENSON/WILMINGTON @ 4 MILES. TAKE EXIT 328A TO MERGE ONTO I-95 S TOWARD BENSON/FAYETTEVILLE (1.6 MILE). TAKE EXIT 79 FOR NC-50/STATE ROUTE 242 TOWARD STATE ROUTE 27/BENSON/NEWTOWN GROVE @ 2 MILES. TURN LEFT ONTO NC-50/SE MAIN ST @ 1 MILE. TURN RIGHT TOWARD NC-242 S/WALTON DR (151 FEET). TURN RIGHT ONTO NC-242 S/WALTON DR (0.7 MILE). TURN RIGHT ONTO MASSENGILL FARM RD (1 MILE). CONTINUE ONTO FARMVIEW RD @ 2. DESTINATION WILL BE ON THE LEFT

PREPARED BY
Jacobs
Challenging today. Reinvesting tomorrow.
Jacobs Telecommunications, Inc.
3445 BELLS FERRY ROAD
ACWORTH, GA 30102
478-785-4050

DESIGN REVISIONS

NO.	DATE	ISSUED FOR	BY
0	09/17/20	ISSUED FOR CONSTRUCTION	VLH

NOT VALID WITHOUT SIGNATURE AND DATE



SITE SUMMARY

PROJECT TYPE:	ANCHOR 2020 PROJECT
STRUCTURE TYPE:	MONOPOLE
TOWER LATITUDE:	35 350378 (NAD 83)
TOWER LONGITUDE:	-78 550202 (NAD 83)
COUNTY:	HARNETT
PARCEL PIN:	1538-42-2332-000
RAD CENTER:	195
JURISDICTION:	HARNETT COUNTY
ZONING CLASSIFICATION:	IND

ACCORDING TO FLOOD INSURANCE RATE MAP NUMBER 3720152800K, EFFECTIVE DATE 206, 03 OCT. THIS SITE IS ZONED "X" AND IS NOT IN A 100-YEAR FLOOD PLAIN.

CONTRACTOR NOTE
CONTRACTOR TO VERIFY CONDITIONS OF THE EXISTING WIRELESS INSTALLATION PRIOR TO MODIFICATION. IF THE CONDITIONS ARE NOT AS PER THE ORIGINAL INSTALLATION OR THE SUPPORTING STRUCTURE HAS BEEN MODIFIED OR DETEIORATED, THE ENGINEER MUST BE NOTIFIED IMMEDIATELY.

PROJECT DIRECTORY

APPLICANT:	T-MOBILE SOUTH, LLC 2105 WATER RIDGE PKWY, STE 400 CHARLOTTE, NC 28217 STEVE OLIVO (201) 696-6963
SITE DESIGN:	JACOBS TELECOMMUNICATIONS, INC. 5449 BELLS FERRY ROAD ACWORTH, GEORGIA 30102
OWNER:	SKYWAY TOWERS 3837 MADACA LANE TAMPA, FL 33618 813-960-6217

"CALL BEFORE YOU DIG"
WWW.NC811.ORG
CALL 811
CALL TOLL FREE
1-800-632-4349

COLOR CODE FOR UTILITY LOCATIONS

ELECTRIC - RED	SEWER - GREEN
GAS/OIL - YELLOW	SURVEY - PINK
TELECOM - ORANGE	PROPOSED EXCAVATION - WHITE
WATER - BLUE	RECLAIMED WATER - PURPLE

SHEET INDEX

SHEET SPECIFIC SHEETS	REV.	DATE
T-1 TITLE SHEET	0	09/17/20
T-2 APPENDIX B CODE SUMMARY	0	09/17/20
T-3 APPENDIX C CODE SUMMARY	0	09/17/20
C-1 OVERALL SITE PLAN AND NOTES	0	09/17/20
C-2 ENLARGED EQUIPMENT PLAN AND NOTES	0	09/17/20
S-1 TOWER ELEVATION & ANTENNA ORIENTATION	0	09/17/20
S-2 ANTENNA & CABLE SCHEDULE	0	09/17/20
E-1 GENERAL ELECTRICAL NOTES & SYMBOLS	0	09/17/20
E-2 GROUNDING NOTES & DIAGRAM	0	09/17/20
E-3 EQUIPMENT CABINET DETAILS	0	09/17/20

STATE CODE COMPLIANCE
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

DESIGN CRITERIA
NORTH CAROLINA BUILDING CODE 2018 (NCBC 2018); BUILDING/SMELTING CODE INTERNATIONAL BUILDING CODE 2018 (IBC 2018); STRUCTURAL CODE MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-10)

OPERATIONS	SIGNATURE _____ DATE _____
RF ENGINEER	SIGNATURE _____ DATE _____
CONSTRUCTION MANAGER	SIGNATURE _____ DATE _____
SITE ACQUISITION AGENT	SIGNATURE _____ DATE _____
LANDOWNER	SIGNATURE _____ DATE _____
PROGRAM MANAGER	SIGNATURE _____ DATE _____
ZONING/PERMITTING	SIGNATURE _____ DATE _____

PREPARED FOR
T-Mobile
185 FARMVIEW STREET
CHARLOTTE, NC 28402
PHONE: (919) 274-4501

SITE NUMBER: 5RA0613A
SITE NAME: MINGO SWAMP
SITE ADDRESS: 200 FARMVIEW RD, DUNN, NC 28334

PREPARED BY: K. KRATINA
DESIGNED BY: T. VIEH
PROJECT NO.: EUTM2020
DATE: 07/29/2020

SHEET NAME: TITLE SHEET
SHEET NUMBER: T-1

ENERGY SUMMARY

The following data shall be considered minimum and any special allowance required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the data to meet performance method, state the annual energy load for the standard reference design vs actual energy load for the proposed design.

Existing building envelope complies with code: No Yes (Check number of this section in the Appendix)

Envelope Building: No Yes (Provide load in separate worksheet)

Climate Zone: 3A 4A 5A

Method of Compliance: Energy Code Performance Prescriptive
ASHRAE 90.1 Performance Prescriptive
(If "No" specify above)

THERMAL ENVELOPE (Provide method only)

Roof/ceiling assembly (each assembly):
Description of assembly: N/A
U-Value of total assembly: _____
R-Value of insulation: _____
Drainage in each assembly: _____
U-Value of skylight: _____
Total square footage of skylights in each assembly: _____

Exterior Wall (each assembly):
Description of assembly: N/A
U-Value of total assembly: _____
R-Value of insulation: _____
Changing wall/panels or doors with glazing: _____
Total heat gain coefficient: _____
Door E-factor: _____

Walls below grade (each assembly):
Description of assembly: N/A
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: N/A
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement met: _____

2018 NC Administrative Code and Policies

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

DESIGN LOADS

Importance Factors: Snow (S): _____
Seismic (IE): _____

Live Loads: Roof: N/A psf
Mechanics: N/A psf
Floor: N/A psf

Ground Snow Load: N/A psf

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

SEISMIC DESIGN CATEGORY: A B C D

Provide the following Seismic Design Parameters:
Risk Category (I, II, III, IV): I II III IV
Spectral Response Acceleration: S_s _____ g
Site Classification (ASCE 7): B C D E

Site Classification (ASCE 7): B C D E

Basic structural system: Bearing Wall Dual w/General Moment Frame
 Building Frame Dual w/Intermediate RC or Special Steel
 Moment Frame Inverted Pendulum Dynamic

Analysis Procedure: Simplified Equipment Label (per ASCE 7) Dynamic

Architectural, Mechanical, Components anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake Wind V

SOIL BEARING CAPACITIES:
Final Test (provide copy of test report): _____ psf
Preliminary Bearing Capacity: _____ psf
Provide soil type and capacity: _____

2018 NC Administrative Code and Policies

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

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEM AND EQUIPMENT

Thermal Zone:
Number of buildings: _____
Number of zones: _____

Interior design conditions:
Number of buildings: _____
Number of zones: _____
Relative humidity: _____

Building envelope:
Number of buildings: _____
Number of zones: _____
Relative humidity: _____

Mechanical Heating/Cooling System:
Unitary:
Description of unit: _____
Heating efficiency: _____
Cooling efficiency: _____
Size category of unit: _____
Solar:
Size category, if oversized, state reason: _____
Other:
Size category, if oversized, state reason: _____

Use equipment efficiencies: _____

NO ALTERATIONS TO EXISTING CONDITIONS

2018 NC Administrative Code and Policies

PREPARED BY

Jacobs
Challenging today.
Reinventing tomorrow.
Jacobs Telecommunications, Inc.
5449 BELLS FERRY ROAD
KNCORTH, GA 30152
478-785-4050

DESIGN REVISIONS

0 08/17/20 ISSUED FOR CONSTRUCTION VLN

NO DATE REVISIONS BY

NOT VALID WITHOUT SIGNATURE AND DATE

ENGINEER SEAL

NORTH CAROLINA PROFESSIONAL SEAL 38528
K. R. KRATZIA
ENGINEER

2018 NC Administrative Code and Policies

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

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type):
into type (provide ASHRAE 90.1 schedule)
number of fixtures in room: _____
ballast type (provide ASHRAE 90.1 ballast type)
number of ballasts per fixture: _____
total wattage per fixture: _____
total interior wattage specified vs. allowed (include building or space by space): _____
total exterior wattage specified vs. allowed: _____

Additional Efficiency Package Defines (When using the 2018 NECCC, not required for ASHRAE M.1):
 C401 2 More Efficient HVAC Equipment Performance
 C402 2 Reduced Lighting Power Density
 C403 2 Enhanced Digital Lighting Controls
 C404 0 On-Site Renewable Energy
 C405 0 Demand Control on System
 C407 7 Reduced Energy Use in Service Water Heating

2018 NC Administrative Code and Policies

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

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type):
into type (provide ASHRAE 90.1 schedule)
number of fixtures in room: _____
ballast type (provide ASHRAE 90.1 ballast type)
number of ballasts per fixture: _____
total wattage per fixture: _____
total interior wattage specified vs. allowed (include building or space by space): _____
total exterior wattage specified vs. allowed: _____

Additional Efficiency Package Defines (When using the 2018 NECCC, not required for ASHRAE M.1):
 C401 2 More Efficient HVAC Equipment Performance
 C402 2 Reduced Lighting Power Density
 C403 2 Enhanced Digital Lighting Controls
 C404 0 On-Site Renewable Energy
 C405 0 Demand Control on System
 C407 7 Reduced Energy Use in Service Water Heating

2018 NC Administrative Code and Policies

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

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type):
into type (provide ASHRAE 90.1 schedule)
number of fixtures in room: _____
ballast type (provide ASHRAE 90.1 ballast type)
number of ballasts per fixture: _____
total wattage per fixture: _____
total interior wattage specified vs. allowed (include building or space by space): _____
total exterior wattage specified vs. allowed: _____

Additional Efficiency Package Defines (When using the 2018 NECCC, not required for ASHRAE M.1):
 C401 2 More Efficient HVAC Equipment Performance
 C402 2 Reduced Lighting Power Density
 C403 2 Enhanced Digital Lighting Controls
 C404 0 On-Site Renewable Energy
 C405 0 Demand Control on System
 C407 7 Reduced Energy Use in Service Water Heating

2018 NC Administrative Code and Policies

PREPARED FOR

Mobile
105 FARMFIELD STREET
PHONE: (919) 274-4207

SITE NUMBER: SR40134

SITE NAME: MINGO SWAMP

SITE ADDRESS: 200 FARMVIEW RD
DUNN, NC 28534

PREPARED BY: K. KRATZIA
APPROVED BY: T. VIEHE
DESIGNED BY: E. UMADON
PROJECT NO: EUMAD008
DATE: 07/29/2020

SHEET NAME: APPENDIX B CODE SUMMARY

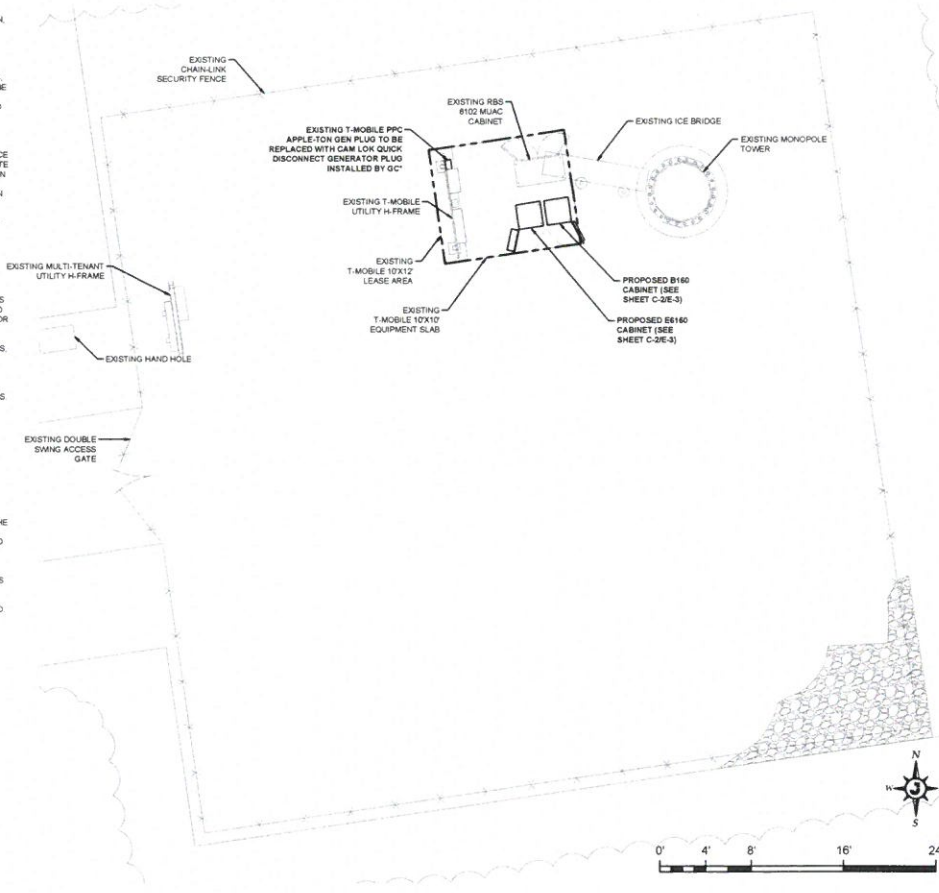
SHEET NUMBER: T-3

2018 NC Administrative Code and Policies

GENERAL NOTES:

1. SUBJECT PROPERTY IS KNOWN AS 1534-42-2332 000 AS SHOWN ON THE HARNETT COUNTY WEBSITE, AND IS SITUATED AT 200 FARMVIEW RD DUNN, NC.
2. THIS SITE DESIGN HAS BEEN PREPARED WITHOUT THE BENEFIT OF AN AS-BUILT SURVEY. SLIGHT VARIATIONS MAY EXIST BETWEEN THIS SITE PLAN AND TRUE DIMENSIONS IN THE FIELD. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS.
3. THE GENERAL CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
4. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES. TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
5. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
6. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.
7. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT, THEY SHALL GOVERN. GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF A NEW TOWER.
8. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS PROCEDURES FOR THE PROTECTION OF EXCAVATIONS. PROPOSED CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.
9. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
10. ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS OF NOTICE SHOULD BE GIVEN AND THE BUILDING INSPECTION DEPARTMENTS HAVE REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.
12. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL PROPOSED UTILITIES WITHIN THE CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
13. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS, ETC. BETWEEN THE WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.
14. PERMITS: THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, FEES AND INSPECTIONS, ETC.

CONTRACTOR TO VERIFY ALL PROPOSED AND EXISTING ANTENNAE, MOUNTS AND CABLES WERE CONSIDERED AND PASSED A STRUCTURAL ANALYSIS PERFORMED BY A LICENSED ENGINEER PRIOR TO INSTALLATION.



OVERALL SITE PLAN

1/8" = 1'-0" 1

PREPARED BY
Jacobs
 Challenging today. Re inventing tomorrow.
 Jacobs Telecommunications, Inc.
 5449 BELLS FERRY ROAD
 ACWORTH, GA 30102
 478-785-4050

DESIGN REVISIONS

NO.	DATE	REVISIONS BY
0	08/17/20	ISSUED FOR CONSTRUCTION

NOT VALID WITHOUT SIGNATURE AND DATE

ENGINEER'S SEAL

 K. R. KRATNA

PREPARED FOR
T-Mobile
 185 PARCHELOD STREET
 CHARLESTON, SC 29402
 PHONE: (843) 214-1401

SITE NUMBER: 5RA0813A
 SITE NAME: MINGO SWAMP
 SITE ADDRESS: 200 FARMVIEW RD DUNN, NC 28334

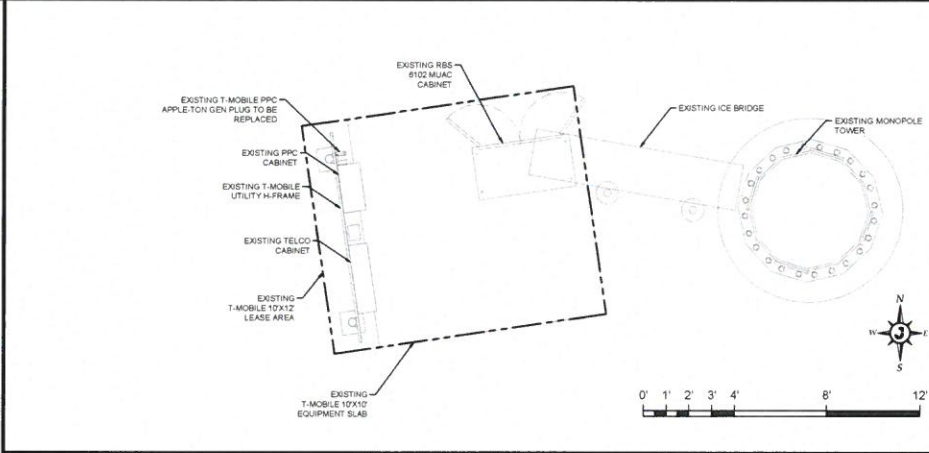
PREPARED BY: APPROVED BY: K. KRATNA
 DESIGNED BY: T. VIEHE
 PROJECT NO: EUTM0208
 DATE: 07/26/2020

SHEET NAME: OVERALL SITE PLAN & NOTES
 SHEET NUMBER: C-1

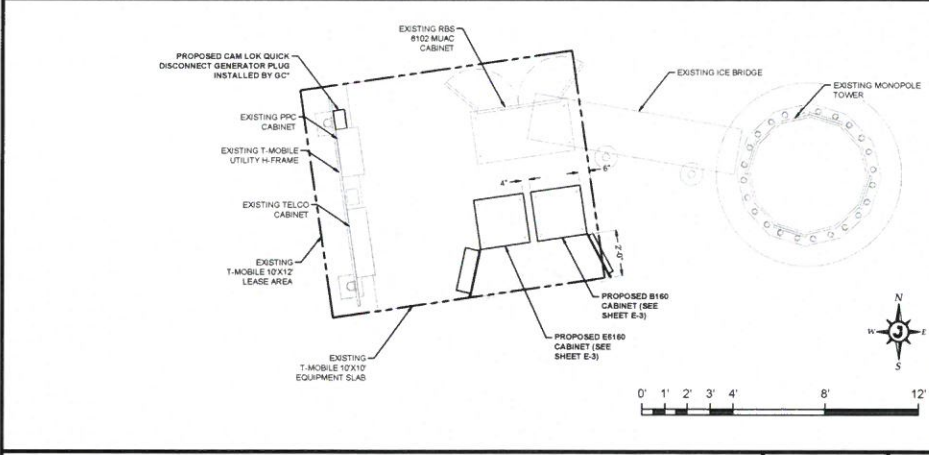
GENERAL NOTES

- SUBJECT PROPERTY IS KNOWN AS 1538-42-2332.000 AS SHOWN ON THE HARNETT COUNTY WEBSITE, AND IS SITUATED AT 200 FARMVIEW RD DUNN, NC.
- THIS SITE DESIGN HAS BEEN PREPARED WITHOUT THE BENEFIT OF AN AS-BUILT SURVEY. SLIGHT VARIATIONS MAY EXIST BETWEEN THIS SITE PLAN AND TRUE DIMENSIONS IN THE FIELD. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS.
- THE GENERAL CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
- IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC., IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
- THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.
- SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION, WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.
- ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
- ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS OF NOTICE SHOULD BE GIVEN AND THE BUILDING INSPECTION DEPARTMENT HAS REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL PROPOSED UTILITIES WITHIN THE CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
- RECORD DRAWINGS MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS, ETC., BETWEEN THE WORK AS SPECIFIED AND INSTALLED RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.
- PERMITS: THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, FEES AND INSPECTIONS, ETC.

CONTRACTOR TO VERIFY ALL PROPOSED AND EXISTING ANTENNAS, MOUNTS AND CABLES WERE CONSIDERED AND PASSED A STRUCTURAL ANALYSIS PERFORMED BY A LICENSED ENGINEER PRIOR TO INSTALLATION.



EXISTING ENLARGED SITE PLAN 1/4" = 1'-0" 1



PROPOSED ENLARGED SITE PLAN 1/4" = 1'-0" 2

PREPARED BY
Jacobs
 Challenging today. Reinventing tomorrow.
 Jacobs Telecommunications, Inc.
 5449 BELLS FERRY ROAD
 ACWORTH, GA 30102
 470-785-4050

DESIGN REVISIONS

0	09/17/20	ISSUED FOR CONSTRUCTION V.L.H.
NO.	DATE	REVISIONS BY
		NOT VALID WITHOUT SIGNATURE AND DATE

ENGINEER SEAL

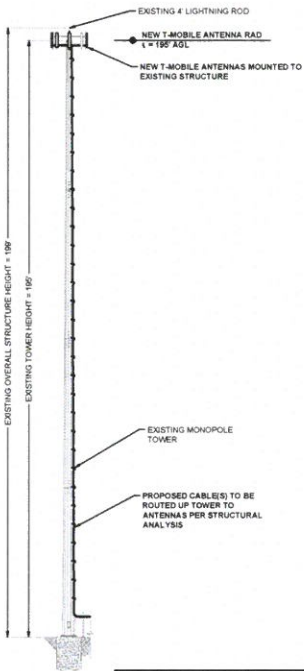
 K. R. KRATINA
 ENGINEER

PREPARED FOR
T-Mobile
 185 FARMVIEW STREET
 CHARLESTON, SC 29402
 PHONE: (803) 270-6450

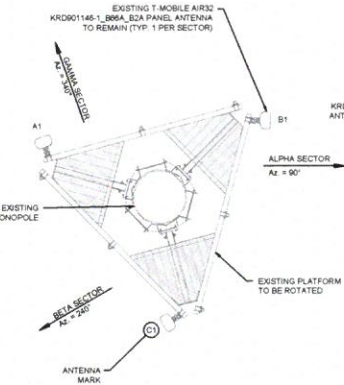
SHEET NUMBER: 5RA0613A
 SITE NAME: MINGO SWAMP
 SITE ADDRESS: 200 FARMVIEW RD DUNN, NC 28534

PREPARED BY: K. KRATINA
 DESIGNED BY: T. VIEH
 PROJECT NO: EUTM006
 DATE: 07/29/2020

SHEET NAME: ENLARGED EQUIPMENT PLAN & NOTES
 SHEET NUMBER: C-2

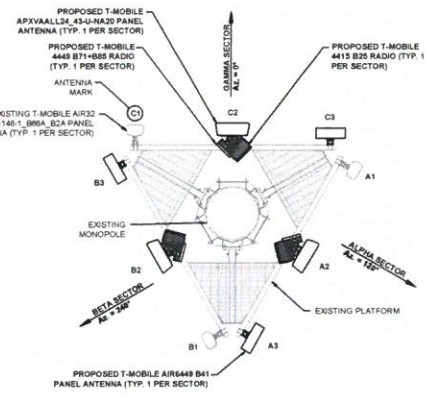


NOTE
THIS SITE DESIGN HAS BEEN PREPARED WITHOUT THE BENEFIT OF AN AS-BUILT SURVEY. THE INFORMATION SHOWN IS NOT BASED ON AN ACTUAL FIELD SURVEY. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS.



EXISTING VIEW

NOTE
THIS SITE DESIGN HAS BEEN PREPARED WITHOUT THE BENEFIT OF AN AS-BUILT SURVEY. THE INFORMATION SHOWN IS NOT BASED ON AN ACTUAL FIELD SURVEY. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS.

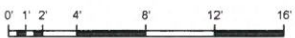


PROPOSED VIEW

NOTE
ANTENNA MOUNT TO BE VERIFIED WITH LATEST STRUCTURAL ANALYSIS

NOTES:

1. CONTRACTOR TO FIELD COORDINATE EXACT LOCATION OF PROPOSED EQUIPMENT WITH EXISTING CONDITIONS ON SITE.
2. PROPOSED EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE FASTENERS SHALL BE HIGH STRENGTH (A325, A490).
3. DRILLING OF EXISTING STEEL MEMBERS IS NOT PERMITTED.
4. BOND PROPOSED EQUIPMENT TO EXISTING SECTOR GROUND BAR PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ADDITIONAL SECTOR GROUND BARS AS REQUIRED.
5. ALL ANTENNAS, CABLES, AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
6. THIS ANTENNA ORIENTATION PLAN IS SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
7. CONTRACTOR TO CONTACT T-MOBILE FOR UP-TO-DATE RF DESIGN DATA. NOTIFY ENGINEER IF CONFLICT EXISTS.



TOWER ELEVATION	1" = 20'-0"	1	PROPOSED ANTENNA ORIENTATION	3/16" = 1'-0"	2
-----------------	-------------	---	------------------------------	---------------	---

PREPARED BY
Jacobs
Challenging today.
Reinventing tomorrow.
Jacobs Telecommunications, Inc.
5649 BELLS FERRY ROAD
ACWORTH, GA 30102
478-785-4050

DESIGN REVISIONS

0	06/17/20	ISSUED FOR CONSTRUCTION	VLH
NO.	DATE	REVISIONS	BY
NOT VALID WITHOUT SIGNATURE AND DATE			

ENGINEER SEAL
NORTH CAROLINA
SEAL
38523
ENGINEER
R. L. R. KRATNA
1/17/20

PREPARED FOR
T-Mobile
185 FARMVIEW STREET
CHARLESTON, SC 29402
PHONE: (843) 214-4201

SITE NUMBER: 5RA0813A
SITE NAME: MINGO SWAMP
SITE ADDRESS: 200 FARMVIEW RD DUNN, NC 28334

PREPARED BY: APPROVED BY: K. KRATNA
DESIGNED BY: T. VIEH
PROJECT NO: EUTM208
DATE: 07/09/2020

SHEET NAME: TOWER ELEVATION & ANTENNA ORIENTATION
SHEET NUMBER: S-1

67D5A997DB MUAC - TOWER TOP EQUIPMENT SCHEDULE (RE: 5RA0613A_ANCHOR_3)										
ANTENNA NUMBER (FROM L TO R)	ANTENNA MODEL	ANTENNA AZIMUTH	MECH TILT	ELEC TILT	ANTENNA CENTERLINE FROM GROUND	TMA/RRUS MODEL	TMA/RRUS QUANTITY	COAX-HYBRID CABLE		
								TYPE	QTY	LENGTH
A1	AIR32 KR0901146-1_B96A_BZA	120°	0°	2'	195'	-	-	-	-	-
A2	APXVAALL24_43-U-NA20	120°	0°	2'	195'	4449 B71+B85 4415 B25	02	6x12 HCS 4AWG	1	70M
A3	AIR0449 B41	120°	0°	2'	195'	-	-	-	-	-
B1	AIR32 KR0901146-1_B96A_BZA	240°	0°	2'	195'	-	-	-	-	-
B2	APXVAALL24_43-U-NA20	240°	0°	2'	195'	4449 B71+B85 4415 B25	02	6x12 HCS 4AWG	1	70M
B3	AIR0449 B41	240°	0°	2'	195'	-	-	-	-	-
C1	AIR32 KR0901146-1_B96A_BZA	0°	0°	2'	195'	-	-	-	-	-
C2	APXVAALL24_43-U-NA20	0°	0°	2'	195'	4449 B71+B85 4415 B25	02	6x12 HCS 4AWG	1	70M
C3	AIR0449 B41	0°	0°	2'	195'	-	-	-	-	-

EQUIPMENT NOTES

- CABLE LENGTHS SHOW ARE ONLY AN ESTIMATE AND SHOULD NOT BE USED FOR ORDERING MATERIALS. CONFIRM THE REQUIRED CABLE LENGTHS 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 WHEN INSTALLED.
- 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 STANDARDS.
- REFER TO EQUIPMENT INSTALLATION STANDARDS FOR ADDITIONAL INFORMATION.
- REFER TO EQUIPMENT MANUFACTURER'S SPECIFICATION SHEETS FOR ADDITIONAL INFORMATION NOT LISTED ABOVE.

67D5A997DB MUAC - TOWER LOADING SUMMARY				
EQUIPMENT TYPE	EXISTING QUANTITY	QUANTITY REMOVED	QUANTITY ADDED	TOTAL QUANTITY
PANEL ANTENNA	3	0	6	9
COAX CABLE	0	0	0	0
HYBRID CABLE	1	0	2	3
RRUS	0	0	6	6
TMA	0	0	0	0

PREPARED BY
Jacobs
 Challenging today.
 Reinventing tomorrow.
 Jacobs Telecommunications, Inc.
 5449 BELLS FERRY ROAD
 ACWORTH, GA 30102
 470-785-4050

DESIGN REVISIONS

NO.	DATE	REVISIONS	BY
0	09/17/20	ISSUED FOR CONSTRUCTION	VLM
NOT VALID WITHOUT SIGNATURE AND DATE			



PREPARED FOR
T-Mobile
 186 FARMVIEW STREET
 CHARLESTON, SC 29402
 PHONE: (803) 270-1401

SITE NUMBER
 5RA0613A

SITE NAME
 MINGO SWAMP

SITE ADDRESS
 200 FARMVIEW RD
 DUNN, NC 28334

PREPARED BY: K. KRATNA
 DESIGNED BY: T. VIEHE
 PROJECT NO.: EUM0005
 DATE: 07/29/2020

SHEET NAME
 ANTENNA & CABLE SCHEDULE

SHEET NUMBER
S-2

GENERAL ELECTRICAL NOTES:

1. SCOPE: PROVIDE LABOR, MATERIALS, AND EQUIPMENT, ETC., REQUIRED TO COMPLETE THE INSTALLATION SHOWN ON THE DRAWINGS.
2. CODES AND STANDARDS: INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND ORDINANCES, UTILITY COMPANY REGULATIONS, AND APPLICABLE REQUIREMENTS OF LATEST EDITIONS OF
 - A. NFC - NATIONAL FIRE CODES
 - B. UL - UNDERWRITERS LABORATORIES
 - C. NEC - NATIONAL ELECTRICAL CODE
 - D. NEMA - NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION
 - E. OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
 - F. SBC - STANDARD BUILDING CODE
3. PERMITS: OBTAIN AND PAY FOR REQUIRED PERMITS, LICENSES, FEES, INSPECTIONS, ETC.
4. COORDINATION: COORDINATE WORK WITH OTHER TRADES.
5. SUBMITTALS: SUBMIT BROCHURES FOR APPROVAL ON SERVICE DISCONNECTING MEANS AND OTHER MAJOR SYSTEM COMPONENTS.
6. EXISTING SERVICES: DO NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
7. EQUIPMENT: CONNECT ELECTRICALLY OPERATED EQUIPMENT.
8. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES & SUBSTITUTIONS BETWEEN WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DOCUMENTS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.
9. IDENTIFICATION: IDENTIFY SERVICE DISCONNECTING MEANS WITH PERMANENT NAMEPLATE.
10. GUARANTEE/WARRANTY: GUARANTEE INSTALLATION TO BE FREE OF DEFECTS, SHORTS, GROUNDS, ETC., FOR A PERIOD OF ONE YEAR. FURNISH WARRANTY SO THE DEFECTIVE MATERIAL AND/OR WORKMANSHIP WILL BE REPAIRED IMMEDIATELY UPON NOTIFICATION AT NO COST TO THE OWNER FOR PERIOD OF WARRANTY.
11. CUTTING AND PATCHING: PROVIDE CUTTING REQUIRED TO DO THE WORK. DO NOT CUT MAJOR STRUCTURAL ELEMENTS WITHOUT APPROVAL. PATCHING SHALL BE OF QUALITY EQUAL TO AND OF MATCHING APPEARANCE WITH EXISTING CONSTRUCTION.
12. DITCHING AND BACKFILL: PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES.
13. RACEWAYS: UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT (MEET NEMA TC2, 1800). EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL CONDUIT BEFORE RISING ABOVE GRADE. PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS: 200 LB. TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 24" RADIUS. RGS CONDUITS, WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT.
14. SUPPORTS: AS REQUIRED BY THE NEC.
15. CONDUCTORS: USE 99% CONDUCTIVITY COPPER WITH TYPE XHHW-2 INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
16. CONNECTORS FOR POWER CONDUCTORS: USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR #10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR #8 AWG AND LARGER.
17. SERVICE: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. COORDINATE AND PAY ALL FEES.
18. TELEPHONE SERVICE: PROVIDE EMPTY CONDUITS WITH PULL WIRES AS INDICATED ON DRAWINGS.
19. UTILITY FRAME METER CENTER (AS REQUIRED): PROVIDED BY OWNER, INSTALLED BY CONTRACTOR. THE ELECTRICAL DESIGN ON THESE DRAWINGS IS BASED ON A METER CENTER CONFIGURED AS FOLLOWS:
 - A. A NEMA 3R ENCLOSURE MOUNTED ON THE FRONT SIDE OF AN EQUIPMENT FRAME INCORPORATING 120/240V, 20A METER SOCKETS AND CIRCUIT BREAKER HOUSINGS. EACH METER/CIRCUIT BREAKER COMBINATION SHALL PROVIDE SERVICE TO ONE (1) CARRIER (OR TOWER LIGHTING AS REQUIRED). METERS ARE TO BE PROVIDED BY LOCAL POWER COMPANY.
 - B. TOWERS REQUIRING FAA LIGHTING SHALL BE ALLOCATED ONE METER SOCKET AND CIRCUIT BREAKER HOUSING IN THE METER BANK. CIRCUIT BREAKER TO BE SIZED AS REQUIRED FOR TOWER LIGHTING EQUIPMENT. METER IS TO BE PROVIDED BY LOCAL POWER COMPANY.
20. UTILITY FRAME TELCO CABINET (AS REQUIRED): PROVIDED BY OWNER. INSTALLED BY CONTRACTOR. THE ELECTRICAL DESIGN ON THESE DRAWINGS IS BASED ON A TELCO CABINET CONFIGURED AS FOLLOWS:
 - A. A NEMA 3R ENCLOSURE SHALL INCLUDE A 3/4" THICK PLYWOOD BACKBOARD SIZED TO FIT CABINET. A PREWIRED 20A, 120V, GFCI DUPLEX RECEPTACLE, SURGE PROTECTORS, AND A GROUND BAR. TELCO CABINET SHALL BE MOUNTED TO THE UTILITY SERVICE FRAME.
 - B. THE TELEPHONE CABINET SHALL ACCOMMODATE ALL TELEPHONE LINES (PROPOSED AND FUTURE) AND CONNECTIONS FOR THEM.
21. PPC CABINET: PPC CABINET SHALL BE MOUNTED TO THE EQUIPMENT SLED SERVICE FRAME. THE ENCLOSURE DESIGN ON THESE DRAWINGS IS BASED ON A NORTHERN TECHNOLOGIES PPC CABINET CONFIGURED AS FOLLOWS:
 - A. PPC CABINET SHALL BE NEMA 3R RATED AND HAVE A DOOR TO ALLOW ACCESS TO INTERNAL COMPONENTS.
 - B. THE PPC ENCLOSURE SHALL INCLUDE A 120/240V, 1 PHASE, 20A MAIN BREAKER ELECTRICAL PANEL WITH SURGE PROTECTION AND WITH CIRCUIT BREAKERS AS REQUIRED FOR SLED ELECTRICAL LOADS. SURGE PROTECTION AN INTERIOR 20A/120V DUPLEX RECEPTACLE, AND EXTERIOR WEATHERPROOF 20A/120V DUPLEX RECEPTACLE SHALL ALSO BE INCLUDED.
 - C. PROVIDE A GROUND WIRE SIZED PER NEC IN ALL CIRCUITS OVER 20 AMPS AND IN ALL CIRCUIT RUNS IN PVC.
 - D. PPC ENCLOSURE SHALL INCLUDE A 3/4" THICK PLYWOOD BACKBOARD SIZED TO FIT CABINET AND SHALL ACCOMMODATE ALL TELEPHONE LINES (PROPOSED AND FUTURE) AND CONNECTIONS FOR THEM. IT SHALL ALSO INCLUDE 2 TELCO GROUND BARS AND PROVIDE MOUNTING SPACE FOR ALARM EQUIPMENT.

PREPARED BY

Jacobs
 Challenging today.
 Reinventing tomorrow.
 Jacobs Telecommunications, Inc.
 5449 BELLS FERRY ROAD
 ACWORTH, GA 30102
 478-785-4055

DESIGN REVISIONS

NO.	DATE	REVISIONS	BY
0	08/17/20	ISSUED FOR CONSTRUCTION	VLH

NOT VALED WITHOUT SIGNATURE AND DATE

ENGINEER SEAL

PREPARED FOR

Mobile
 185 FARMVIEW DRIVE
 CHARLESTON, SC 29407
 PHONE (843) 714-4301

SITE NUMBER: SRA0813A

SITE NAME: MINGO SWAMP

SITE ADDRESS: 200 FARMVIEW RD, DUNN, NC 28534

PREPARED BY: APPROVED BY: K. KRAUT
 DESIGNED BY: T. VIEHE
 PROJECT NO: EUTM0208
 DATE: 07/26/2020

SHEET NAME: GENERAL ELECTRICAL NOTES & SYMBOLS

SHEET NUMBER: E-1

GENERAL ELECTRICAL NOTES

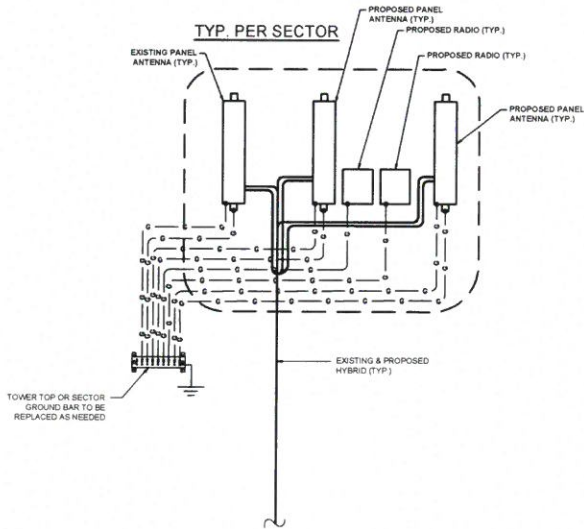
SCALE: N/A

1

GENERAL GROUNDING NOTES:

1. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.
2. GROUND RODS:
 - A. 5/8" x 12' LONG COPPER CLAD STEEL
 - B. STANDARD SPACING: 10'
 - C. TOP SHALL BE A MINIMUM OF 2'-6" BELOW BASE OF GRAVEL.
3. GROUND CONDUCTORS:
 - A. #2 BARE TINNED SOLID COPPER UNLESS INDICATED OTHERWISE
 - B. WHEN DIRECTION OF CONDUCTOR CHANGES, IT SHALL BE DONE GRADUALLY
 - C. ALL GROUNDING CONDUCTORS SHALL RUN THROUGH PVC SLEEVES WHEREVER CONDUCTORS RUN THROUGH CONCRETE SLABS
 - D. GROUND RINGS SHALL BE BURIED A MINIMUM OF 2'-6" BELOW BASE OF GRAVEL. GROUND RINGS SHALL BE LOCATED A MINIMUM OF 2'-0" FROM OUTSIDE EDGE OF CABINETS, TOWER FOUNDATION, AND OTHER SITE OBJECTS
4. GROUND CONNECTIONS:
 - A. ALL CONNECTIONS SHALL BE EXOTHERMIC (CADWELD OR EQUIVALENT) UNLESS INDICATED OTHERWISE
 - B. ALL MATERIALS USED SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS
 - C. CONNECTIONS AT GROUND BARS AND SERVICE DISCONNECTING MEANS SHALL CONSIST OF LUGS CADWELDED TO GROUND CONDUCTORS UNLESS INDICATED OTHERWISE. LUGS SHALL BE ATTACHED TO GROUND BARS USING STAINLESS STEEL OR HOT-DIPPED GALVANIZED STEEL BOLTS, NUTS, AND LOCKWASHERS
5. COAXIAL TRANSMISSION LINE GROUNDING:
 - A. VERTICAL RUNS THAT ARE 200' OR LESS SHALL REQUIRE A GROUNDING KIT AT THE TOP AND BOTTOM OF TOWER
 - B. VERTICAL RUNS THAT ARE GREATER THAN 200' SHALL REQUIRE A GROUNDING KIT (IN ADDITION TO THE ABOVE) FROM THE TOP EVERY 150' TOWARDS THE GROUND UNTIL THE DISTANCE IS LESS THAN 150' FROM THE GROUND (NOT FOR MONOPOLES)
 - C. SURGE ARRESTOR IS PROVIDED BY OTHERS AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL MAKE ALL CONNECTIONS REQUIRED FOR INSTALLATION
 - D. ALL GROUNDING KITS SHALL BE PROVIDED BY OTHERS AND INSTALLED BY CONTRACTOR
6. MISCELLANEOUS ITEMS TO BE CONNECTED TO THE GROUNDING SYSTEM:
 - A. ANY METAL FENCE POST WITHIN 6' OF THE GROUND RING
 - B. TRANSMISSION LINE ENTRANCE HATCH
 - C. METAL CABINET PARTS NOT GROUNDED BY THE INTERNAL GROUND RING
 - D. METAL FUEL STORAGE TANKS
 - E. ANY SIGNIFICANT METAL OBJECT WITHIN 6' OF THE EXTERNAL GROUNDING SYSTEM OR ANY OTHER GROUNDED OBJECT
 - F. EXTERIOR ICE SHIELDS
 - G. GENERATOR AND SUPPORT SKID OR BASE AND SWITCH
7. INSTALLATION AND TESTING:
 - A. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO FIELD CONDITIONS
 - B. CONTRACTOR SHALL NOT COVER UP GROUND RING AND CONNECTIONS UNTIL AN INSPECTION HAS BEEN PERFORMED. COORDINATE INSPECTION WITH CONSTRUCTION MANAGER
 - C. PROVIDE TESTING OF GROUNDING SYSTEM AS DIRECTED BY CONSTRUCTION MANAGER
8. THE MAXIMUM ALLOWABLE RESISTANCE READING SHALL BE 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE GROUNDING SYSTEM AS MEASURED AT THE ARRESTOR BRACKET EXCEEDS 5.0 OHMS, THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL BE NOTIFIED SO THAT ADDITIONAL GROUND LOCATIONS CAN BE UTILIZED.
9. ALL EXPOSED GROUND LEADS TO GROUND RING, PLACED IN CONCRETE, SHALL BE ENCASED IN 3/4" FLEXIBLE CONDUIT, SEAL TYPE OR SIMILAR.
10. ALL GROUND WIRE CONNECTIONS TO EQUIPMENT GROUND RING THAT ARE RUNNING ABOVE GROUND SHALL BE RUN INSIDE SEAL-TIGHT FLEX CONDUIT.
11. ALL CONNECTIONS ABOVE GROUND EXCEPT CONNECTIONS TO GROUND BARS OR ARRESTOR BRACKET SHALL BE WITH DOUBLE LUG CONNECTORS. CONNECTIONS TO GROUND BARS & ARRESTORS SHALL BE CADWELDED.
12. COMPACT BACKFILL OF ALL TRENCHES FOR GROUNDING RING. SITE SOIL OR #1 STONE MAY BE USED FOR BACKFILL MATERIALS. CONTRACTOR SHALL OBTAIN APPROVAL FOR BACKFILL MATERIALS TO BE USED FROM CONSTRUCTION MANAGER.
13. CONTRACTOR SHALL PROVIDE 5 S FLAT & LOCK WASHERS AS REQUIRED FOR COMPLETE INSTALLATION OF GROUND LEADS AT GROUND BUS.

NOTE:
THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE T-MOBILE CM OF ANY CONFLICTS.



GROUNDING NOTES

SCALE: N/A 1

GROUNDING DIAGRAM

SCALE: N/A 2

PREPARED BY
Jacobs
Challenging today. Reinventing tomorrow.
Jacobs Telecommunications, Inc.
5449 BELLS FERRY ROAD
ACWORTH, GA 30112
470-785-4050

DESIGN REVISIONS

NO.	DATE	REVISIONS	BY
0	09/17/20	ISSUED FOR CONSTRUCTION	VJH

NOT VALID WITHOUT SIGNATURE AND DATE

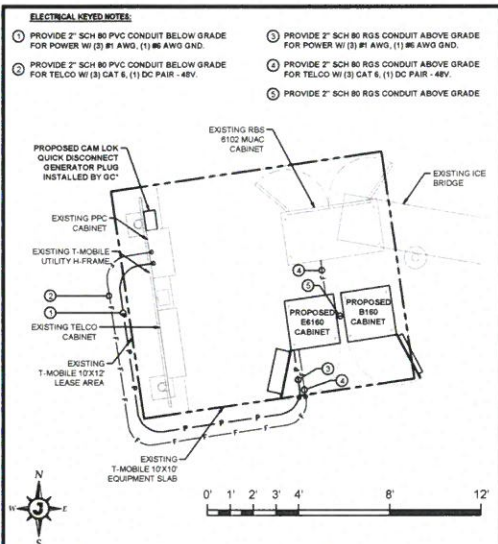
ENGINEER SEAL
NORTH CAROLINA PROFESSIONAL SEAL
SEA 38528
K. R. KRATHA
ENGINEER
07/27/20

PREPARED FOR
Mobile
160 FARMFIELD STREET
CHARLESTON, SC 29402
PHONE: (803) 778-4601

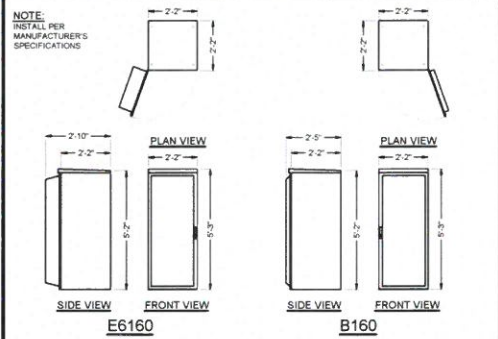
SITE NUMBER: SRA013A
SITE NAME: MINGO SWAMP
SITE ADDRESS: 200 FARMVIEW RD
DUNN, NC 28334

PREPARED BY: K. KRATHA
APPROVED BY: T. VIEHE
DESIGNED BY: T. VIEHE
PROJECT NO: EUTM006
DATE: 07/26/2020

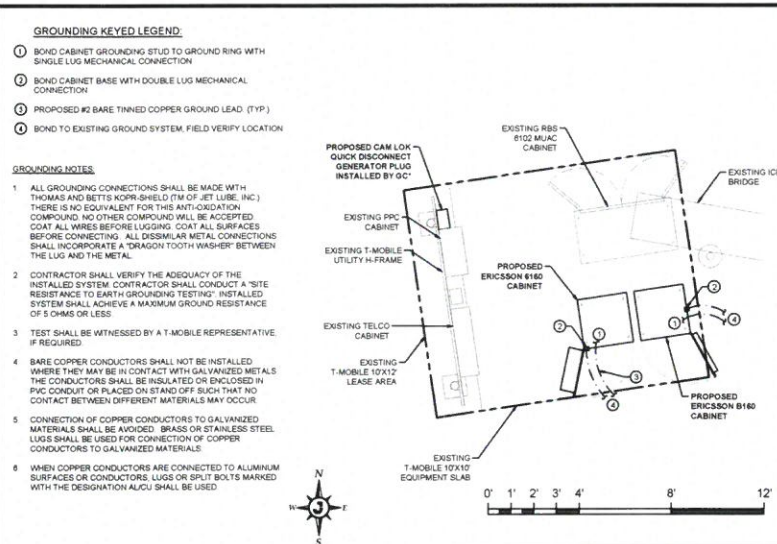
SHEET NAME: GROUNDING NOTES & DIAGRAM
SHEET NUMBER: E-2



ELECTRICAL PLAN 1/4" = 1'-0" 1



ERICSSON RBS 6160 & B160 CABINET SCALE: N.T.S. 3



GROUNDING PLAN 1/4" = 1'-0" 2

PPC SCHEDULE

NO.	LOAD SERVED	120/240 VOLTS		3 WIRE SURFACE MOUNTED		200A, 2 POLE MAIN BREAKER		CKT #	
		VA	AMP/POLE	VA	AMP/POLE	VA	VA		
1	RADIO CABINET #1 (R10)	11500	-	1252	302	-	-	SUPPRESSOR	7
2	-	-	11500	-	-	-	-	-	8
3	-	7000	-	-	15/1	150	-	GFI	9
4	RADIO CABINET #2	-	7000	1002	-	-	-	SPARE	10
5	LIGHT	500	-	20/1	-	-	-	SPARE	11
6	FAN	-	200	20/1	-	-	-	SPARE	12
VOLT AMPS		16000	18700	37850		150		TOTAL VOLT AMPERES DEMAND VA (TOTAL VA x 1.25)	
				47313					

NOTES:
1. PANEL IS INTEGRAL TO PPC (PROVIDED BY T-MOBILE). INFORMATION SHOWN PROVIDED BY MANUFACTURER

PPC SCHEDULE SCALE: N/A 4

PREPARED BY
Jacobs
Challenging today. Re inventing tomorrow.
Jacobs Telecommunications, Inc.
3444 BELLS FERRY ROAD
ACWORTH, GA 30102
470-789-4050

DESIGN REVISIONS

0 06/17/20 ISSUED FOR CONSTRUCTION VLH
NO. DATE REVISIONS BY
NOT VALID WITHOUT SIGNATURE AND DATE

ENGINEER SEAL
K. KRATINA
REGISTERED PROFESSIONAL ENGINEER
STATE OF NORTH CAROLINA
LICENSE NO. 38573
EXPIRES 12/31/23

PREPARED FOR
T-Mobile
185 FARMVIEW STREET
CHARLESTON, SC 29402
PHONE: (843) 214-4301

SITE NUMBER: SRAD013A
SITE NAME: MINGO SWAMP
SITE ADDRESS: 200 FARMVIEW RD DUNN, NC 28334

PREPARED BY: K. KRATINA
DESIGNED BY: T. VIEH
PROJECT NO.: EUTM0206
DATE: 07/26/2020

SHEET NAME: EQUIPMENT CABINET DETAILS
SHEET NUMBER: **E-3**