T-Mobile

T-MOBILE SITE NUMBER:	**9JK2819A**	**BUSINESS UNIT #:**	**846221**
T-MOBILE SITE NAME:	**9JK2819A (USA)**	**SITE ADDRESS:**	**603 SOUTHWEST WENDY TERRACE,LAKE CITY, FL 32025**
SITE TYPE:	**GUYED TOWER**	**COUNTY:**	**COLUMBIA**
TOWER HEIGHT:	**300'-0"**	**JURISDICTION:**	**COLUMBIA COUNTY**

T-MOBILE FIRST TIME INSTALL SITE CONFIGURATION: 67E998E 6160 (no GSM)

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	SE LAKE CITY
SITE ADDRESS:	603 SOUTHWEST WENDY TERRACE LAKE CITY, FL 32025
COUNTY:	COLUMBIA
MAP/PARCEL #:	284S1708832018
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	30° 6' 46.56"
LONGITUDE:	-82° 37' 5.17"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	86 FT.
CURRENT ZONING:	AGRICULTURAL
JURISDICTION:	COLUMBIA COUNTY
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	RYMAR COMPANY INC P O BOX 1653 LAKE CITY FL 32056
TOWER OWNER:	CROWN CASTLE USA, INC. 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 1 RAVINIA DRIVE, SUITE 1000 ATLANTA, GA 30346
ELECTRIC PROVIDER:	CLAY ELECTRIC CO-OP N/A
TELCO PROVIDER:	AT&T N/A

PROJECT TEAM

A&E FIRM:	P. MARSHALL & ASSOCIATES LLC. 1000 HOLCOMB WOOD PKWY STE 210, ROSWELL, GA 30076 SENIOR ENGINEER - PATRICK MARSHALL, P.E. PROJECT ENGINEER - AJ BULOT, E.I.T. OFFICE 678-280-2325
CARRIER/APPLICANT:	T-MOBILE 1 RAVINIA DRIVE, SUITE 1000 ATLANTA, GA 30346 SEAN MASSEY - DEVELOPMENT MANAGER 404-277-8434
CROWN CASTLE USA INC. DISTRICT CONTACTS:	2 CHASE CORPORATE DRIVE, SUITE 105 BIRMINGHAM, AL 35244 SUSAN PALM - A&E SPECIALIST 205-587-1867 JAMES CRISP - CONSTRUCTION MANAGER TBD

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

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ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL FLORIDA ONE CALL
(800) 432-4770
CALL 3 WORKING DAYS
BEFORE YOU DIG!

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
- INSTALL (3) ANTENNAS
- INSTALL (6) RRHs
- INSTALL (3) ANTENNA SECTOR MOUNTS
- INSTALL (2) HYBRID CABLES

GROUND SCOPE OF WORK:
- INSTALL (1) 10'x15' CONCRETE SLAB
- INSTALL (2) EQUIPMENT CABINETS
- INSTALL (1) UTILITY FRAME

NOTE:
THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY. T-MOBILE IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

LOCATION MAP

NO SCALE

APPLICABLE CODES/REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2020 FLORIDA BUILDING CODE
ELECTRICAL	2017 NATIONAL ELECTRICAL CODE

THE STRUCTURAL ANALYSIS HAS BEEN PERFORMED IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE, 7TH EDITION FOR EXPOSURE C AND RISK CATEGORY II, BASED UPON AN ULTIMATE WIND SPEED OF 119 MPH.

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	MORRISON HERSHFIELD CN12-319 / 2300001
DATED:	3/16/23
MOUNT ANALYSIS:	BY OTHERS
DATED:	
RFDS REVISION:	1
DATED:	5/25/2022
ORDER ID:	640916
REVISION:	0

NOTE: ELECTRICAL PERMIT WILL BE REQUIRED FOR ANY NEW OR MODIFIED LINE VOLTAGE.

CALL FLORIDA ONE CALL
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CALL 3 WORKING DAYS
BEFORE YOU DIG!

APPROVALS

APPROVAL	SIGNATURE	DATE
PROPERTY OWNER OR REP.		
LAND USE PLANNER		
T-MOBILE		
OPERATIONS		
RF		
NETWORK		
BACKHAUL		
CONSTRUCTION MANAGER		

THE PARTIES ABOVE HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES AND MODIFICATIONS THEY MAY IMPOSE.

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	3/24/2023	FC	PRELIM	AJB
0	4/17/2023	FC	FINALS	AJB

Patrick W. Marshall, P.E.
Registered Engineer
State of Florida #053573
P Marshall & Associates Certificate of Authorization #27595

PATRICK W MARSHALL LICENSE No. 53573 STATE OF FLORIDA PROFESSIONAL ENGINEER
Patrick Marshall
Digitally signed by Patrick Marshall
DN: E=pmarshall@pmass.com, CN=Patrick Marshall, O=Patrick Marshall, L=Roswell, S=Georgia, C=US
Date: 2023.04.17 13:21:25-04'00'

Patrick W. Marshall, State of Florida, Professional Engineer, License No. 53573. This item has been electronically signed and sealed by Patrick W. Marshall, PE on the Date and/or Time Stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copy.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: T-1

REVISION: A

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800–788–7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
   THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE" AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
   CARRIER: T–MOBILE
   TOWER OWNER: CROWN CASTLE USA INC.
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER–TO–CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
   #4 BARS AND SMALLER — 40 ksi
   #5 BARS AND LARGER — 60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH — 3"
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 BARS AND LARGER — 2"
   #5 BARS AND SMALLER — 1–1/2"
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
   SLAB AND WALLS — 3/4"
   BEAMS AND COLUMNS — 1–1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
   4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
   4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERYIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER–ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "T–MOBILE".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE

SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
DC VOLTAGE	POS (+)	RED**
	NEG (–)	BLACK**

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON–METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

T-Mobile
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ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0" GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	3/24/2023	FC	PRELIM	AJB
0	4/17/2023	FC	FINALS	AJB

Patrick W. Marshall, P.E.
Registered Engineer
State of Florida #053573
P Marshall & Associates Certificate of Authorization #27595

PATRICK W MARSHALL
LICENSE
No. 53573
STATE OF FLORIDA
PROFESSIONAL ENGINEER

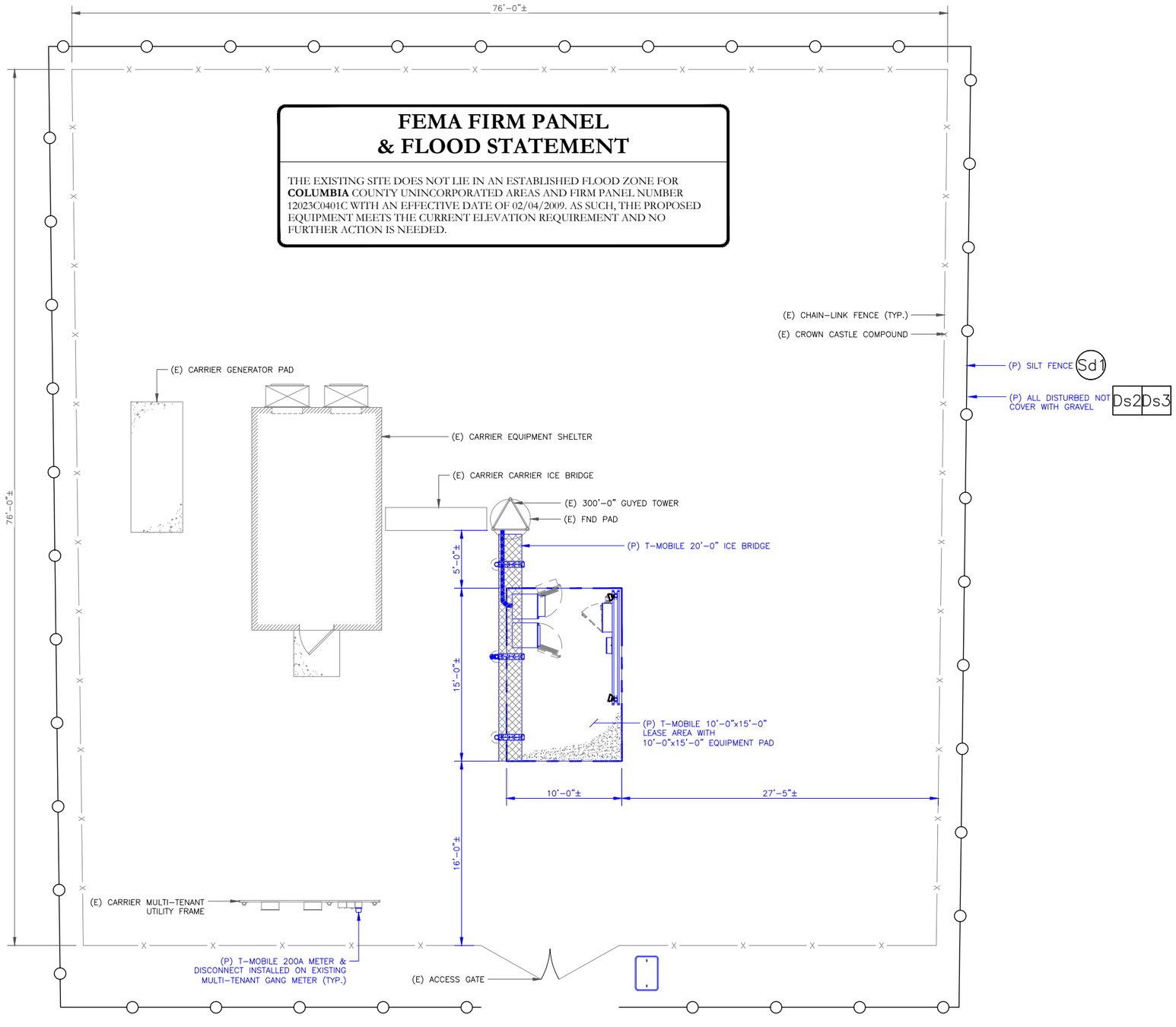
SHEET NUMBER: **T-2**
REVISION: **A**

Sd1 TYPE C SEDIMENT BARRIER - TO PREVENT ANY SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE SITE AND ENTERING NATURAL DRAINAGE WAYS OR STORM DRAINAGE SYSTEMS.

Ds2 DISTURBED AREA STABILIZATION (TEMPORARY) - TO ESTABLISH A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.

Ds3 DISTURBED AREA STABILIZATION (PERMANENT) - TO ESTABLISH A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.

Du DISTURBED AREA DUST CONTROL - TO CONTROL THE SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS, AND SIMILAR SITES.



FEMA FIRM PANEL & FLOOD STATEMENT

THE EXISTING SITE DOES NOT LIE IN AN ESTABLISHED FLOOD ZONE FOR **COLUMBIA** COUNTY UNINCORPORATED AREAS AND FIRM PANEL NUMBER 12023C0401C WITH AN EFFECTIVE DATE OF 02/04/2009. AS SUCH, THE PROPOSED EQUIPMENT MEETS THE CURRENT ELEVATION REQUIREMENT AND NO FURTHER ACTION IS NEEDED.

1 OVERALL SITE PLAN
SCALE: 5' 2.5' 0 5' — 1"=5'-0" (FULL SIZE) 1"=10'-0" (11x17)

N

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
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1000 HOLCOMB WOODS PKWY STE. 210
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T-MOBILE SITE NUMBER:
9JK2819A

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SE LAKE CITY

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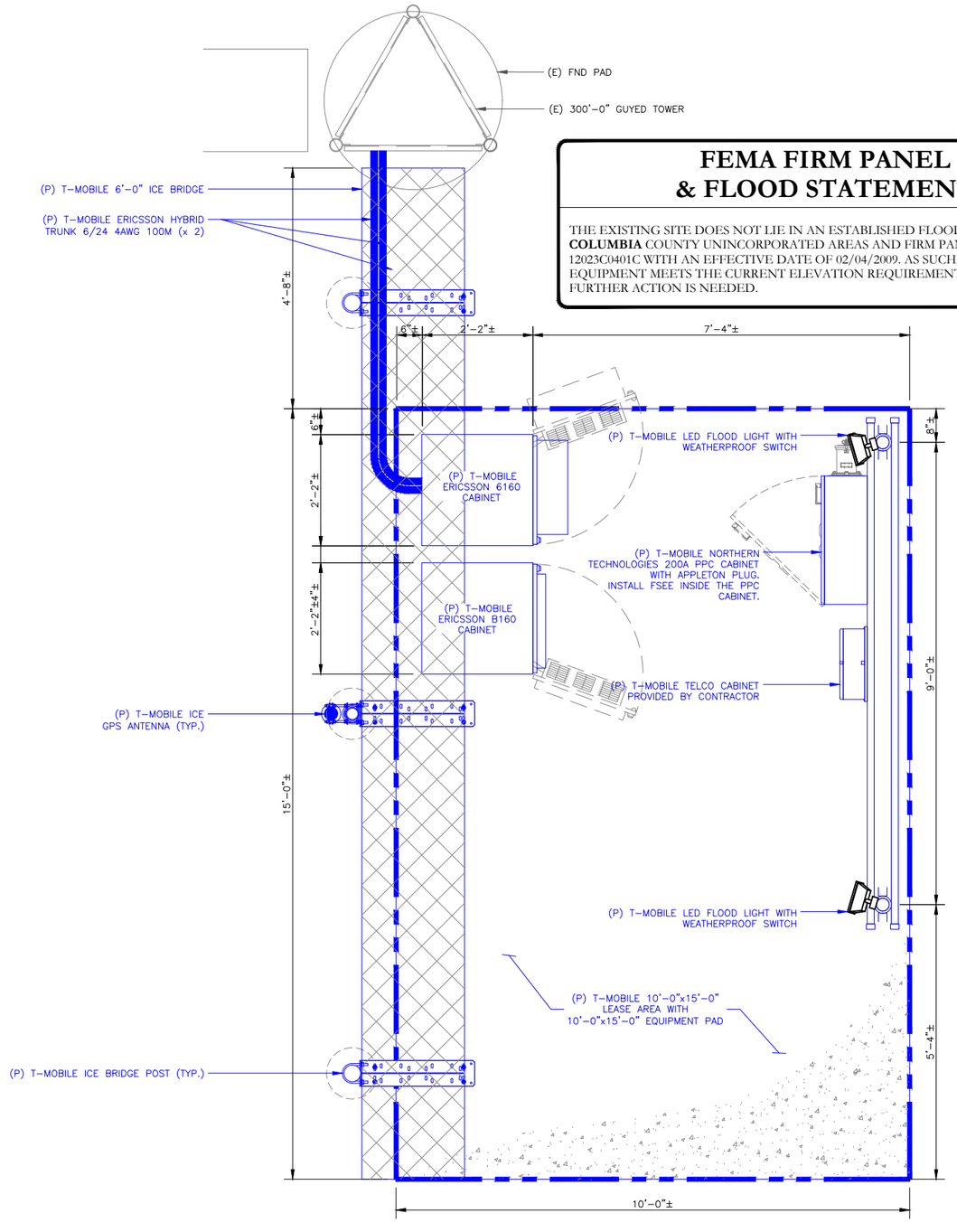
SHEET NUMBER: C-1.1
REVISION: A

NOTE:
ALL TRENCHING REQUIRED WITHIN COMPOUND SHALL BE PERFORMED BY HAND-DIGGING ONLY.



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2 FINAL EQUIPMENT PLAN
SCALE: 1" 6" 0 1' 3/4"=1'-0" (FULL SIZE) 3/8"=1'-0" (11x17)

N

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

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8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

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1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0"
GUYED TOWER

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SHEET NUMBER: C-1.2
REVISION: A

NOTE:

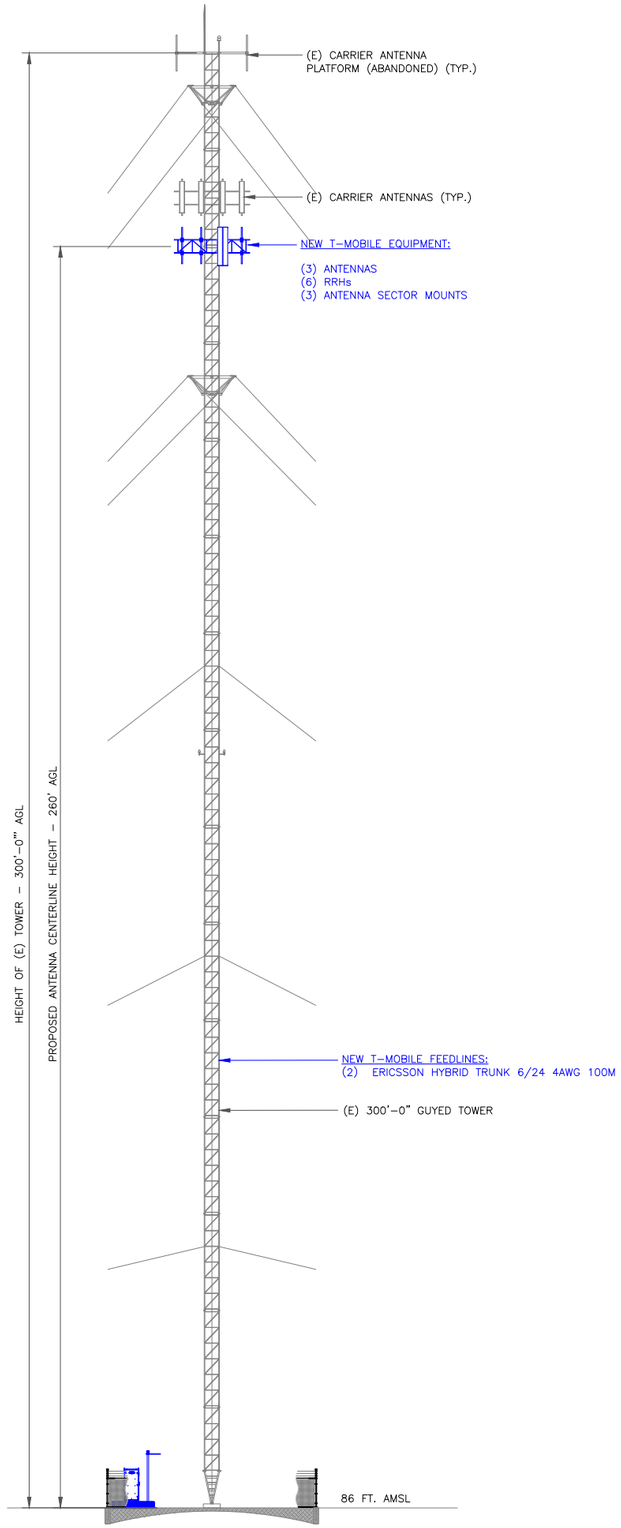
ANTENNA TIP MUST BE AT LEAST 1' BELOW BASE OF BEACON.

* GC TO CONFIRM RAD CENTER

T-MOBILE EQUIPMENT

ANTENNA CL: 260'
MOUNT CL: 260'

ANY AND ALL TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/ EXISTING SAFETY CLIMB

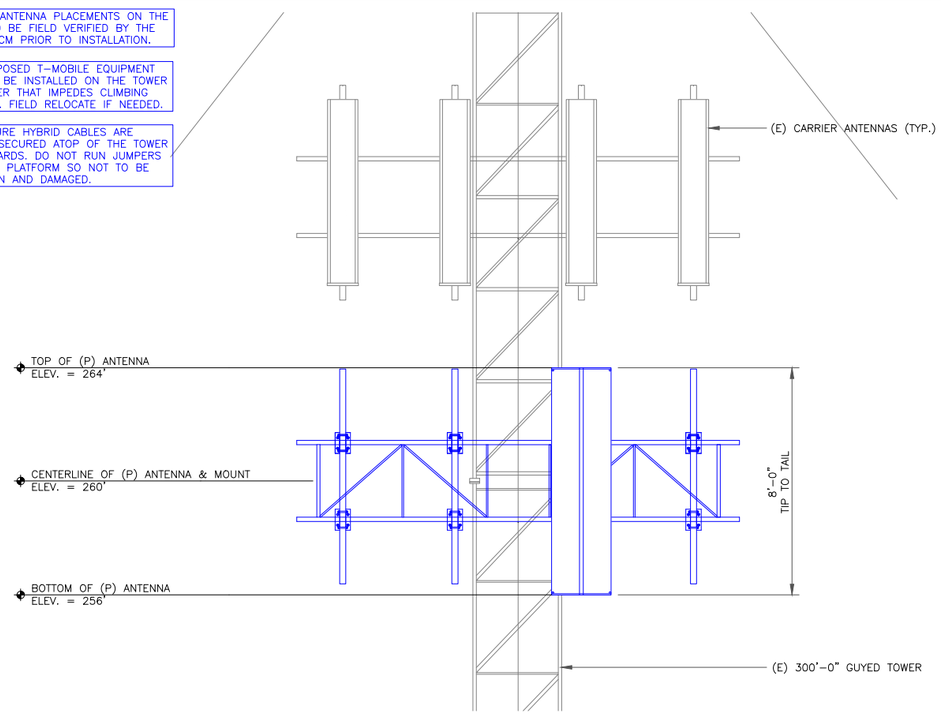


1 FINAL ELEVATION
SCALE: NOT TO SCALE

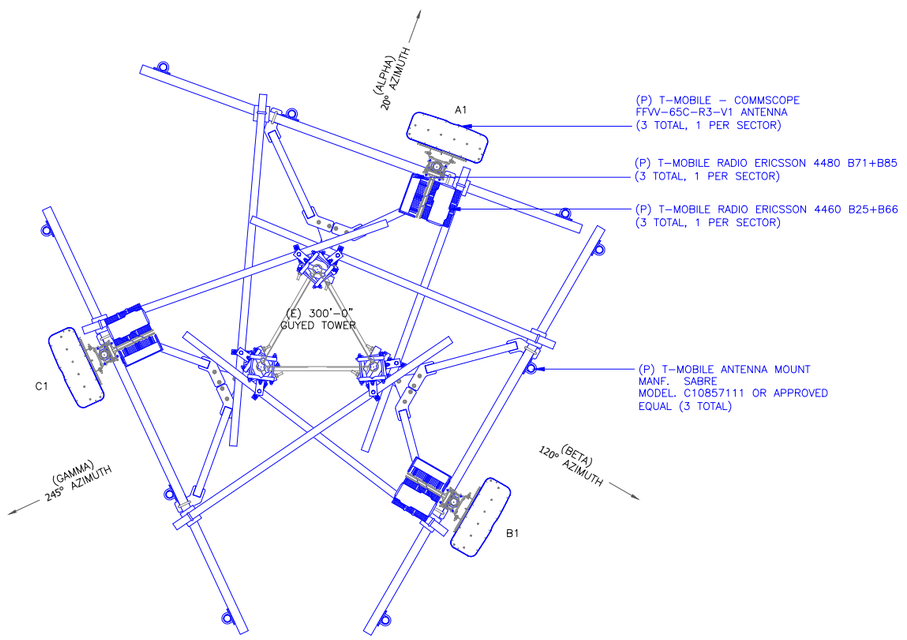
NOTE: ALL ANTENNA PLACEMENTS ON THE MOUNT TO BE FIELD VERIFIED BY THE T-MOBILE CM PRIOR TO INSTALLATION.

NOTE: PROPOSED T-MOBILE EQUIPMENT SHALL NOT BE INSTALLED ON THE TOWER IN A MANNER THAT IMPEDES CLIMBING THE TOWER. FIELD RELOCATE IF NEEDED.

NOTE: ENSURE HYBRID CABLES ARE PROPERLY SECURED ATOP OF THE TOWER PER STANDARDS. DO NOT RUN JUMPERS ON TOP OF PLATFORM SO NOT TO BE STEPPED ON AND DAMAGED.



2 PROPOSED ANTENNA LAYOUT
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT
SCALE: NOT TO SCALE

N

T-Mobile

1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE

8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A

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1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0" GUYED TOWER

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SHEET NUMBER: C-2

REVISION: A

TOWER TOP EQUIPMENT SCHEDULE					
ANTENNA SECTOR	ANTENNA MARK	ANTENNA MODEL	ANTENNA AZIMUTH	RRU MODEL	ANTENNA CABLE DESCRIPTION
ALPHA	'A1'	(1) COMMSCOPE FFVV-65C-R3-V1 (P)	20°	(1) ERICSSON 4460 B25+B66 (P) (1) ERICSSON 4480 B71+B85 (P)	(1) ERICSSON HYBRID TRUNK 6/24 4AWG 100M (P)
BETA	'B1'	(1) COMMSCOPE FFVV-65C-R3-V1 (P)	120°	(1) ERICSSON 4460 B25+B66 (P) (1) ERICSSON 4480 B71+B85 (P)	(1) ERICSSON HYBRID TRUNK 6/24 4AWG 100M (P)
GAMMA	'C1'	(1) COMMSCOPE FFVV-65C-R3-V1 (P)	245°	(1) ERICSSON 4460 B25+B66 (P) (1) ERICSSON 4480 B71+B85 (P)	HYBRID (SHARED)

NOTE: (P) DENOTES PROPOSED EQUIPMENT; (E) DENOTES EXISTING EQUIPMENT

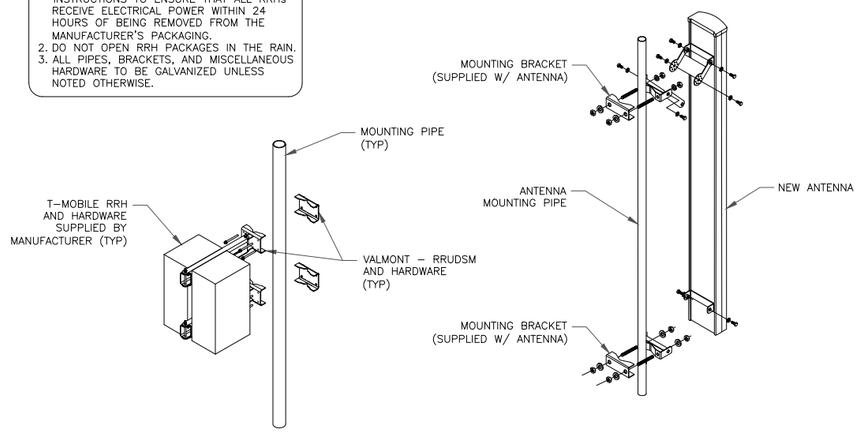
EQUIPMENT NOTES:

1. THE HYBRID CABLE LENGTHS SHOWN ARE ONLY ESTIMATES 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 EXISTING AND PROPOSED ANTENNA CABLES SHALL BE COLOR CODED PER T-MOBILE STANDARDS.
5. REFER TO NOKIA SIEMENS NETWORKS EQUIPMENT INSTALLATION STANDARDS FOR ADDITIONAL INFORMATION.
6. REFER TO EQUIPMENT MANUFACTURER'S SPECIFICATION SHEETS FOR ADDITIONAL INFORMATION NOT LISTED ABOVE.
7. SCAN ALL T-MOBILE ASSET ITEMS TO SITE DURING CONSTRUCTION.

TOWER LOADING SUMMARY				
EXISTING QUANTITY	REMOVE QUANTITY	EQUIPMENT TYPE	ADD QUANTITY	TOTAL QUANTITY
0	0	PANEL ANTENNA	3	3
0	0	RADIO 4460	3	3
0	0	RADIO 4480	3	3
0	0	ERICSSON FEEDLINE	2	2

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



1 ANTENNA WITH RRHs MOUNTING DETAIL
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
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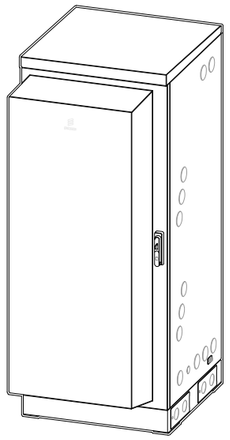
SHEET NUMBER: C-3

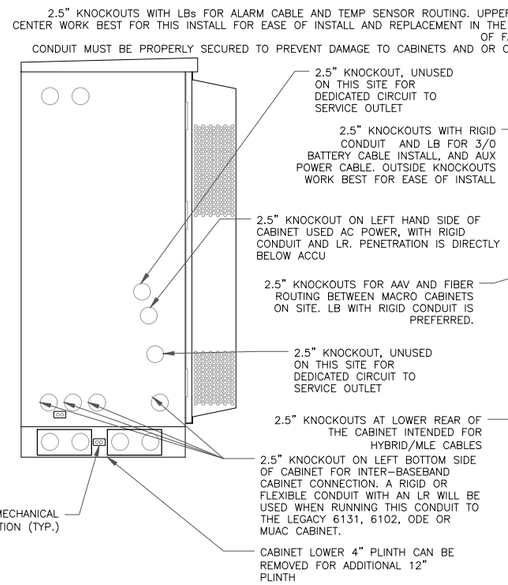
REVISION: A

ERICSSON – 6160	
WEIGHT (W/O WITHOUT EQUIPMENT)	295.0 LBS
SIZE (H x W x D)	63" x 25.6x 34"

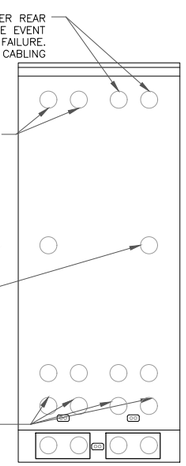


1 ERICSSON 6160
SCALE: NOT TO SCALE

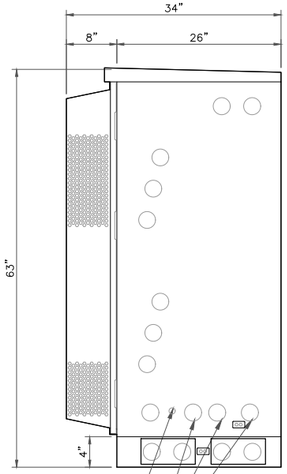
LEFT VIEW



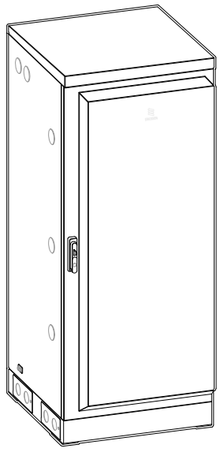
REAR VIEW



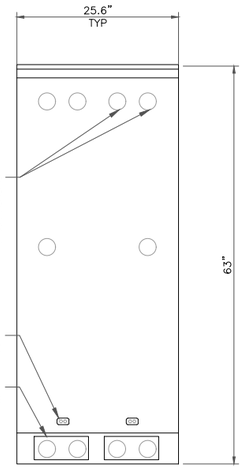
RIGHT VIEW



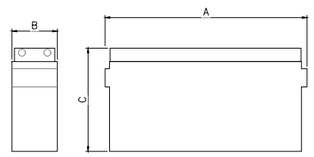
ERICSSON – B160	
WEIGHT (W/O WITHOUT EQUIPMENT)	295.0 LBS
SIZE (H x W x D)	63" x 25.6x 29"



REAR VIEW



2 ERICSSON B160
SCALE: NOT TO SCALE



INSTALLER 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.

SPECIFICATIONS											
MODEL NUMBER	VOLTAGE	CAPACITY (AH)		NOMINAL DIMENSIONS						NOMINAL WEIGHT	
		8 HR TO 1.75 VPC @ 25°	10 HR TO 1.8 VPC @ 25°	INCHES			MILLIMETERS				
				A	B	C	A	B	C	LBS	Kg
NSB 190FT RED BATTERY	12	183 / 186 AH	187 / 190 AH	22.0	4.9	12.6	560	125	320	124.3	56.3

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

FLOAT VOLTAGE

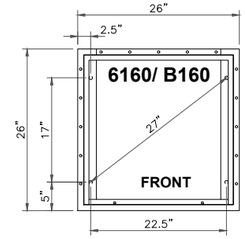
CONSTANT VOLTAGE CHARGING IS RECOMMENDED

RECOMMENDED FLOAT VOLTAGE:2.27 +/- 0.02 VPC

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					

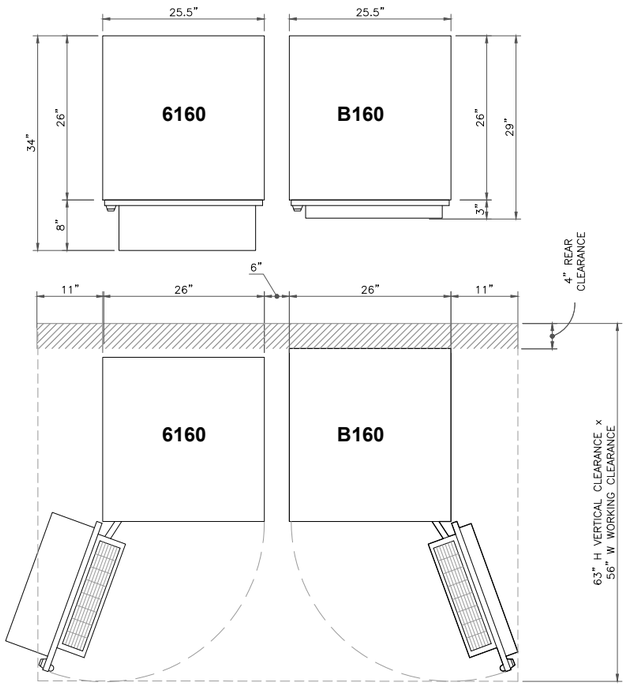
NSB 190FT RED BATTERY LEAD & ACID WEIGHTS (12-VOLT MODULE):			
ELECTROLYTE	WEIGHT	/KG	10.5
		/LBS	23.2
	VOLUME	/LITERS	7.8
		/GALLONS	2.08
ACID	WEIGHT	/KG	4.8
		/LBS	10.5
	VOLUME	/LITERS	2.6
		/GALLONS	0.7
LEAD	WEIGHT	/KG	17.9
		/LBS	39.4
LEAD OXIDE	VOLUME	/KG	23.3
		/LBS	51.2
TOTAL WEIGHT	WEIGHT	/KG	56.3
		/LBS	124.3

BOTTOM VIEW

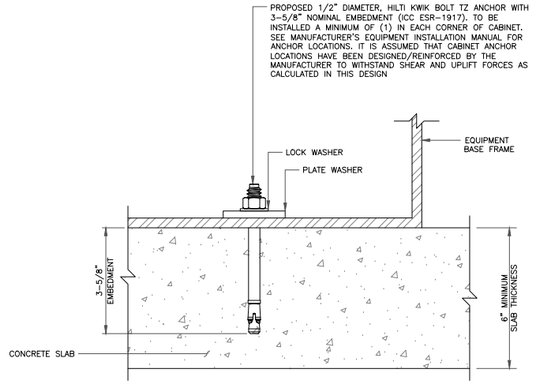


INSTALLER NOTE:

- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL KNOCKOUTS THROUGH
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND/OR CABLING



3 PLAN CABINET DETAILS
SCALE: NOT TO SCALE



4 CABINET ATTACHMENT
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	3/24/2023	FC	PRELIM	AJB
0	4/17/2023	FC	FINALS	AJB

Patrick W. Marshall, P.E.
Registered Engineer
State of Florida #053573
P Marshall & Associates Certificate of Authorization #27595

PATRICK W MARSHALL LICENSE No. 53573 STATE OF FLORIDA PROFESSIONAL ENGINEER

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SHEET NUMBER: C-4

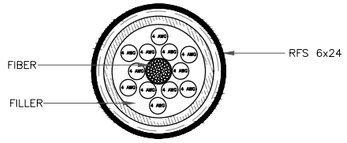
REVISION: A

MANUFACTURER:	RADIO FREQUENCY SYSTEMS
MODEL:	HB158-21U6S24-XXM
CABLE OD:	1.996" (50.7 MM)
CABLE WEIGHT:	2.5 LB/FT (3.65 KG/K)
JACKET COLOR:	BLACK
COLOR CODE:	4 AWG-COLORED PVC BLK & RED-NUMBER PRINTED

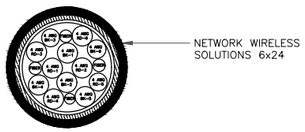
NOTES:
NOMINAL LENGTH EQUALS LENGTH OF TRUNK NOT INCLUDING TOP AND BOTTOM BREAKOUTS; BREAKOUT LENGTHS ADD ADDITIONALLY TO THE TOTAL ASSEMBLY LENGTH TIP TO TIP TOP BREAKOUT – DC POWER CABLE SPECIFICATIONS:

NO OF DC PAIRS 6; SPECIFICATIONS PER 1 PAIR: MAXIMUM DC-RESISTANCE POWER CABLE Ω/KM (Ω/FT) 1.4 (0.42), CROSS SECTION OF POWER CABLE MM2 (AWG) 13.3 (6), OVERALL CABLE DIAMETER MM (IN) 17.8 (0.70), DC CABLE JACKET MATERIAL PVC, EMI SHIELD TINNED COPPER BRAID

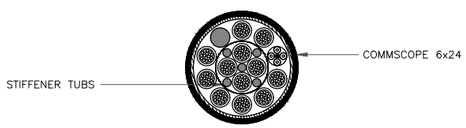
PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	1.99
CROSS-SECTION AREA (SQUARE INCHES)	3.13
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.5



PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	1.79
CROSS-SECTION AREA (SQUARE INCHES)	2.516
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.65

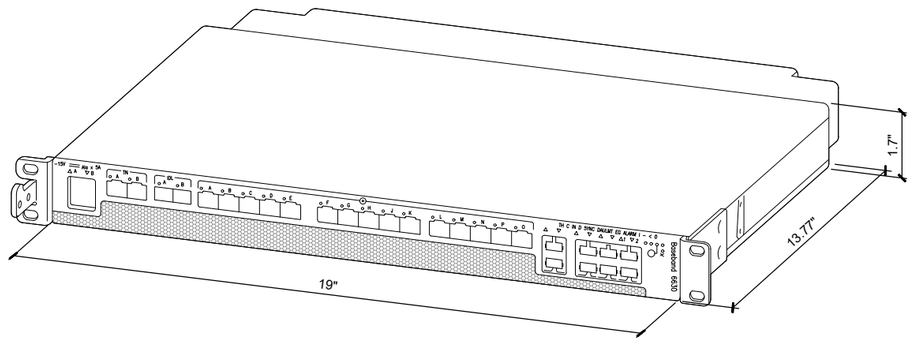


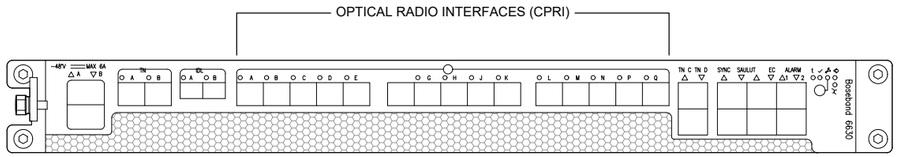
PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	1.67
CROSS-SECTION AREA (SQUARE INCHES)	2.19
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.22



1 6X24 4AWG HYBRID CABLE
SCALE: NOT TO SCALE

ERICSSON BASEBAND 6630	
WEIGHT (W/O MOUNTING HARDWARE)	14.3 LBS
SIZE (H x W x D)	1.7 x 19 x 13.77 IN.



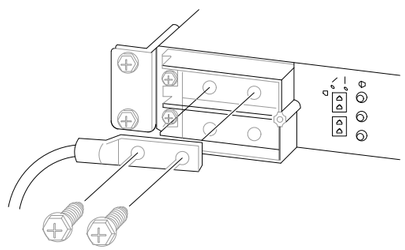


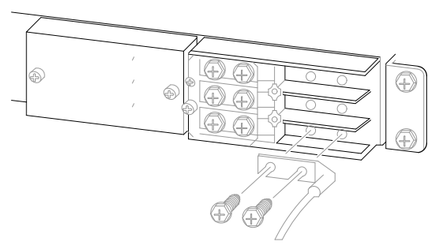
2 ERICSSON BB 6630 / BB 6648
SCALE: NOT TO SCALE

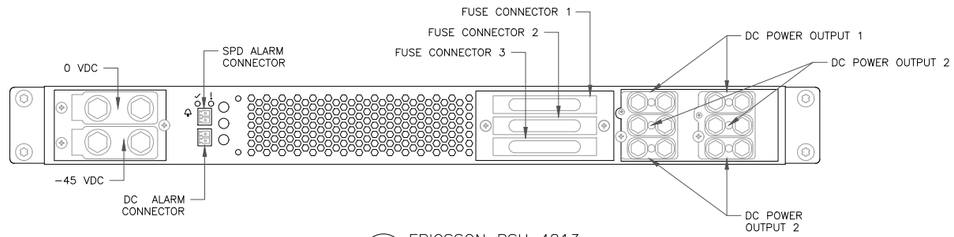
ERICSSON PSU 4813	
WEIGHT (W/O MOUNTING HARDWARE)	17.1 LBS
SIZE (H x W x D)	1.7 x 19 x 13.3 IN.
NEEDED INSTALLATION KIT	
PSU4813 INSTALL KIT FOR RBS	34133
PSU4813 INSTALL KIT FOR PBC6200	34134
PSU4813 INSTALL KIT FOR 6160/RBS6230	34135

INSTALLER NOTE:

1. THE PSU 48 13 SHALL BE FED VIA 200A BREAKER INSTALLED, FOR EXAMPLE, IN THE LLVD1 SECTION OF AN ENCLOSURE 6160 DC DISTRIBUTION SUBRACK.
2. CONNECT -58 VDC DISTRIBUTION CABLE TO TERMINAL AT THE RIGHT, WHICH WILL BE FED TO RRU/AIR AT THE OTHER END.







3 ERICSSON PSU 4813
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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0	4/17/2023	FC	FINALS	AJB

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P Marshall & Associates Certificate of Authorization #27595

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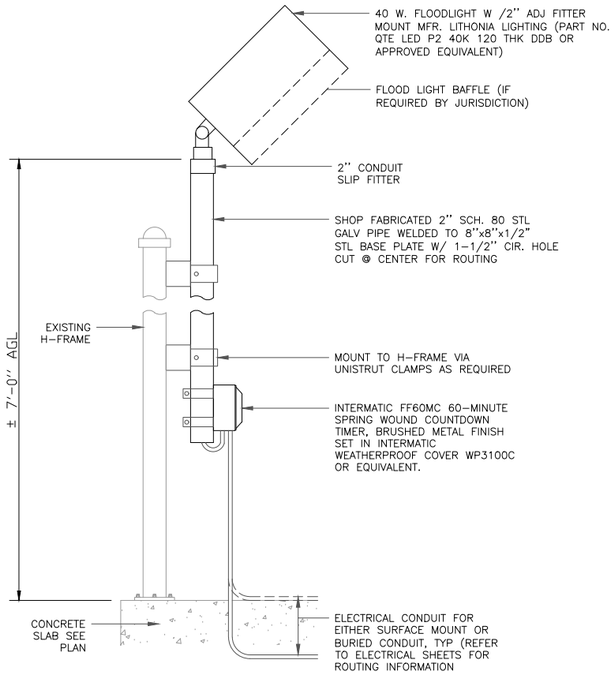
SHEET NUMBER: C-5

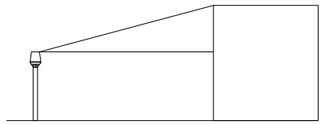
REVISION: A



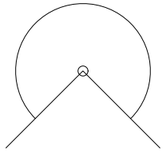
1 SERVICE LIGHT
SCALE: NOT TO SCALE

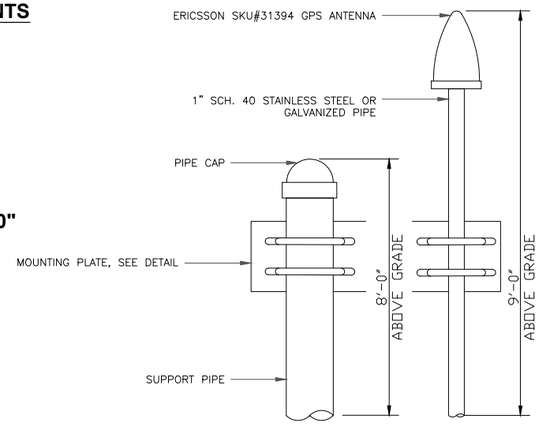
GPS MINIMUM SKY VIEW REQUIREMENTS

OBSTRUCTIONS MUST BE BELOW 15'-0"

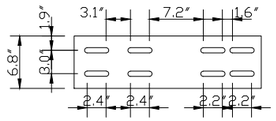


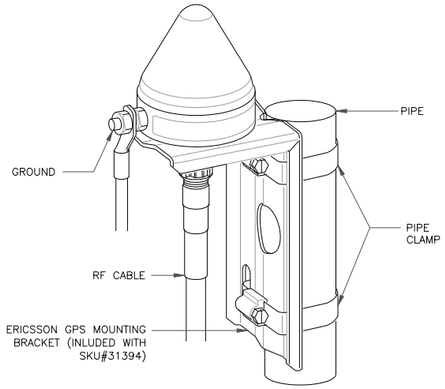
MINIMUM OF 75% OR 270 DEGREES IN ANY DIRECTION





MOUNTING PLATE





2 GPS DETAILS
SCALE: NOT TO SCALE

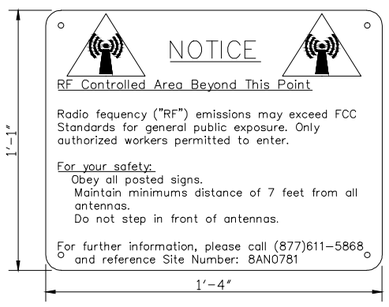
INSTALLER NOTE:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT
2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4" O.D. SCH. 40 GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MIN. 18") USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBARRED AND SMOOTH IN ORDER TO DEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
3. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREE VERTICAL & THE BASE OF THE ANTENNA IS WITHIN 2 DEGREE OF THE LEVEL.
4. DO NOT SWEEP TEST GPS ANTENNA

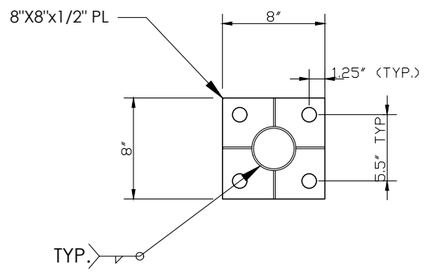
3 T-MOBILE SITE SIGNAGE
SCALE: NOT TO SCALE

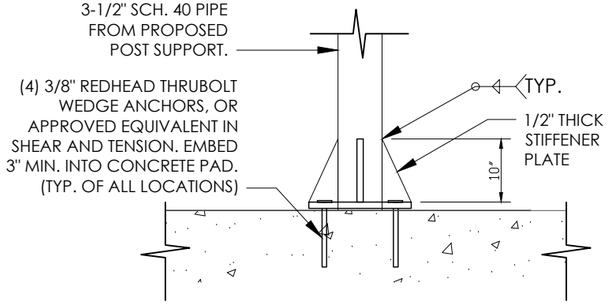
INSTALLER NOTE:

1. RF NOTICE SIGN TO BE WHITE METAL W/ BLACK LETTERING
2. SIGNS TO BE PROVIDED AND INSTALLED BY CONTRACTOR
3. SIGNS TO BE INSTALLED AT ROOFTOP ENTRANCE OR OTHER MANDATED AREAS



4 RF SIGNAGE
SCALE: NOT TO SCALE





5 ANCHOR DETAIL (WHERE APPLICABLE)
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
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BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
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EXISTING 300'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	3/24/2023	FC	PRELIM	AJB
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SHEET NUMBER: C-6

REVISION: A

FFVV-65C-R3-V1

8-port sector antenna, 4x 617-894 and 4x 1695–2690 MHz, 65° HPBW, 3x RET

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.99 m² | 10.656 ft²
Effective Projective Area (EPA), lateral	0.33 m² | 3.552 ft²
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male

Dimensions

Width	640 mm | 25.197 in
Depth	235 mm | 9.252 in
Length	2437 mm | 95.945 in

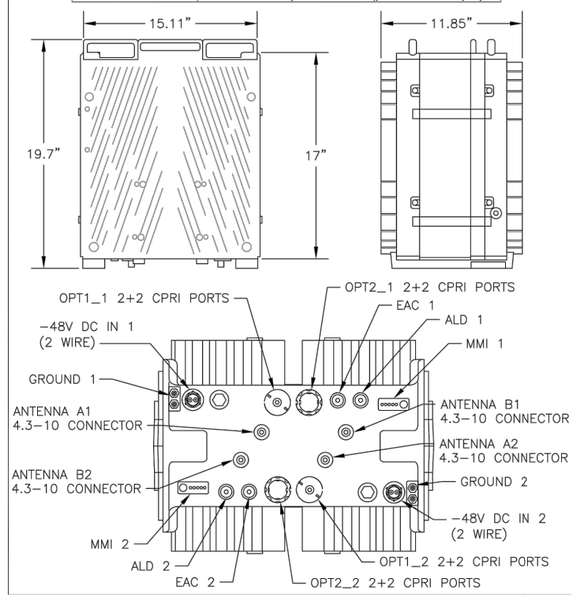
COMMSCOPE®

1 COMMSCOPE FFVV-65C-R3-V1 SPECIFICATIONS
SCALE: NOT TO SCALE

SPACE INTENTIONALLY LEFT BLANK

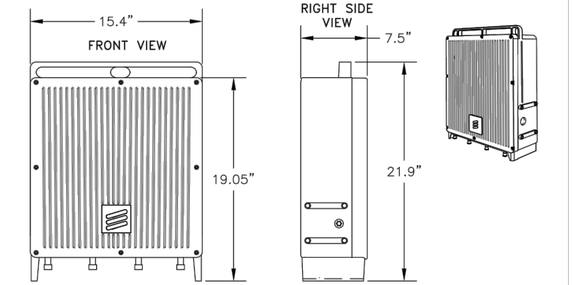
2 NOT USED
SCALE: NOT TO SCALE

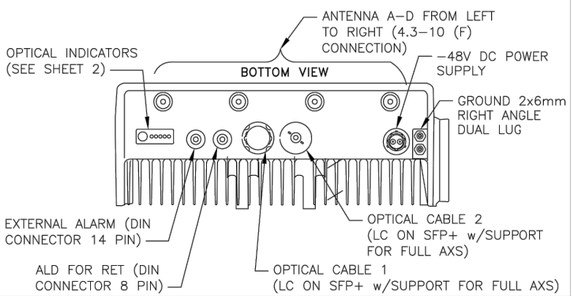
MANUFACTURER:	ERICSSON
MODEL:	4460 RADIO B2/25 B66 (KRC 161 912/3)
DIMENSIONS:	17" x 15.11" x 11.85" (H" x W" x D")
WEIGHT:	109 LBS
BRACKET WEIGHT:	4.8 LBS (ERS HEAVY #SXK1255993/1)



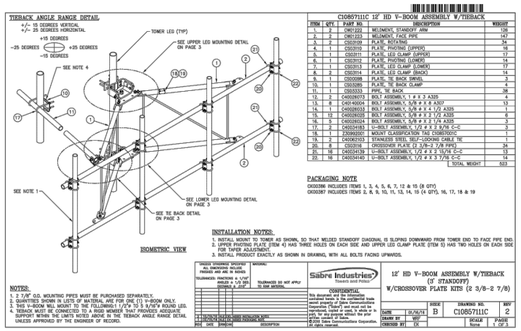
3 RADIO ERICSSON 4460 B25+B66 SPECIFICATIONS
SCALE: NOT TO SCALE

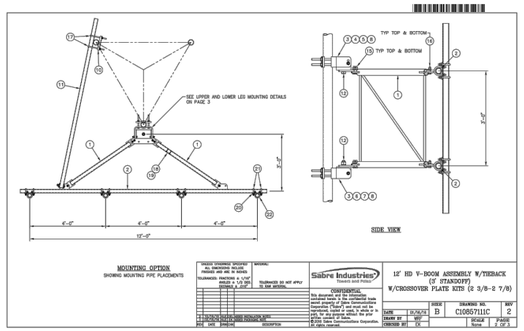
MANUFACTURER:	ERICSSON
MODEL:	4480 RADIO (KRC 161 922/1)
DIMENSIONS:	21.9" x 15.4" x 7.5" (H x W x D)
MODEL BAND:	B71, B85 FOR NR AND LTE
WEIGHT:	93 LBS
BRACKET WEIGHT:	3.75 LBS (MULTI ERS #109 1973/2)

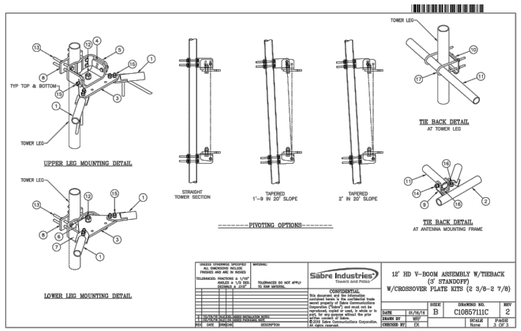




4 RADIO ERICSSON 4480 B71+B85 SPECIFICATIONS
SCALE: NOT TO SCALE







5 SABRE C10857111 MOUNT
SCALE: NOT TO SCALE

T-Mobile

1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE

8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A

P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	3/24/2023	FC	PRELIM	AJB
0	4/17/2023	FC	FINALS	AJB

Patrick W. Marshall, P.E.
Registered Engineer
State of Florida #053573
P Marshall & Associates Certificate of Authorization #27595

PATRICK W MARSHALL
LICENSE
No. 53573
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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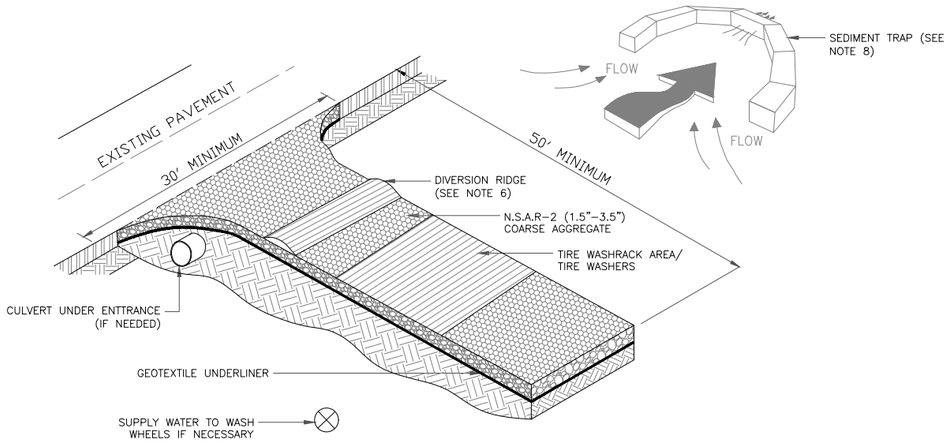
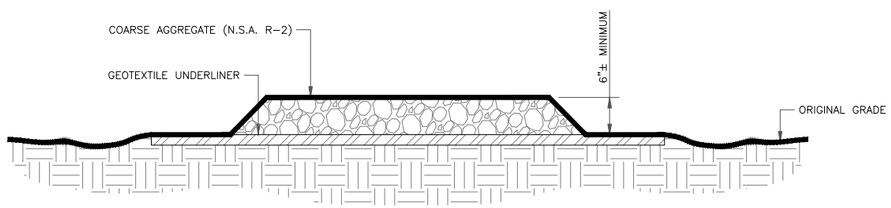
SHEET NUMBER: C-7

REVISION: A



1 Co CONSTRUCTION EXIT DETAIL
SCALE: NOT TO SCALE



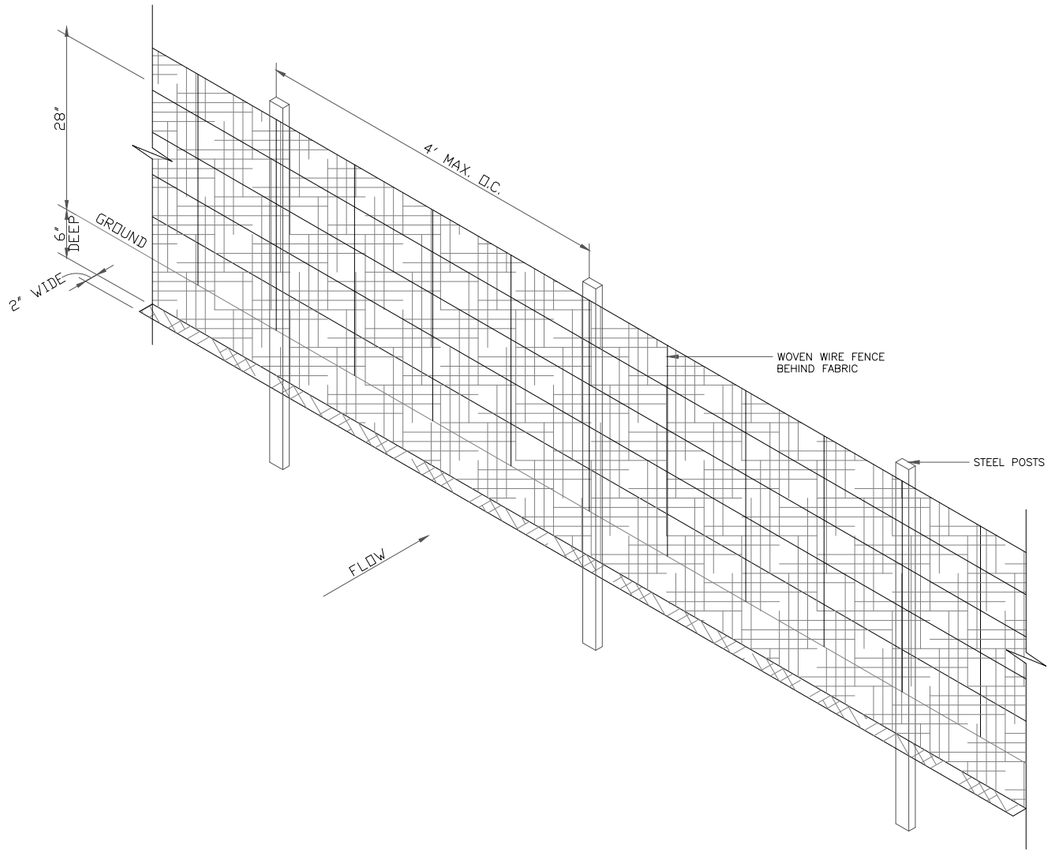
2 Co ENTRANCE ELEVATION
SCALE: NOT TO SCALE

NOTES:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%..
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

MAINTENANCE:

1. INSPECT BARRIERS AT THE END OF EACH WORKING DAY, OR AFTER EACH RAIN, AND REPAIR OR CLEAN AS NECESSARY.
2. REMOVE SEDIMENT FROM BARRIER WHEN TWO-THIRDS FULL.
3. DISPOSE OF SEDIMENT SO THAT IT WILL NOT ENTER THE BARRIER AGAIN AND STABILIZE IT WITH VEGETATION.
4. REPLACE FILTER FABRIC WHEN DETERIORATED.
5. DESIGN LIFE OF A SYNTHETIC SILT FENCE IS APPROXIMATELY 6 MONTHS.
6. MAINTAIN UNTIL THE PROJECT IS VEGETATED OR OTHERWISE STABILIZED.
7. REMOVE BARRIERS AND ACCUMULATED SEDIMENT AND STABILIZE THE EXPOSED AREA WHEN THE PROJECT IS STABILIZED.



3 Sd1 TYPE C SEDIMENTATION BARRIER DETAIL
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
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BU #: **846221**
SE LAKE CITY

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EXISTING 300'-0"
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P Marshall & Associates Certificate of Authorization #27595

PATRICK W MARSHALL LICENSE No. 53573 STATE OF FLORIDA PROFESSIONAL ENGINEER

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SHEET NUMBER: C-8

REVISION: A

VEGETATIVE COVERS

CALENDAR MONTH		TEMPORARY SEED	APPLICATION RATE/ACRE	PERMANENT SEED	APPLICATION RATE/ACRE
1.	JANUARY	RYE GRASS	40–50 LB.	UNHULLED BERMUDA[1]	8–10 LB.
				SERICEA LESPEDEZA[2]	30–40 LB.
2.	FEBRUARY			UNHULLED BERMUDA[1]	8–10 LB.
				SERICEA LESPEDEZA[2]	30–40 LB.
				FESCUE	30–50 LB.
3.	MARCH	RYE	2–3 BU.	UNHULLED BERMUDA[1]	8–10 LB.
		ANNUAL LESPEDEZA	20–25 LB.	SERICEA LESPEDEZA[2]	30–40 LB.
		WEEPING LOVE GRASS	4–6 LB.	FESCUE	30–50 LB.
4.	APRIL	RYE	2–3 BU.	WEEPING LOVE GRASS	4–6 LB.
		BROWN TOP MILLET	30–40 LB.	HULLED BERMUDA	5–6 LB.
		ANNUAL LESPEDEZA	20–25 LB.	BAHIA	40–60 LB.
		SUDAN ANNUAL	35 LB.		
5.	MAY	WEEPING LOVE GRASS	4–6 LB.	WEEPING LOVE GRASS	4–6 LB.
		SUDAN GRASS	35 LB.	HULLED BERMUDA	5–6 LB.
		BROWN TOP MILLET	30–40 LB.	BAHIA	40–60 LB.
6.	JUNE	WEEPING LOVE GRASS	4–6 LB.	WEEPING LOVE GRASS	4–6 LB.
		SUDAN GRASS	35 LB.	HULLED BERMUDA	5–6 LB.
		BROWN TOP MILLET	30–40 LB.	BAHIA	40–60 LB.
7.	JULY	WEEPING LOVE GRASS	4–6 LB.		
		SUDAN GRASS	35 LB.		
		BROWN TOP MILLET	30–40 LB.		
8.	AUGUST	RYE GRASS	40–50 LB.		
		WEEPING LOVE GRASS	4–6 LB.		
9.	SEPTEMBER			TALL FESCUE	30–50 LB.
10.	OCTOBER	WHEAT	2–3 BU.	UNHULLED BERMUDA[1]	8–10 LB.
				SERICEA LESPEDEZA[2]	30–40 LB.
				FESCUE	30–50 LB.
11.	NOVEMBER	WHEAT	2–3 BU.	UNHULLED BERMUDA[1]	8–10 LB.
				SERICEA LESPEDEZA[2]	30–40 LB.
				FESCUE	30–50 LB.
12.	DECEMBER	RYE	2–3 BU.	UNHULLED BERMUDA[1]	8–10 LB.
		RYE GRASS	40–50 LB.	SERICEA LESPEDEZA[2]	30–40 LB.
		WHEAT	2–3 BU.	FESCUE	30–50 LB.

[1] USE A MINIMUM OF 40 LBS. SCARIFIED SEED. THE REMAINDER MAY BE UNSCARIFIED, CLEAN HULLED SEED.

[2] USE EITHER COMMON SERALA OR INTERSTATE SERICEA LESPEDEZA.

GENERAL

THIS VEGETATIVE PLAN WILL BE CARRIED OUT ON ROAD CUT AND FILL SLOPES, SHOULDERS, AND OTHER CRITICAL AREAS CREATED BY CONSTRUCTION. SEEDING WILL BE DONE AS SOON AS CONSTRUCTION IN AN AREA IS COMPLETED. PLANTINGS WILL BE MADE TO CONTROL EROSION, TO REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS AND TO IMPROVE THE SAFETY AND BEAUTY OF THE DEVELOPMENT AREA.

SOIL CONDITIONS

DUE TO GRADING AND CONSTRUCTION, THE AREAS TO BE TREATED ARE MAINLY SUBSOIL AND SUBSTRATES. FERTILITY IS LOW AND THE PHYSICAL CHARACTERISTICS OF THE EXPOSED MATERIAL ARE UNFAVORABLE TO ALL BUT THE MOST HARDY PLANTS.

TREATMENT SPECIFICATIONS

HYDRAULIC SEEDING EQUIPMENT: WHEN HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS USED, NO GRADING AND SHAPING OR SEEDBED PREPARATION WILL BE REQUIRED. THE FERTILIZER, SEED AND WOOD CELLULOSE FIBER MULCH WILL BE MIXED WITH WATER AND APPLIED IN A SLURRY. ALL SLURRY INGREDIENTS MUST BE COMBINED TO FORM A HOMOGENOUS MIXTURE, AND SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER MIXTURE IS MADE. STRAW OR HAY MULCH AND ASPHALT EMULSION WILL BE APPLIED WITH BLOWER–TYPE MULCH SPREADING EQUIPMENT WITHIN 24 HOURS AFTER SEEDING. THE MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. THE PER ACRE APPLICATION RATES ARE AS FOLLOWS:

A. SEEDING WITH MULCH: (HYDRAULIC SEEDING EQUIPMENT ON SLOPES 3:1 AND STEEPER)

AGRICULTURAL LIMESTONE #75	4000 LBS./ACRE
FERTILIZER, 5–10–15	1500 LBS./ACRE
MULCH (STRAW OR HAY) OR	5000 LBS./ACRE
WOOD CELLULOSE FIBER MULCH	1000 LBS./ACRE

SEED SPECIES	APPLICATION RATE/ACRE	PLANTING DATES
SERICEA LESPEDEZA, SCARIFIED WEEPING LOVE GRASS, OR COMMON BERMUDA, HULLED	60 LBS. 4 LBS. 6 LBS.	3/1 – 6/15
FESCUE SERICEA LESPEDEZA, UNSCARIFIED	40 LBS. 60 LBS.	9/1 – 10/31
FESCUE SERICEA LESPEDEZA, UNSCARIFIED RYE	40 LBS. 75 LBS. 50 LBS.	11/1 – 2/28
HAY MULCH FOR TEMPORARY COVER	5000 LBS.	6/15 – 8/31

B. TOP DRESSING: APPLY WHEN PLANTS ARE 2 TO 4 INCHES TALL

FERTILIZER (AMMONIUM NITRATE 33.5%) 300 LBS./ACRE

C. SECOND–YEAR TREATMENT:

FERTILIZER (0–20–20 OR EQUIVALENT) 500 LBS./ACRE

Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

GENERAL

THIS VEGETATIVE PLAN WILL BE CARRIED OUT ON ROAD CUT AND FILL SLOPES, SHOULDERS, AND OTHER CRITICAL AREAS CREATED BY CONSTRUCTION. SEEDING WILL BE DONE AS SOON AS CONSTRUCTION IN AN AREA IS COMPLETED. PLANTINGS WILL BE MADE TO CONTROL EROSION, TO REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS AND TO IMPROVE THE SAFETY AND BEAUTY OF THE DEVELOPMENT AREA.

SOIL CONDITIONS

DUE TO GRADING AND CONSTRUCTION, THE AREAS TO BE TREATED ARE MAINLY SUBSOIL AND SUBSTRATES. FERTILITY IS LOW AND THE PHYSICAL CHARACTERISTICS OF THE EXPOSED MATERIAL ARE UNFAVORABLE TO ALL BUT THE MOST HARDY PLANTS.

TREATMENT SPECIFICATIONS

CONVENTIONAL SEEDING EQUIPMENT: GRADE, SHAPE, AND SMOOTH WHERE NEEDED TO PROVIDE FOR SAFE EQUIPMENT OPERATION AT SEEDING TIME AND FOR MAINTENANCE PURPOSES. THE LIME AND FERTILIZER IN DRY FORM WILL BE SPREAD UNIFORMLY OVER THE AREA IMMEDIATELY BEFORE SEEDBED PREPARATION. A SEEDBED WILL BE PREPARED BY SCARIFYING TO A DEPTH OF 1 TO 4 INCHES AS DETERMINED ON SITE. THE SEEDBED MUST BE WELL PULVERIZED, SMOOTHED, AND FIRMED. SEEDING WILL BE DONE WITH A CULTIPACKER–SEEDER, DRILL, ROTARY SEEDER, OR OTHER MECHANICAL OR HAND SEEDER. SEED WILL BE DISTRIBUTED UNIFORMLY OVER A FRESHLY PREPARED SEEDBED AND COVERED LIGHTLY. WITHIN 24 HOURS AFTER SEEDING, STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. MULCH WILL BE SPREAD WITH BLOWER–TYPE MULCH EQUIPMENT OR BY HAND AND ANCHORED IMMEDIATELY AFTER IT IS SPREAD. A DISK HARROW WITH THE DISK SET STRAIGHT OR A SPECIAL PACKER DISK MAY BE USED TO PRESS THE MULCH INTO THE SOIL. THE PER ACRE APPLICATION RATES ARE AS FOLLOWS:

A. SEEDING WITH MULCH: (CONVENTIONAL SEEDING EQUIPMENT ON SLOPES LESS THAN 3:1)

AGRICULTURAL LIMESTONE #75	4000 LBS./ACRE
FERTILIZER, 5–10–15	1500 LBS./ACRE
MULCH (STRAW OR HAY)	5000 LBS./ACRE

SEED SPECIES	APPLICATION RATE/ACRE	PLANTING DATES
HULLED COMMON BERMUDA GRASS	10 LBS.	3/1 – 6/15
FESCUE	50 LBS.	9/1 – 10/31
FESCUE RYE GRASS	50 LBS. 50 LBS.	11/1 – 2/28
HAY MULCH FOR TEMPORARY COVER	5000 LBS.	6/15 – 8/31

B. TOP DRESSING: APPLY WHEN PLANTS ARE 2 TO 4 INCHES TALL

FERTILIZER (AMMONIUM NITRATE 33.5%) 300 LBS./ACRE

C. SECOND–YEAR TREATMENT:

FERTILIZER (5–10–15 OR EQUIVALENT) 800 LBS./ACRE

Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
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EXISTING 300'-0"
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PATRICK W MARSHALL LICENSE No. 53573 STATE OF FLORIDA PROFESSIONAL ENGINEER

SHEET NUMBER: C-9

REVISION: A

NOTES

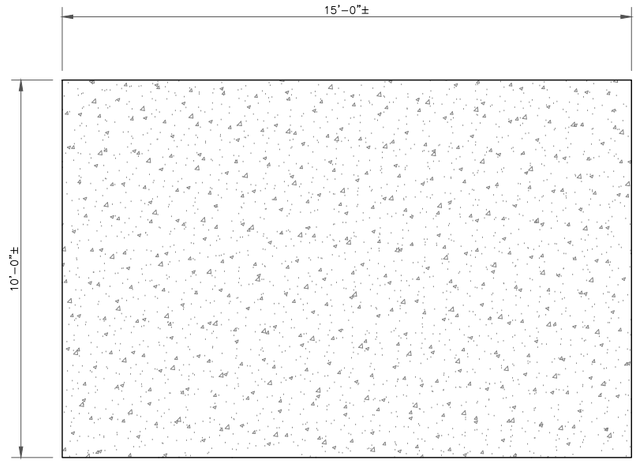
REINFORCED CONCRETE PAD (MINIMUM REQUIREMENTS):

1. REINFORCED CONCRETE CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ACI STANDARDS 318.
2. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
3. ALL REINFORCING STEEL SHALL BE NEW BILLIT STEEL, CONFORMING TO ASTM A-615, GRADE 60, DEFORMED, CONSISTING OF MIN. #4 BARS @ 12" O.C. (MAX) EACH WAY.
4. UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. (ACI 315).
5. ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS OTHERWISE SHOWN.
6. ALL EXPOSED EXTERNAL CORNERS OF CONCRETE TO BE TOOLED EDGE, UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL REFER TO DRAWINGS OF THEIR TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES.
8. CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATION OF ALL ELECTRICAL OPENINGS AND EQUIPMENT PADS WITH THE ELECTRICAL EQUIPMENT DETAIL AND SHOP DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION FOR ALL UTILITIES.
9. CONCRETE PAD WAS DESIGNED ASSUMING EXISTING SURFACE SOILS BENEATH PAD HAVE MINIMUM NET ALLOWABLE BEARING PRESSURE OF 1000 PSF.
10. SOIL BEARING CAPACITY SHOULD BE VERIFIED BY CONTRACTOR WITH THE SPECIFIC GEOTECHNICAL REPORT. IF THIS MINIMUM IS NOT MET, FURTHER REVIEW OF DESIGN OR SPECIAL DESIGN MA BE REQUIRED.
11. THE SOIL BENEATH THE CONCRETE PAD MUST BE FREE OF ORGANIC MATTER OR OTHER DELETERIOUS SUBSTANCES, AND SHOULD BE COMPACTED AND LEVELED BEFORE PLACING THE GRAVEL BASE MATERIAL.

CONCRETE PAD NOTE

USE OF EXISTING CONCRETE PADS:

PM&A WAS NOT PROVIDED WITH AS BUILT INFORMATION FOR EXISTING CONCRETE PADS. CONTRACTOR SHALL VERIFY THAT EXISTING CONCRETE PADS ARE OF MIN. THICKNESS, REINFORCEMENT AND COMPRESSIVE STRENGTH AS WELL AS MEET THE MIN. REQUIREMENTS AS LISTED ABOVE PRIOR TO INSTALLING NEW GENERATOR ON EXISTING PAD. IN CASES WHERE EXISTING PAD DOES NOT MEET MIN. REQUIREMENTS THE CONTRACTOR SHALL NOTIFY T-MOBILE AND CONFIRM AND RECEIVE APPROVAL FROM SITE CM TO REPLACE EXISTING PAD WITH NEW PAD AS DETAILED ON THIS SHEET. IF EXISTING GENERATOR CONDUIT STUB-UPS ARE PRESENT, CONTRACTOR TO VERIFY EXACT LOCATION AND UTILIZE EXISTING CONDUITS FOR NEW GENERATOR.



1 CONCRETE SLAB PLAN
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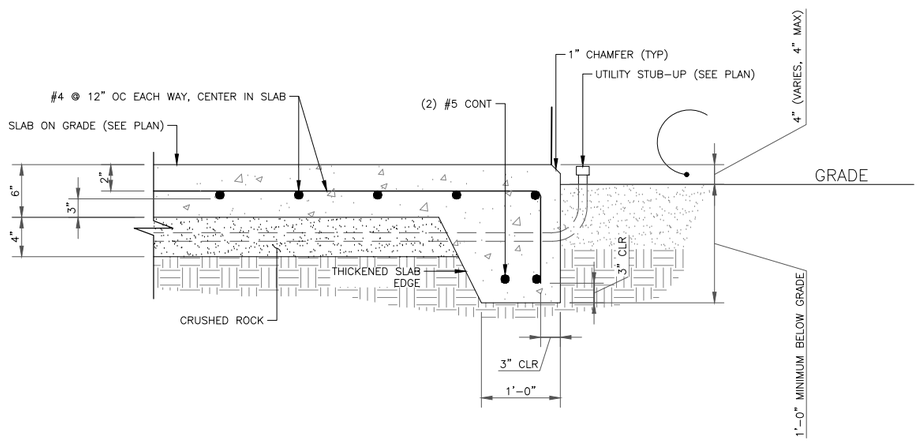

2 CONECTION DETAIL
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

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1000 HOLCOMB WOODS PKWY STE. 210
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PROFESSIONAL ENGINEER

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SHEET NUMBER: C-10

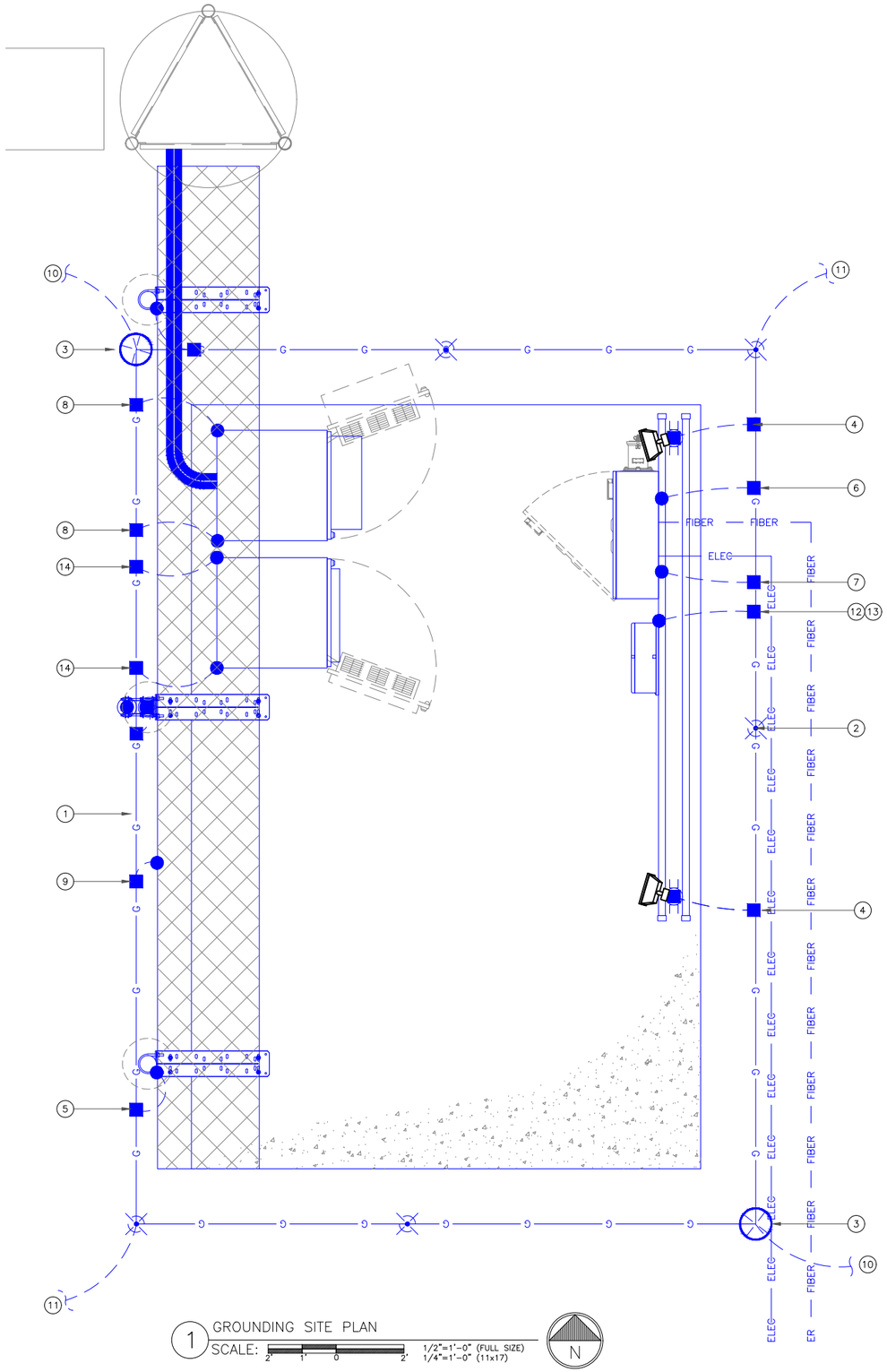
REVISION: A

GROUNDING KEY NOTES:

1. PROPOSED #2 BARE TINNED SOLID COPPER GROUND RING (TYP.)
2. PROPOSED 5/8" DIA. x 8' LONG STEEL SHAFT COPPER CLAD GROUND ROD (TYP.)
3. PROPOSED GROUND ROD WITH COVERED PVC TEST WELL (TYP.)
4. GROUND PROPOSED UTILITY FRAME POST WITH CADWELD CONNECTION TO BASE PLATE (TYP.)
5. GROUND PROPOSED ICE BRIDGE POST WITH CADWELD CONNECTION TO BASE (TYP.)
6. GROUND PROPOSED PPC POWER PANEL PER NEC 250 AND LOCAL UTILITY REQUIREMENTS (TYP.)
7. GROUND PROPOSED TELCO GROUND BAR WHERE REQUIRED BY TELCO BACKHAUL (TYP.)
8. GROUND PROPOSED CABINET CHASSIS WITH #2 GROUND CONDUCTOR TO EXISTING GROUNDING SYSTEM PER MANUFACTURER'S SPECIFICATIONS (TYP.)
9. GROUND ICE BRIDGE CHANNEL SECTIONS WITH 2–HOLE LUG CONNECTION. BOND ADJOINING CHANNEL SECTIONS TOGETHER WITH 2–HOLE LUG JUMPERS (TYP.)
10. GROUND TO ALL METALLIC OBJECTS WITHIN 6' OF THE PROPOSED EQUIPMENT AND BURIED GROUND RING (TYP.)
11. GROUND PROPOSED T–MOBILE BURIED EQUIPMENT GROUND RING TO EXISTING SITE GROUND RING. CONDUCT GROUNDING SYSTEM TEST AND INCLUDE IN THE CLOSEOUT PACKAGE TO T–MOBILE. ADDITIONAL GROUNDING MAY BE REQUIRED PENDING THE RESULTS OF THE GROUNDING SYSTEM TEST (TYP. x 2)
12. 2"x6" TELCO BUSS BAR WITH INSULATORS. GROUND WITH (2) EXOTHERMIC WELD CONNECTIONS, 1 PER SIDE (TYP.)
13. GROUND PROPOSED TELCO N.I.U. WITH #6 GREEN TO TELCO BUS BAR (TYP.)
14. GROUND PROPOSED CABINET MAIN GROUND BAR WITH 2–HOLE LUG CONNECTION PER MANUFACTURER'S SPECIFICATIONS (TYP.)

NOTE:

ALL TRENCHING REQUIRED WITHIN COMPOUND SHALL BE PERFORMED BY HAND–DIGGING ONLY.



1 GROUNDING SITE PLAN
SCALE: 2' 1' 0 2' 1/2"=1'–0" (FULL SIZE) 1/4"=1'–0" (11x17)

N

GROUNDING AND CABLE NOTES:

1. T–MOBILE IS ELIMINATING THE HOME RUN GROUND WIRE FROM THE TOP AND BOTTOM BUSS BARS ON TOWER SITES. ROOFTOPS ARE STILL REQUIRED TO HAVE SECTORIZED GROUND AND #2 INSULATED GROUND WIRE, FROM SECTOR GROUNDS TO MAIN BUSS BARS AND BUILDING STEEL.
2. REMOVED INSULATORS (CHERRIES) FROM THE BUSS BARS AND GROUND TO TOWER, TOP AND BOTTOM ON TOWER SITES ONLY.
3. ALL EXPOSED GROUNDS ARE TO BE DRESSED WITH SEAL TIGHT.
4. ALL ICE BRIDGE POSTS ARE TO BE GROUND WITH #2 SOLID AND DRESSED IN SEAL TIGHT.
5. THE DISTANCE BETWEEN TRAPEZE HANGERS ON ICE BRIDGES IS 3'.
6. THE DISTANCE BETWEEN BUTTERLIES AND CABLE STAND–OFFS IS 3'.
7. THE DISTANCE BETWEEN CONVENTIONAL AND/OR SNAP–HANGERS ON 1/2" JUMPERS SHALL BE NO MORE THAN 3' AT THE TOP OF 2' AT THE BOTTOM, PER MANUFACTURER'S RECOMMENDATION.
8. NO HYBRID CABLES SHOULD TOUCH METAL OR STEEL; THE USE OF STAND–OFF BRACKETS ARE REQUIRED.
9. JUMPERS SHOULD NOT BE CURLED–UP OR COILED TO ELIMIMATE SLACK.
10. GRAVEL UNDER ALL PLATFORMS IS REQUIRED.
11. HYBRID AND JUMPER LINES SHOULD BE DRESSED IN ON THE SIDE OR BOTTOM OF T–BOOMS.

GROUNDING LEGEND

- INSPECTION WELL VERIFY LOCATION W/ CONSTR. MGR.
- 5/8"x10'–0" COPPER CLAD GROUND ROD, 10' O.C. (TYP)
- G — #6 AWG STRANDED & INSULATED
- #2 AWG SOLID COPPER TINNED
- GROUND BUS BAR
- EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)
- MECHANICAL CONNECTION

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	3/24/2023	FC	PRELIM	AJB
0	4/17/2023	FC	FINALS	AJB

Patrick W. Marshall, P.E.
Registered Engineer
State of Florida #053573
P Marshall & Associates Certificate of Authorization #27595

PATRICK W MARSHALL LICENSE No. 53573 STATE OF FLORIDA PROFESSIONAL ENGINEER

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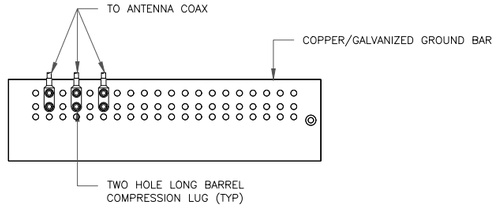
SHEET NUMBER: G-1

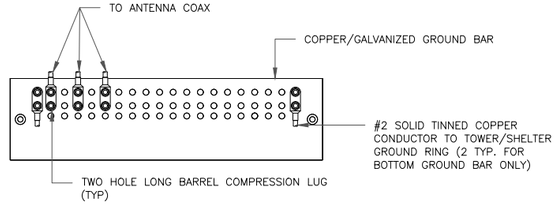
REVISION: A



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 ANTENNA MOUNT STEEL.

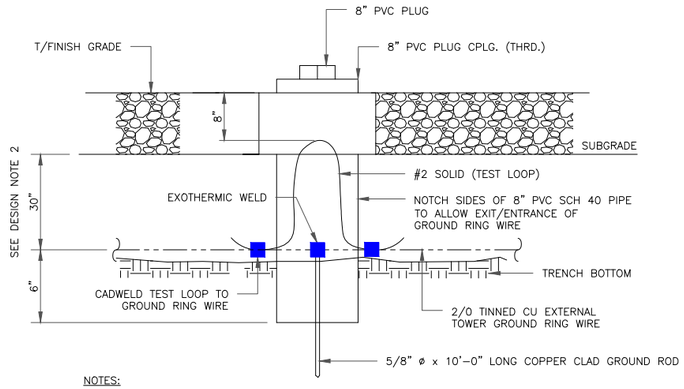
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



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. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE

NOTES:

1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE

SINGLE CONNECTOR AT GROUND BARS

SINGLE CONNECTOR AT STEEL OBJECTS

SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

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1 RAVINIA DRIVE, SUITE 1000
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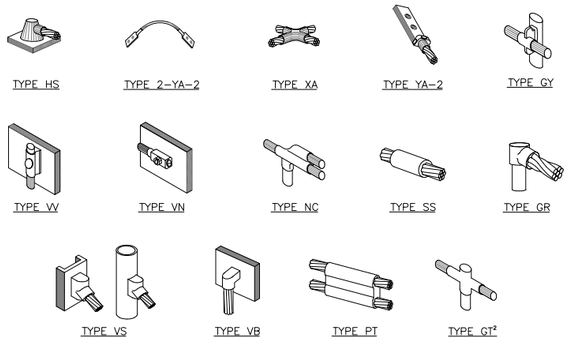
SHEET NUMBER: G-2
REVISION: A

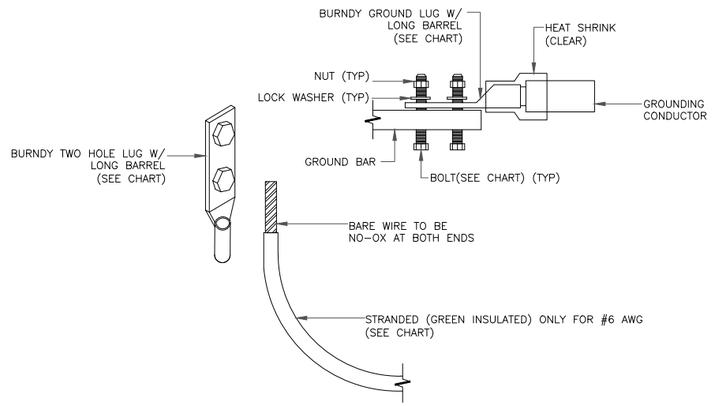


NOTE:

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE

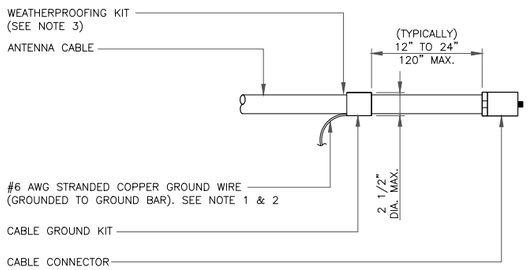
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



NOTES:

1. 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.

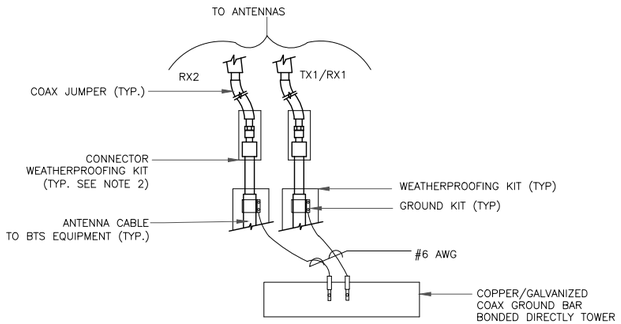
2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



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.

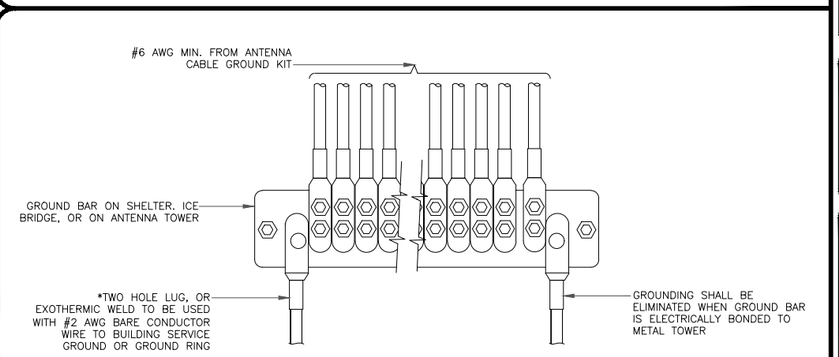
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



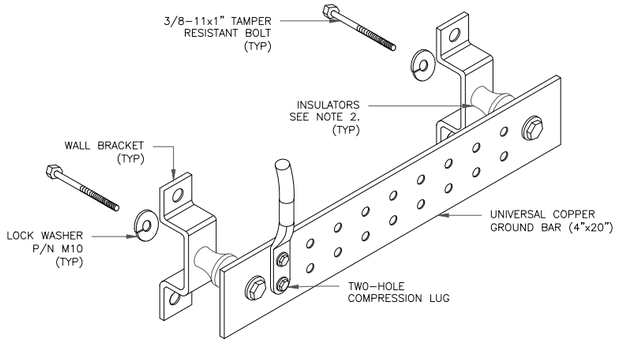
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



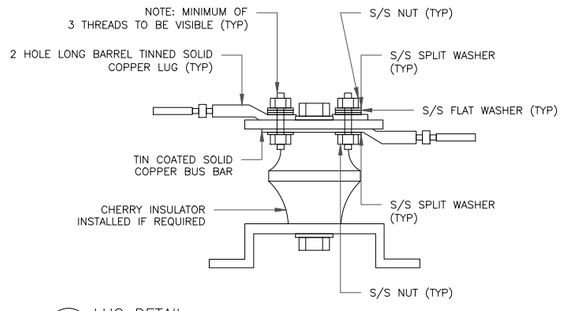
5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



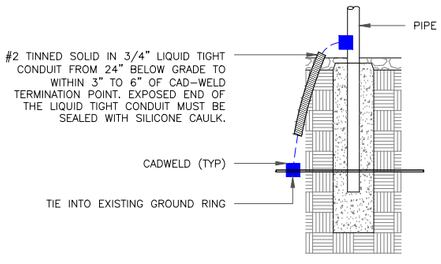
NOTES:

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.

6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

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1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

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SHEET NUMBER: G-3
REVISION: A

A. WORK INCLUDED:

THIS SPECIFICATION AND ACCOMPANYING DRAWING CONTEMPLATE THE PROVISIONS AND INSTALLATION, BY THE ELECTRICAL CONTRACTOR OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS T–MOBILE SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE PROVISIONS AND INSTALLATION OF AN ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS.

2. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. (UNLESS OTHERWISE NOTED).

3. ALL CONDUITS SHALL BE LEFT WITH 200# TEST PULL WIRE. (UNLESS NOTED OTHERWISE) STUB & PLUG BOTH ENDS OF ALL SPARE CONDUITS UP AT 12" ABOVE GRADE.

4. SUBCONTRACTOR SHALL NOTIFY ELECTRIC AND TELEPHONE SERVICES CONTACT AT START OF CONSTRUCTION (2 WEEKS MIN.):

POWER CO.:
CONTACT:
PHONE #:

TELEPHONE CO.:
CONTACT:
PHONE #:

7. ABOVE GRADE RISER CONDUIT SHALL BE GALVANIZED STEEL WITH MATCHING FITTINGS.

8. ALL WIRE SHALL BE (COPPER, 600V THHW, 90°C) UNLESS NOTED OTHERWISE.

B. CODES, PERMITS AND FEES:

1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY SUBCONTRACTOR.

2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES; STATE, LOCAL AND NATIONAL, AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT, SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING RECOGNIZED AUTHORITIES:

A.N.S.I. – AMERICAN NATIONAL STANDARDS INSTITUTE
I.E.E.E. – INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
N.E.C. – NATIONAL ELECTRIC CODE
N.E.M.A. – NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N.F.P.A. – NATIONAL FIRE PROTECTION ASSOCIATION
U.L. – UNDERWRITERS LABORATORIES, INC.

3. THE SUBCONTRACTOR SHALL BE LICENSED TO PERFORM WORK IN THE STATE, CITY OR COUNTY OF THE PROJECT SITE AS REQUIRED.

4. UTILITY COMPANY COORDINATION
ELECTRICAL CONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY. BEFORE SUBMITTING HIS BID, THE SUBCONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN HIS BID WHENEVER POSSIBLE.

5. UTILITIES:

THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE EXCAVATION AND PROPER BACKFILLING OF TRENCHES AND SUPPLY CONDUIT REQUIRED FOR UNDERGROUND TELEPHONE & ELECTRICAL UTILITIES. ALL TRENCHING SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE W/ASTM D–1557 IN 6" LIFTS.

THE ELECTRICAL TRENCH SHALL START AT THE NEW PREFABRICATED RADIO EQUIPMENT BUILDING AND END AT THE NEW METER BOARD STRUCTURE. THE SUBCONTRACTOR SHALL THEN STUB THE CONDUIT 5' OUTSIDE THE FENCE. THE ELECTRIC PROVIDER SHALL PROVIDE SERVICE TO THE NEW METER BOARD STRUCTURE. THE SUBCONTRACTOR SHALL PROPERLY BACKFILL THE TRENCHES AFTER SETTLEMENT AND RESTORE GRAVEL COMPOUND. CONTACT ELECTRIC PROVIDER SIX WEEKS PRIOR TO CONSTRUCTION FOR SERVICE AND COORDINATION OF ACCESS TO SITE.

THE SUBCONTRACTOR SHALL RUN THE TELEPHONE TRENCH AND CONDUIT FROM THE NEW PREFABRICATED RADIO EQUIPMENT BUILDING TO THE NEW TELCO METER BOARD STRUCTURE. THE SUBCONTRACTOR SHALL THEN RUN CONDUIT W/PULL STRING OUTSIDE THE FENCE IN THE UTILITY EASEMENT TO THE R.O.W. THE SUBCONTRACTOR SHALL STAKE THE LOCATIONS OF THE PULL BOXES. THE TELCO PROVIDER SHALL PROVIDE SERVICE TO THE METER BOARD STRUCTURE. THE SUBCONTRACTOR SHALL PROPERLY BACKFILL THE TRENCHES AFTER SETTLEMENT AND RESTORE THE GRAVEL COMPOUND.

1. PROVIDE ALL SIGNAGE AS REQUIRED BY NEC & LOCAL JURISDICTION.

2. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

3. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

4. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

5. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

6. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

7. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.

8. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPICITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANEL BOARD AND CIRCUIT ID'S).

9. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

10. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

11. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

16. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

17. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

18. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

19. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

20. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

21. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

22. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

23. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

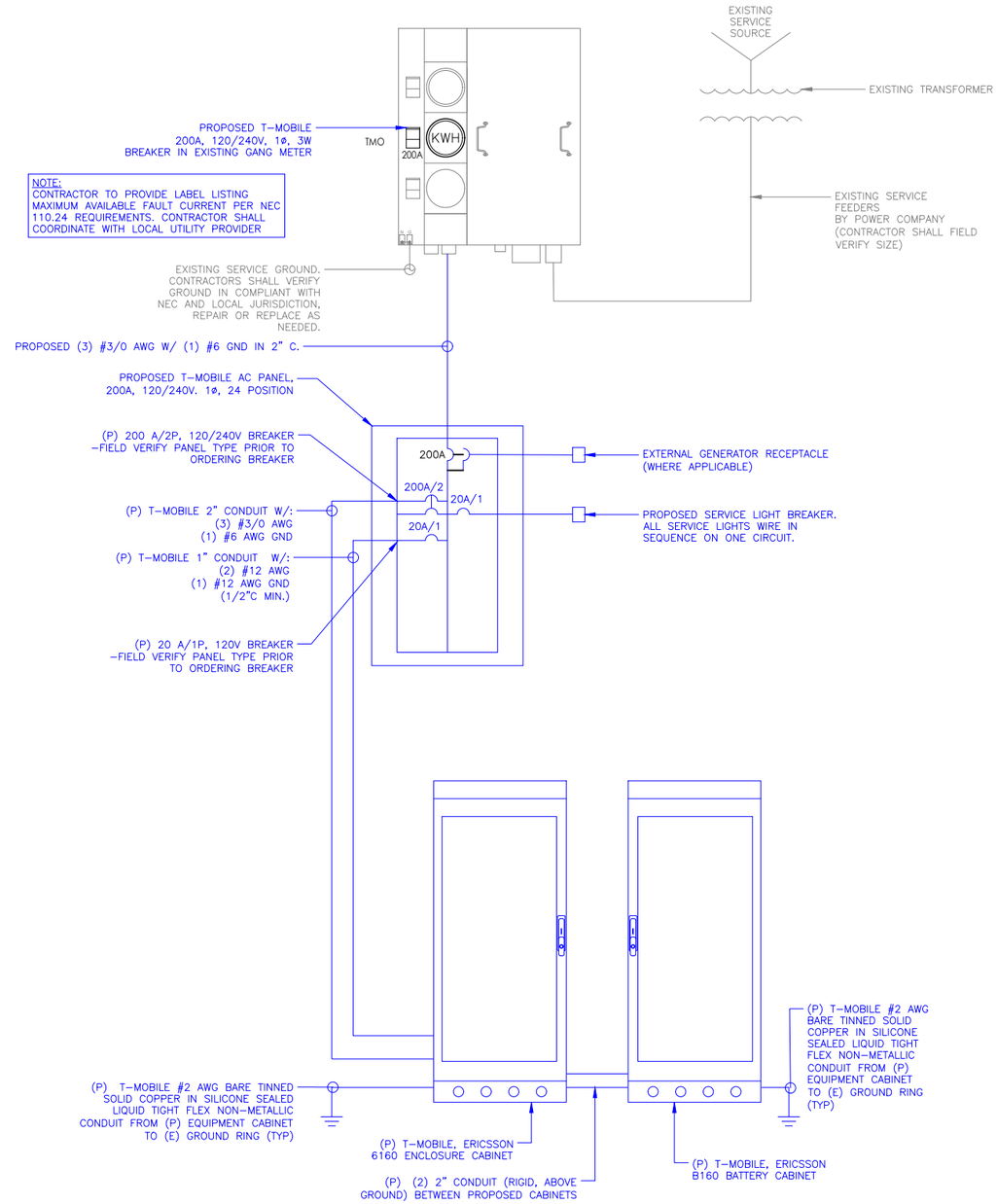
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

25. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

26. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

27. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

28. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



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SHEET NUMBER: E-1

REVISION: A

T-MOBILE SITE #: 9JK2819A			LOCATION:	VOLTAGE: 240/120 1Ø							MOUNTING / ENCLOSURE: EXISTING / NEMA 3R			
Main AC Panel			**PROPOSED H-FRAME**	MAIN C/B: 200 AMPS							AVAIL. FAULT CURRENT: EXISTING			
3/24/2023				BUS RATING: 200 AMPS							SHORT CIRCUIT RATING: 65,000			
AMPS/ POLES	WIRE & CONDUIT	TYPE	DESCRIPTION	KVA	CKT	A		B	CKT	KVA	DESCRIPTION	TYPE	WIRE & CONDUIT	AMPS/ POLES
60/2	**(3)#6, (1)#10 GND, 3/4"C**	**EQ**	**SURGE PROTECTION**	**0.10**	1	0.28			2	**0.18**	**GFCI**	**R**	**(2) #12, (1)#12 GND,1/2"C**	**15/1**
60/2	**-**	**EQ**	**SURGE PROTECTION**	**0.10**	3			16.60	4	**16.50**	**ERICSSON 6160**	**EQ**	**(2) #3/0 AWG & (1) #6 GND**	**200/2**
20/1	**(2)#12,(1)#12 GND, 1/2"C**	**L**	**FLOOD LIGHT**	**0.50**	5	17.00			6	**16.50**	**ERICSSON 6160**	**EQ**	**(2) #3/0 AWG & (1) #6 GND**	**200/2**
-	-	-	-		7				8		-	-	-	-
-	-	-	-		9				10		-	-	-	-
-	-	-	-		11				12		-	-	-	-
-	-	-	-		13				14		-	-	-	-
-	-	-	-		15				16		-	-	-	-
-	-	-	-		17				18		-	-	-	-
-	-	-	-		19				20		-	-	-	-
				PHASE TOTAL		17.3		16.6		KVA				

TOTAL CONNECTED LOAD	33.9 kVA	141 A
TOTAL DEMAND LOAD	34.0 kVA	142 A

LOAD TYPE	DESCRIPTION	CONN. LOAD		DEMAND FACTOR	DESIGN LOAD	
		KVA	AMPS		KVA	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	33.2	138.3	1.00	33.2	138.3
E	EXISTING	0.0	0.0	1.25	0.0	0.0

* ALL EQUIPMENT LOADS CONSIDERED CONTINUOUS LOADS

NOTES:

1 PROPOSED AC POWER PANEL SCHEDULE
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
8000 AVALON BLVD, SUITE 700
ALPHARETTA, GA 30009

PM&A
P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

T-MOBILE SITE NUMBER:
9JK2819A

BU #: **846221**
SE LAKE CITY

603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

EXISTING 300'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	3/24/2023	FC	PRELIM	AJB
0	4/17/2023	FC	FINALS	AJB

Patrick W. Marshall, P.E.
Registered Engineer
State of Florida #053573
P Marshall & Associates Certificate of Authorization #27595

PATRICK W MARSHALL LICENSE No. 53573 STATE OF FLORIDA PROFESSIONAL ENGINEER

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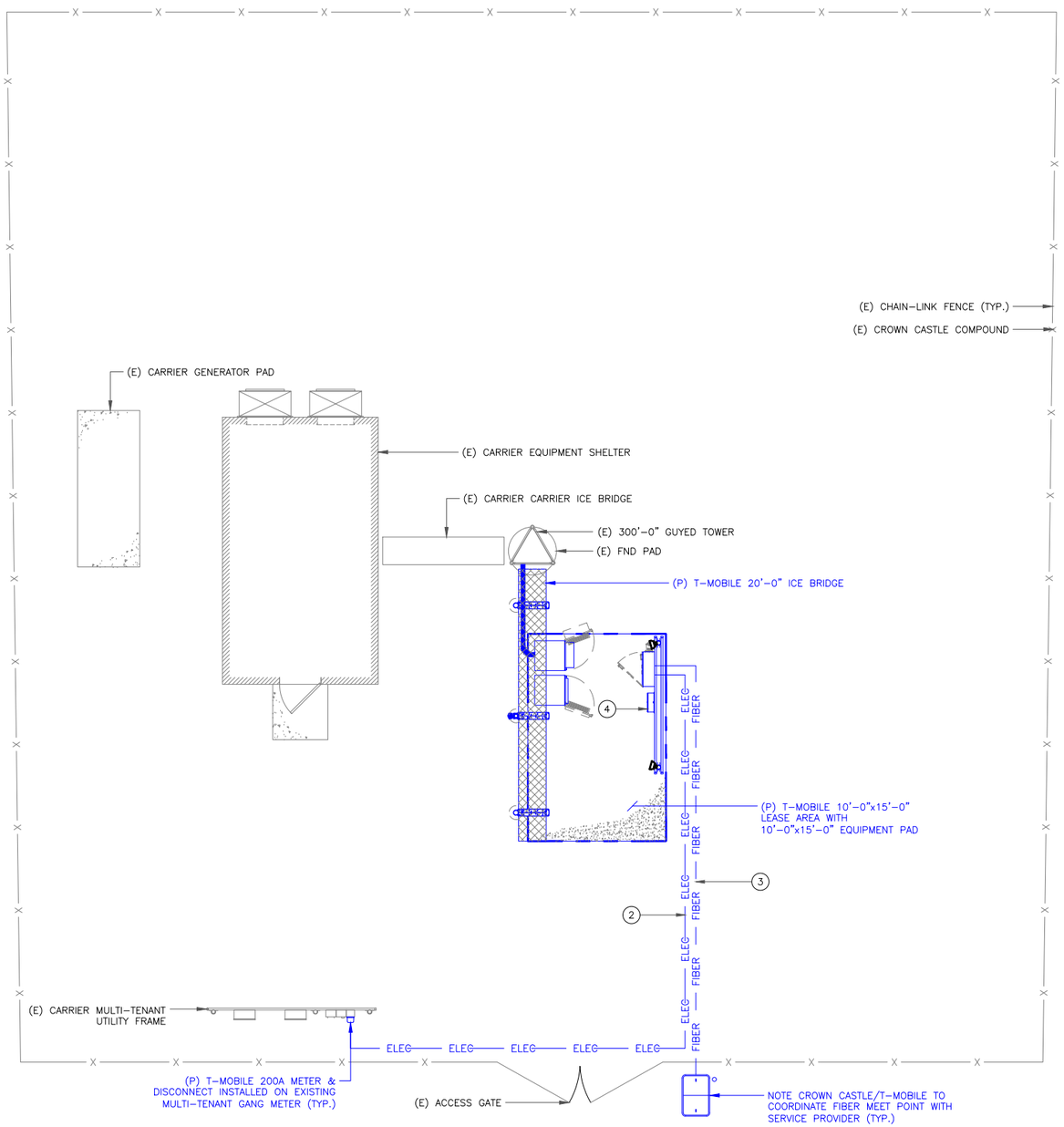
SHEET NUMBER: E-1.1

REVISION: A

NOTE:
ALL TRENCHING REQUIRED WITHIN COMPOUND SHALL BE PERFORMED BY HAND–DIGGING ONLY.

KEYED NOTES:

1. PROPOSED METER & 200A/2P BREAKER INSTALLED ON EXISTING UTILITY POST. COORDINATE WITH LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.
2. CONDUCTORS SIZED PER UTILITY COMPANY REQUIREMENTS AND LENGTH OF FINAL RUN TO SOURCE OF SERVICE. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE WEATHERHEAD IF REQUIRED.
3. PROPOSED 3" PVC CONDUIT WITH PULLSTRINGS FROM TELCO PEDESTAL TO THE PROPOSED PPC TELCO BAY.
4. PROPOSED TELCO N.I.U. ON THE T–MOBILE UTILITY FRAME. COORDINATE WITH LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.



1 UTILITY PLAN
SCALE: 5' 2.5' 0 5' 1"=5'–0" (FULL SIZE) 1"=10'–0" (11x17)

N

T-Mobile
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ALPHARETTA, GA 30009

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T-MOBILE SITE NUMBER:
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BU #: **846221**
SE LAKE CITY

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SHEET NUMBER: E-2

REVISION: A

CONDUIT KEY NOTES:

1. PROPOSED 3" PVC CONDUIT FROM PPC TELCO BAY TO MAIN TELCO DEMARC. PROVIDE PULLSTRINGS IN ACCORDANCE WITH UTILITY REQUIREMENTS.
2. PROPOSED 2" PVC CONDUIT FROM METER TO PPC POWER BAY.
3. PROPOSED 2" POWER CONDUIT ROUTED FROM PPC TO NEW 6160 CABINET.
4. PROPOSED 2" CONDUITS ROUTED FROM CIENA TO NEW 6160 CABINET FOR POWER, ALARM AND FIBER CABLING.
5. PROPOSED 2" WATER TIGHT CONDUITS FOR BATTERY CABLE AND ALARMING.
6. PROPOSED GPS CABLE ROUTED TO ERICSSON 6160 CABINET.
7. EXPOSED HYBRID CABLES AND GPS GABLE TO BE INSTALLED IN CABLE TRAY OR ICE BRIDGE TO PREVENT POSSIBLE DAMAGE.
8. PROPOSED TECH DUPLEX WORK OUTLET INSIDE PPC CABINET.
9. PROPOSED PVC FLEX CONDUIT FROM PPC POWER PANEL TO LED FLOOD LIGHT SWITCH.
10. PROPOSED 1-1/4" TELCO CONDUIT FROM FIBER N.I.U. TO PPC CABINET TELCO CHAMBER.

NOTE:

ALL TRENCHING REQUIRED WITHIN COMPOUND SHALL BE PERFORMED BY HAND-DIGGING ONLY.

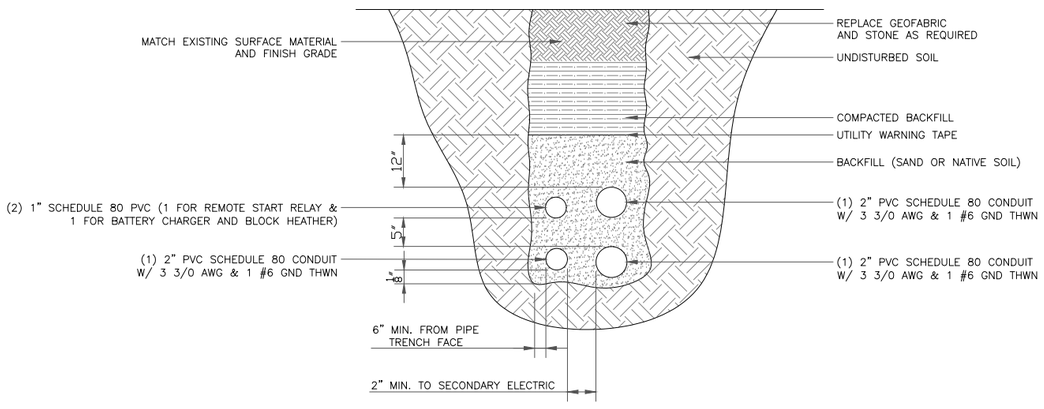
SEPARATION DIMENSIONS TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.

CONDUIT NOTE:

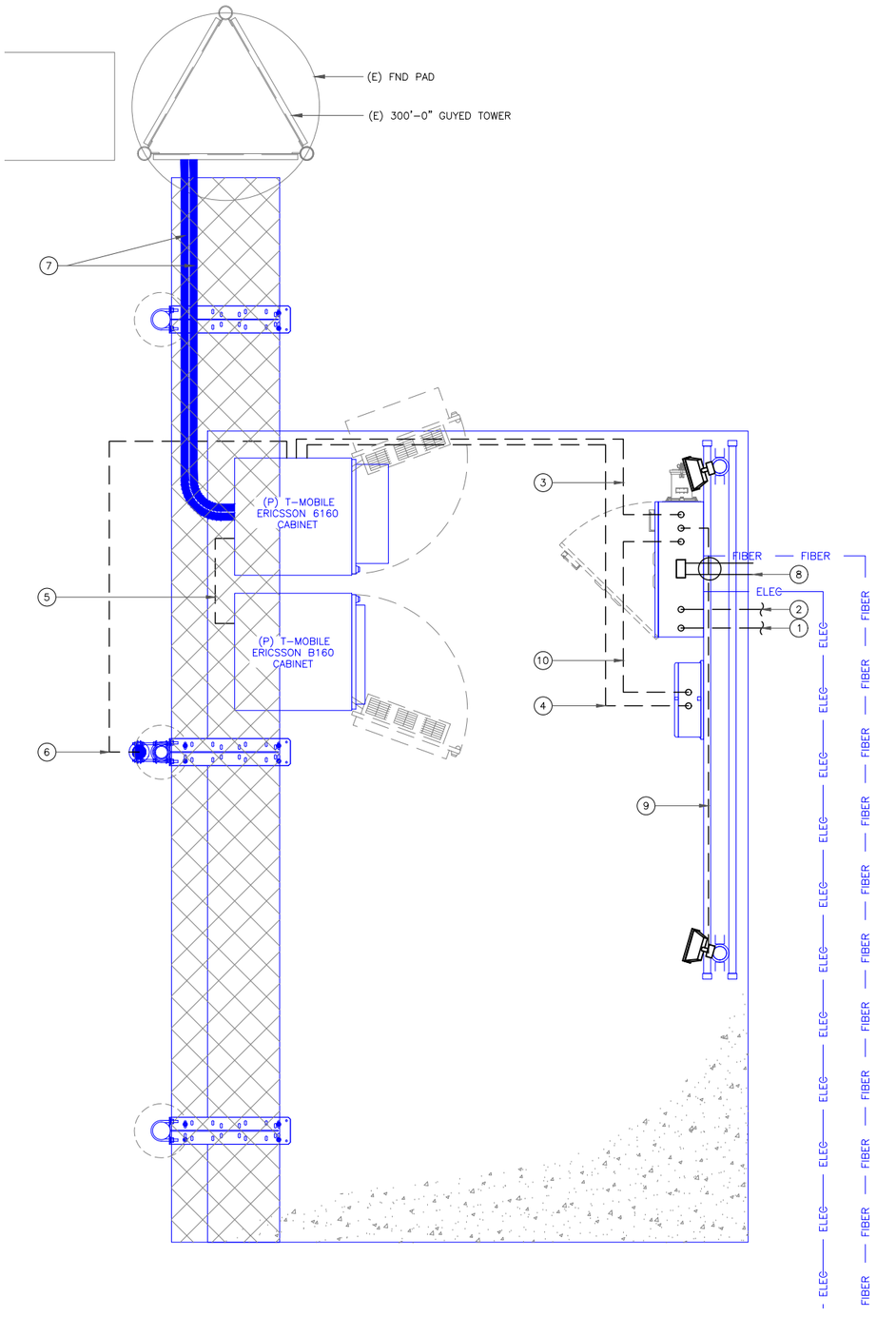
ALL BURIED CONDUIT SHALL BE PVC SCHEDULE 80. ALL EXPOSED CONDUIT ROUTED ACROSS THE EXISTING CONCRETE SLAB SHALL BE GALVANIZED RGS ON 1-5/8" UNISTRUT OR EQUIVALENT.

NOTE:

EXPOSED HYBRID CABLES AND GPS GABLE TO BE INSTALLED IN CABLE TRAY OR ICE BRIDGE TO PREVENT POSSIBLE DAMAGE.



2 TRENCH DETAILS
SCALE: NOT TO SCALE



1 EQUIPMENT CONDUIT DETAIL
SCALE: NOT TO SCALE

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SHEET NUMBER: E-3

REVISION: A