



1 Cityplace Dr, Suite 490  
Creve Coeur, MO 63141

Phone: (314) 513-0147  
www.crowncastle.com

August 2<sup>nd</sup> 2022

Melanie A. Bachman  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

RE: **Notice of Exempt Modification for AT&T Wireless  
Crown Site ID#876331; AT&T Site ID CTL01024  
115 North Mountain Rd. New Britain, CT 06053  
Latitude: 41.676589 / Longitude: -72.821414**

Dear Ms. Bachman:

AT&T currently maintains (12) antennas at the 100-foot mounts on the existing 118-foot Monopole Tower located at **115 North Mountain Rd. New Britain**. The property is owned March 17 LLC and the Tower by Crown Castle. AT&T now intends to replace six (9) antennas. This modification/proposal includes hardware that is both 4G(LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

**Planned Modifications:**

**Tower:**

**REMOVE AND REPLACE**

- (2) CCI HPA-65R-BUU-H6 Antennas (**REMOVE**), (1) Andrew SBNH-1D6565C Antennas (**REMOVE**), (2) CCI TPA-65R-BU6DA-K antennas (**REPLACE**) (1) CCI TPA-65R-BU8DA-K Antennas (**REPLACE**)
- (2) KMW AM-X-CD-16-65-00T Antennas (**REMOVE**), (1) CCI HPA-65R-BUU-H8 Antennas (**REMOVE**), (2) CCI DMP65R-BU6DA-K antennas (**REPLACE**) (1) CCI DMP65R-BU8DA-K Antennas (**REPLACE**)
- (3) Powerwave 7770 Antennas (**REMOVE**), (3) Ericsson – AIR6449 N77D (**REPLACE**), (3) Ericsson – AIR6419 N77G (antennas stacked) (**REPLACE**)
- (3) Powerwave TT19-08BP111-001 TMAs (**REMOVE**)
- (3) CCI DTMABP7819VG12A TMAs (**REMOVE**)
- (3) Ericsson – RRUS-32-B2 (**REMOVE**) (3) Ericsson 8843 B2/B66A Radios (**REPLACE**)
- (3) Ericsson RRUS 11 B12 Radios (**REMOVE**), (3) Ericsson 4449 B5/B12 Radios (**REPLACE**)
- (6) Powerwave 7020 RET Motors (**REMOVE**)
- (1) RFS/Celwave DB-B1-6C-12AB-0Z OVP (**REMOVE**)
- (6) 7/8” Coax cables (**REMOVE**), (3) 7/8” 6AWG DC Cables (**REPLACE**) (1) 3/8” 24 Pair Fiber Cables (**REPLACE**)

**INSTALL**

- (3) Ericsson 8843 B14 Radios
- (6) Y Cables to dual band radios

---

The Foundation for a Wireless World.

CrownCastle.com



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www.crowncastle.com

- (1) Raycap DC9-48-60-24-8C – EV Junction Cylinder
- (6) Dual Radio Mounts
- (3) 2 ½” SCH 40 x 6’ long pipe mounts with crossover hardware

**Ground:**

**Remove:**

- (6) Powerwave LGP13519
- (6) Powerwave CM1007-DBPXBC-003

**Install:**

- (1) 6648 W/ XCEDE Cable
- (1) 6630 Module
- (1) DC12-48-60RM Rack-Mount Tray
- (1) IDLe Cable
- (9) Vertical Up-Converters
- (3) Rectifiers in Existing PowerPlant

This facility was approved by the City of New Britain Planning and Zoning on November 22, 1996. Please see attached Exhibit A.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent The Honorable Erin E. Stewart, Mayor David D. Zajac, Zoning Enforcement Officer, and property owner, March 17 LLC.

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. §16-50j-72(b)(2).



1 Cityplace Dr, Suite 490  
Creve Coeur, MO 63141

Phone: (314) 513-0147  
[www.crowncastle.com](http://www.crowncastle.com)

Sincerely,

Katie Adams  
Crown Castle, Agent for AT&T  
[kadams@nbcllc.com](mailto:kadams@nbcllc.com)  
781-392-7547

cc:

The Honorable Erin E. Stewart, Mayor  
City of New Britain  
27 West Main Street  
New Britain, CT 06051  
(Via Fedex)

David D. Zajac, Zoning Enforcement Officer  
City of New Britain  
27 West Main Street, Room 404  
New Britain, CT 06051  
(Via Fedex)

March 17 LLC  
PO Box 3040  
One Liberty Square,  
New Britain CT 06050  
(Via Fedex)

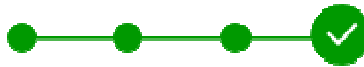
**Katie Adams**

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**From:** TrackingUpdates@fedex.com  
**Sent:** Tuesday, August 9, 2022 9:43 AM  
**To:** Katie Adams  
**Subject:** FedEx Shipment 777604954740: Your package has been delivered



Hi. Your package was  
delivered Tue, 08/09/2022 at  
9:39am.

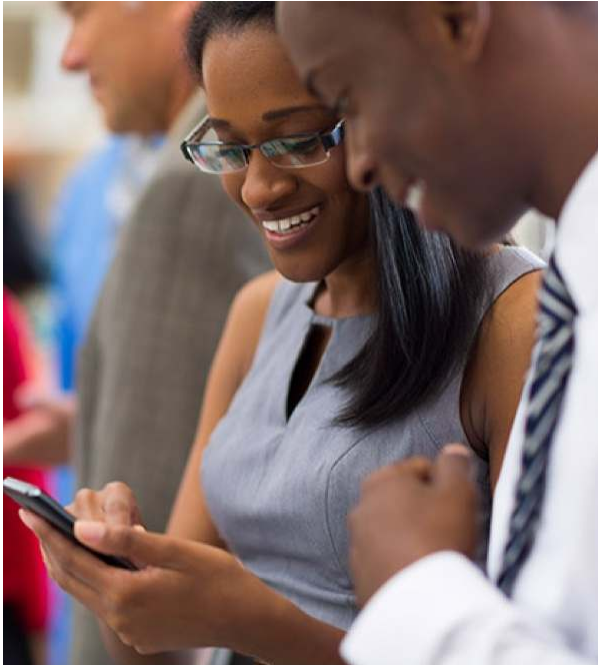


Delivered to 10 FRANKLIN SQ, NEW BRITAIN, CT 06051

**OBTAIN PROOF OF DELIVERY**

<b>TRACKING NUMBER</b>	<a href="#">777604954740</a>
<b>FROM</b>	NB+C 100 Apollo Drive Suite 303 CHELMSFORD, MA, US, 01824
<b>TO</b>	Connecticut Siting Council Melanie A. Bachman 10 Franklin Square NEW BRITAIN, CT, US, 06051
<b>REFERENCE</b>	100753

**SHIPPER REFERENCE** 100753  
**SHIP DATE** Mon 8/08/2022 06:15 PM  
**PACKAGING TYPE** FedEx Pak  
**ORIGIN** CHELMSFORD, MA, US, 01824  
**DESTINATION** NEW BRITAIN, CT, US, 06051  
**SPECIAL HANDLING** Deliver Weekday  
**NUMBER OF PIECES** 1  
**TOTAL SHIPMENT WEIGHT** 3.00 LB  
**SERVICE TYPE** FedEx Standard Overnight



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✉ Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 8:43 AM CDT 08/09/2022.

All weights are estimated.

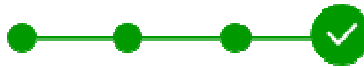
**Katie Adams**

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**From:** TrackingUpdates@fedex.com  
**Sent:** Tuesday, August 9, 2022 9:49 AM  
**To:** Katie Adams  
**Subject:** FedEx Shipment 777588787573: Your package has been delivered



Hi. Your package was delivered Tue, 08/09/2022 at 9:48am.



Delivered to 1 LIBERTY SQ, NEW BRITAIN, CT 06050

**OBTAIN PROOF OF DELIVERY**

<b>TRACKING NUMBER</b>	<a href="#">777588787573</a>
<b>FROM</b>	NB+C 100 Apollo Drive Suite 303 CHELMSFORD, MA, US, 01824
<b>TO</b>	March 17 LLC One Liberty Square PO Box 3040 NEW BRITAIN, CT, US, 06050
<b>REFERENCE</b>	100788 - CSC

**SHIPPER REFERENCE** 100788 - CSC  
**SHIP DATE** Mon 8/08/2022 06:15 PM  
**PACKAGING TYPE** FedEx Pak  
**ORIGIN** CHELMSFORD, MA, US, 01824  
**DESTINATION** NEW BRITAIN, CT, US, 06050  
**SPECIAL HANDLING** Deliver Weekday  
**NUMBER OF PIECES** 1  
**TOTAL SHIPMENT WEIGHT** 1.00 LB  
**SERVICE TYPE** FedEx Priority Overnight



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This report was generated at approximately 8:49 AM CDT 08/09/2022.

All weights are estimated.

**Katie Adams**

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**From:** TrackingUpdates@fedex.com  
**Sent:** Tuesday, August 9, 2022 10:10 AM  
**To:** Katie Adams  
**Subject:** FedEx Shipment 777588733518: Your package has been delivered



Hi. Your package was  
delivered Tue, 08/09/2022 at  
10:04am.



Delivered to 27 W MAIN ST, NEW BRITAIN, CT 06051  
Received by T.TINA

**OBTAIN PROOF OF DELIVERY**

<b>TRACKING NUMBER</b>	<a href="#">777588733518</a>
<b>FROM</b>	NB+C 100 Apollo Drive Suite 303 CHELMSFORD, MA, US, 01824
<b>TO</b>	City of New Britain The Honorable Erin E. Stewart, Mayo 27 West Main Street NEW BRITAIN, CT, US, 06051
<b>REFERENCE</b>	100788 - CSC 1



# Exhibit A

## **Original Facility Approval**

10:AM (ELECT) WAYNE GLEIFERT

083

**B 85**

CITY OF NEW BRITAIN  
DEPARTMENT OF LICENSES, PERMITS  
AND INSPECTIONS  
TELEPHONE: 826-3383

**BUILDING/ZONING  
PERMIT**

DATE	11/22/96
COST	112,000.
FEE	1,780.

**APPLICANT** Sprint PCS | **TEL. NO.** 294-5609

**ADDRESS** 9 Barnes Industrial Rd, Wallingford, CT 06492

**PERMIT FOR:** Construct 120' Monopole Tower, per engineered drawings/specifications.

**LOCATION** North Mountain Rd, Lot C

BUILDING DIMENSIONS	FT. WIDE BY	FT. LONG AND	FT. IN HEIGHT
BUILDING TYPE	USE GROUP	LOT SIZE	ZONE
OWNER	October 24 Corporation	CERT. OF OCCUPANCY REQUIRED	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
ADDRESS		AS-BUILT SURVEY REQUIRED	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

THE MATCHING APPLICATION IS PART AND PARCEL OF THIS BUILDING PERMIT.

WHERE APPLICABLE SEPARATE PERMITS ARE  
REQUIRED FOR ELECTRICAL, PLUMBING AND  
MECHANICAL INSTALLATIONS.

APPLICANT'S COPY

*Norman L. ...*  
 BUILDING OFFICIAL  
 WNUK  
 12-5-96

**MANDATORY INSPECTIONS REQUIRED**

**POST PERMIT FOR DURATION OF WORK**

# Exhibit B

## Property Card

# 115 NORTH MOUNTAIN RD

**Location** 115 NORTH MOUNTAIN RD

**Mblu** F2D/ 102/ / /

**Acct#** 66600115

**Owner** MARCH 17 LLC

**Assessment** \$233,310

**Appraisal** \$333,300

**PID** 1134

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$234,100	\$99,200	\$333,300

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$163,870	\$69,440	\$233,310

## Owner of Record

**Owner** MARCH 17 LLC  
**Co-Owner**  
**Address** PO BOX 3040  
ONE LIBERTY SQUARE  
NEW BRITAIN , CT 06050

**Sale Price** \$900,000  
**Certificate**  
**Book & Page** 2021/980  
**Sale Date** 06/12/2019  
**Instrument** 17

## Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
MARCH 17 LLC	\$900,000		2021/980	17	06/12/2019
OCTOBER TWENTY FOUR INC	\$550,000	1	1826/0309	19	09/29/2011
OCTOBER TWENTY FOUR INC	\$0		0733/0284		02/02/1978
GIUSEPPE CACCAMO SALVATORE	\$0		0431/0424		01/01/1900
	\$0		0224/0239		01/01/1900

## Building Information

**Building 1 : Section 1**

**Year Built:**

**Building Photo**

**Living Area:** 0  
**Replacement Cost:** \$0  
**Building Percent Good:**  
**Replacement Cost**  
**Less Depreciation:** \$0

Building Attributes	
Field	Description
Style	Outbuildings
Model	
Grade	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Central Heat Sys	
Heat Type	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs	
Total Rooms	
Bath Style	
Kitchen Style	
Num Kitchens	
Whirlpool Tub	
Fireplaces_2	
Rec Room Finish	
Rec Room Qual	
Bsmt Garages	
Fireplaces	
Bldg Nbhd	
Fndtn Cndtn	
Basement	



(<https://images.vgsi.com/photos/NewBritainCTPhotos/default.jpg>)

### Building Layout

 Building Layout (ParcelSketch.ashx?pid=1134&bid=1593)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

### Extra Features

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**Extra Features**

**Legend**

No Data for Extra Features

**Land**

**Land Use**

**Use Code** 4400  
**Description** Ind Ld De  
**Zone** TP  
**Neighborhood** 101G  
**Alt Land Appr Category** No

**Land Line Valuation**

**Size (Acres)** 0.82  
**Depth**  
**Assessed Value** \$69,440  
**Appraised Value** \$99,200

**Outbuildings**

Outbuildings						<b><u>Legend</u></b>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV5	Conc Pad			256.00 S.F.	\$3,100	1
FN3	Fence-6' Chain			150.00 L.F.	\$1,500	1
CB3	PreCastConcCel			286.00 S.F.	\$89,200	1
CB3	PreCastConcCel			360.00 S.F.	\$140,300	1

**Valuation History**

Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$234,100	\$99,200	\$333,300
2020	\$234,100	\$99,200	\$333,300
2019	\$234,100	\$99,200	\$333,300

Assessment			
Valuation Year	Improvements	Land	Total
2021	\$163,870	\$69,440	\$233,310
2020	\$163,870	\$69,440	\$233,310
2019	\$163,870	\$69,440	\$233,310

# Exhibit C

## **Construction Drawings**



**AT&T SITE NUMBER:** CTL01024  
**AT&T SITE NAME:** NEW BRITAIN LOON LAKE  
**AT&T FA CODE:** 10035310  
**AT&T PACE NUMBER:** MRCTB052078,MRCTB051326,MRCTB051254,MRCTB051358,MRCTB051163, MRCTB051483,MRCTB051414,MRCTB051046  
**AT&T PROJECT:** 5G NR 1SR CBAND, BBU ADD, 5G NR 1DR-1, LTE 4C, 5G NR 1SR, 4TX4RX, LTE 3C

**BUSINESS UNIT #:** 876331  
**SITE ADDRESS:** 115 NORTH MOUNTAIN RD NEW BRITAIN, CT 06053  
**COUNTY:** HARTFORD  
**SITE TYPE:** MONOPOLE  
**TOWER HEIGHT:** 118'-0"

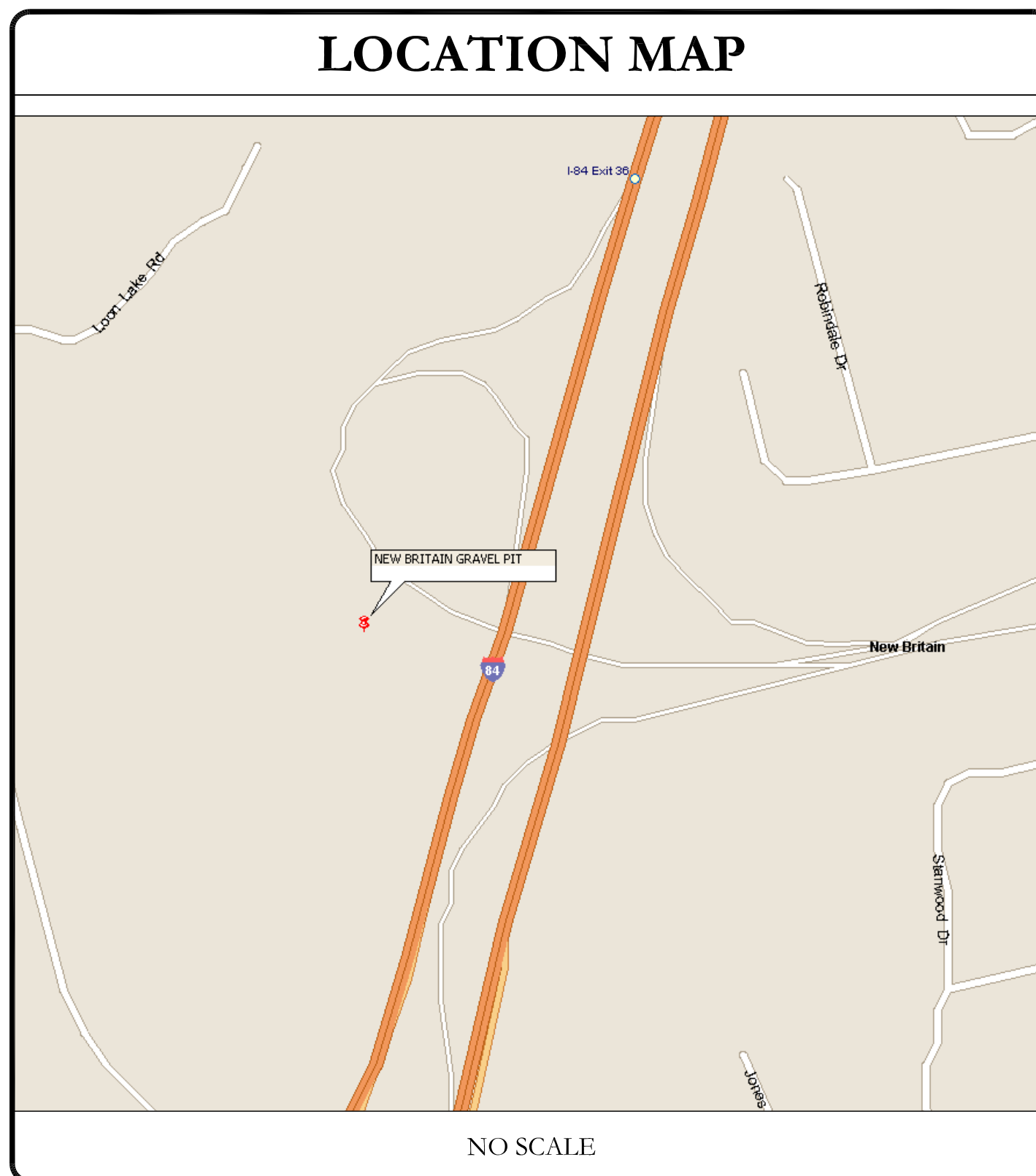


SITE INFORMATION	
CROWN CASTLE USA INC. SITE NAME:	NEW BRITAIN GRAVEL PIT
SITE ADDRESS:	115 NORTH MOUNTAIN RD NEW BRITAIN, CT 06053
COUNTY:	HARTFORD
MAP/PARCEL #:	F2D 102
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41.6765750°
LONGITUDE:	-72.8214161°
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	351'
CURRENT ZONING:	TP (TECHNOLOGY PARK)
JURISDICTION:	CONNECTICUT SITING COUNCIL
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	MARCH 17 LLC PO BOX 3040 ONE LIBERTY SQUARE NEW BRITAIN, CT 06050
TOWER OWNER:	CROWN CASTLE USA INC 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	AT&T TOWER ASSET GROUP 575 MOROSGO DRIVE ATLANTA, GA 30324-3300
ELECTRIC PROVIDER:	CONNECTICUT LIGHT & POWER CO
TELCO PROVIDER:	LIGHTOWER

DRAWING INDEX	
SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	SITE PLAN
C-1.2	EXISTING & FINAL EQUIPMENT PLANS
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	FINAL EQUIPMENT SCHEDULE
C-4	EQUIPMENT MOUNTING DETAILS
C-5	EQUIPMENT SPECS
C-5.1	EQUIPMENT SPECS
G-1	GROUNDING SCHEMATIC
G-2	GROUNDING DETAILS
ATTACHED	PLUMBING DIAGRAM
ATTACHED	MOUNT MODIFICATION SPECS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. 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 CONNECTICUT ONE CALL (800) 922-4455 CBVD.COM CALL 2 WORKING DAYS BEFORE YOU DIG!



**AT&T SITE NUMBER:** CTL01024  
**BU #:** 876331  
**NEW BRITAIN GRAVEL PIT**  
 115 NORTH MOUNTAIN RD  
 NEW BRITAIN, CT 06053  
 EXISTING  
 118'-0" MONOPOLE

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	10/8/21	BMK	PRELIMINARY REVIEW	STH
B	01/9/22	KT	PRELIMINARY REVIEW	KT
C	4/7/22	JHW	PRELIMINARY REVIEW	KT
D	5/4/22	MEH	PRELIMINARY REVIEW	KT
0	6/24/22	MEH	CONSTRUCTION	MTJ

PROJECT TEAM	
A&E FIRM:	B+T GROUP 1717 S BOULDER AVE, SUITE 300 TULSA, OK 74119 MARVIN PHILLIPS mphilips@btgrp.com
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NY 12065  PAUL PEDICONE - PROJECT MANAGER PAUL.PEDICONE@CROWNCastle.COM  BILL WOLFF - CONSTRUCTION MANAGER BILL.WOLFF@CROWNCastle.COM
NOTE:	PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

PROJECT DESCRIPTION
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.
TOWER SCOPE OF WORK:
<ul style="list-style-type: none"> <li>REMOVE (2) CCI ANTENNAS - HPA-65R-BUU-H6 ANTENNAS</li> <li>REMOVE (3) POWERWAVE - 7770 ANTENNAS</li> <li>REMOVE (1) ANDREW - SBNH-ID6565C ANTENNAS</li> <li>REMOVE (1) CCI ANTENNAS - HPA-65R-BUU-H8 ANTENNAS</li> <li>REMOVE (2) KMW - AMX-CD-16-65-00T-RET ANTENNAS</li> <li>REMOVE (3) POWERWAVE - TT19-08BP11-001 TMAs</li> <li>REMOVE (3) CCI - DTMABP7819VG12A TMAs</li> <li>REMOVE (3) ERICSSON - RRUS-11 B12 RADIOS</li> <li>REMOVE (3) ERICSSON - RRUS-32 B2 RADIOS</li> <li>REMOVE (6) POWERWAVE - 7020 RET MOTORS</li> <li>REMOVE (6) COAX CABLES (7/8")</li> <li>INSTALL MOUNT MODIFICATIONS PER MOUNT ANALYSIS BY INFINGY ENGINEERING, PLLC DATED 3/23/22</li> <li>INSTALL (2) CCI - TPA-65R-BU6DA-K ANTENNAS</li> <li>INSTALL (3) ERICSSON - AIR6449 N77D + AIR6419 N77G STACKED ANTENNAS</li> <li>INSTALL (1) CCI - TPA-65R-BU8DA-K ANTENNAS</li> <li>INSTALL (2) CCI - DMP65R-BU6DA ANTENNAS</li> <li>INSTALL (1) CCI - DMP65R-BU8DA ANTENNAS</li> <li>INSTALL (3) ERICSSON - 4478 B14 RADIOS</li> <li>INSTALL (3) ERICSSON - 8843 B2/B6GA RADIOS</li> <li>INSTALL (6) Y-CABLE TO NEW DUAL BAND RRU</li> <li>INSTALL (3) ERICSSON - 4449 B5/B12 RADIOS</li> <li>INSTALL (1) RAYCAP - DC9-48-60-24-8C-EV JUNCTION CYLINDER</li> <li>INSTALL (3) 7/8" 6AWG DC</li> <li>INSTALL (1) 3/8" 24-PAIR FIBER</li> <li>INSTALL (6) DUAL RADIO MOUNTS</li> <li>INSTALL (3) 2-1/2" SCH 40 x 6'-0" LONG MOUNT PIPES W/ CROSSOVER HARDWARE</li> </ul>
GROUND SCOPE OF WORK:
<ul style="list-style-type: none"> <li>REMOVE (6) POWERWAVE - LGP13519</li> <li>REMOVE (6) POWERWAVE - CM1007-DBPXBC-003</li> <li>INSTALL (1) 6648 W/ XCEDE CABLE</li> <li>INSTALL (1) 6630 MODULE</li> <li>INSTALL (1) DC12-48-60-RM RACK-MOUNT TRAY</li> <li>INSTALL (1) IDLE CABLE</li> <li>INSTALL (9) VERTIV UP-CONVERTERS</li> <li>INSTALL (3) RECTIFIERS IN EXISTING POWERPLANT</li> </ul>

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	2015 IBC PORTION OF 2018 CT SBC WITH AMENDMENTS
MECHANICAL	2015 IMC PORTION OF 2018 CT SBC WITH AMENDMENTS
ELECTRICAL	2017 NEC PORTION OF 2018 CT SBC WITH AMENDMENTS
REFERENCE DOCUMENTS:	
STRUCTURAL ANALYSIS:	B+T GROUP
DATED:	11/12/21
MOUNT ANALYSIS:	INFINGY ENGINEERING, PLLC
DATED:	3/23/22
RFDS REVISION:	FINAL
DATED:	4/28/22
ORDER ID:	556502
REVISION:	0

B&T ENGINEERING, INC.  
 PEC.0001564  
 Expires 2/10/23

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:	REVISION:
T-1	0



**CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:**

- 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.
- "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.
- 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.
- 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).
- ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED-STD-10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
- 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.
- 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.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 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.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- 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.
- 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.
- 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.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- 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.

**GREENFIELD GROUNDING NOTES:**

- 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.
- THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL 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.
- 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.
- METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 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.
- 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.
- 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.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTI-OXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- 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.
- 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).
- 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).

**GENERAL NOTES:**

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION  
CARRIER: AT&T  
TOWER OWNER: CROWN CASTLE USA INC.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

**CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:**

- 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.
- UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- 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.
- 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.
- 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
- 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"
- 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:**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- 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 AIG MINIMUM. VERIFY 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.
- 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.
- 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).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL THE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 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.
- 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.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- 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.
- 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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEC AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SIZING FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEC AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOULD SPECMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- 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 LOCKRUT ON OUTSIDE AND INSIDE.
- 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.
- 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.
- 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.
- 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.
- 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.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "AT&T".
- 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**

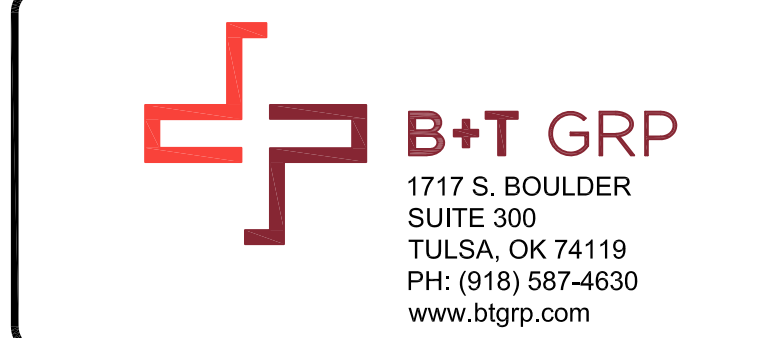
\* SEE NEC 210.5(C)(1) AND (2)  
\*\* POLARITY MARKED AT TERMINATION

**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

**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



**AT&T SITE NUMBER:  
CTL01024**

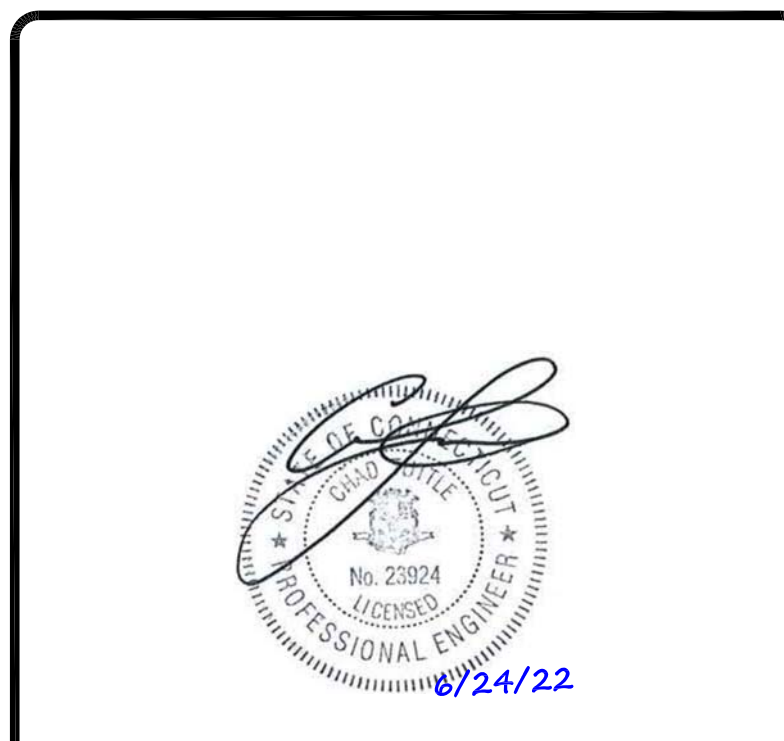
**BU #: 876331  
NEW BRITAIN GRAVEL PIT**

**115 NORTH MOUNTAIN RD  
NEW BRITAIN, CT 06053**

**EXISTING  
118'-0" MONOPOLE**

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	10/8/21	BMK	PRELIMINARY REVIEW	STH
B	01/9/22	KT	PRELIMINARY REVIEW	KT
C	4/7/22	JHW	PRELIMINARY REVIEW	KT
D	5/4/22	MEH	PRELIMINARY REVIEW	KT
0	6/24/22	MEH	CONSTRUCTION	MTJ



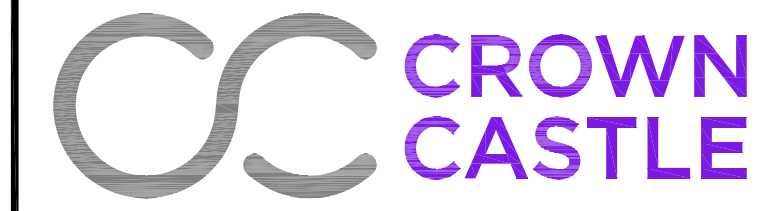
**B&T ENGINEERING, INC.**  
PEC.0001564  
Expires 2/10/23

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**SHEET NUMBER: T-2**      **REVISION: 0**



575 MOROSGO DRIVE  
ATLANTA, GA 30324-3300



3 CORPORATE PARK DRIVE, SUITE 101  
CLIFTON PARK, NY 12065



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
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www.blgrp.com

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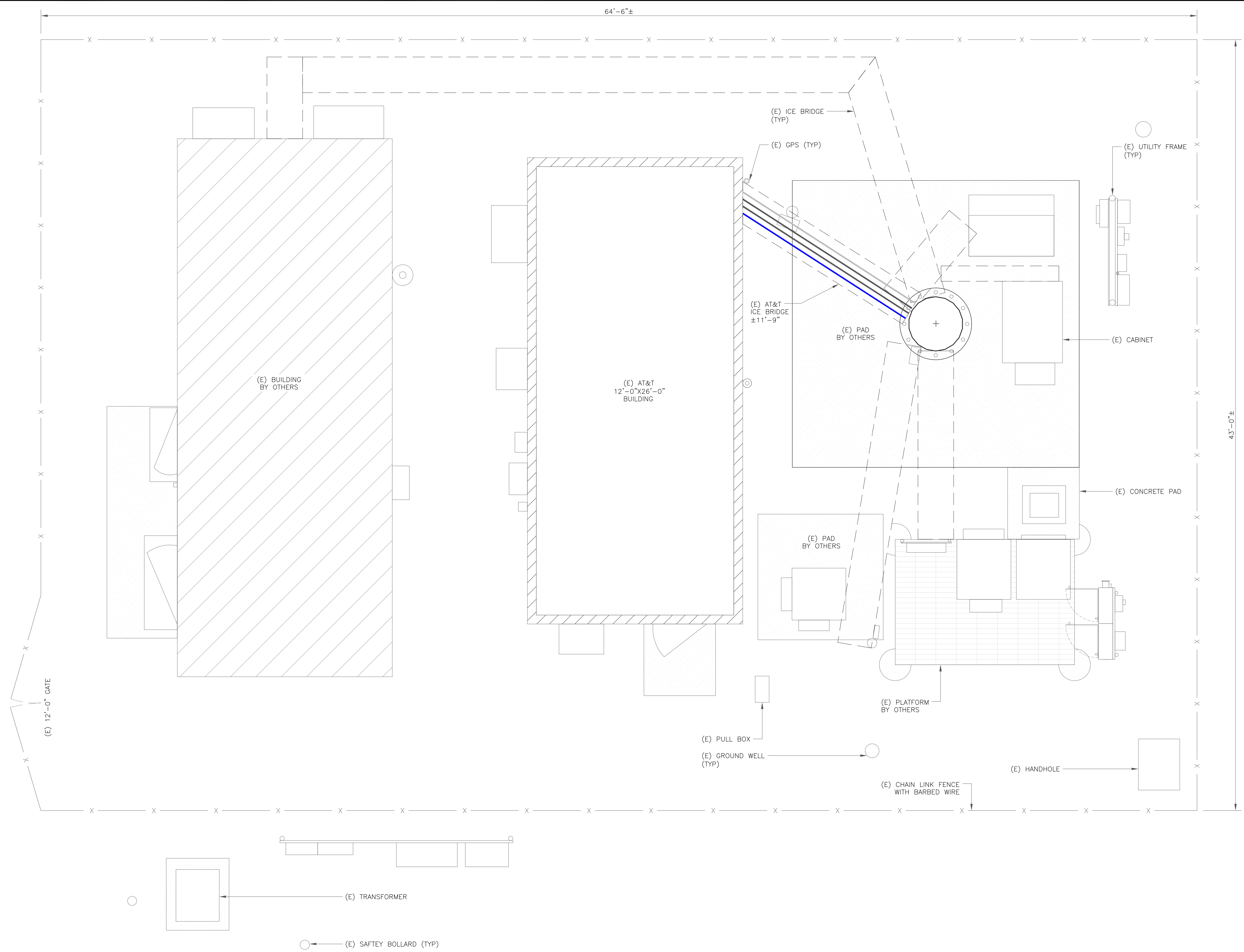


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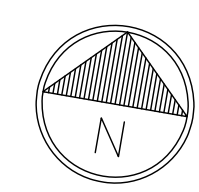
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**C-1.1**

REVISION:  
**0**



**1** SITE PLAN  
 SCALE: 3/8"=1'-0" (FULL SIZE)  
 3/16"=1'-0" (11x17)



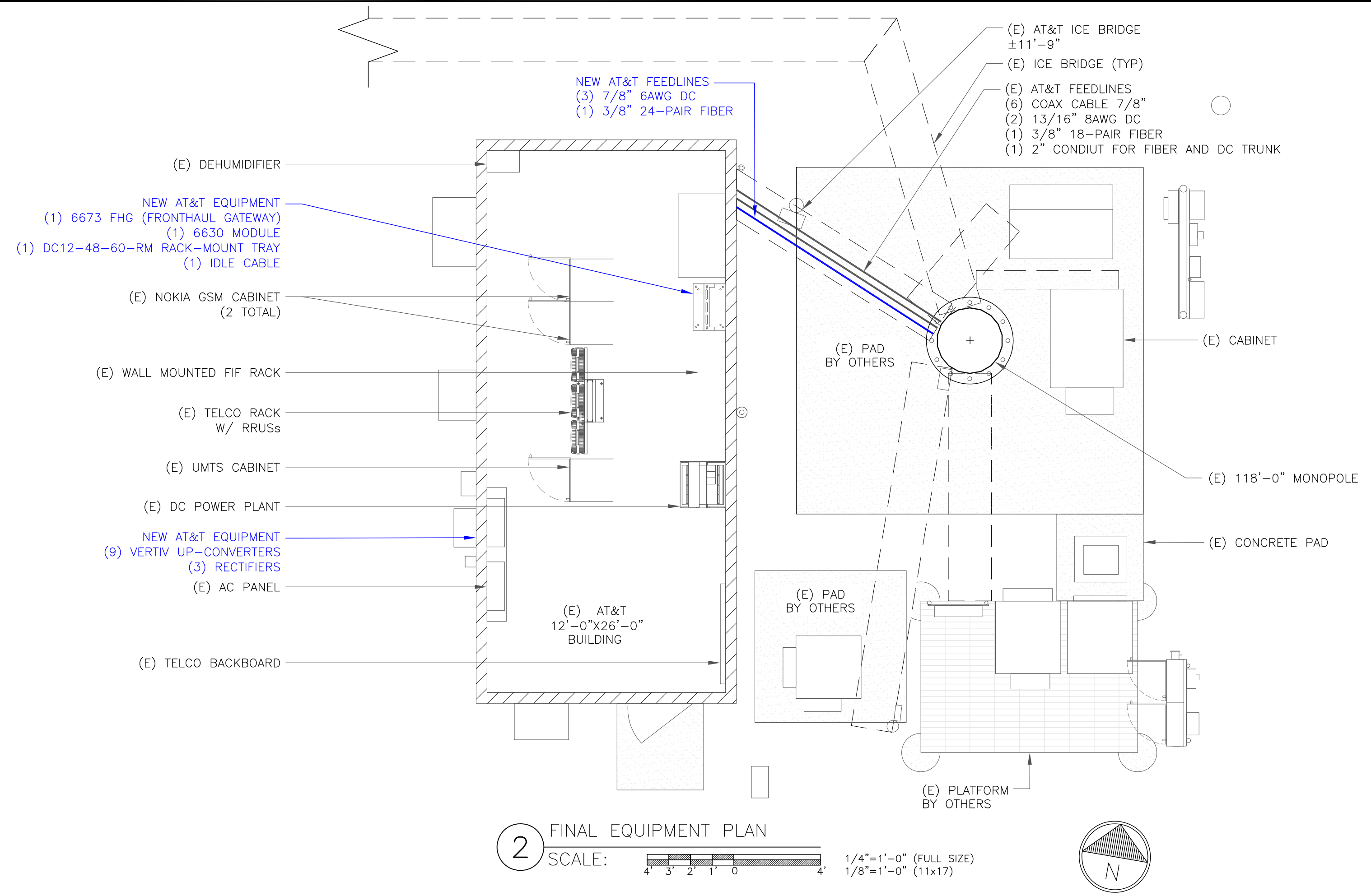
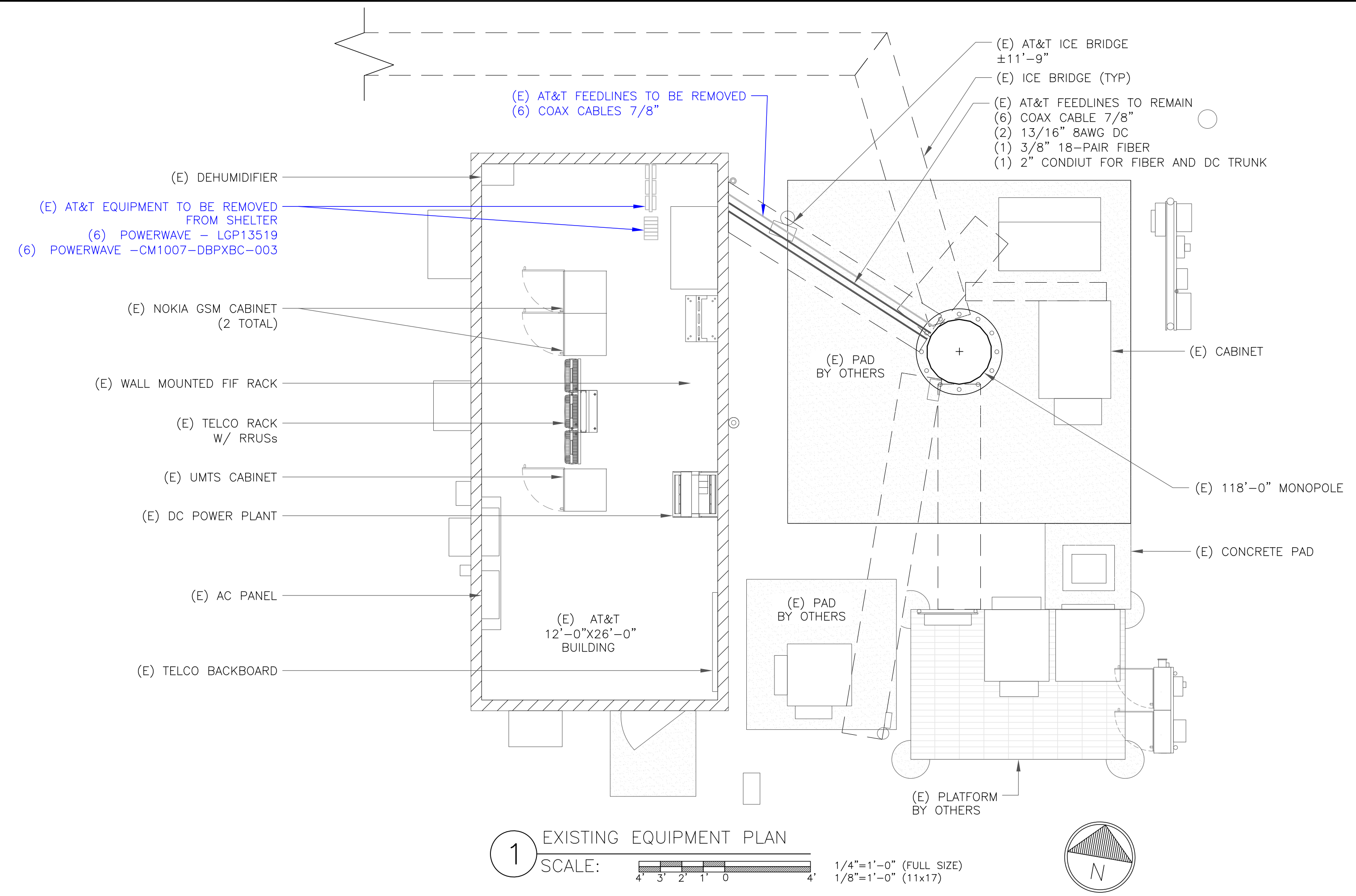
151136.004.01\_NEW BRITAIN GRAVEL PIT.dwg - Sheet-C-1.1 - User: mjones - Jun 24, 2022 - 9:18am

AT&T SITE NUMBER:  
**CTL01024**

BU #: 876331  
**NEW BRITAIN GRAVEL PIT**

115 NORTH MOUNTAIN RD  
NEW BRITAIN, CT 06053

EXISTING  
118'-0" MONOPOLE



- GROUND SCOPE OF WORK:
- REMOVE (6) POWERWAVE - LGP13519
  - REMOVE (6) POWERWAVE - CM1007-DBPXBC-003
  - INSTALL (1) 6673 FHG (FRONTHAUL GATEWAY)
  - INSTALL (1) 6630 MODULE
  - INSTALL (1) DC12-48-60-RM RACK-MOUNT TRAY
  - INSTALL (1) IDLE CABLE
  - INSTALL (9) VERTIV UP-CONVERTERS
  - INSTALL (3) RECTIFIERS IN EXISTING POWERPLANT

ISSUED FOR:

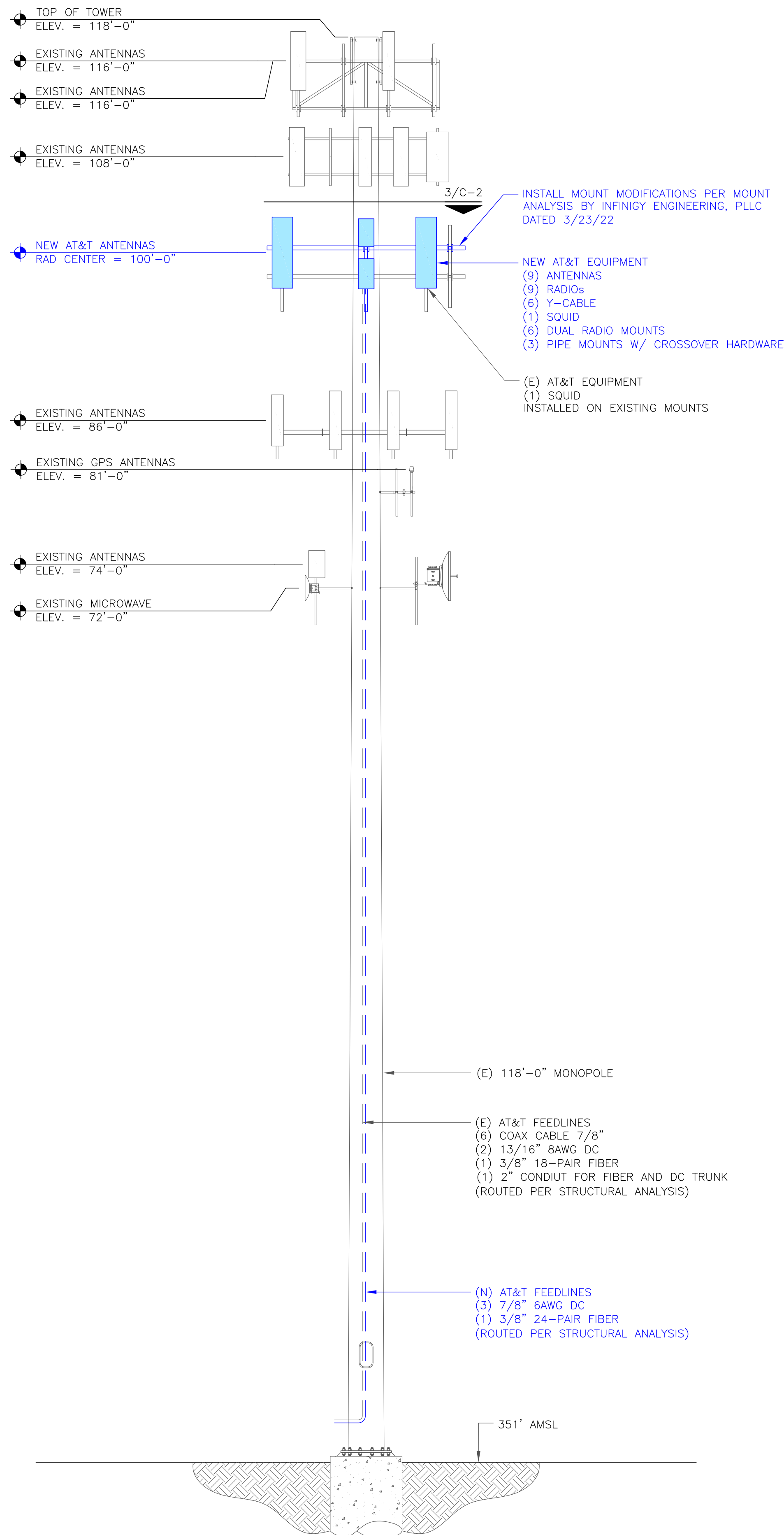
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0	6/24/22	MEH	CONSTRUCTION	MTJ



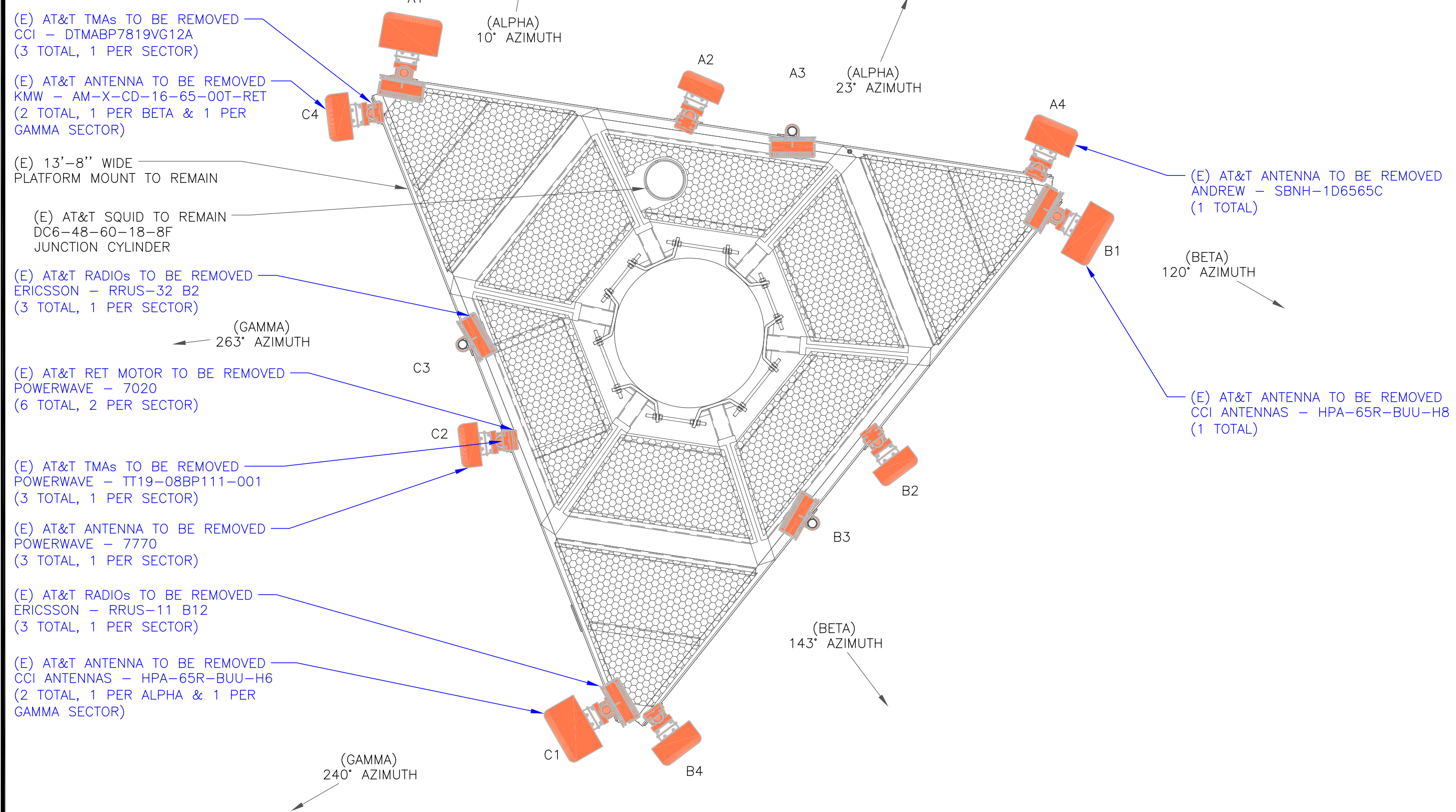
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PEC.0001564  
Expires 2/10/23

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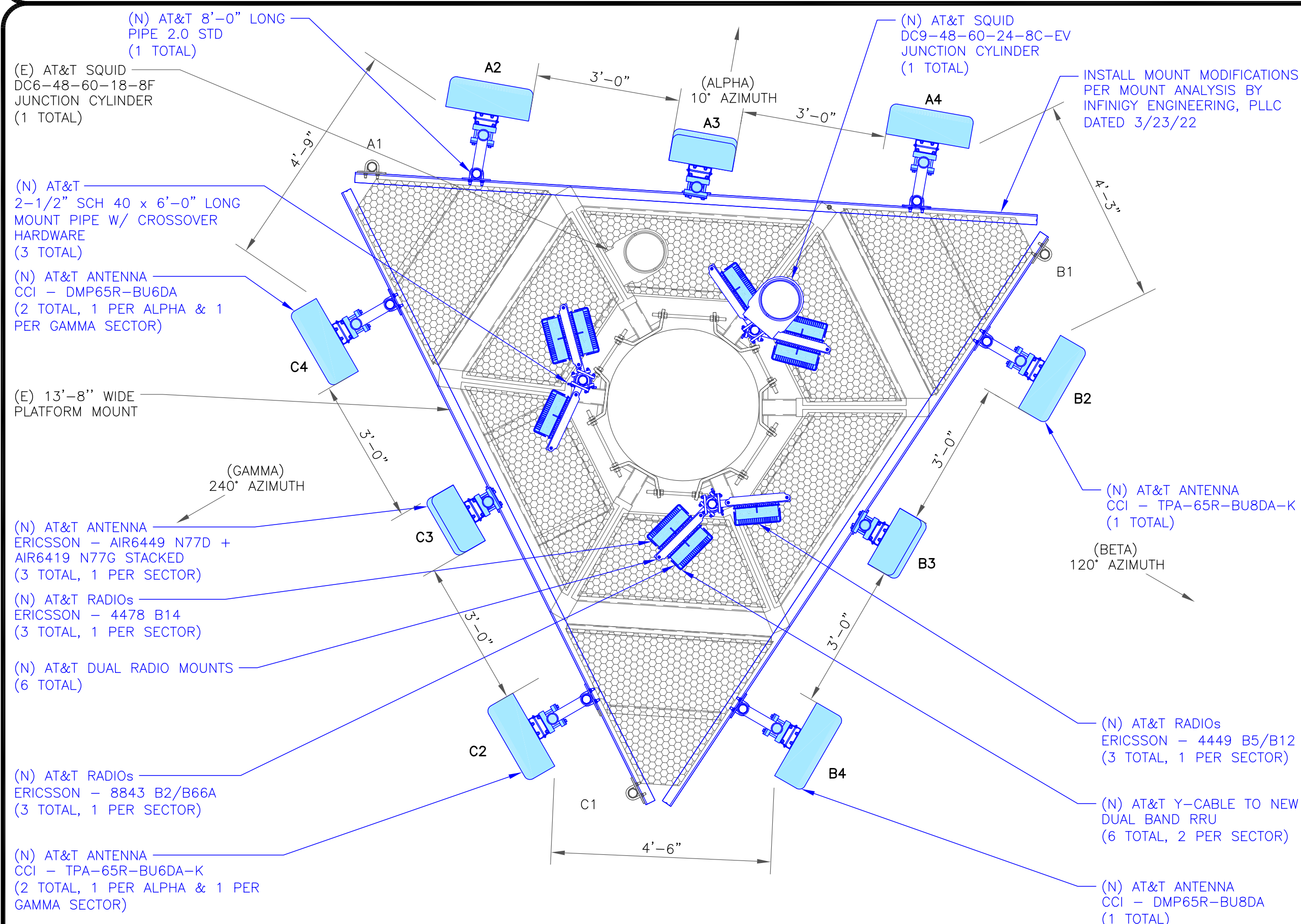
SHEET NUMBER: **C-1.2** REVISION: **0**



1 FINAL ELEVATION  
SCALE: NOT TO SCALE



2 EXISTING ANTENNA PLAN  
SCALE: 1/2"=1'-0" (FULL SIZE)  
1/4"=1'-0" (11x17)



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

"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.

- INSTALLER NOTES:
- REFERENCE C-3 FOR FINAL EQUIPMENT SCHEDULE.
  - REFERENCE C-5 & C-5.1 FOR NEW EQUIPMENT SPECIFICATIONS.
  - CONTRACTOR TO VERIFY ALL ANTENNA TIP HEIGHTS DO NOT EXCEED BEACON BASE HEIGHT.
  - 3'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE ANTENNAS ON SAME SECTOR.
  - 6'-0" MINIMUM DISTANCE REQUIRED BETWEEN 700BC & 700DE ANTENNAS ON SAME SECTOR.
  - 4'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE 700 ANTENNAS ON OPPOSING SECTORS.
  - ALL ANTENNA MEASUREMENT DISTANCES MUST BE EDGE TO EDGE (RELOCATE ANTENNAS AS NEEDED).
  - 8" MINIMUM DISTANCE REQUIRED BETWEEN ANTENNA & RADIO. SEE GENERIC EXAMPLE DETAIL ON SHEET C-4.

575 MOROSGO DRIVE  
ATLANTA, GA 30324-3300

3 CORPORATE PARK DRIVE, SUITE 101  
CLIFTON PARK, NY 12065

1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.blgrp.com

AT&T SITE NUMBER:  
**CTL01024**

BU #: 876331  
**NEW BRITAIN GRAVEL PIT**

115 NORTH MOUNTAIN RD  
NEW BRITAIN, CT 06053

EXISTING  
118'-0" MONOPOLE

ISSUED FOR:

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0	6/24/22	MEH	CONSTRUCTION	MTJ

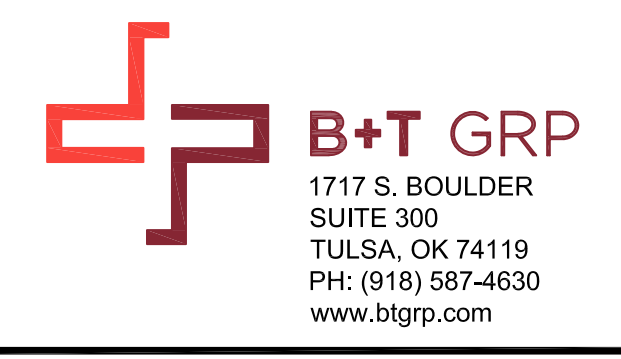
8/24/22

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SHEET NUMBER: **C-2** REVISION: **0**

151136.004.01\_NEW BRITAIN GRAVEL PIT.dwg - Sheet-C-2 - User: njones - Jun 24, 2022 - 9:18am



AT&T SITE NUMBER:  
**CTL01024**

BU #: **876331**  
**NEW BRITAIN GRAVEL PIT**

115 NORTH MOUNTAIN RD  
NEW BRITAIN, CT 06053

EXISTING  
118'-0" MONOPOLE

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SHEET NUMBER: **C-3** REVISION: **0**

### FINAL ANTENNA AND FEEDLINE SCHEDULE

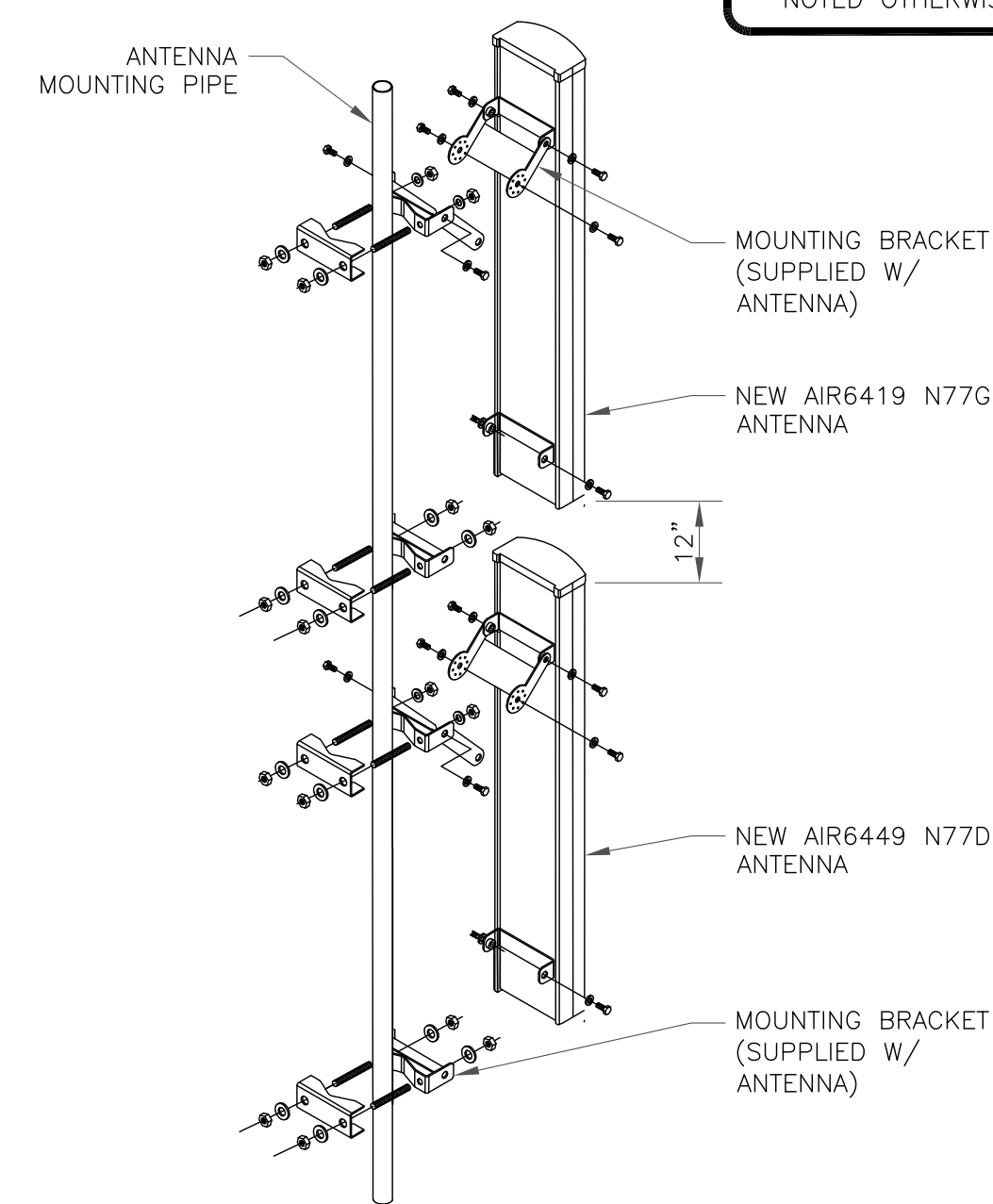
POS.	TECH	STATUS	AZIMUTH	ANTENNA TYPE	ANTENNA RAD CENTER	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	MAIN COAX SIZE	MAIN COAX LENGTH	COAX QTY	TMA QTY AND MODEL	SURGE PROTECTION	DC/FIBER CABLES	RRHs QTY & MODEL ON TOWER	LOCATION	DIPLEXER ON TOWER	DIPLEXER ON GROUND	RET CABLE
ALPHA SECTOR																		
A1	-	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A2	LTE 700 / LTE 1900 / LTE AWS / 5G 1900 / 5G AWS	NEW	10°	CCI - TPA-65R-BU6DA-K	100'-0"	0°	5° / 3° / 3° / 3° / 3° / 3°	7/8"	150'-0"	2	-	(1) DC6-48-60-18-8F	(1) 3/8" 18-PAIR FIBER (2) 13/16" 8AWG DC	(1) ERICSSON - 4478 B14 (1) ERICSSON - 8843 B2/B66A (1) Y-CABLE TO NEW DUAL BAND RRU	TOWER	N	N	N
A3	5G CBAND / 5G DOD	NEW	10°	ERICSSON - AIR6449 N77D + AIR6419 N77G STACKED	100'-0"	-	0° / 0°	-	-	-	-	-	-	INTEGRATED WITHIN ANTENNA	TOWER	N	N	N
A4	LTE 700 / 5G 850	NEW	10°	CCI - DMP65R-BU6DA	100'-0"	0°	5° / 5°	-	-	-	-	-	-	(1) ERICSSON - 4449 B5/B12 (1) Y-CABLE TO NEW DUAL BAND RRU	TOWER	N	N	N
BETA SECTOR																		
B1	-	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B2	LTE 700 / LTE 1900 / LTE AWS / 5G 1900 / 5G AWS	NEW	120°	CCI - TPA-65R-BU8DA-K	100'-0"	0°	9° / 8° / 8° / 8° / 8° / 8°	7/8"	150'-0"	2	-	(1) DC9-48-60-24-8C-EV	(3) 7/8" 6AWG DC FIBER (1) 3/8" 24-PAIR FIBER	(1) ERICSSON - 4478 B14 (1) ERICSSON - 8843 B2/B66A (1) Y-CABLE TO NEW DUAL BAND RRU	TOWER	N	N	N
B3	5G CBAND / 5G DOD	NEW	120°	ERICSSON - AIR6449 N77D + AIR6419 N77G STACKED	100'-0"	-	0° / 0°	-	-	-	-	-	-	INTEGRATED WITHIN ANTENNA	TOWER	N	N	N
B4	LTE 700 / 5G 850	NEW	120°	CCI - DMP65R-BU8DA	100'-0"	0°	9° / 9°	-	-	-	-	-	-	(1) ERICSSON - 4449 B5/B12 (1) Y-CABLE TO NEW DUAL BAND RRU	TOWER	N	N	N
GAMMA SECTOR																		
C1	-	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C2	LTE 700 / LTE 1900 / LTE AWS / 5G 1900 / 5G AWS	NEW	240°	CCI - TPA-65R-BU6DA-K	100'-0"	0°	4° / 2° / 2° / 2° / 2° / 2°	7/8"	150'-0"	2	-	-	-	(1) ERICSSON - 4478 B14 (1) ERICSSON - 8843 B2/B66A (1) Y-CABLE TO NEW DUAL BAND RRU	TOWER	N	N	N
C3	5G CBAND / 5G DOD	NEW	240°	ERICSSON - AIR6449 N77D + AIR6419 N77G STACKED	100'-0"	-	0° / 0°	-	-	-	-	-	-	INTEGRATED WITHIN ANTENNA	TOWER	N	N	N
C4	LTE 700 / 5G 850	NEW	240°	CCI - DMP65R-BU6DA	100'-0"	0°	4° / 4°	-	-	-	-	-	-	(1) ERICSSON - 4449 B5/B12 (1) Y-CABLE TO NEW DUAL BAND RRU	TOWER	N	N	N

NOTE: BOLD DENOTES NEW EQUIPMENT

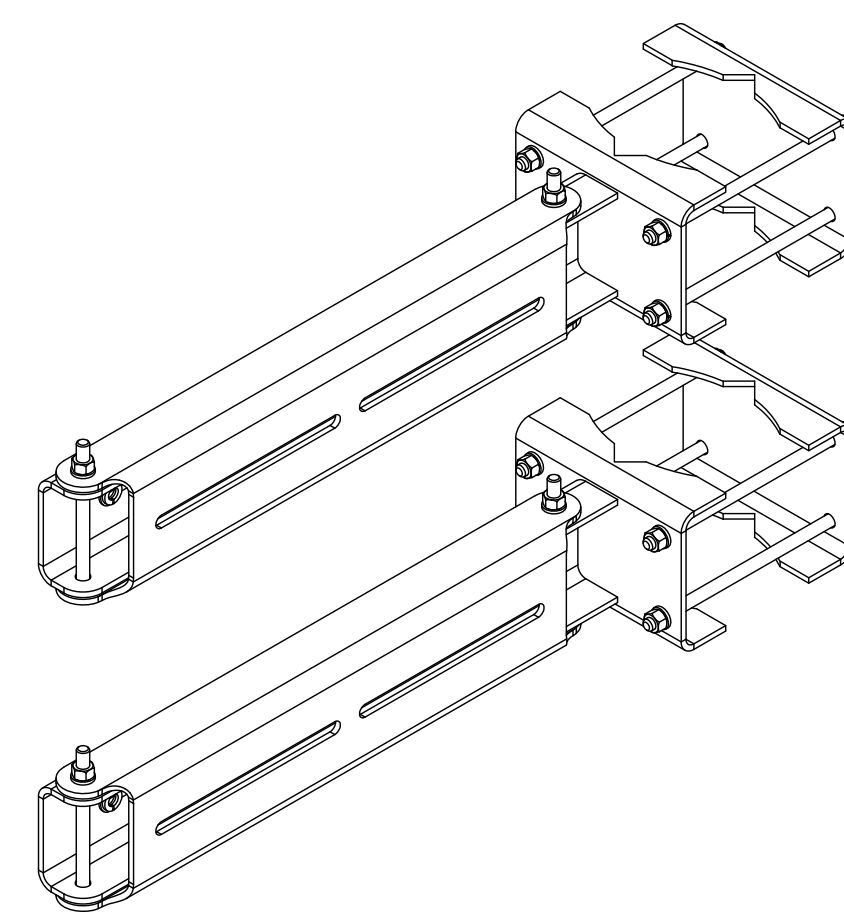
151136.004.01\_NEW BRITAIN GRAVEL PIT.dwg - SheetC-3 - User: njones - Jun 24, 2022 - 9:19am

**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 MOUNTING DETAIL  
SCALE: NOT TO SCALE



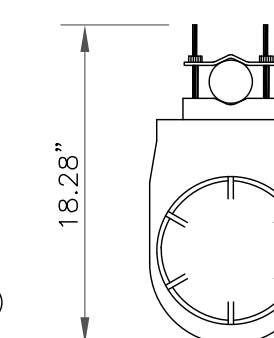
DUAL RADIO MOUNT

2 DUAL RADIO MOUNT  
SCALE: NOT TO SCALE

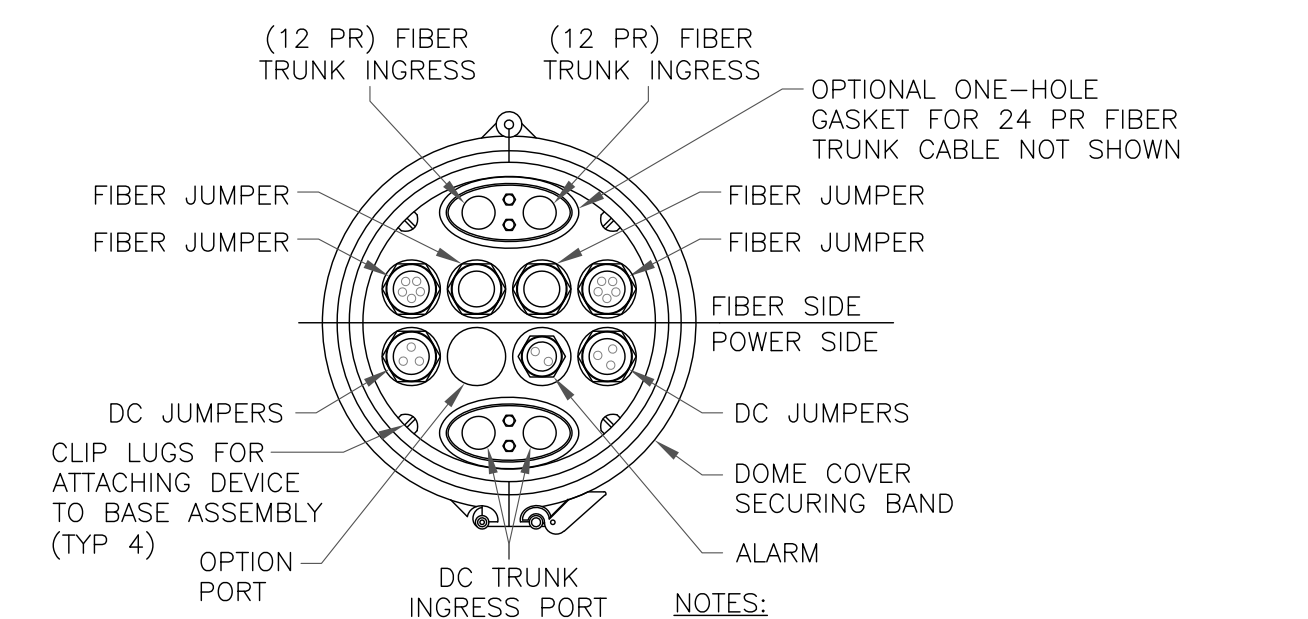
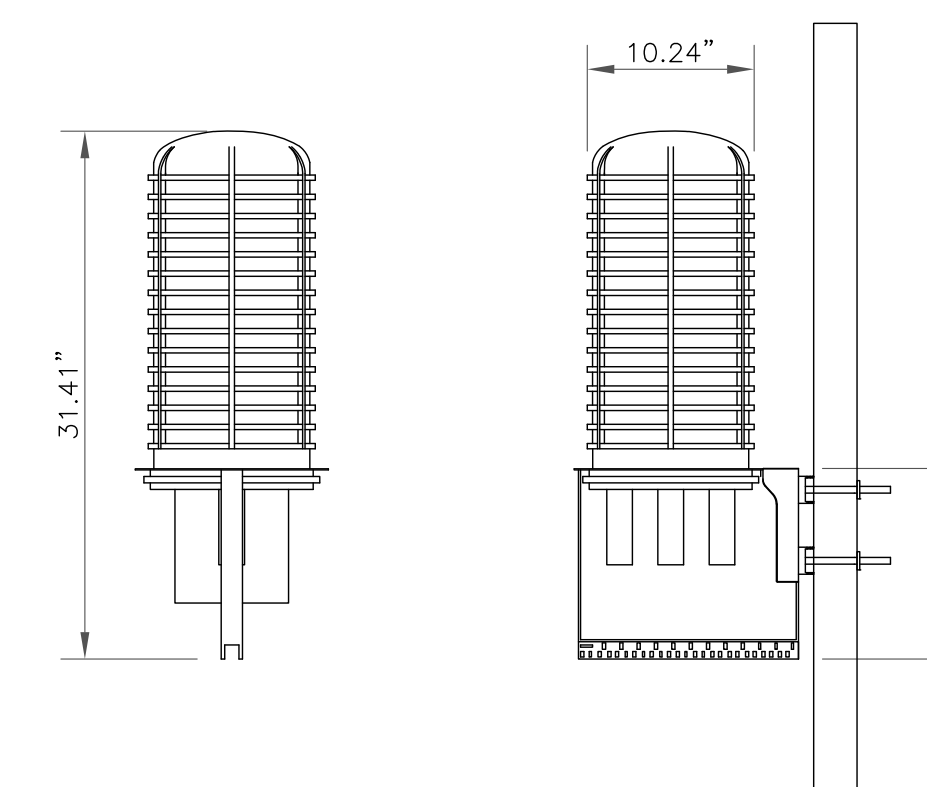
3 NOT USED  
SCALE: NOT TO SCALE

**RAYCAP**  
DC9-48-60-24-8C-EV

RAYCAP - DC9-48-60-24-8C-EV  
SIZE: 10.24x31.40 IN.  
WEIGHT: 26.2 LBS  
NOMINAL OPERATING VOLTAGE: 48 VDC  
VOLTAGE PROTECTION RATING: 330 V  
WIND LOADING: 150 MPH SUSTAINED (105.7 LBS)  
WIND LOADING: 195 MPH GUST (213.6 LBS)



CONTRACTOR TO USE "THREAD LUBRICANT" ON MOUNTING BOLTS DURING INSTALLATION



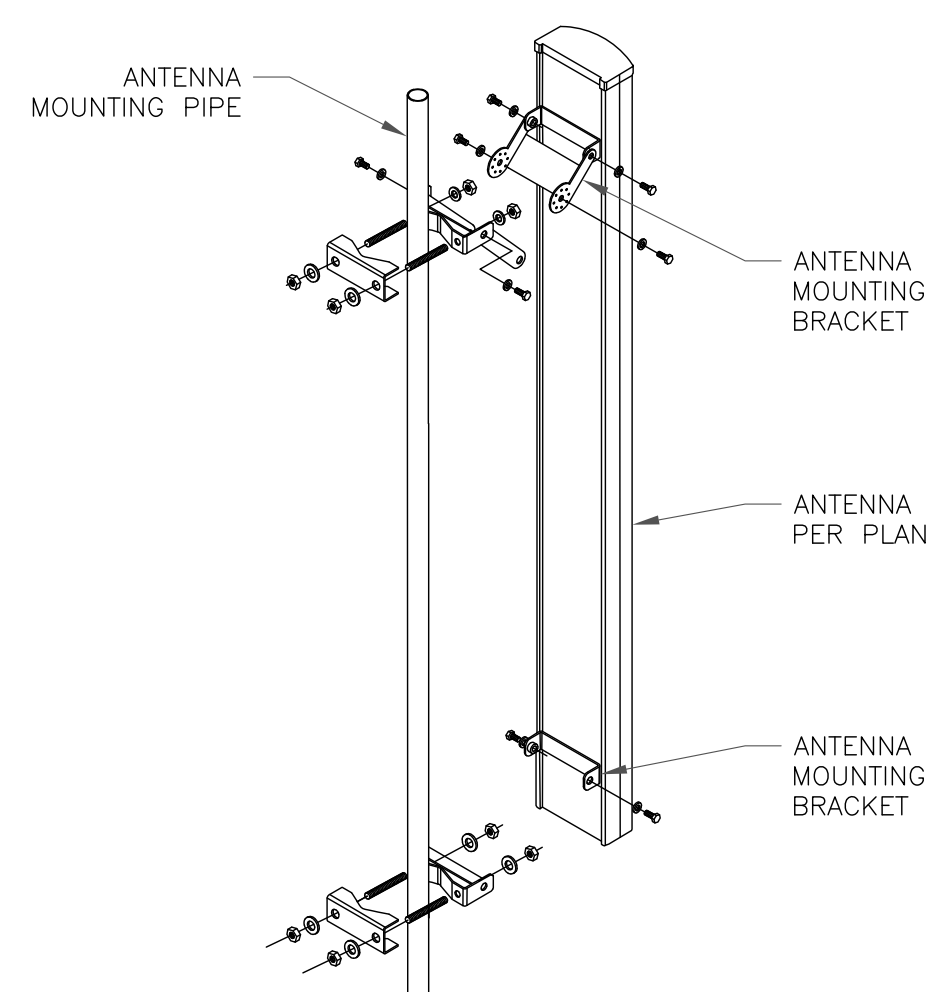
**NOTES:**

1. REMOVE CABLE SEALING GLAND AND INSTALL M32x1.5 METRIC-T0-1" NPT ADAPTER (COOPER CROUSE-HINES P/N CAP 740 994 OR EQUIVALENT MFR) WHEN CONNECTING CONDUIT TO OVP.

6 SQUID MOUNTING DETAIL  
SCALE: NOT TO SCALE

**INSTALLER NOTES:**

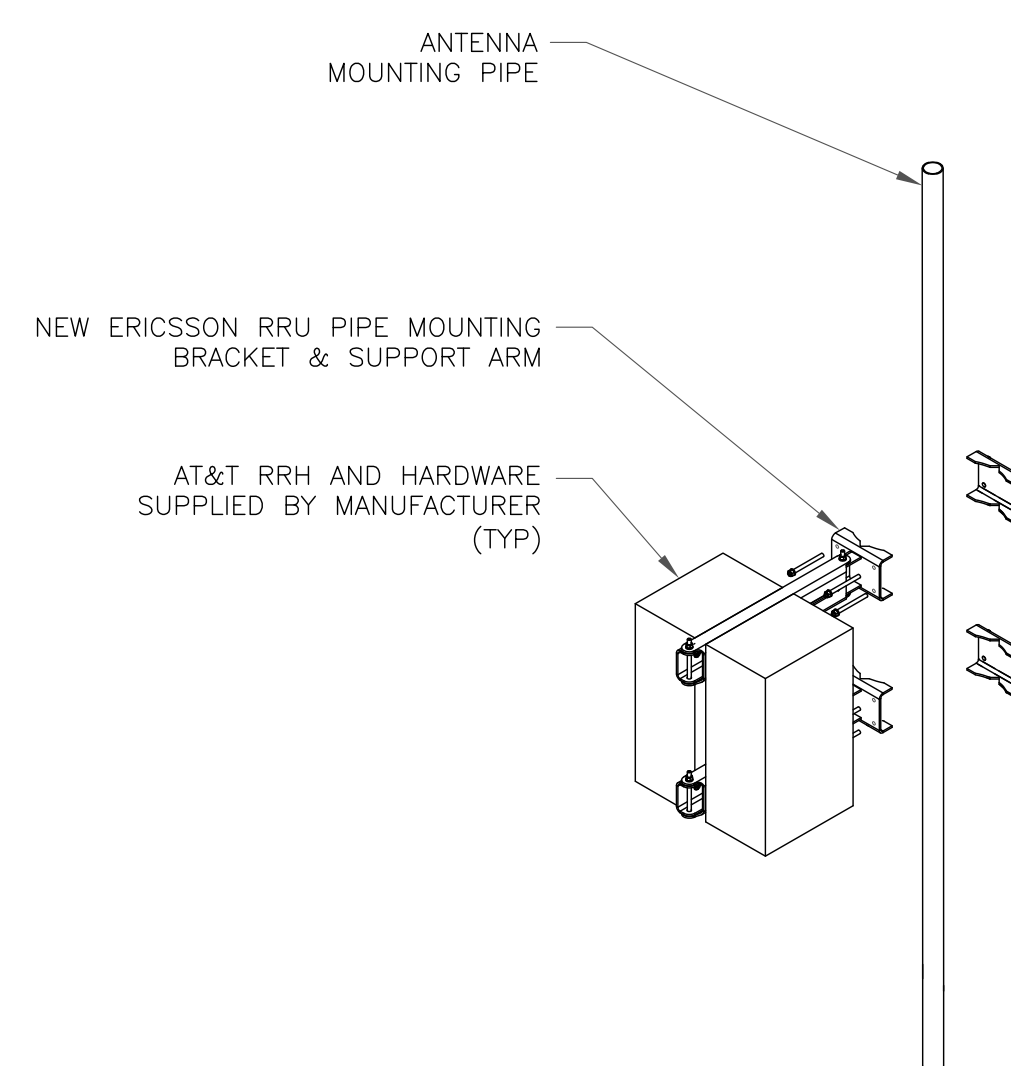
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3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



4 ANTENNA MOUNTING DETAIL  
SCALE: NOT TO SCALE

**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.



5 ANTENNA WITH DUAL RRH MOUNTING DETAIL  
SCALE: NOT TO SCALE

575 MOROSGO DRIVE  
ATLANTA, GA 30324-3300

3 CORPORATE PARK DRIVE, SUITE 101  
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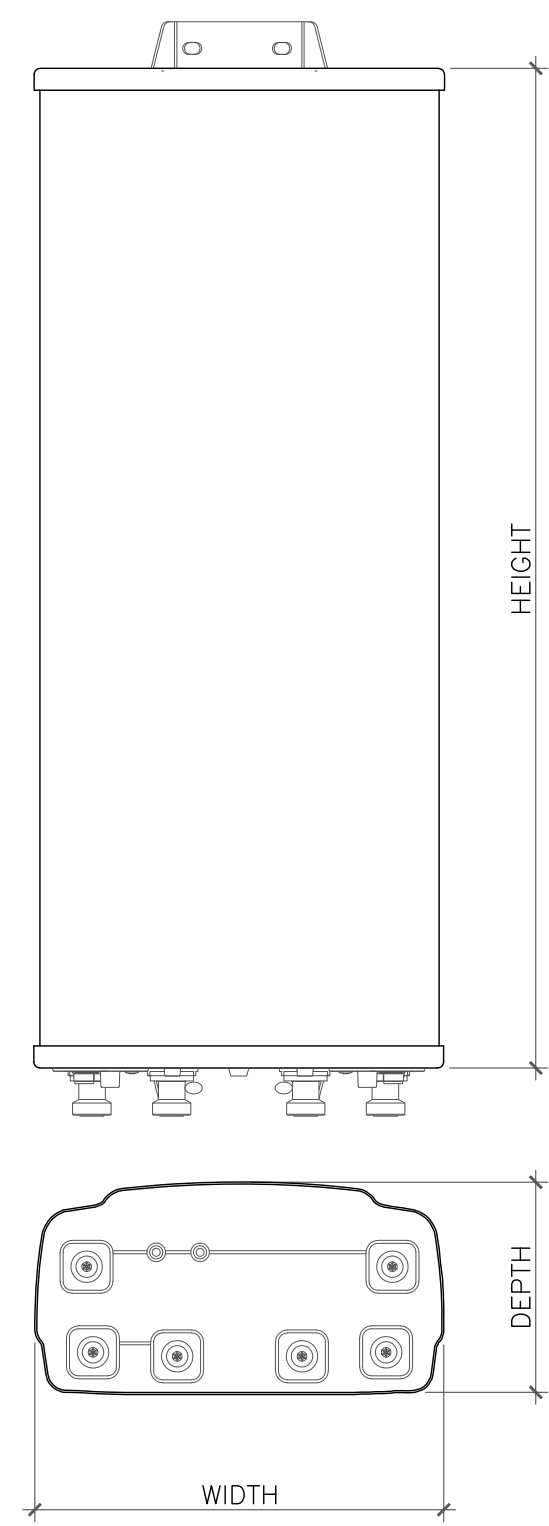
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D	5/4/22	MEH	PRELIMINARY REVIEW	KT
0	6/24/22	MEH	CONSTRUCTION	MTJ

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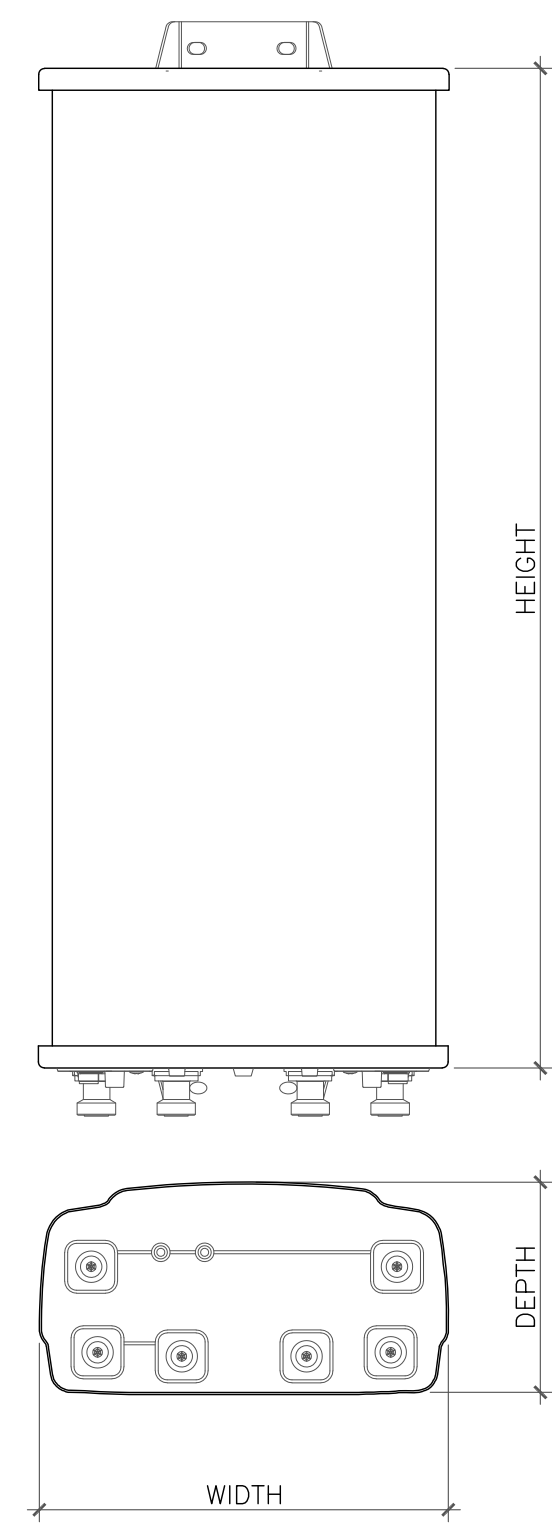
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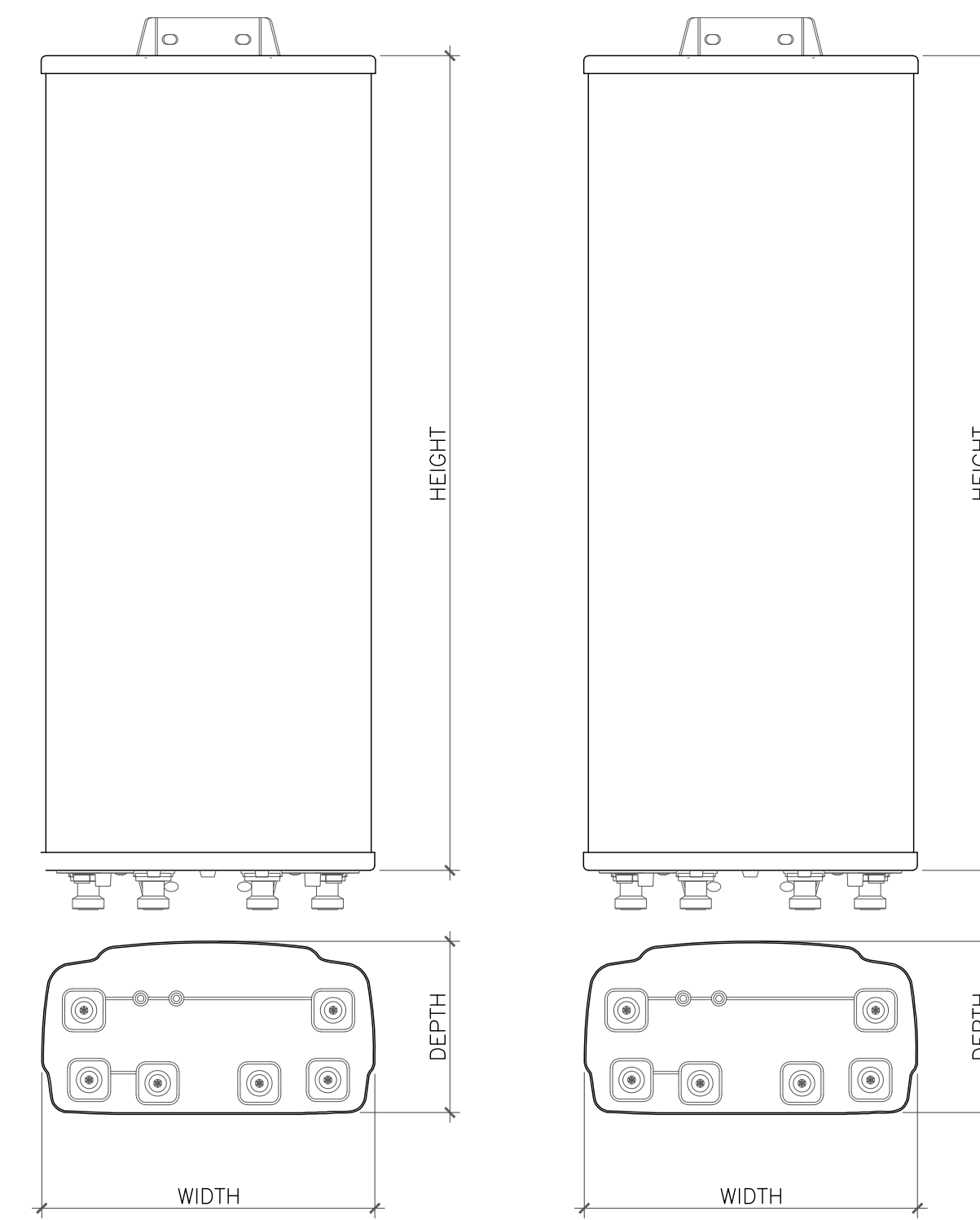
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
TPA-65R-BU6DA-K	71.20"	20.70"	7.70"	69.00lbs

1 ANTENNA DETAIL  
SCALE: NOT TO SCALE



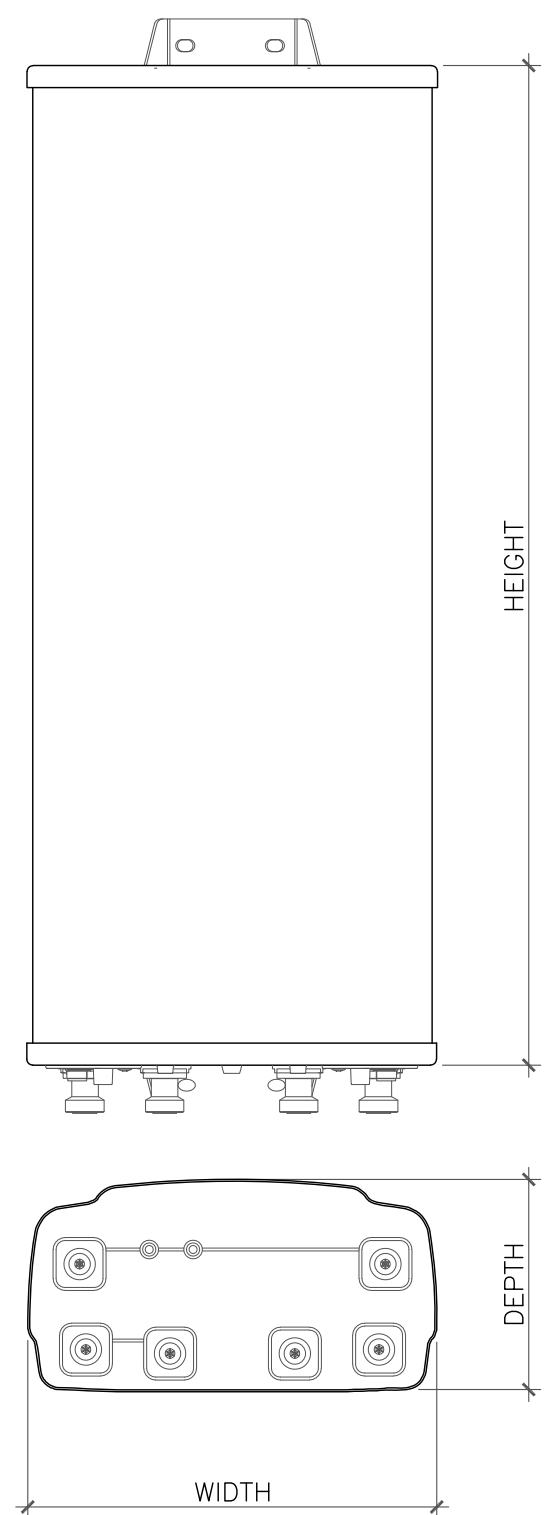
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU6DA	71.20"	20.70"	7.70"	89.30lbs

2 ANTENNA DETAIL  
SCALE: NOT TO SCALE



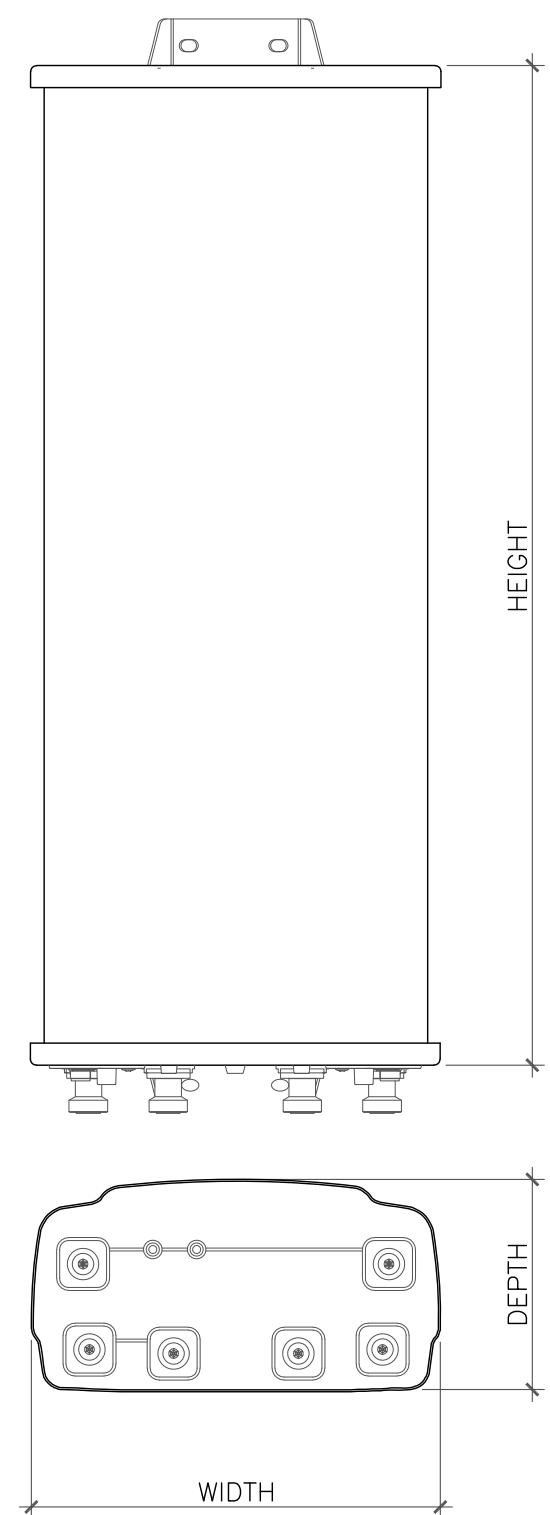
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
ERICSSON/ AIR6449 N77D	30.39"	15.87"	8.07"	81.60lbs
ERICSSON/ AIR6419 N77G	27.95"	15.75"	6.68"	66.20lbs

3 ANTENNA DETAIL  
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU8D	96.0"	20.70"	7.70"	105.6lbs

4 ANTENNA DETAIL  
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
TPA65R-BU8D	96.0"	20.70"	7.70"	87.1lbs

5 ANTENNA DETAIL  
SCALE: NOT TO SCALE

6 NOT USED  
SCALE: NOT TO SCALE

575 MOROSGO DRIVE  
ATLANTA, GA 30324-3300

3 CORPORATE PARK DRIVE, SUITE 101  
CLIFTON PARK, NY 12065

1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.blgrp.com

AT&T SITE NUMBER:  
**CTL01024**

BU #: **876331**  
**NEW BRITAIN GRAVEL PIT**

115 NORTH MOUNTAIN RD  
NEW BRITAIN, CT 06053

EXISTING  
118'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	10/8/21	BMK	PRELIMINARY REVIEW	STH
B	01/9/22	KT	PRELIMINARY REVIEW	KT
C	4/7/22	JHW	PRELIMINARY REVIEW	KT
D	5/4/22	MEH	PRELIMINARY REVIEW	KT
0	6/24/22	MEH	CONSTRUCTION	MTJ



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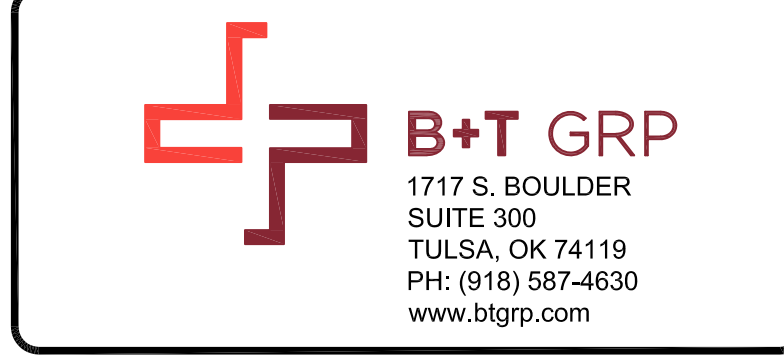
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AT&T SITE NUMBER:  
**CTL01024**

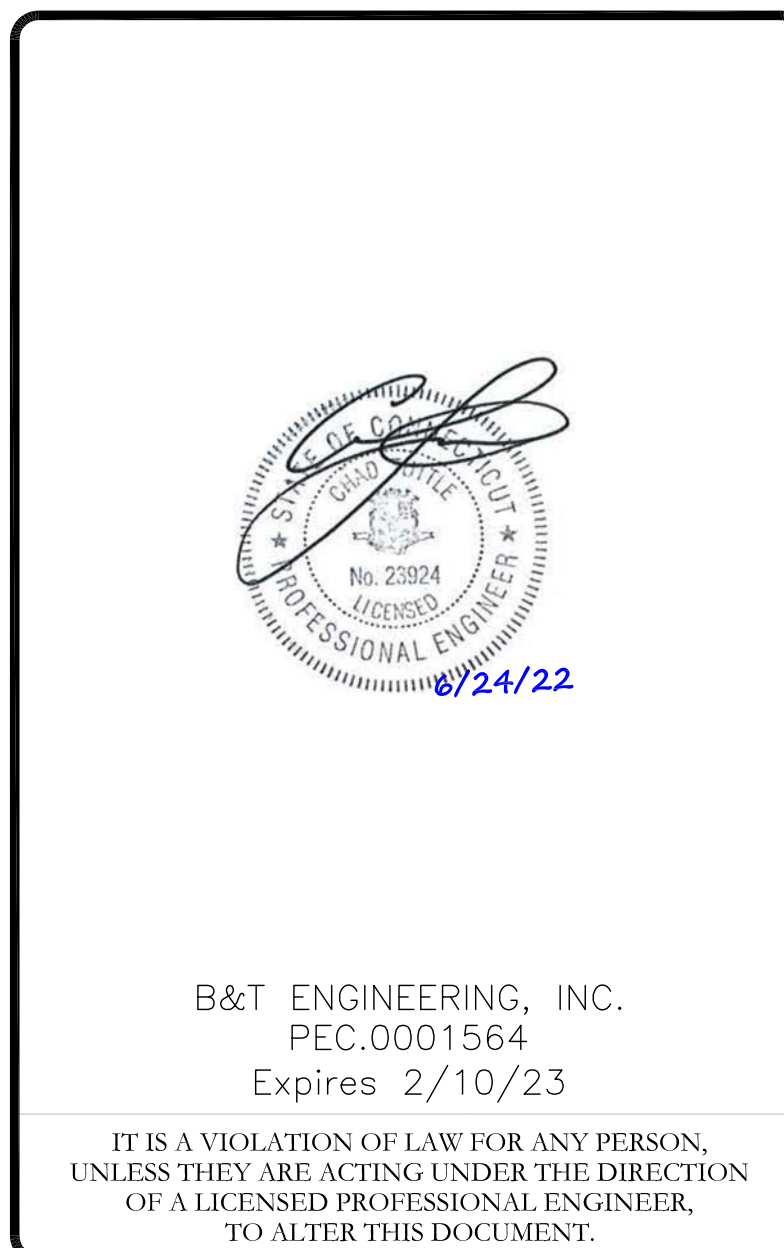
BU #: **876331**  
**NEW BRITAIN GRAVEL PIT**

115 NORTH MOUNTAIN RD  
NEW BRITAIN, CT 06053

EXISTING  
118'-0" MONOPOLE

ISSUED FOR:

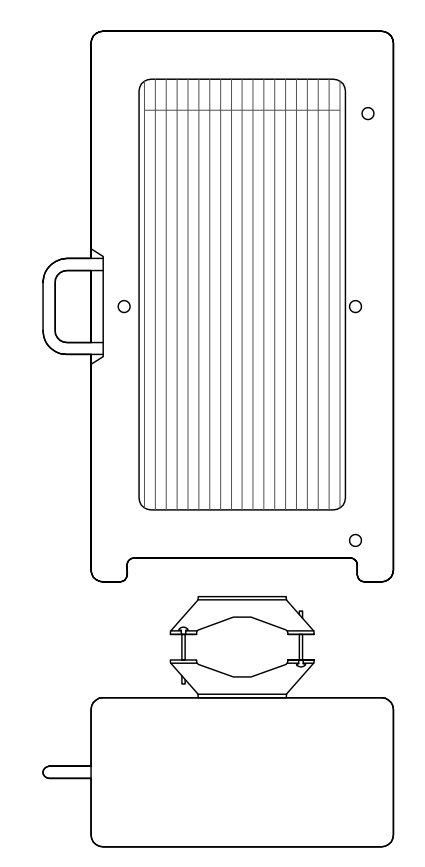
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B	01/9/22	KT	PRELIMINARY REVIEW	KT
C	4/7/22	JHW	PRELIMINARY REVIEW	KT
D	5/4/22	MEH	PRELIMINARY REVIEW	KT
0	6/24/22	MEH	CONSTRUCTION	MTJ



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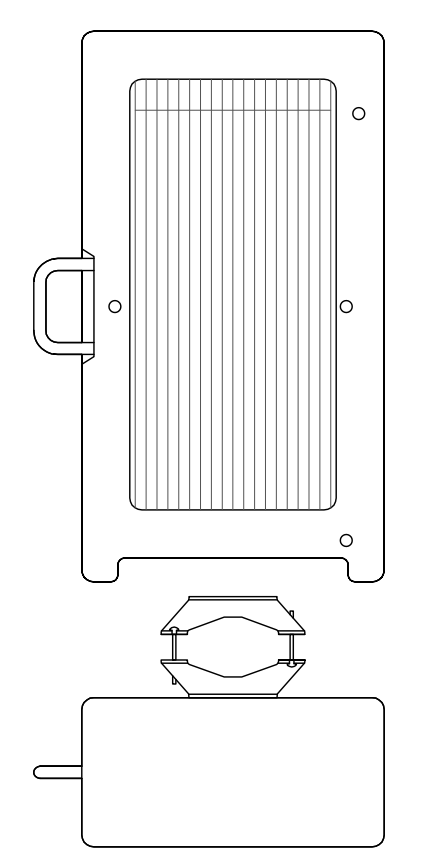
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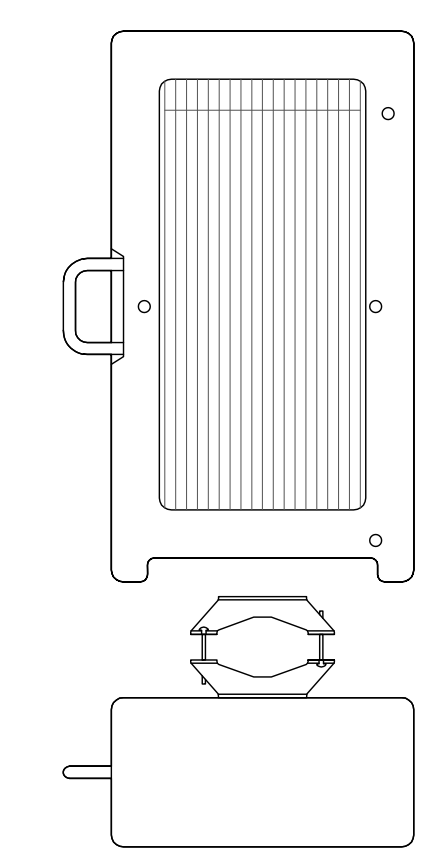
ERICSSON - 4478 B14  
WEIGHT (FULLY EQUIPPED): 59.40 LBS  
SIZE (HxWxD): 18.10x13.40x8.26 IN.  
CONNECTOR TYPE: 4.3-10 FEMALE (4 TOTAL PORTS)

1 ERICSSON - 4449 B5/B12  
SCALE: NOT TO SCALE



ERICSSON - 8843 B2/B66A  
WEIGHT (FULLY EQUIPPED): 75.00 LBS  
SIZE (HxWxD): 18.00x13.20x11.30 IN.  
CONNECTOR TYPE: 4.3-10 FEMALE (4 TOTAL PORTS)

2 ERICSSON - 4449 B5/B12  
SCALE: NOT TO SCALE



ERICSSON - 4449 B5/B12  
WEIGHT (FULLY EQUIPPED): 71.00 LBS  
SIZE (HxWxD): 17.90x13.19x9.44 IN.  
CONNECTOR TYPE: 4.3-10 FEMALE (4 TOTAL PORTS)

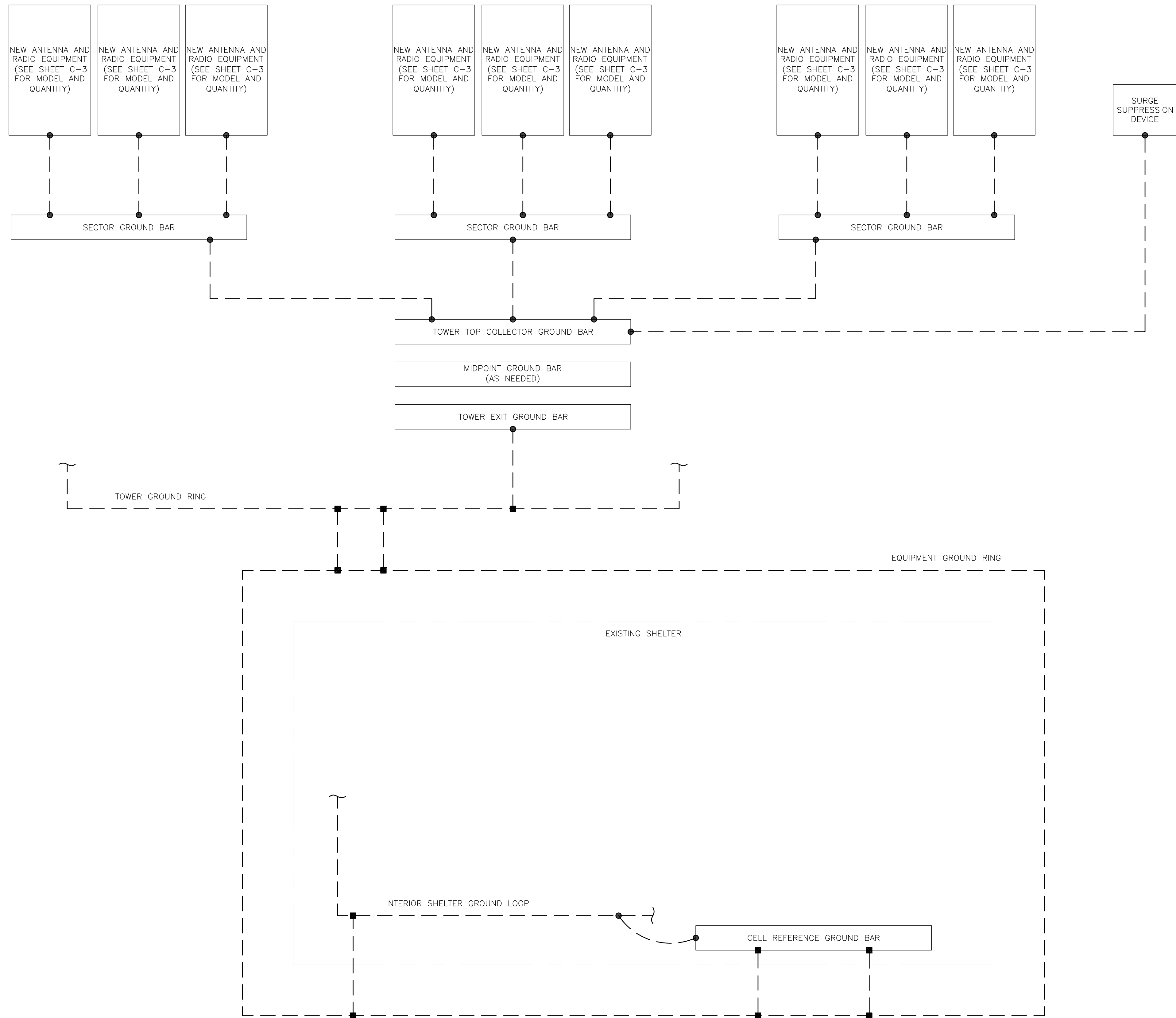
3 ERICSSON - 4449 B5/B12  
SCALE: NOT TO SCALE

4 NOT USED  
SCALE: NOT TO SCALE

5 NOT USED  
SCALE: NOT TO SCALE

6 NOT USED  
SCALE: NOT TO SCALE





**GROUNDING PLAN LEGEND:**

---	GROUND WIRE		COPPER GROUND ROD
■	EXOTHERMIC WELD		GROUND ROD W/ TEST WELL
●	MECHANICAL CONNECTION		

**CELL REFERENCE GROUND BAR:** POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUITS (ATT-TP-76416 7.6.7).

**HATCH PLATE GROUND BAR:** BOND TO THE INTERIOR GROUND RING WITH (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CELL SITE REFERENCE GROUND BAR MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS.

**EXTERIOR CABLE ENTRY PORT GROUND BARS:** LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE (ATT-TP-76416 7.6.7.2).

DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICES CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR PER TP76300 SECTION H 6 AND TP76416 FIGURE 7-11 REQUIREMENTS.

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**AT&T SITE NUMBER:**  
**CTL01024**

**BU #: 876331**  
**NEW BRITAIN GRAVEL PIT**

115 NORTH MOUNTAIN RD  
NEW BRITAIN, CT 06053

EXISTING  
118'-0" MONOPOLE

**ISSUED FOR:**

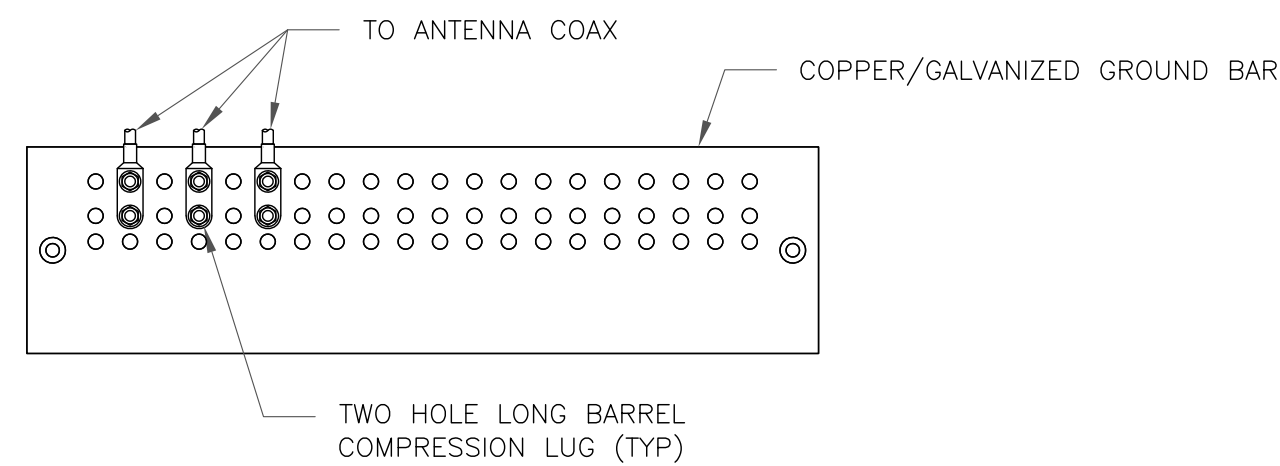
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B	01/9/22	KT	PRELIMINARY REVIEW	KT
C	4/7/22	JHW	PRELIMINARY REVIEW	KT
D	5/4/22	MEH	PRELIMINARY REVIEW	KT
0	6/24/22	MEH	CONSTRUCTION	MTJ

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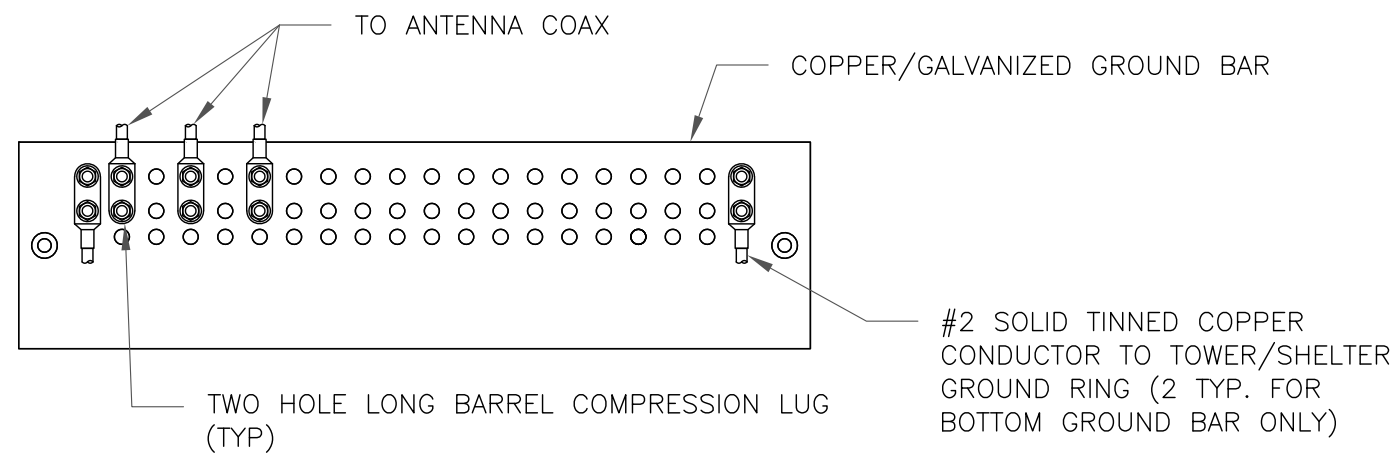
**1** GROUNDING SCHEMATIC  
SCALE: NOT TO SCALE



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

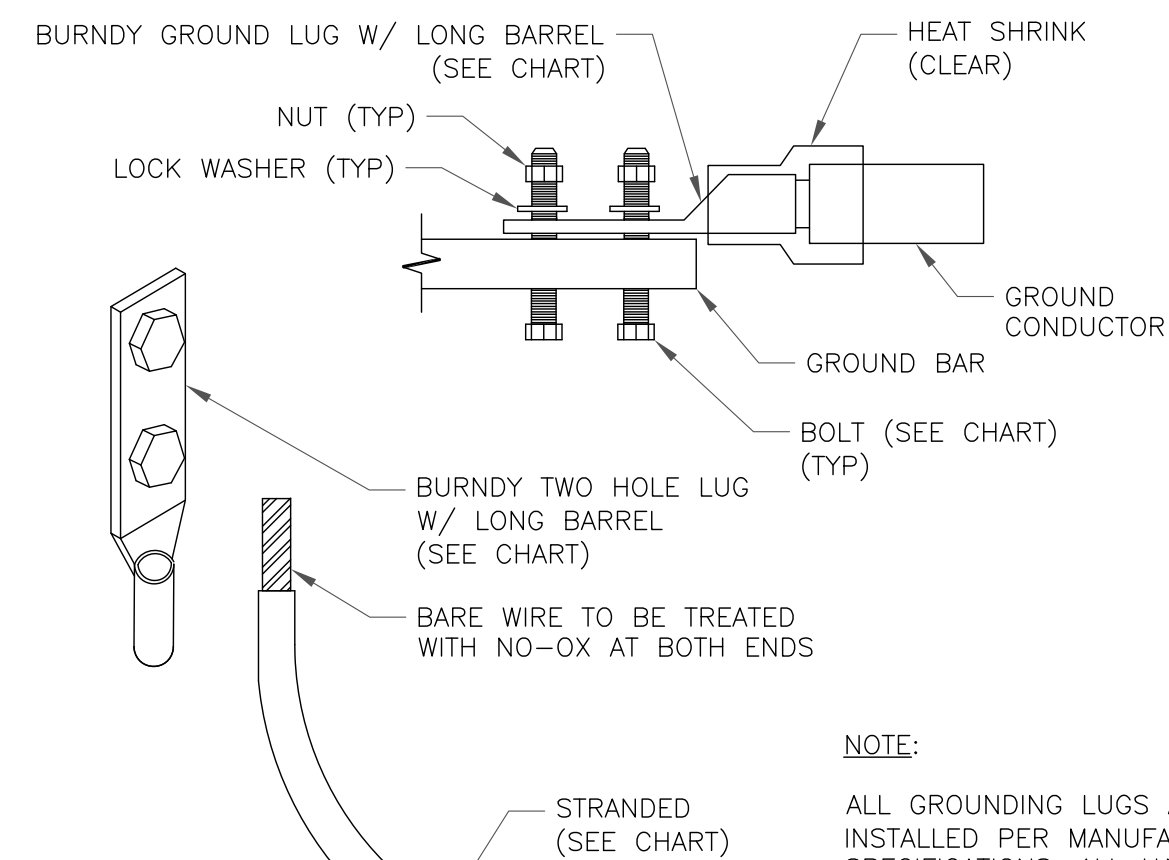


NOTES:

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

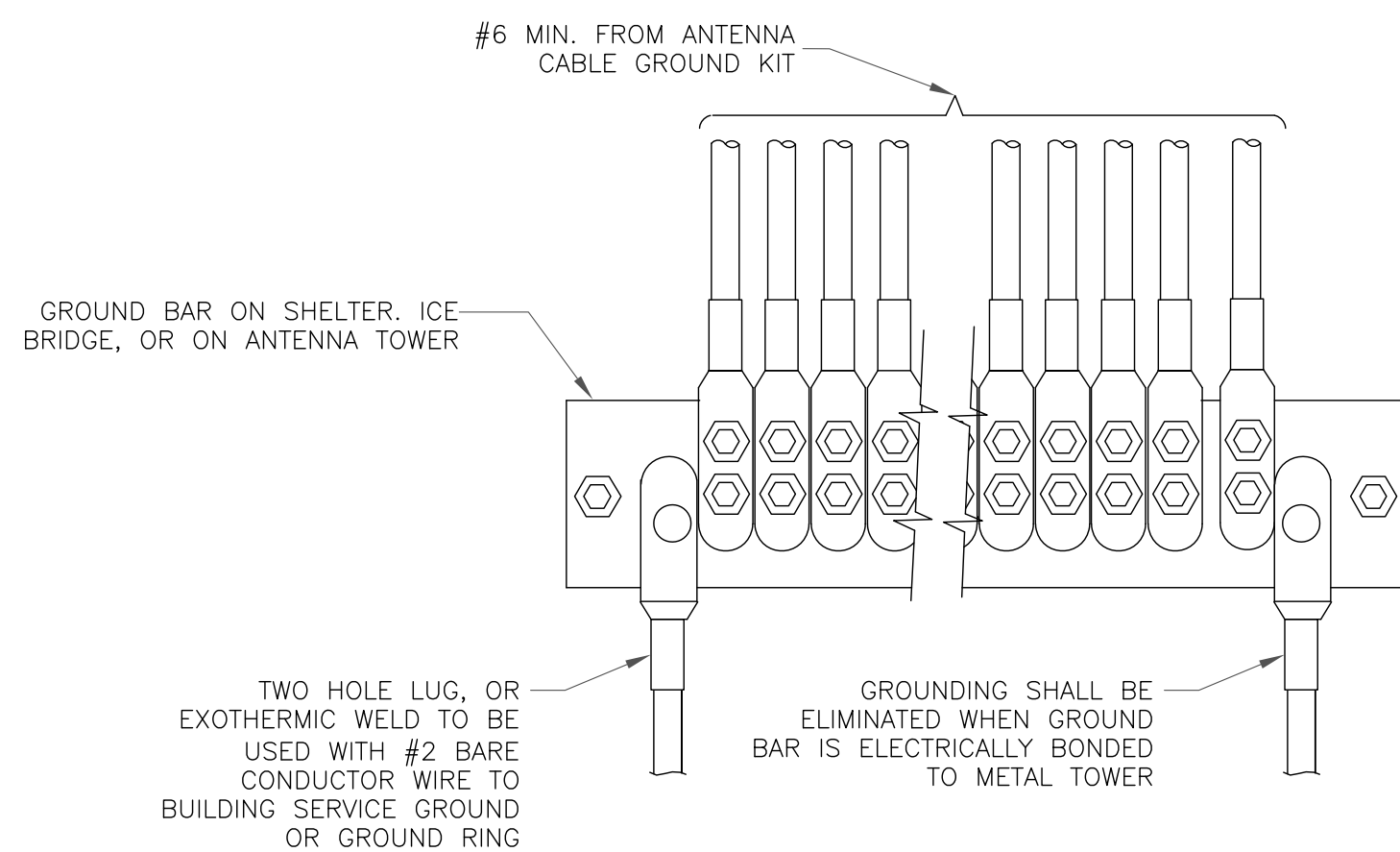
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



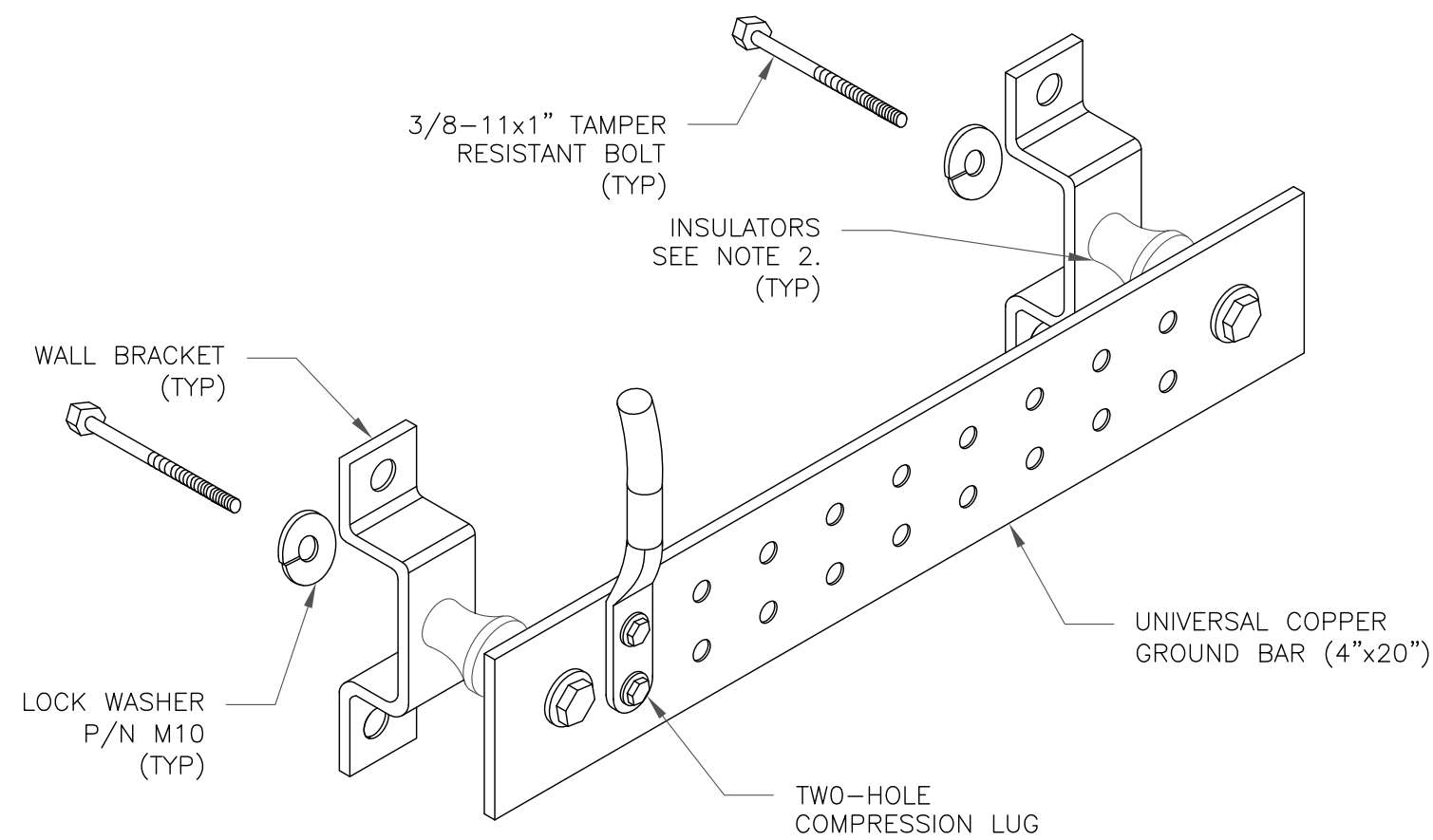
NOTE:

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

3 MECHANICAL LUG CONNECTION  
SCALE: NOT TO SCALE



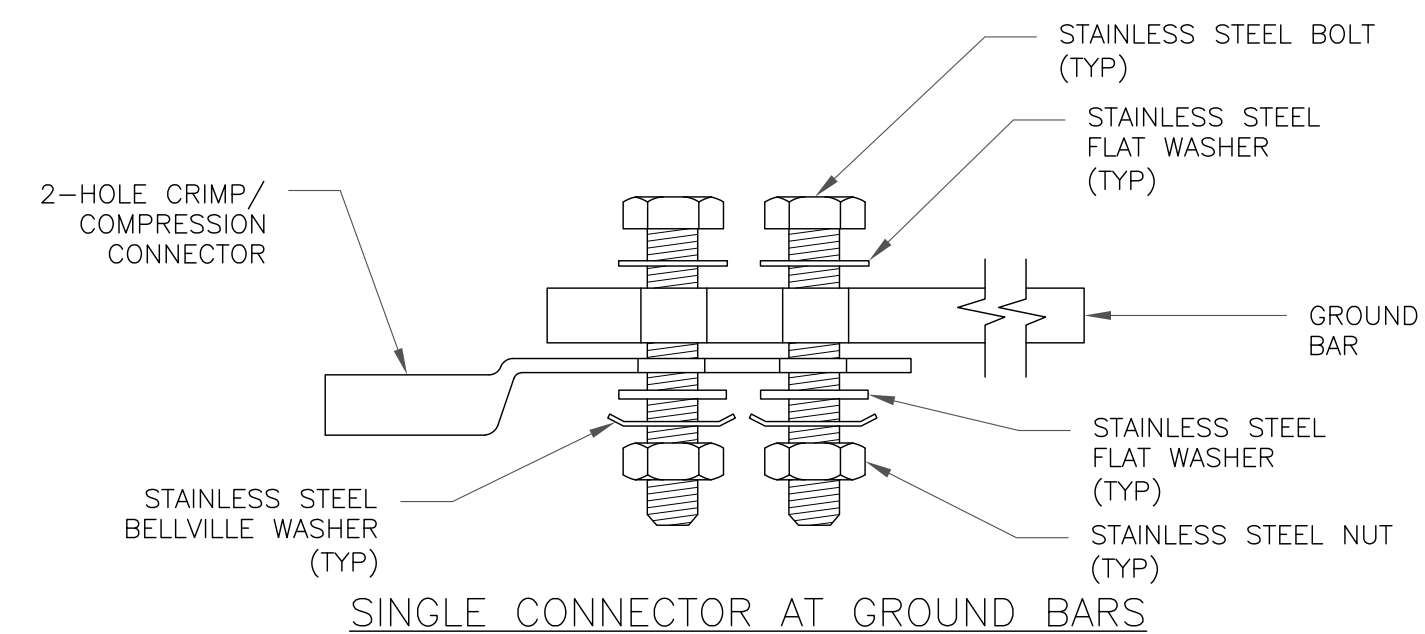
4 GROUNDWIRE INSTALLATION  
SCALE: NOT TO SCALE



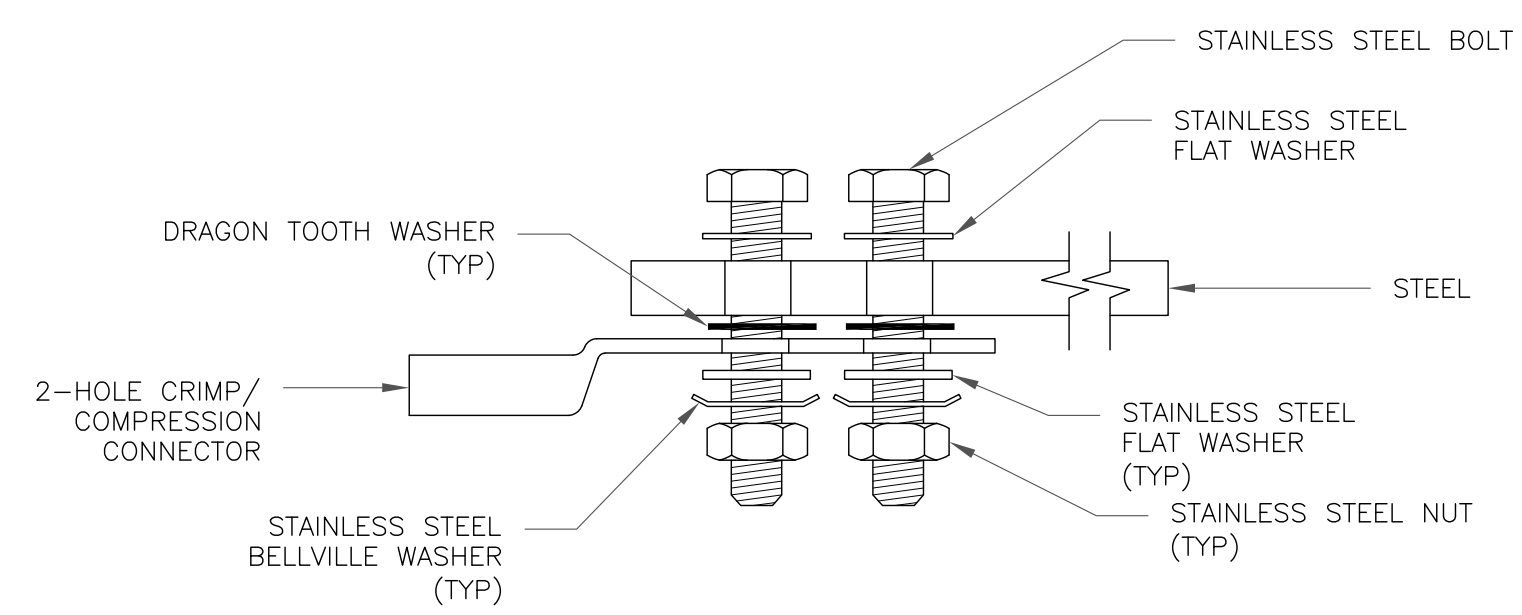
NOTES:

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

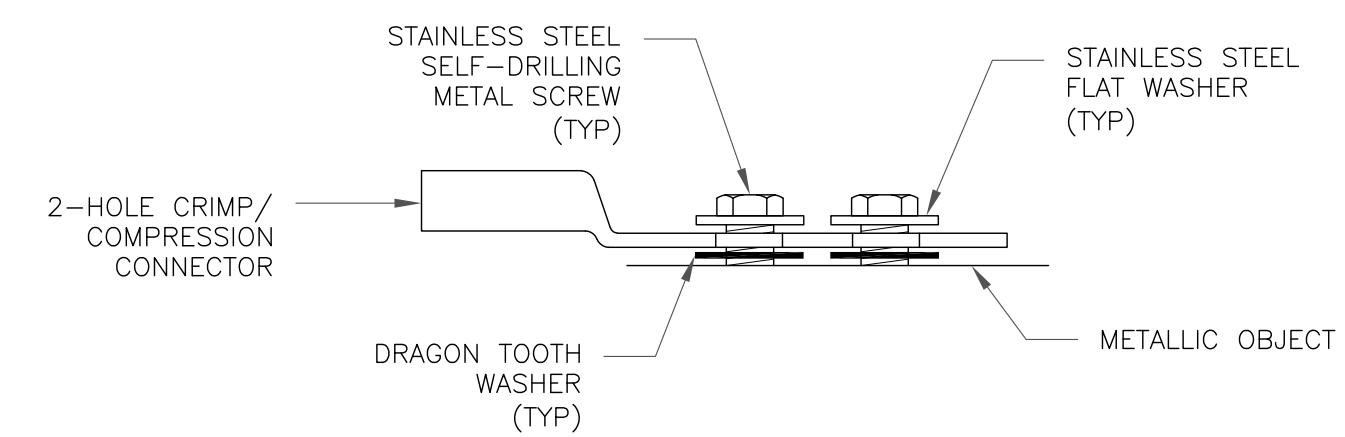
5 GROUND BAR DETAIL  
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

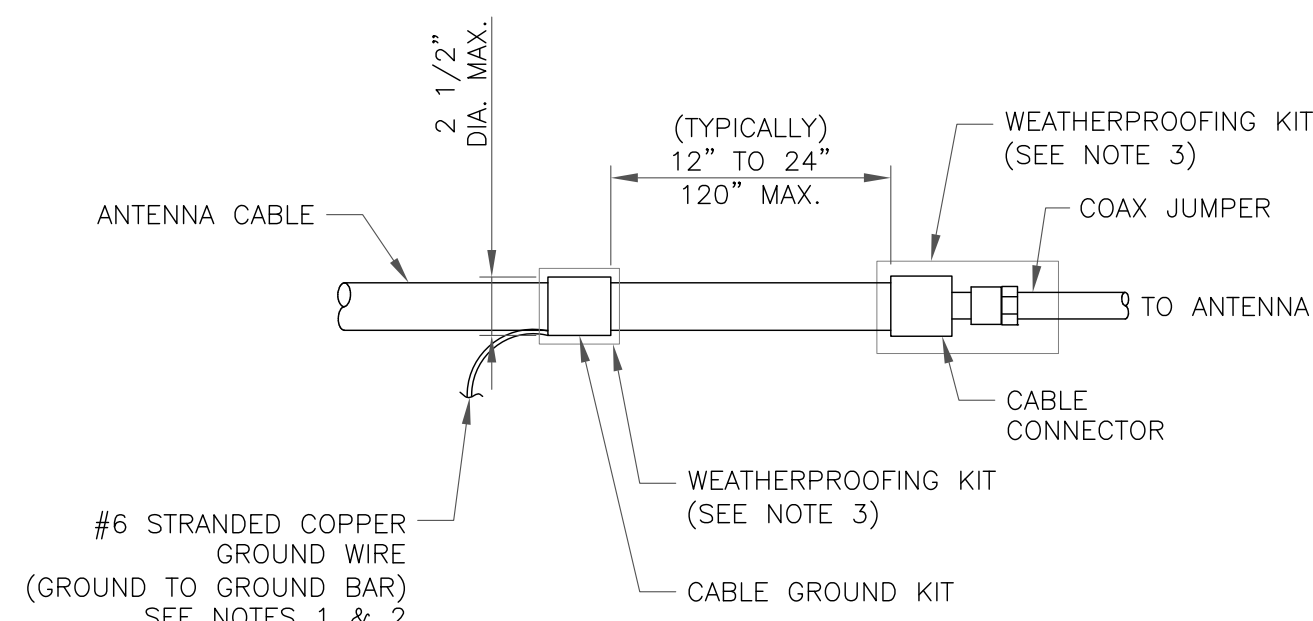


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

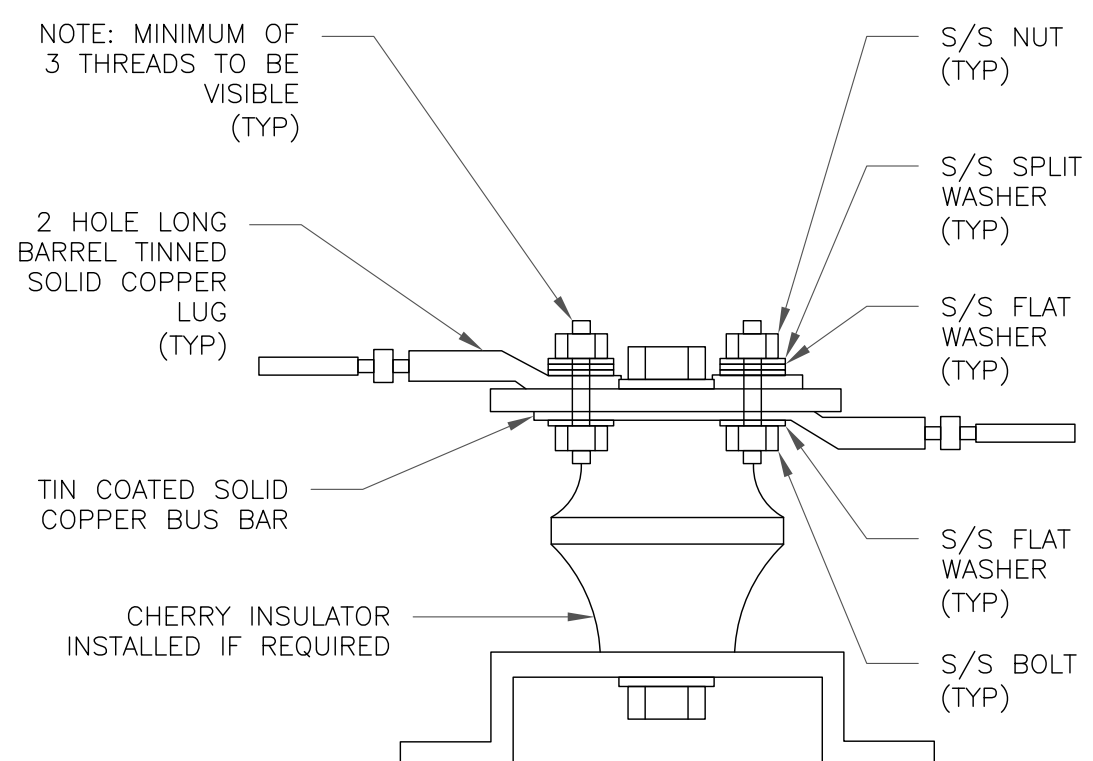
8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS  
SCALE: NOT TO SCALE



NOTES:

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

6 CABLE GROUND KIT CONNECTION  
SCALE: NOT TO SCALE



7 LUG DETAIL  
SCALE: NOT TO SCALE

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AT&T SITE NUMBER:  
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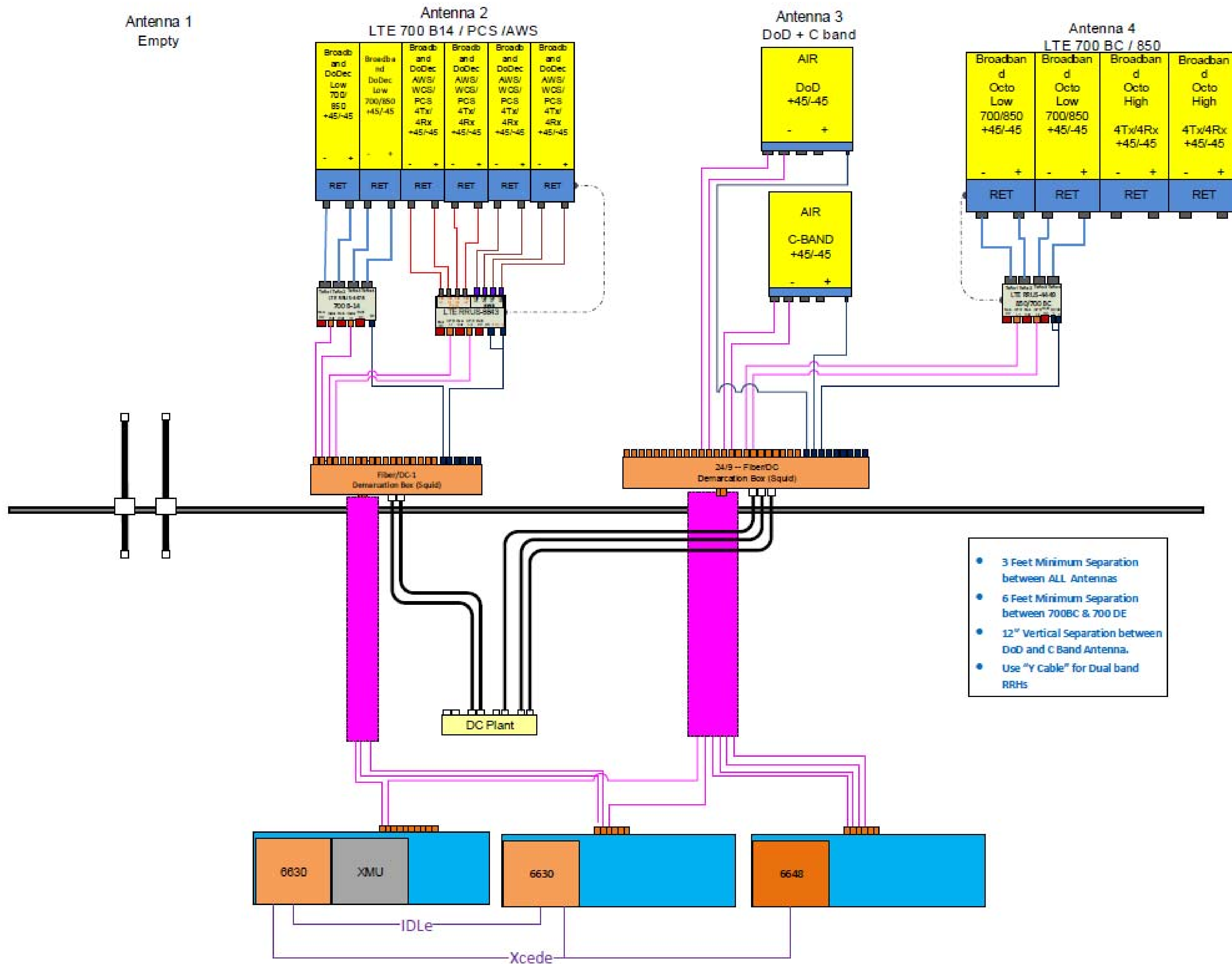
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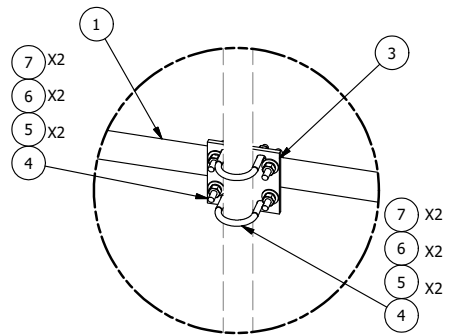
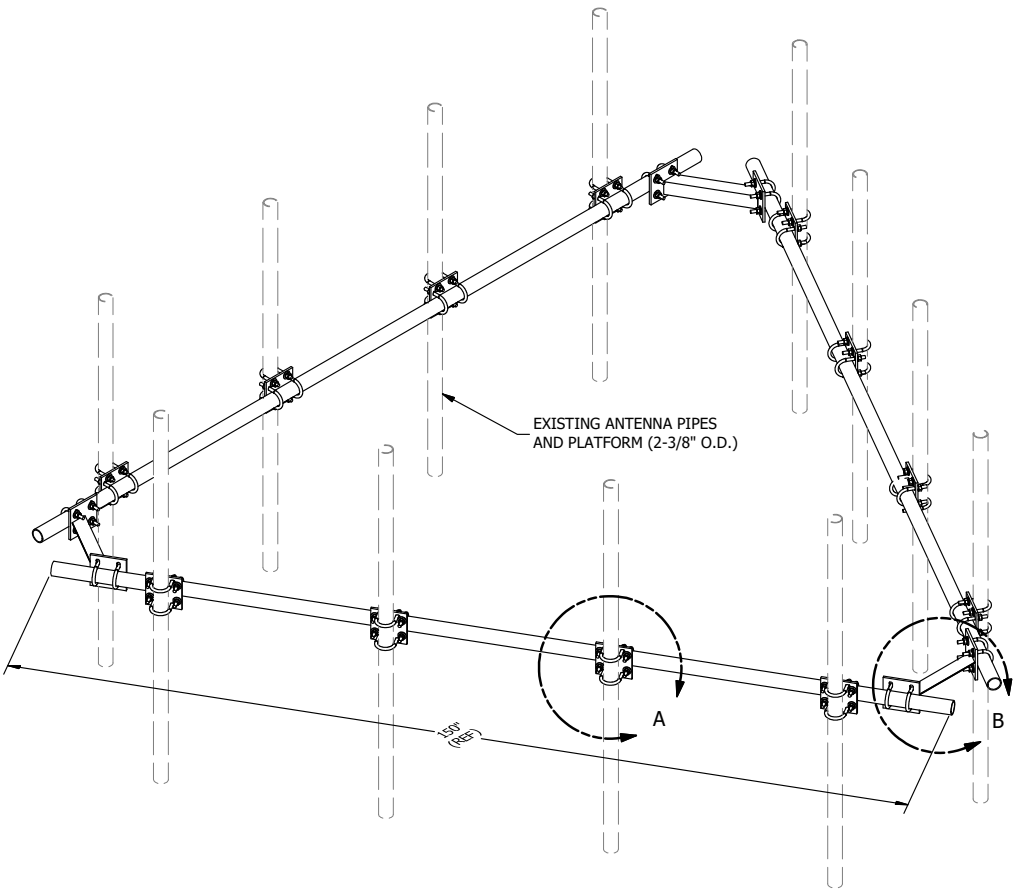
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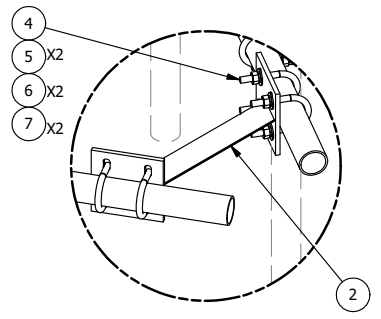
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PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	137.31
2	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
3	12	SCX1	CROSSOVER PLATE 2-3/8" X 2-3/8"	6 in	3.71	44.50
4	60	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	37.51
5	120	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	4.09
6	120	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	1.67
7	120	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	8.60
TOTAL WT. #						272.43



DETAIL A



DETAIL B

**TOLERANCE NOTES**  
**TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:**  
**SAWED, SHEARED AND GAS CUT EDGES ( $\pm 0.030"$ )**  
**DRILLED AND GAS CUT HOLES ( $\pm 0.030"$ ) - NO CONING OF HOLES**  
**LASER CUT EDGES AND HOLES ( $\pm 0.010"$ ) - NO CONING OF HOLES**  
**BENDS ARE  $\pm 1/2$  DEGREE**  
**ALL OTHER MACHINING ( $\pm 0.030"$ )**  
**ALL OTHER ASSEMBLY ( $\pm 0.060"$ )**

PROPRIETARY NOTE:  
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

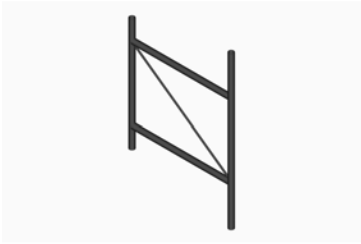
DESCRIPTION			
<b>HANDRAIL KIT FOR 12'-6" FACE</b>			
CPD NO.	DRAWN BY	ENG. APPROVAL	
	KC8 5/30/2012		
CLASS	SUB	DRAWING USAGE	CHECKED BY
81	01	CUSTOMER	BMC 7/13/2014

<b>SITE PRO 1</b> A valmont COMPANY	Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX
	Engineering Support Team: 1-888-753-7446
PART NO.	<b>HRK12</b>
DWG. NO.	<b>HRK12</b>

A	REPLACED HCP WITH X-AHCP	CPD	CEK	7/10/2014
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
REVISION HISTORY				

# P-100

---



Panel Antenna Stand-Off Bracket, 12 in

## Product Classification

**Product Type** Stand-off mount

## General Specifications

**Note** One 72 in x 8 in panel antenna per sector

## Dimensions

**Height** 1778 mm | 70 in

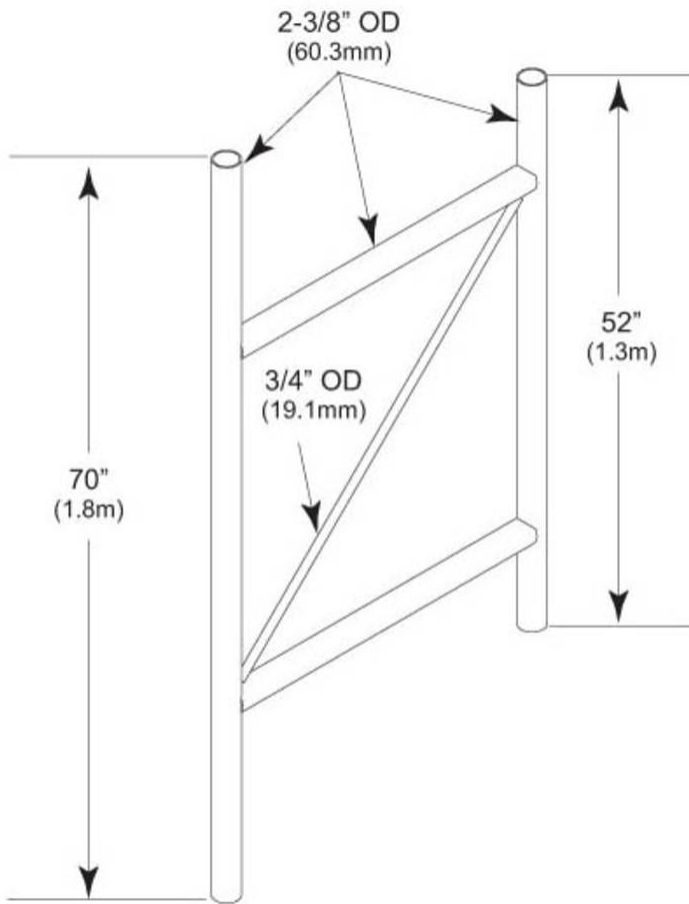
**Width** 76.2 mm | 3 in

**Length** 304.8 mm | 12 in

**Stand-off Distance** 304.8 mm | 12 in

# P-100

## Outline Drawing



## Material Specifications

**Material Type** Hot dip galvanized steel

## Mechanical Specifications

**Wind Rating** 120 mph (BWS) at 150 ft AGL

**Wind Rating Test Method** TIA/EIA-222

## Packaging and Weights

**Included** Stand-off

**Packaging quantity** 1

# P-100

---

**Weight, net** 19 kg | 41.888 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant



## \* Footnotes

**Wind Rating** BWS—Base Wind Speed; FBC—Florida Building Code

# Exhibit D

## Structural Analysis Report





Date: November 12, 2021

B+T Group  
1717 S. Boulder, Suite 300  
Tulsa, OK 74119  
(918) 587-4630

**Subject:** Structural Analysis Report

**Carrier Designation:** AT&T Mobility Co-Locate  
**Site Number:** CTL01024  
**Site Name:** New Britain Loon Lake  
**FA Number:** 10035310

**Crown Castle Designation:** BU Number: 876331  
**Site Name:** New Britain Gravel Pit  
**JDE Job Number:** 649411  
**Work Order Number:** 2018021  
**Order Number:** 556502 Rev. 0

**Engineering Firm Designation:** B+T Group Project Number: 151136.005.01

**Site Data:** 115 North Mountain Rd, New Britain, Hartford County, CT  
Latitude 41° 40' 35.72", Longitude -72° 49' 17.09"  
118 Foot - Monopole

B+T Group is pleased to submit this “Structural Analysis Report” to determine the structural integrity of the above-mentioned tower.

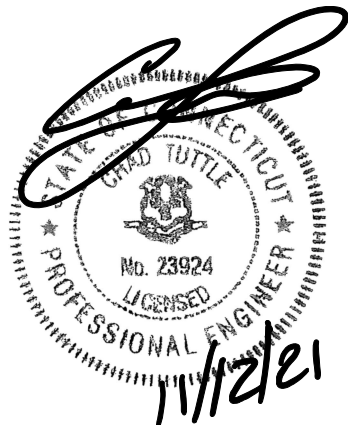
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity – 99.7%**

This analysis utilizes an ultimate 3-second gust wind speed of 117 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Jacob Johnson, E.I.T.

Respectfully submitted by: B+T Engineering, Inc.  
COA: PEC.0001564; Expires: 02/10/2022



Chad E. Tuttle, P.E.

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3.2) Assumptions

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Table 6 - Insufficient Structural Analysis Report Addendum

## 1) INTRODUCTION

This is a 118 ft. Monopole designed by Rohn in October 1996.

The tower has been modified multiple times to accommodate additional loading.

## 2) ANALYSIS CRITERIA

<b>TIA-222 Revision:</b>	TIA-222-H
<b>Risk Category:</b>	II
<b>Wind Speed:</b>	117 mph
<b>Exposure Category:</b>	C
<b>Topographic Factor:</b>	1
<b>Ice Thickness:</b>	1.5 in
<b>Wind Speed with Ice:</b>	50 mph
<b>Service Wind Speed:</b>	60 mph

**Table 1 - Proposed Equipment Configuration**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
98.0	100.0	2	CCI Antennas	DMP65R-BU6D	9	7/8
		1	CCI Antennas	DMP65R-BU8D		
		2	CCI Antennas	TPA65R-BU6D_CCIV2		
		1	CCI Antennas	TPA65R-BU8D_CCIV2		
		3	Ericsson	AIR 6419 B77G		
		3	Ericsson	AIR 6449 B77D		
		3	Ericsson	RRUS 4449 B5/B12		
		3	Ericsson	RRUS 4478 B14_CCIV2		
		3	Ericsson	RRUS 8843 B2/B66A_CCIV2		
	98.0	1	Raycap	DC9-48-60-24-8C-EV	2	3/8
		1	Raycap	DC6-48-60-18-8F		
		1	Site Pro 1	HRK12 Support Rail Kit		
		1	--	Platform Mount [LP 712-1]		

**Table 2 - Other Considered Equipment**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
116.0	117.0	3	Alcatel Lucent	800MHZ 2X50W RRH w/Filter	--	--
	116.0	1	--	Pipe Mount [PM 601-3]		
	113.0	3	Alcatel Lucent	PCS 1900MHZ 4X45W-65MHZ		
114.0	116.0	1	Andrew	VHLP1-23	4	1-1/4
		3	Alcatel Lucent	TD-RRH8X20-25		
		1	RFS Celwave	APXV9ERR18-C-A20		
		2	RFS Celwave	APXVSPP18-C-A20		
		3	RFS Celwave	APXVTM14-C-120		
	1	Samsung Telecom.	WIMAX DAP HEAD			
114.0	1	--	Platform Mount [LP 502-1]	1	1/2	

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	
108.0	108.0	3	Commscope	SDX1926Q-43	3 6	1-5/8 7/8	
		3	Ericsson	AIR 32 B2A/B66AA			
		3	Ericsson	AIR6449 B41_T-MOBILE			
		3	Ericsson	KRY 112 144/1			
		3	Ericsson	Radio 4449 B71 B85A_T-Mobile			
		3	Ericsson	RRUS 4415 B25			
		3	RFS Celwave	APXVAARR24_43-U-NA20			
		1	Site Pro 1	RMQP-496-HK Platform Mount			
85.0	90.0	6	Commscope	NHH-65B-R2B	7 1	1-5/8 1-1/2	
		1	Raycap	RVZDC-6627-PF-48			
		3	Samsung Telecom.	MT6407-77A			
		3	Samsung Telecom.	RFV01U-D1A			
		3	Samsung Telecom.	RFV01U-D2A			
		1	Antel	BXA-70040-6CF-EDIN-2			
		2	Antel	BXA-70063-6CF-2			
	1	RFS Celwave	DB-B1-6C-12AB-0Z				
	85.0	85.0	1	--			36" Long P2STD Mount Pipe
			3	--			72" Long P2.5 STD Mount Pipe
			1	VZWSMART			PLK5 Kicker Kit
			1	VZWSMART			PLK1 Support Rail Kit
			1	--			Platform Mount [LP 303-1]
80.0	81.0	1	Lucent	KS24019-L112A	1	1/2	
	80.0	1	--	Side Arm Mount [SO 701-1]			
62.0	62.0	1	Commscope	MC-PK8-DSH	1	1-1/2	
		3	Fujitsu	TA08025-B604			
		3	Fujitsu	TA08025-B605			
		3	JMA Wireless	MX08FRO665-21			
		1	Raycap	RDIDC-9181-PF-48			

### 3) ANALYSIS PROCEDURE

**Table 3 - Documents Provided**

Document	Reference	Source
Tower Manufacturer Drawing	5875885	CCI Sites
Mount Modification Report	9970790	CCI Sites
Tower Modification Drawing	2268906	CCI Sites
Tower Modification Drawing	3259703	CCI Sites
Post Modification Inspection	3684848	CCI Sites
Tower Modification Drawing	4858411	CCI Sites
Post Modification Inspection	5407775	CCI Sites
Tower Modification Drawing	5371260	CCI Sites
Post Modification Inspection	5596857	CCI Sites

Document	Reference	Source
Tower Modification Drawing	5907683	CCI Sites
Post Modification Inspection	6131239	CCI Sites
Foundation Drawing	1947809	CCI Sites
Geotech Report	2192549	CCI Sites
Crown CAD Package	Date: 09/04/2021	CCI Sites

### 3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

### 3.2) Assumptions

- 1) The tower and structures were maintained in accordance with the - TIA-222 standard.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the tower.

## 4) ANALYSIS RESULTS

**Table 4 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	118 - 113	Pole	P24x0.25	1	-3.072	--	2.3	Pass
L2	113 - 108	Pole	P24x0.25	2	-3.462	--	6.7	Pass
L3	108 - 103	Pole	P24x0.25	3	-8.577	--	17.0	Pass
L4	103 - 98	Pole	P24x0.25	4	-9.303	--	27.1	Pass
L5	98 - 93	Pole	P24x0.25	5	-13.398	--	46.1	Pass
L6	93 - 90	Pole	P24x0.25	6	-13.722	--	56.0	Pass
L7	90 - 85	Pole	P24x0.375	7	-14.525	--	46.7	Pass
L8	85 - 80	Pole	P24x0.375	8	-19.007	--	63.2	Pass
L9	80 - 76.5	Pole	P24x0.375	9	-19.679	--	73.3	Pass
L10	76.5 - 76.25	Pole + Reinf.	P24x0.5875	10	-19.745	--	53.2	Pass
L11	76.25 - 74	Pole + Reinf.	P24x0.5875	11	-20.227	--	58.0	Pass
L12	74 - 73.75	Pole + Reinf.	P24x0.9	12	-20.308	--	58.1	Pass
L13	73.75 - 68.75	Pole + Reinf.	P24x0.9	13	-21.782	--	68.9	Pass
L14	68.75 - 68.5	Pole + Reinf.	P24x0.8	14	-21.855	--	53.3	Pass
L15	68.5 - 68.25	Pole + Reinf.	P24x0.575	15	-21.910	--	70.8	Pass
L16	68.25 - 64.5	Pole + Reinf.	P24x0.575	16	-22.740	--	79.2	Pass
L17	64.5 - 64.25	Pole + Reinf.	P24x1.05	17	-22.837	--	69.2	Pass
L18	64.25 - 63	Pole + Reinf.	P24x1.05	18	-23.250	--	71.7	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L19	63 - 62.75	Pole + Reinf.	P24x1	19	-23.339	--	74.5	Pass
L20	62.75 - 60	Pole + Reinf.	P24x1	20	-27.355	--	80.9	Pass
L21	60 - 59.75	Pole + Reinf.	P30x0.675	21	-27.610	--	50.8	Pass
L22	59.75 - 54.75	Pole + Reinf.	P30x0.675	22	-29.171	--	58.5	Pass
L23	54.75 - 49.75	Pole + Reinf.	P30x0.675	23	-30.774	--	66.4	Pass
L24	49.75 - 49.08	Pole + Reinf.	P30x0.675	24	-30.993	--	67.5	Pass
L25	49.08 - 48.83	Pole + Reinf.	P30x0.875	25	-31.083	--	62.3	Pass
L26	48.83 - 43.83	Pole + Reinf.	P30x0.875	26	-32.799	--	69.8	Pass
L27	43.83 - 42	Pole + Reinf.	P30x0.875	27	-33.425	--	72.6	Pass
L28	42 - 41.75	Pole + Reinf.	P30x1	28	-33.536	--	64.2	Pass
L29	41.75 - 36.75	Pole + Reinf.	P30x1	29	-35.444	--	70.9	Pass
L30	36.75 - 34.5	Pole + Reinf.	P30x1	30	-36.308	--	74.0	Pass
L31	34.5 - 34.25	Pole + Reinf.	P30x1.05	31	-36.422	--	66.0	Pass
L32	34.25 - 34	Pole + Reinf.	P30x1.05	32	-36.528	--	66.3	Pass
L33	34 - 33.75	Pole + Reinf.	P30x0.95	33	-36.624	--	74.7	Pass
L34	33.75 - 30	Pole + Reinf.	P30x0.95	34	-38.069	--	79.9	Pass
L35	30 - 29.75	Pole + Reinf.	P36x0.5875	35	-38.387	--	75.8	Pass
L36	29.75 - 28.5	Pole + Reinf.	P36x0.5875	36	-38.820	--	77.5	Pass
L37	28.5 - 28.25	Pole + Reinf.	P36x0.6125	37	-38.929	--	77.6	Pass
L38	28.25 - 27.94	Pole + Reinf.	P36x0.8375	38	-39.065	--	61.7	Pass
L39	27.94 - 27.69	Pole + Reinf.	P36x0.8375	39	-39.175	--	62.0	Pass
L40	27.69 - 23	Pole + Reinf.	P36x0.8375	40	-41.233	--	67.1	Pass
L41	23 - 22.75	Pole + Reinf.	P36x0.9625	41	-41.358	--	62.9	Pass
L42	22.75 - 21.5	Pole + Reinf.	P36x0.9625	42	-41.930	--	64.2	Pass
L43	21.5 - 21.25	Pole + Reinf.	P36x0.875	43	-42.045	--	69.4	Pass
L44	21.25 - 21	Pole + Reinf.	P36x0.875	44	-42.153	--	69.7	Pass
L45	21 - 20.75	Pole + Reinf.	P36x0.8	45	-42.255	--	77.7	Pass
L46	20.75 - 19	Pole + Reinf.	P36x0.8	46	-42.963	--	79.9	Pass
L47	19 - 18.75	Pole + Reinf.	P36x0.925	47	-43.096	--	70.7	Pass
L48	18.75 - 18.5	Pole + Reinf.	P36x0.925	48	-43.212	--	70.9	Pass
L49	18.5 - 18.25	Pole + Reinf.	P36x0.9	49	-43.326	--	72.9	Pass
L50	18.25 - 13.25	Pole + Reinf.	P36x0.9	50	-45.609	--	78.6	Pass
L51	13.25 - 12.7	Pole + Reinf.	P36x0.9	51	-45.866	--	79.2	Pass
L52	12.7 - 12.35	Pole + Reinf.	P36x0.8875	52	-46.041	--	72.3	Pass
L53	12.35 - 12.13	Pole + Reinf.	P36x0.8875	53	-46.154	--	72.5	Pass
L54	12.13 - 12	Pole + Reinf.	P36x0.8875	54	-46.217	--	72.6	Pass
L55	12 - 11.75	Pole + Reinf.	P36x1.075	55	-46.344	--	63.6	Pass
L56	11.75 - 8.38	Pole + Reinf.	P36x1.075	56	-48.054	--	66.7	Pass
L57	8.38 - 8.13	Pole + Reinf.	P36x1.175	57	-48.187	--	71.4	Pass
L58	8.13 - 7.75	Pole + Reinf.	P36x1.175	58	-48.373	--	71.8	Pass
L59	7.75 - 7.5	Pole + Reinf.	P36x1.075	59	-48.500	--	68.0	Pass
L60	7.5 - 7.25	Pole + Reinf.	P36x1.1	60	-48.630	--	67.6	Pass
L61	7.25 - 4	Pole + Reinf.	P36x1.1	61	-50.319	--	70.6	Pass
L62	4 - 3.73	Pole + Reinf.	P36x1.475	62	-50.473	--	54.5	Pass
L63	3.73 - 3.58	Pole + Reinf.	P36x1.475	63	-50.555	--	54.6	Pass
L64	3.58 - 3	Pole + Reinf.	P36x1.475	64	-50.869	--	55.0	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail	
L65	3 - 2.75	Pole + Reinf.	P36x1.475	65	-51.008	--	55.2	Pass	
L66	2.75 - 1.9	Pole + Reinf.	P36x1.1	66	-51.400	--	72.4	Pass	
L67	1.9 - 1.65	Pole + Reinf.	P36x1.1	67	-51.524	--	72.7	Pass	
L68	1.65 - 0	Pole + Reinf.	P36x1.1	68	-52.284	--	74.2	Pass	
							Summary		
							Pole	77.6	Pass
							Reinforcement	80.9	Pass
							Overall	80.9	Pass

**Table 5 - Tower Component Stresses vs. Capacity**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Connection	90	10.1	Pass
1	Bridge Stiffeners		20.1	Pass
1	Flange Connection	60	36.0	Pass
1	Bridge Stiffeners		38.9	Pass
1	Flange Connection	30	52.8	Pass
1	Bridge Stiffeners		51.9	Pass
1	Anchor Rods	Base	87.8	Pass
1	Anchor Rod Bracket	Base	86.8	Pass
1	Base Plate	Base	57.6	Pass
1	Base Foundation (Structure)	Base	71.2	Pass
1	Base Foundation (Soil Interaction)	Base	99.7	Pass

<b>Structure Rating (max from all components) =</b>	<b>99.7%</b>
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Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) Rating per TIA-222-H Section 15.5.

#### 4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.