



1 INDUSTRIAL AVE,
SUITE 3
MORRIS PLAZA NJ 07430
PHONE: 201.684.0055
FAX: 201.684.0066

May 20th, 2022

Members of the Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
93 Old Amity Road / 9 Meyers Road, Bethany, CT 06524
Latitude: 41.40475833
Longitude: -73.99998333
T-Mobile Site#: CTNH217A - Anchor

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 222-foot level of the existing 343-foot self-support tower at 9 Meyers Road, Bethany, CT. The 343-foot self-support tower and property are owned and operated by American Tower. T-Mobile now intends to remove and replace (3) antennas at the 222-foot level of the tower. These antennas will support 5G services.

Planned Modifications:

Tower:

Install New:

- (3) Ericsson AIR 6419 B41 Antennas
- (3) Radio 4460 B25 B66
- (3) 6x24 Hybrid Cables

To Be Removed:

- (3) APX16DWV Antennas
- (3) ETT19V2A12UB
- (6) 1 5/8" Coax

To Remain:

- (3) APXVAARR24 Antennas
- (3) Radio 4449
- (3) 6x12 Hybrid Cables

Ground:

Install (1) 6160 Power Enclosure

Install (1) B160 Battery Cabinet

Remove (1) 3102 MUAC Cabinet

This facility has prior approvals on file for modification by the Siting Council going back as far as September 15, 1993, but no records of the original tower construction can be found. The prior approvals on file with the Council show no record of conditions that would restrict this exempt modification request.

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 to First Selectman Paula Cofrancesco, Elected Official, and Lina Frazer, Zoning Enforcement Officer, as well as the tower and property owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications 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 Communications 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, T-Mobile respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Eric Breun

Transcend Wireless

Cell: 201-658-7728

Email: ebreun@transcendwireless.com

Attachments

cc: Paula Cofrancesco - First Selectman of Bethany

Lina Frazer - Zoning Enforcement Officer

American Tower - Tower/Property Owner

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
PAULA COFRANCESCO
40 PECK ROAD
BETHANY CT 06524

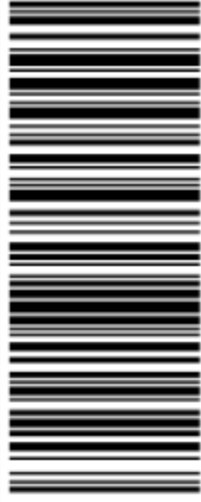


CT 067 9-04



UPS GROUND

TRACKING #: 1Z V25 742 03 9746 8281



BILLING: P/P

Reference #1: CTNH217A

XOL 22.04.20 NV45 21.0A 05/2022*



TM

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
ZEO
LINA FRAZER
40 PECK ROAD
BETHANY CT 06524



CT 067 9-04



UPS GROUND

TRACKING #: 1Z V25 742 43 9589 8272



BILLING: P/P

Reference #1: CTNH217A

XOL 22.04.20 NV45 21.0A 05/2022*



TM

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
CONTACTS MANAGEMENT
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN MA 01801



MA 018 9-04



UPS GROUND

TRACKING #: 1Z V25 742 03 9905 8292



BILLING: P/P

Reference #1: CTNH217A

XOL 22-04-20 NV45 21.0A 05/2022*



TM

Hello, your package has been delivered.

Delivery Date: Thursday, 05/19/2022

Delivery Time: 11:20 AM

Signed by: BRINTON

TRANSCEND WIRELESS

Tracking Number: [1ZV257420397468281](#)

Ship To: PAULA COFRANCESCO
40 PECK ROAD
BETHANY, CT 06524
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 1.0 LBS

Reference Number: CTNH217A

Hello, your package has been delivered.

Delivery Date: Thursday, 05/19/2022

Delivery Time: 11:20 AM

Signed by: BRINTON

TRANSCEND WIRELESS

Tracking Number: [1ZV257424395898272](#)

Ship To: LINA FRAZER
40 PECK ROAD
BETHANY, CT 06524
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 1.0 LBS

Reference Number: CTNH217A

Hello, your package has been delivered.

Delivery Date: Thursday, 05/19/2022

Delivery Time: 12:17 PM

Left At: INSIDE DELIV

Signed by: ID Verified

TRANSCEND WIRELESS

Tracking Number:	<u>1ZV257420399058292</u>
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CTNH217A

Parcel Information					
Location:	9 MEYERS RD	Property Use:	Industrial	Primary Use:	Light Industrial
Unique ID:	00002800	Map Block Lot:	118/51C	Acres:	9.20
490 Acres:	0.00	Zone:	B&I	Volume / Page:	0000/0000
Developers Map / Lot:		Census:			
Location:	9 MEYERS RD	Property Use:	Industrial	Primary Use:	Light Industrial
Unique ID:	00002800	Map Block Lot:	118/51C	Acres:	9.20
490 Acres:	0.00	Zone:	B&I	Volume / Page:	0000/0000
Developers Map / Lot:		Census:			

Value Information		
	Appraised Value	Assessed Value
Land	479,000	335,300
Buildings	112,419	78,690
Detached Outbuildings	14,237	9,970
Total	605,656	423,960

Owner's Information
Owner's Data
AMERICAN TOWERS RE: SITE # 88008 STE 205 P O BOX 723597 ATLANTA GA 31139



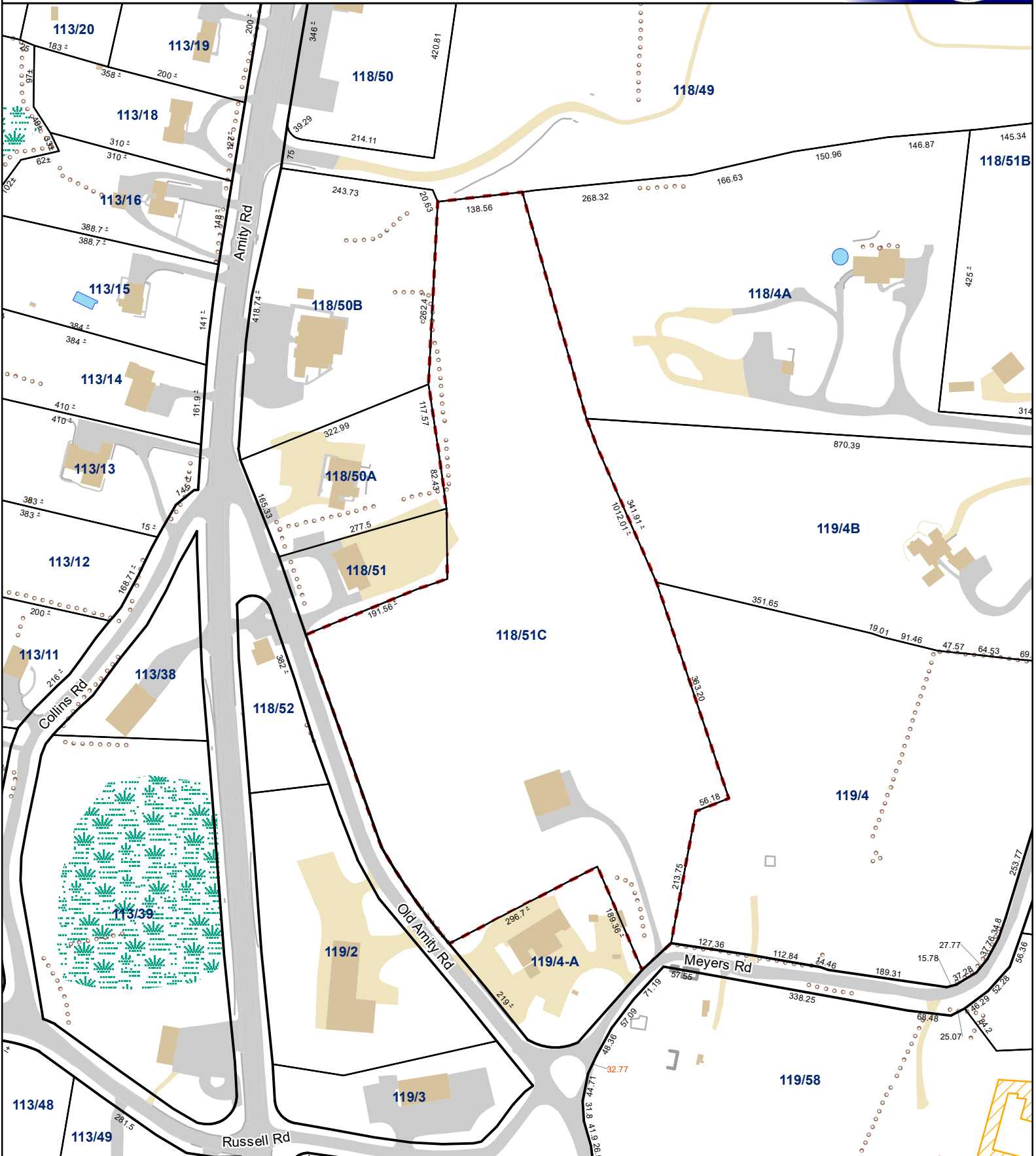
Building 1					
Category:	Industrial	Use:	Light Industrial	Stories:	1.00
Above Grade:	3,136	Below Grade:	0	Below Grade Finish:	0
Construction:	Average	Year Built:	1967	Heating:	FHA
Fuel:	Oil	Cooling Percent:	0%	Siding:	Pre-Cast Concrete
Roof Material:		Beds/Units:	0		

Detached Outbuildings				
Type:	Year Built:	Length:	Width:	Area:
Fencing	1967			216
Paving	1967			1,100
Building Utility	1967			360

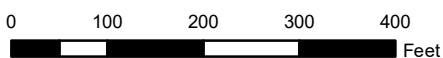
Owner History - Sales					
Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
AMERICAN TOWERS INC	0124	0716	02/16/2000		\$6,222,480
AMERICAN TEL & TEL CO	0043	0554	08/10/1966		\$0

Town of Bethany, Connecticut Assessment Parcel Map

Parcel: 00002800
Address: 9 MEYERS RD



Approximate Scale: 1 inch = 200 feet



Map Produced: Jul 2020

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The Town of Bethany and its mapping contractors assume no legal responsibility for the information contained herein.

From: Isabel Kearns <ikearns@bethany-ct.com>
Sent: Monday, March 23, 2020 9:53 AM
To: ejamieson@transcendwireless.com
Subject: 93 Old Amity Road

Elizabeth: I am sorry to say, we have nothing in the file about the construction of the tower. I am sorry.

Isabel Kearns

Inland Wetlands & Zoning

Enforcement Officer

Town of Bethany

40 Peck Road

Bethany, CT 06524

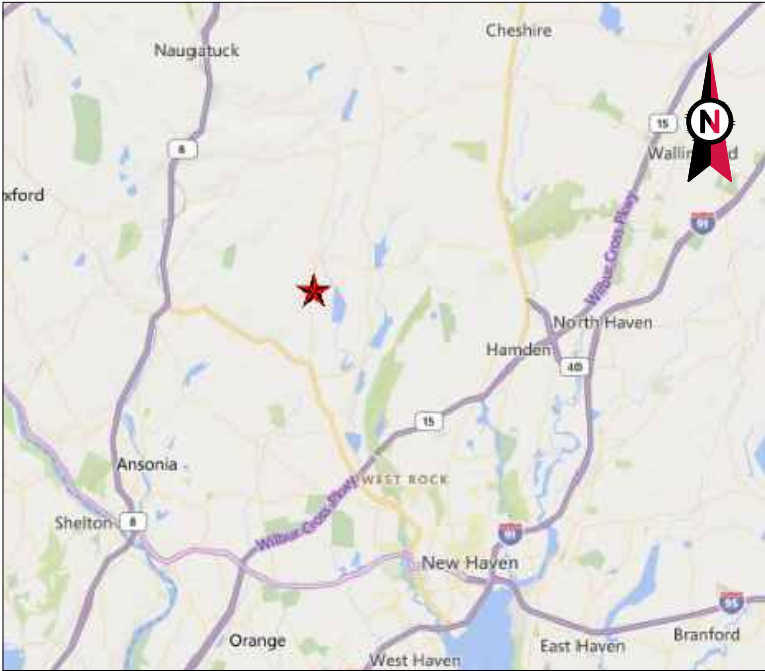
(203) 393-2100 X1135 (Office)

(203) 410-5909 (Cell)

(203) 393-0828 (Fax)

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VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: BETHANY CT
ATC SITE NUMBER: 88008
T-MOBILE SITE NAME: CTNH217/ATC-BETHANY
T-MOBILE SITE NUMBER: CTNH217A
SITE ADDRESS: 9 MEYERS ROAD
BETHANY, CT 06524



LOCATION MAP

BIRD WATCH SITE:
PLEASE CONTACT BIRD.WATCH@AMERICANTOWER.COM OR
AMERICAN TOWER NOC AT 877-518-6937 FOR ASSISTANCE

T-MOBILE ANCHOR AMENDMENT PLAN
67D5D998E ODE+6160 CONFIGURATION

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	SITE ADDRESS: 9 MEYERS ROAD BETHANY, CT 06524 COUNTY: NEW HAVEN GEOGRAPHIC COORDINATES: LATITUDE: 41.40475833 LONGITUDE: -72.99998333 GROUND ELEVATION: 620' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (3) ANTENNA(s), (3) TTA(s), AND (6) 1 5/8" COAX CABLE(s) INSTALL (3) ANTENNA(s), (3) RRU(s), AND (3) ERICSSON HYBRID TRUNK 6/24 4AWG CABLE(s) EXISTING (3) ANTENNA(s), (3) RRU(s), AND (3) ERICSSON 6X12 HCS CABLE(s) TO REMAIN <u>GROUND WORK:</u> REMOVE (1) 6102 MUAC CABINET INSTALL (1) ENCLOSURE 6160 AND (1) B160 BATTERY CABINET EXISTING (1) RBS 6201 ODE CABINET TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
		G-001	TITLE SHEET	0	05/04/22	TC	
		G-002	GENERAL NOTES	0	05/04/22	TC	
		C-101	DETAILED SITE PLAN	0	05/04/22	TC	
		C-102	DETAILED EQUIPMENT PLAN	0	05/04/22	TC	
		C-201	TOWER ELEVATION	0	05/04/22	TC	
		C-401	ANTENNA INFORMATION & SCHEDULE	0	05/04/22	TC	
		C-501	CONSTRUCTION DETAILS	0	05/04/22	TC	
		C-502	CONSTRUCTION DETAILS	0	05/04/22	TC	
		E-501	GROUNDING DETAILS	0	05/04/22	TC	
	E-601	ELECTRICAL SCHEMATIC	0	05/04/22	TC		
	R-601	SUPPLEMENTAL					
	R-602	SUPPLEMENTAL					
	R-603	SUPPLEMENTAL					
	R-604	SUPPLEMENTAL					
	R-605	SUPPLEMENTAL					
	R-606	SUPPLEMENTAL					
	R-607	SUPPLEMENTAL					
	R-608	SUPPLEMENTAL					
	R-609	SUPPLEMENTAL					



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	05/04/22

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

T-MOBILE SITE NAME:
CTNH217/ATC-BETHANY

SITE ADDRESS:
9 MEYERS ROAD
BETHANY, CT 06524



Authorized by "EOR"
05-May-2022 03:24:54


DATE DRAWN:	05/04/22
ATC JOB NO:	14089639_G3
CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

TITLE SHEET	
SHEET NUMBER: G-001	REVISION: 0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
- A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)

B. AC/TELCO INTERFACE BOX (PPC)

C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)

D. TOWERS, MONOPOLES

E. TOWER LIGHTING

F. GENERATORS & LIQUID PROPANE TANK

G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING

H. ANTENNAS (INSTALLED BY OTHERS)

I. TRANSMISSION LINE

J. TRANSMISSION LINE JUMPERS

K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS

L. TRANSMISSION LINE GROUND KITS

M. HANGERS

N. HOISTING GRIPS

O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.
- SPECIAL CONSTRUCTION
- ANTENNA INSTALLATION NOTES:
1. WORK INCLUDED:

A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.

B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.

C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.

D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.

E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF

COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
△0	FOR CONSTRUCTION	TC	05/04/22
△1			
△2			
△3			
△4			

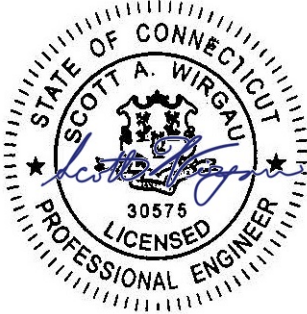
ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

T-MOBILE SITE NAME:
CTNH217/ATC-BETHANY

SITE ADDRESS:
9 MEYERS ROAD
BETHANY, CT 06524

SEAL:



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05-May-2022 09:24:54

DATE DRAWN:	05/04/22
ATC JOB NO:	14089639_G3
CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

GENERAL NOTES

SHEET NUMBER:

G-002

REVISION:

0

SITE PLAN NOTES:

1.

THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2.

ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3.

NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
—	CHAINLINK FENCE

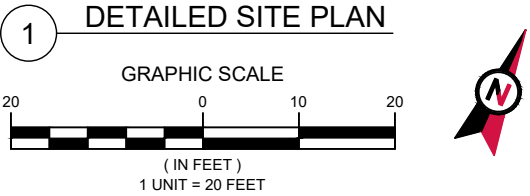
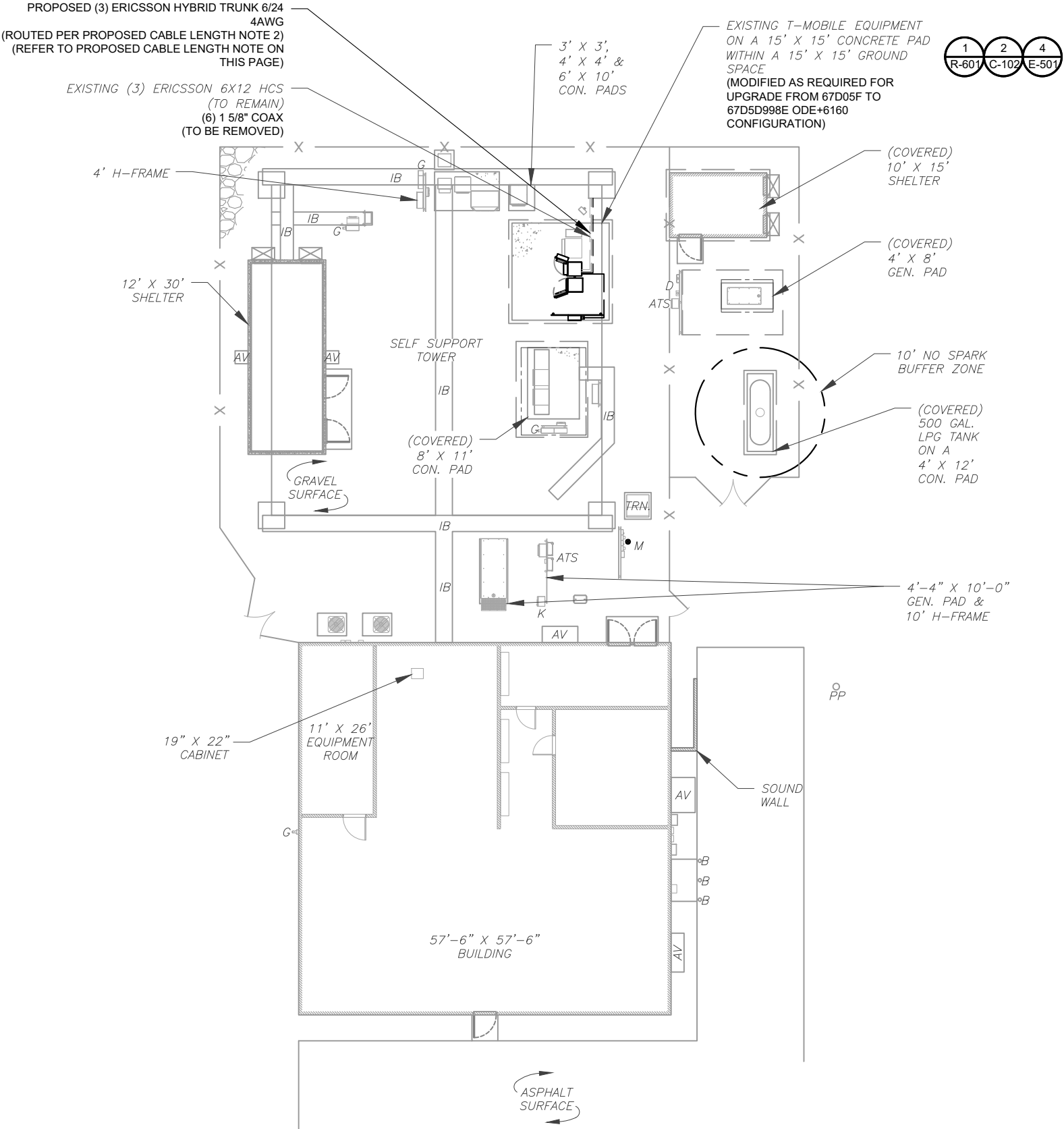
- PROPOSED CABLE LENGTH:

1.

ESTIMATED LENGTH OF PROPOSED CABLE IS **295'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.

2.

ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).





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SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

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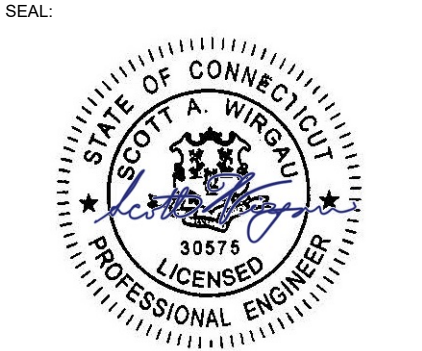
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	05/04/22
1			
2			
3			
4			

ATC SITE NUMBER:
88008

ATC SITE NAME:
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T-MOBILE SITE NAME:
CTNH217/ATC-BETHANY

SITE ADDRESS:
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BETHANY, CT 06524



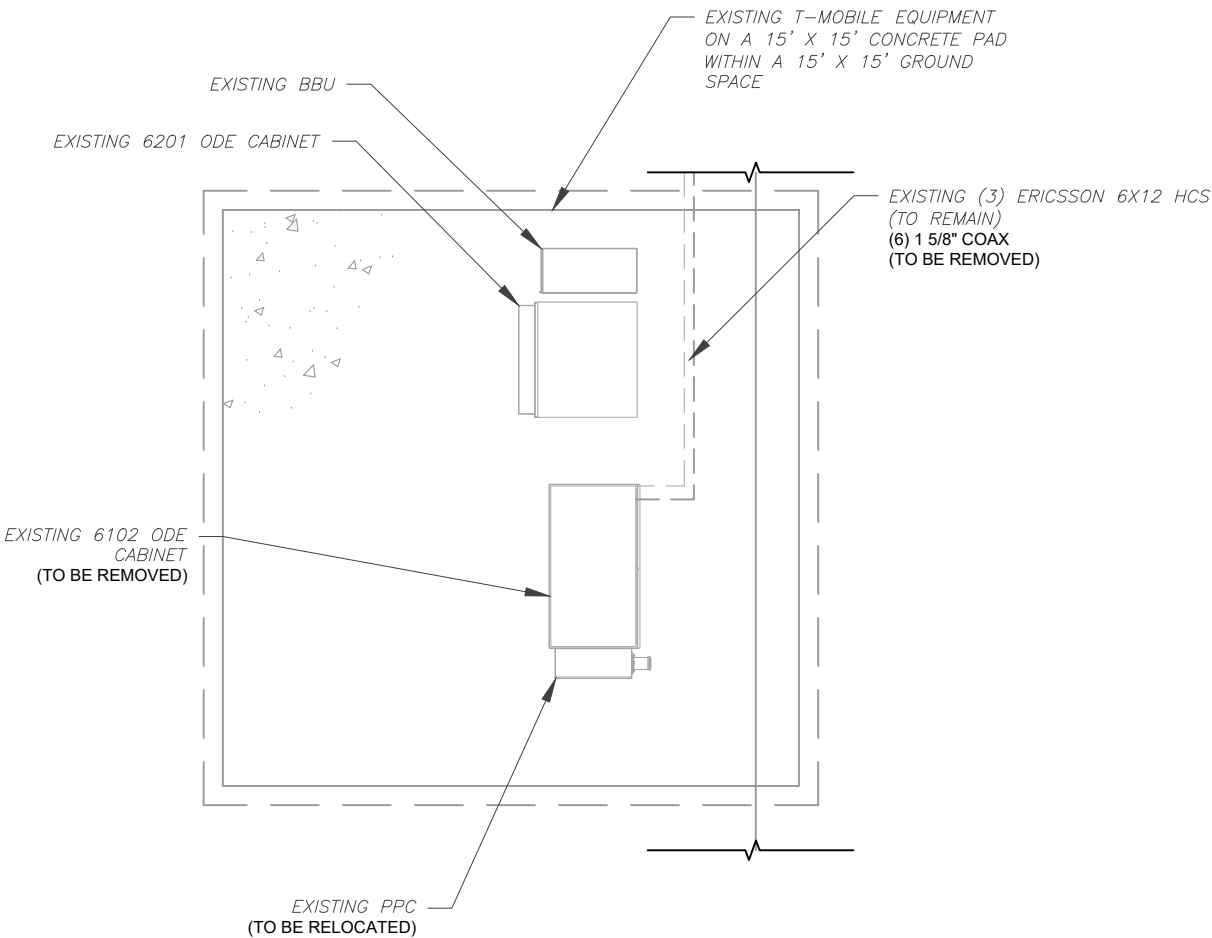
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05-May-2022 03:24:54
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DATE DRAWN:	05/04/22
ATC JOB NO:	14089639_G3
CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

DETAILED SITE PLAN	
SHEET NUMBER: C-101	REVISION: 0

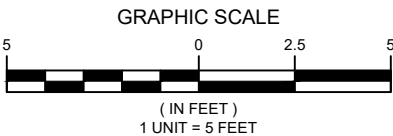
SITE PLAN NOTES:

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
3. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.

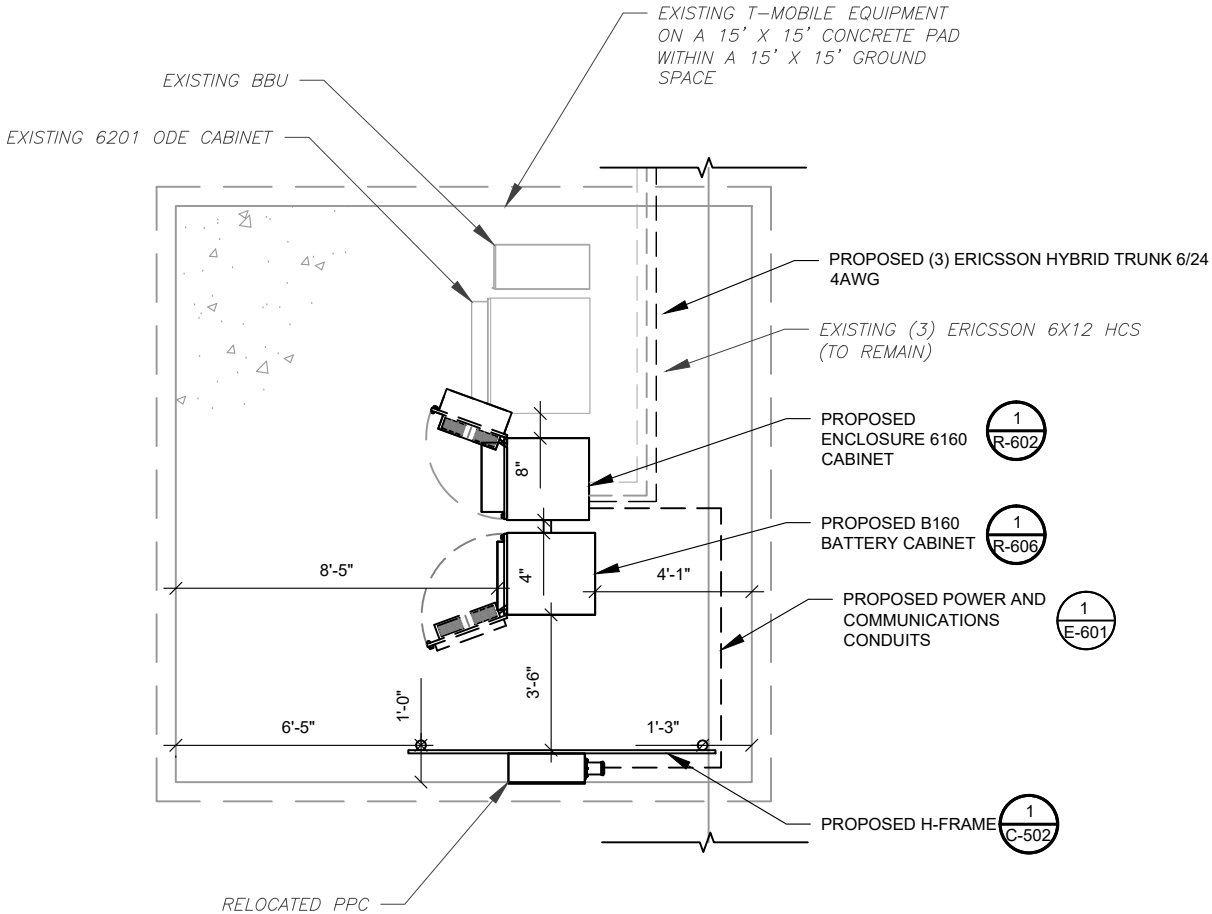


1

EXISTING GROUND EQUIPMENT LAYOUT

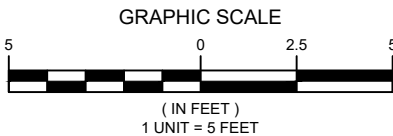


T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS.



2

PROPOSED GROUND EQUIPMENT LAYOUT



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0	FOR CONSTRUCTION	TC	05/04/22
1			
2			
3			
4			

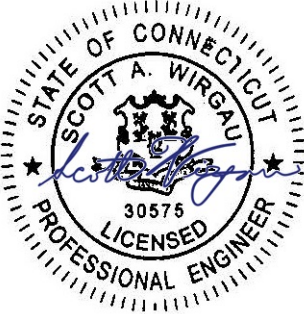
ATC SITE NUMBER:
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ATC SITE NAME:
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BETHANY, CT 06524

SEAL:



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05-May-2022 03:24:54

DATE DRAWN:	05/04/22
ATC JOB NO:	14089639_G3
CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

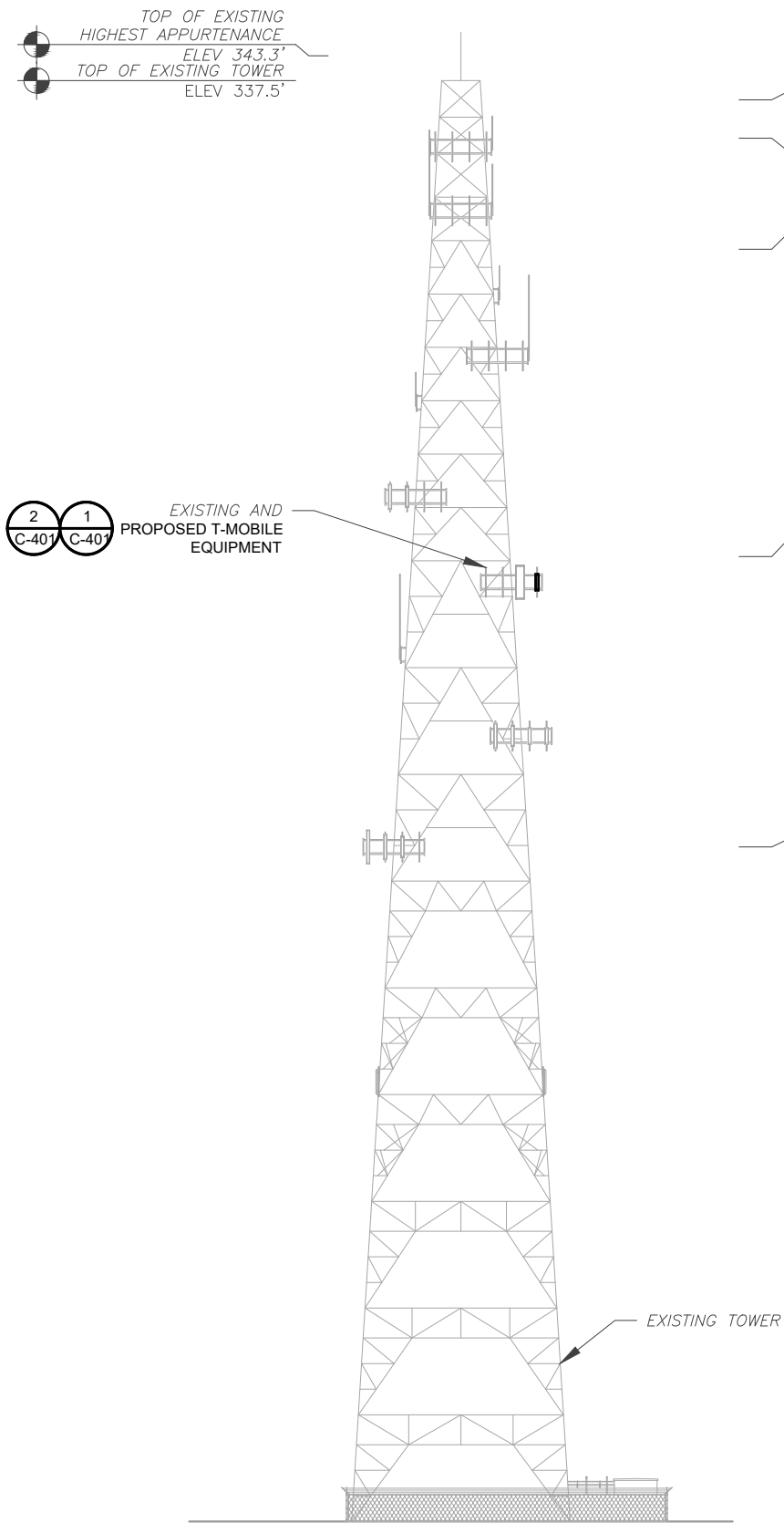
DETAILED EQUIPMENT
PLAN

SHEET NUMBER:

C-102

REVISION:

0



1 TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORP, DATED 04/07/2022, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS. EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.).
 - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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0	FOR CONSTRUCTION	TC	05/04/22

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

T-MOBILE SITE NAME:
CTNH217/ATC-BETHANY

SITE ADDRESS:
9 MEYERS ROAD
BETHANY, CT 06524

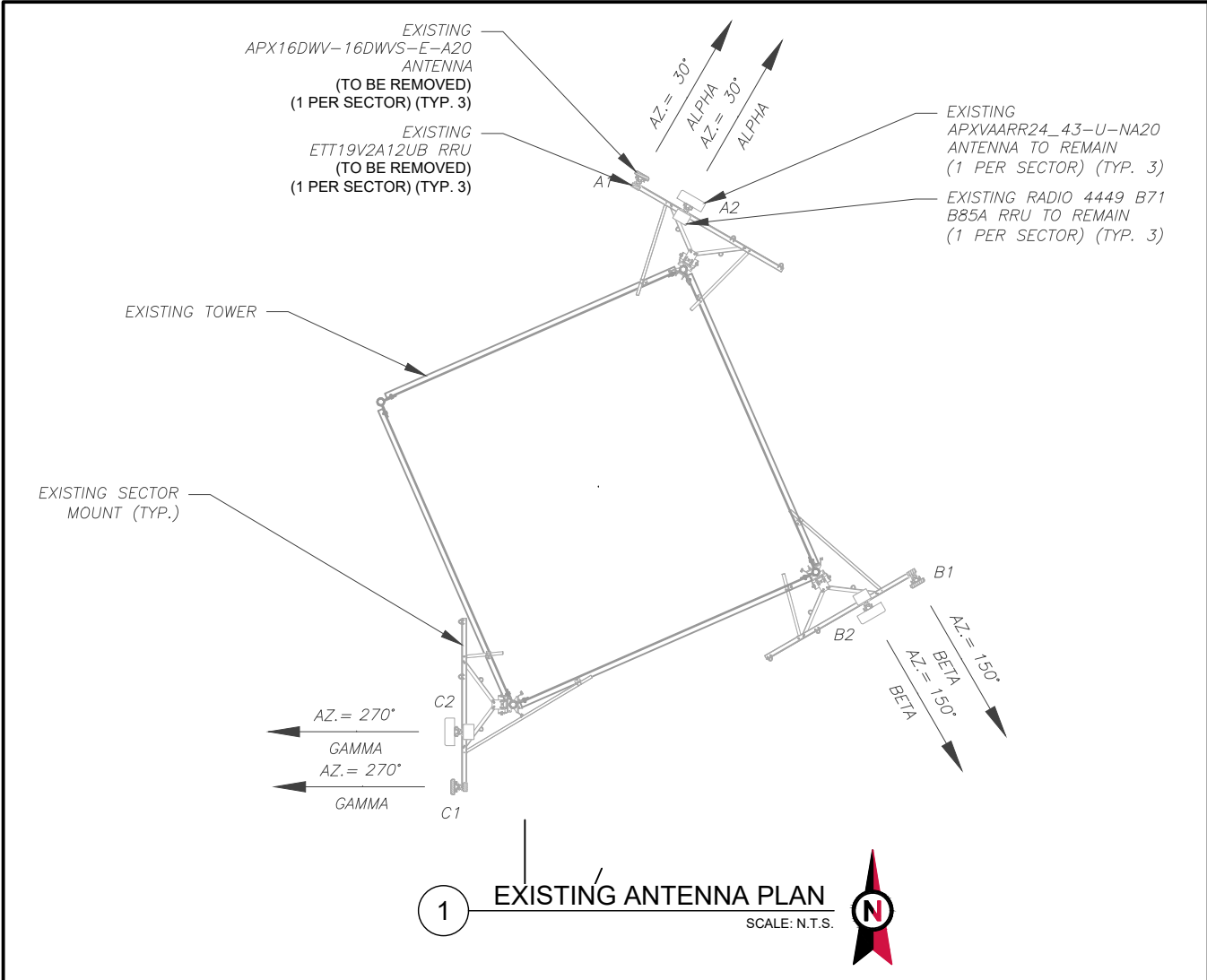


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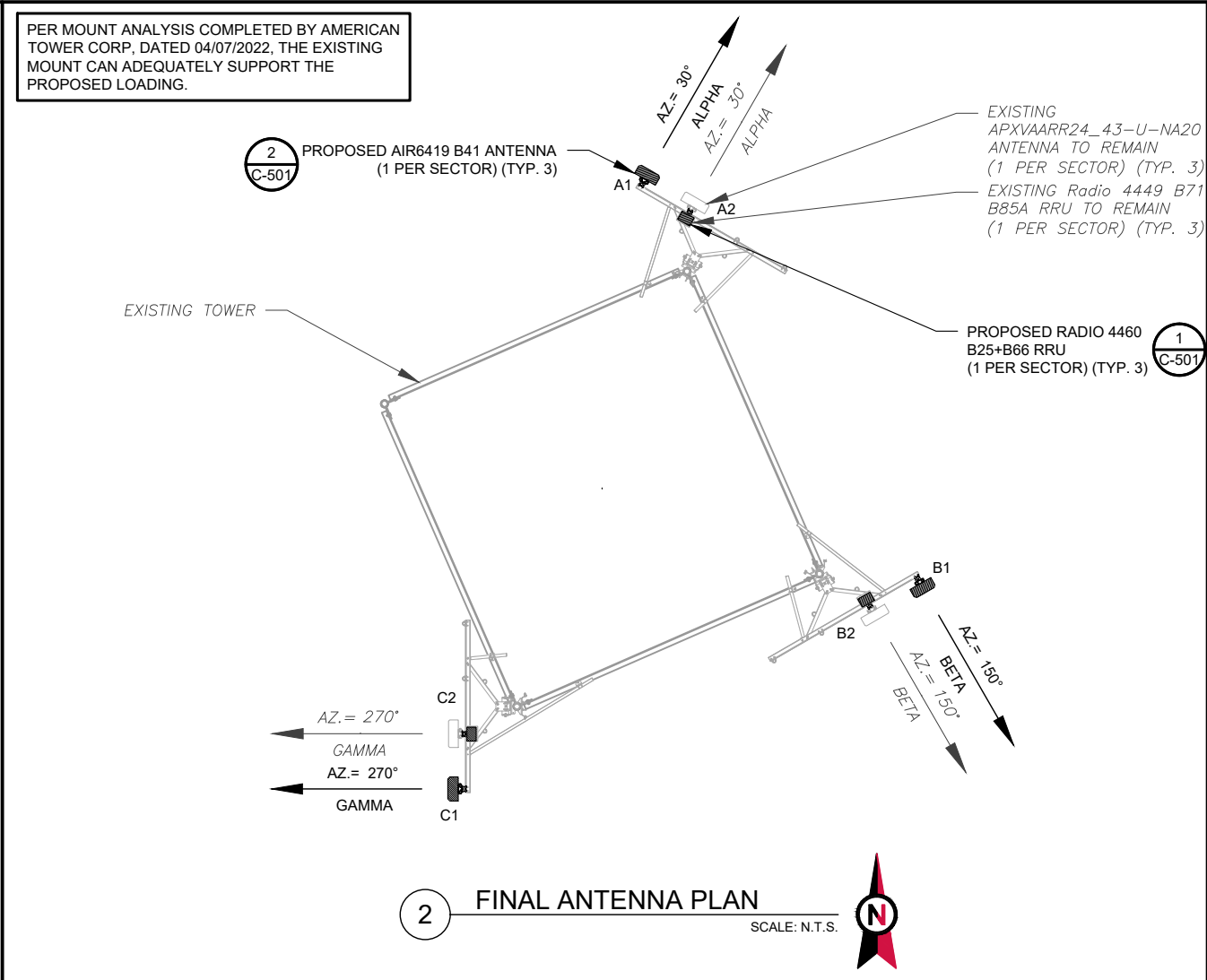
DATE DRAWN:	05/04/22
ATC JOB NO:	14089639_G3
CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

TOWER ELEVATION

SHEET NUMBER: C-201	REVISION: 0
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PER MOUNT ANALYSIS COMPLETED BY AMERICAN
TOWER CORP., DATED 04/07/2022, THE EXISTING
MOUNT CAN ADEQUATELY SUPPORT THE
PROPOSED LOADING.



EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	222'	30°	A1	APX16DWV-16DWVS-E-A20	L2100/G1900	0/2	RMV	ETT19V2A12UB
			A2	APXVAARR24_43-U-NA20	L700/L600/N600	0/2	RMN	RADIO 4449 B71 B85A
BETA	222'	150°	B1	APX16DWV-16DWVS-E-A20	L2100/G1900	0/2	RMV	ETT19V2A12UB
			B2	APXVAARR24_43-U-NA20	L700/L600/N600	0/2	RMN	RADIO 4449 B71 B85A
GAMMA	222'	270°	C1	APX16DWV-16DWVS-E-A20	L2100/G1900	0/2	RMV	ETT19V2A12UB
			C2	APXVAARR24_43-U-NA20	L700/L600/N600	0/2	RMN	RADIO 4449 B71 B85A

- NOTES
1. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
 2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	222'	30°	A1	AIR 6419 B41	L2500/N2500	0	ADD	-	-
			A2	APXVAARR24_43-U-NA20	L700/L600/N600 L2100/L1900/G1900	0	RMN	4460 BAND 2/25 RADIO 4449 B71 B85A	ADD RMN
BETA	222'	150°	B1	AIR 6419 B41	L2500/N2500	0	ADD	-	-
			B2	APXVAARR24_43-U-NA20	L700/L600/N600 L2100/L1900/G1900	0	RMN	4460 BAND 2/25 RADIO 4449 B71 B85A	ADD RMN
GAMMA	222'	270°	C1	AIR 6419 B41	L2500/N2500	0	ADD	-	-
			C2	APXVAARR24_43-U-NA20	L700/L600/N600 L2100/L1900/G1900	0	RMN	4460 BAND 2/25 RADIO 4449 B71 B85A	ADD RMN

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
-	RMN	(3) ERICSSON 6X12 HCS	RMN
-	RMV	(6) 1 5/8" COAX	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
-	RMN	(3) ERICSSON 6X12 HCS	RMN
-	RMV	(3) ERICSSON HYBRID TRUNK 6/24 4AWG	ADD


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T-MOBILE SITE NAME:
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SITE ADDRESS:
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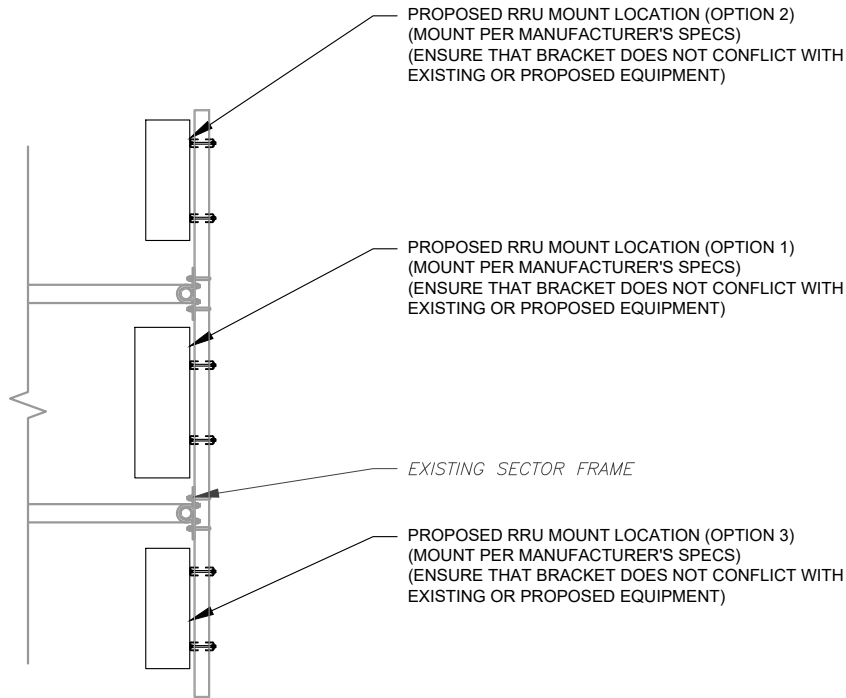
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DATE DRAWN:	05/04/22
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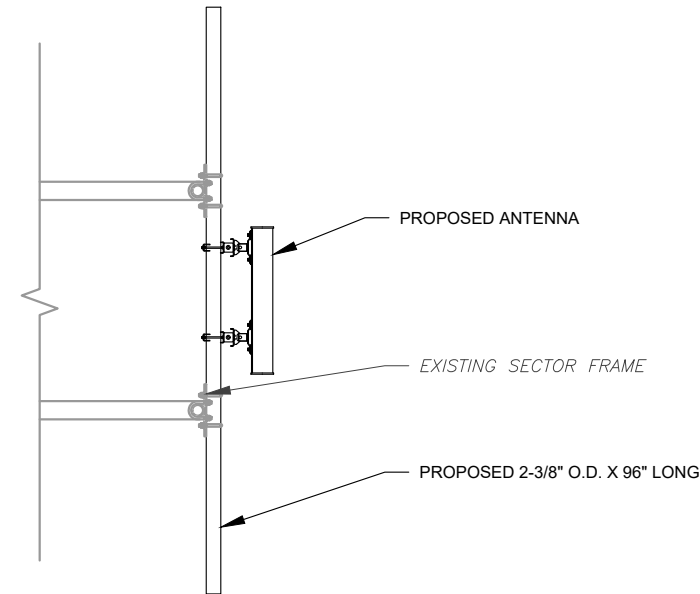
ANTENNA INFORMATION
& SCHEDULE

SHEET NUMBER:
C-401

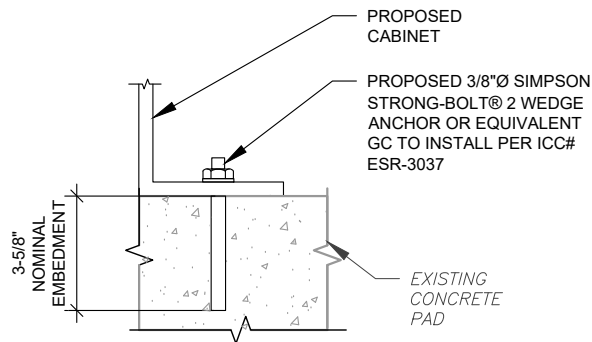
REVISION:
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1 PROPOSED RRU MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



NOTE:

INSTALL SIMPSON STRONG-TIE® STRONG-BOLT® 2 WEDGE ANCHOR(S) STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.STRONGTIE.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

3 CABINET ATTACHMENT DETAIL
SCALE: N.T.S.



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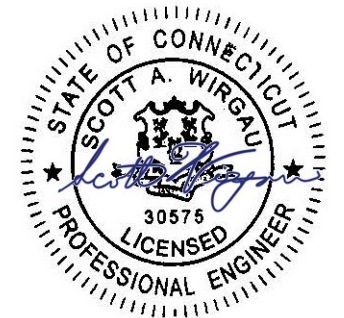
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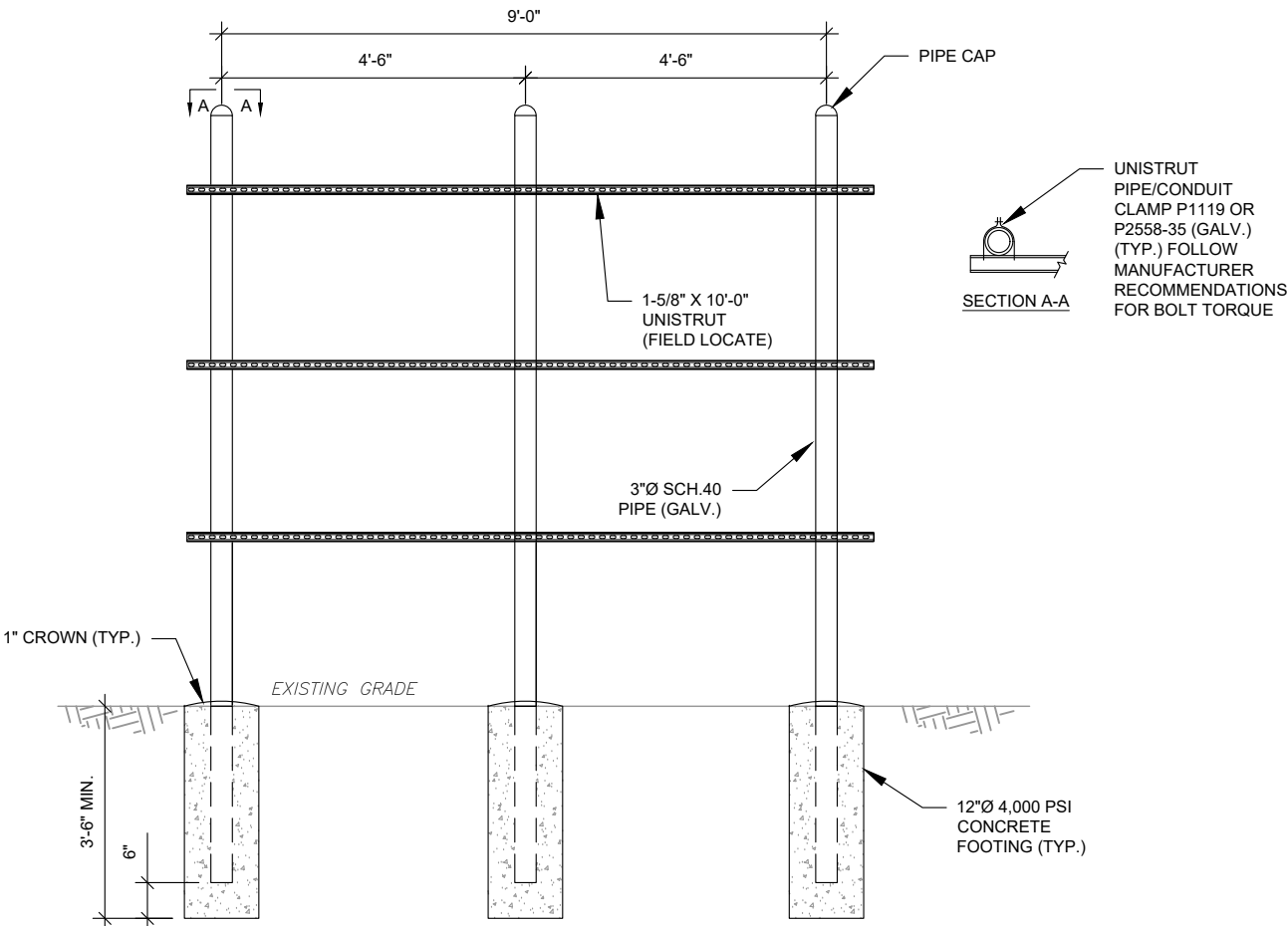
DATE DRAWN:	05/04/22
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CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

CONSTRUCTION
DETAILS

SHEET NUMBER:	REVISION:
C-501	0

H-FRAME NOTES:

- IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
- PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
- SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
- UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
- ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.



1 TYPICAL H-FRAME DETAIL
SCALE: N.T.S.



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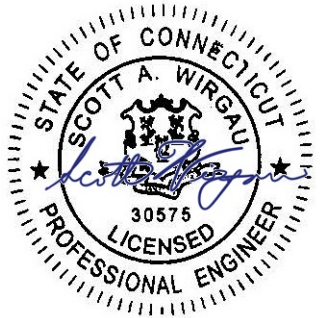
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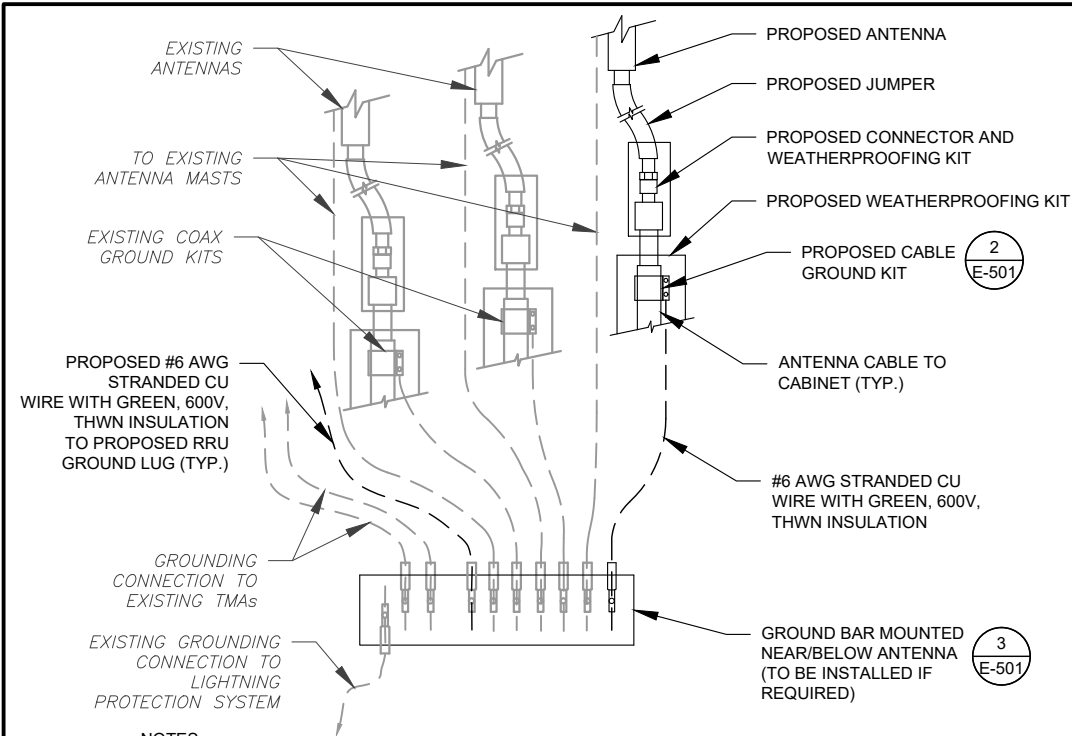


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DETAILS

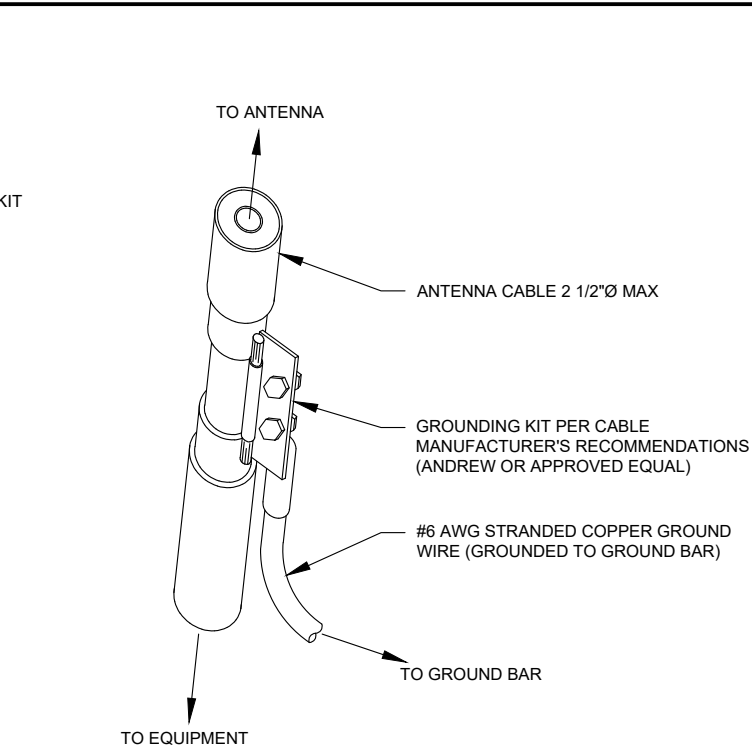
SHEET NUMBER:	REVISION:
C-502	0



NOTES:

- THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
- SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

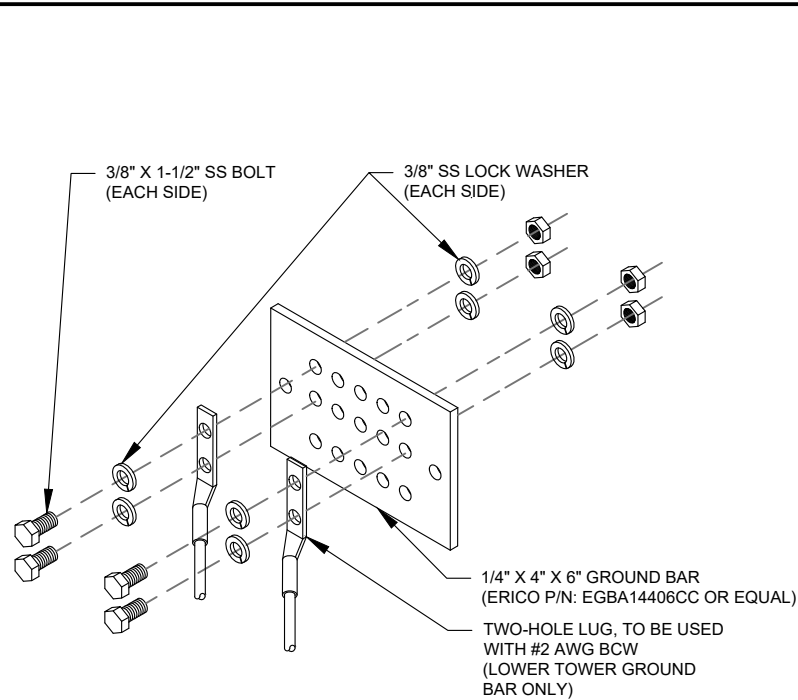
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



GROUND KIT NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

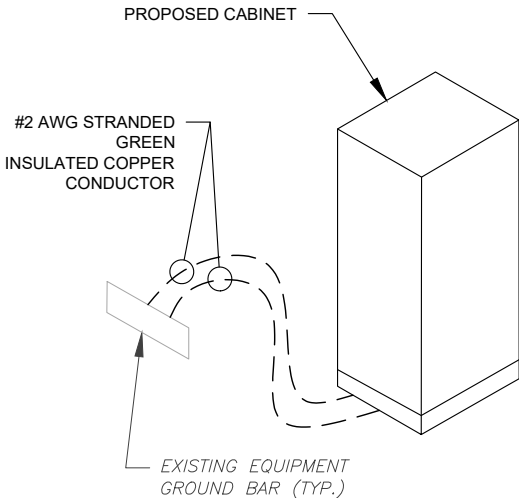
- GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
- GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.

STANDARD CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
RMC (METALLIC)	AC, DC COMM	ABOVE GROUND	ABOVE GROUND PPC TO SSC
PVC	AC POWER	UNDERGROUND	UNDERGROUND PPC TO SSC OR BACKHAUL TRANSPORT HUB TO SSC
LFMC	AC, DC, COMM	MAX 6' PER CONDUIT RUN, ABOVE GROUND ONLY	TIGHT LOCATIONS BETWEEN HUB AND CONDUIT BUT NOT TO BE USED WHERE IT CAN BE STEPPED ON
EMT	INDOOR AC, DC COMM	INDOOR NOT EXPOSED TO THE OUTDOOR ENVIRONMENT (MUST BE DRY)	CIRCUIT PANEL TO JUNCTION BOX
LFNC	GROUND WIRE	CONCEALING AND PROTECTING BTCW RISERS ONLY	GROUND RING TO MGB OR SSC

EXCEPTION CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
EMT (NOT PREFERRED)	OUTDOOR DC, COMM	OUTDOOR WHEN USED WITH WATERTIGHT HUBS ONLY	BETWEEN EQUIPMENT AND BATTERY CABINET OR EQUIPMENT TO EQUIPMENT CABINETS FOR INTER CABINET CONNECTION
RMC NONMETALLIC (ALUMINUM)	OUTDOOR/INDOOR PER NEC GUIDLINES	ABOVE GROUND	MAT BE USED AS A LOWER COST ALTERNATIVE TO METALLIC RMC, MUST MEET OR EXCEED FEDERAL SPEC: WW-C-540C, UL-6A, ANSI C80.5, NEC 344.10 (A) ALLOWS THE USE OF EITHER ALUMINUM OR GALVANIZED FITTINGS

4 CONDUIT USE TABLES



5 CABINET GROUNDING DETAIL
SCALE: N.T.S.

ELECTRICAL NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
- ATC HAS NOT VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW IN CHART.
- FOR SPECIFIC CABINET / ANCILLARY EQUIPMENT WIRING REQUIREMENTS, THE T-MOBILE CONTRACTOR SHOULD REFERENCE DESIGN DOCUMENTS PROVIDED BY T-MOBILE FOR THIS CURRENT PROJECT CONFIGURATION, IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS & NEC STANDARDS & PRACTICES.

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"

6 ELECTRICAL NOTES



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
△	FOR CONSTRUCTION	TC	05/04/22
△			
△			
△			
△			

ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

T-MOBILE SITE NAME:
CTNH217/ATC-BETHANY

SITE ADDRESS:
9 MEYERS ROAD
BETHANY, CT 06524



Authorized by "EOR"
05-May-2022 09:24:56


DATE DRAWN:	05/04/22
ATC JOB NO:	14089639_G3
CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

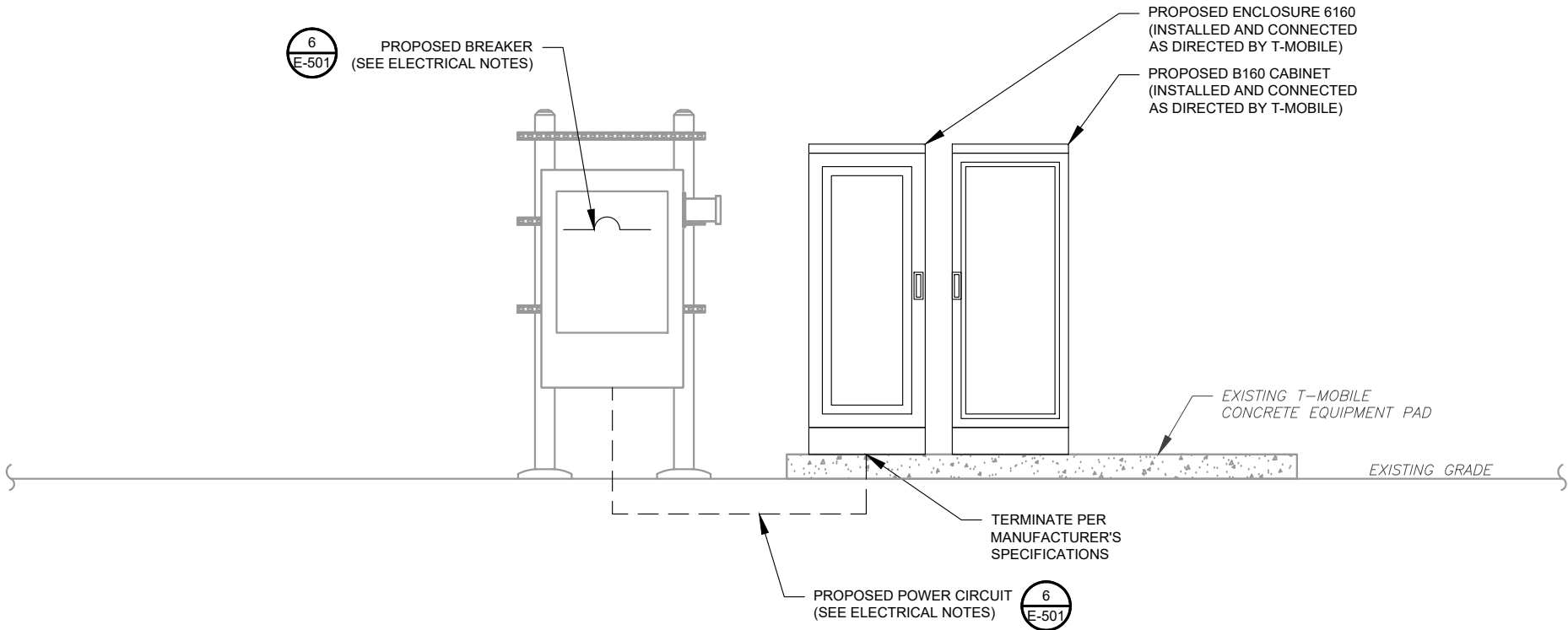
GROUNDING DETAILS

SHEET NUMBER:
E-501

REVISION:
0

ELECTRICAL NOTES:

1. THIS DIAGRAM REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
3. ATC HAS NOT YET VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER.



1 ELECTRICAL SCHEMATIC
SCALE: N.T.S.



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	05/04/22

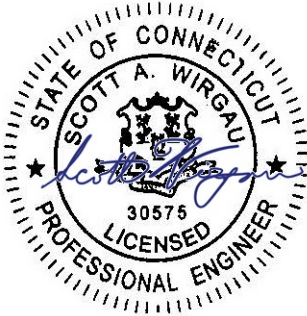
ATC SITE NUMBER:
88008

ATC SITE NAME:
BETHANY CT

T-MOBILE SITE NAME:
CTNH217/ATC-BETHANY

SITE ADDRESS:
9 MEYERS ROAD
BETHANY, CT 06524

SEAL:



Authorized by "EOR"
05-May-2022 09:24:56

DATE DRAWN:	05/04/22
ATC JOB NO:	14089639_G3
CUSTOMER ID:	CTNH217/ATC-BETHANY
CUSTOMER #:	CTNH217A

ELECTRICAL
SCHEMATIC

SHEET NUMBER:	REVISION:
E-601	0

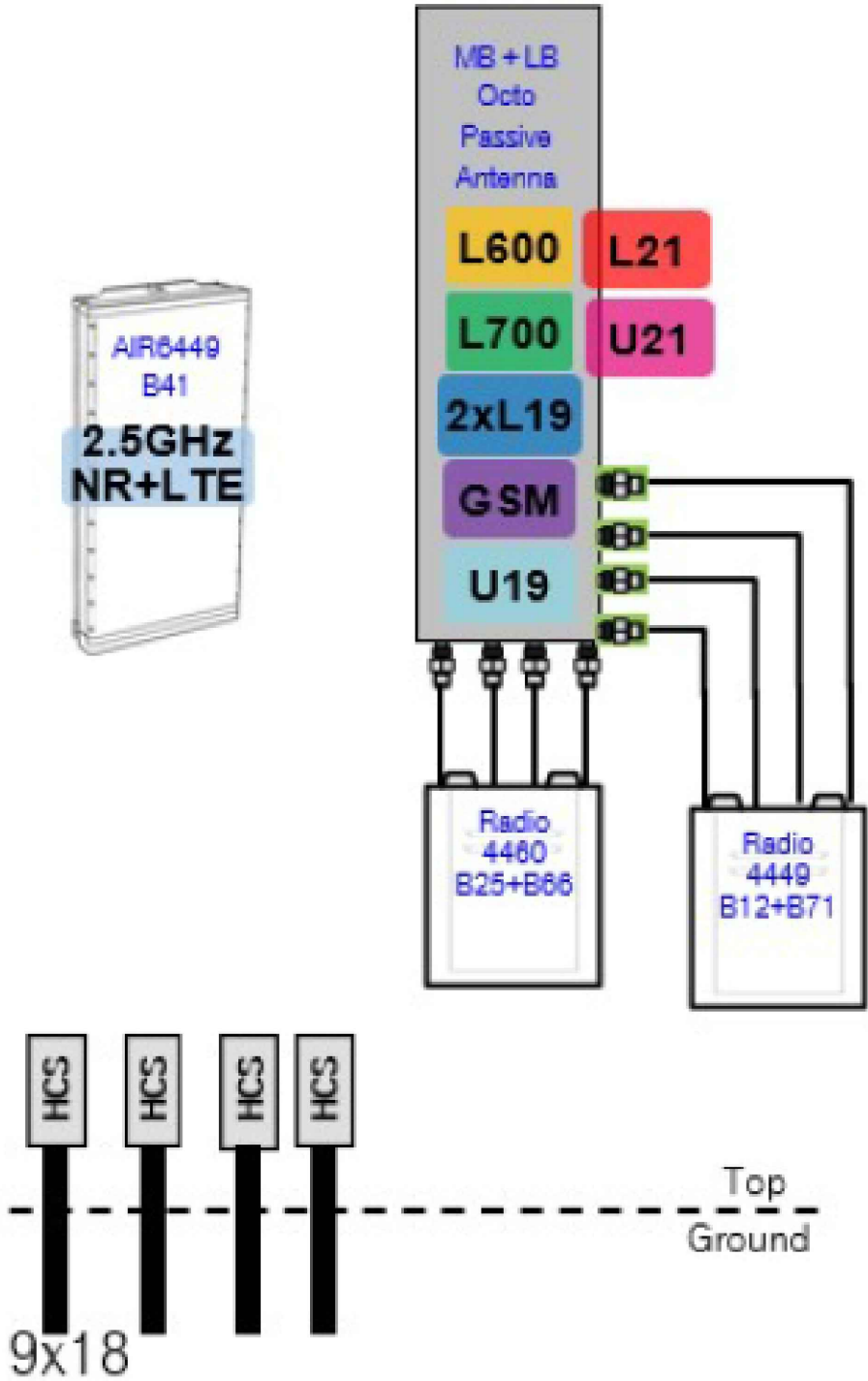
Proposed RAN Equipment				
Template: 67D5D998E ODE+6160				
Enclosure	1	2	3	4
Enclosure Type	RBS 6201 ODE	Ancillary Equipment (Ericsson)	Enclosure 6160 AC V1	B160
Baseband	BB 6630 L2100 L1900 DUG20 G1900 BB 6630 L700 L600 N800		RP 6651 N2500 L2500	
Hybrid Cable System	Ericsson 8x12 HCS *Select Length & AWG* (x 3)		Ericsson Hybrid Trunk 6/24 4AWG 90m (x 3) PSU 4813 vR4A (Kit)	
Transport System			CSR IXRe V2 (Gen2)	

- RAN Scope of Work:**
- Remove and return all cabinet radios from existing base station cabinet.
 - Existing (2) ODE's on site.
 - (1) ODE not referenced in the RFDS will be removed.
 - Remove 6102 MUAC.
 - Add 150A Breaker for 6160.
 - Add (1) Enclosure 6160.
 - Add (1) IXRe Router to new Enclosure 6160.
 - Add (1) RP 6651 for L2500/N2500 to new Enclosure 6160.
 - Add (1) PSU4813 Voltage Booster to new Enclosure 6160.
 - Add (1) Battery Cabinet B160.
 - Existing : (3) 6x12,
 - Remove all Coax,
 - Add (3) 6X24 HCS terminating at the Enclosure 6160. Connect DC for the AIR6419 B41 to the PSU4813 Voltage Booster.

1 CABINET CONFIGURATION

67D5A998E.jpg

Final Config: 67D5A998E



Notes:

2 ANTENNA CONFIGURATION

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

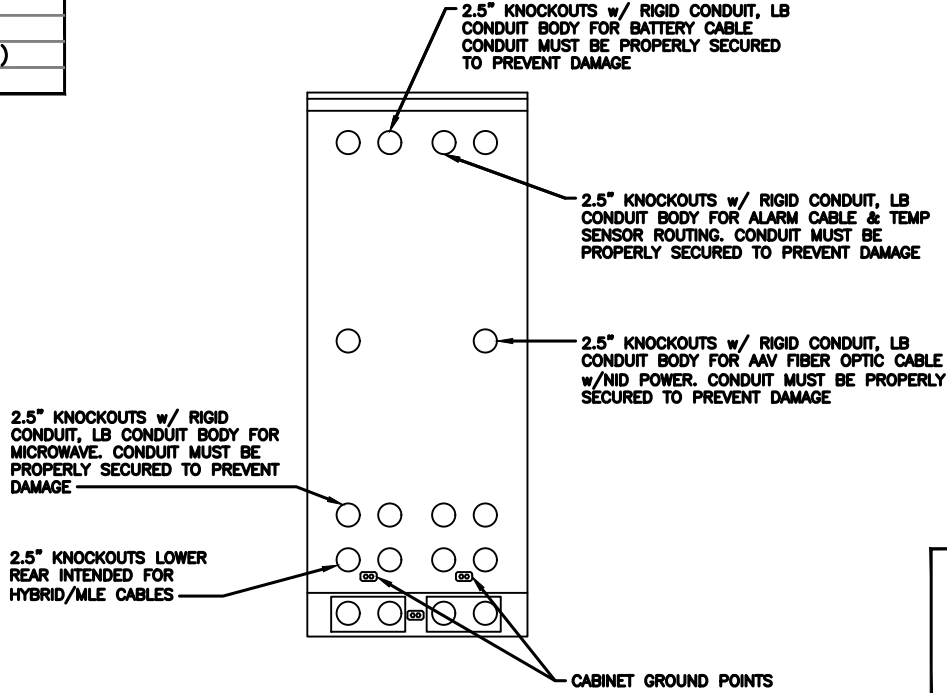
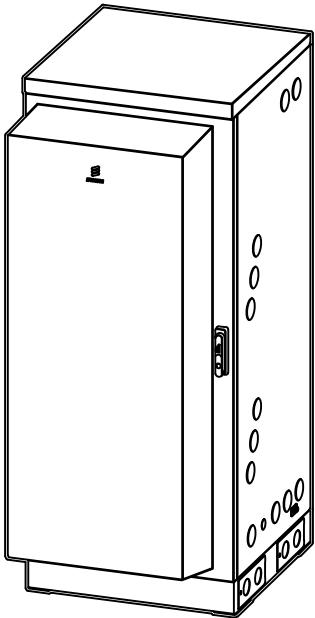
SHEET NUMBER:

R-601

REVISION:

0

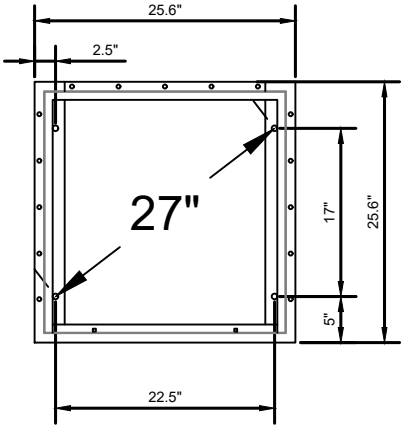
MANUFACTURER:	ERICSSON
MODEL:	6160 SITE SUPPORT CABINET
DIMENSIONS:	63" x 25.6" x 33.6" (H x W x D)
WEIGHT:	373 LBS



REAR VIEW

NOTE:

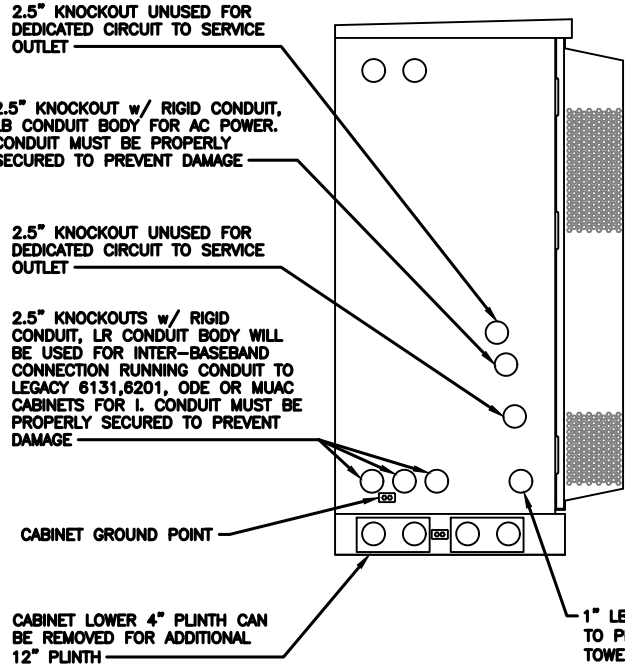
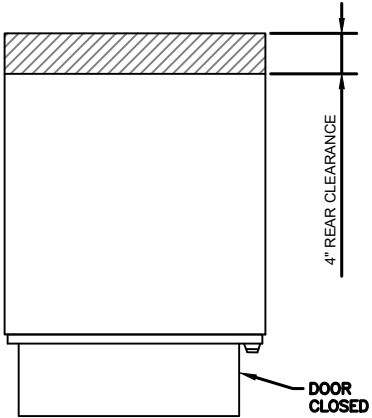
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



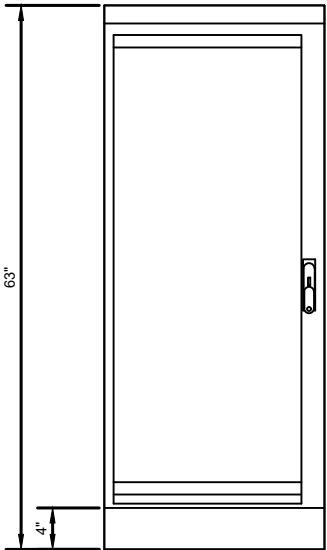
BOLT DOWN PATTERN

GROUNDING NOTE:

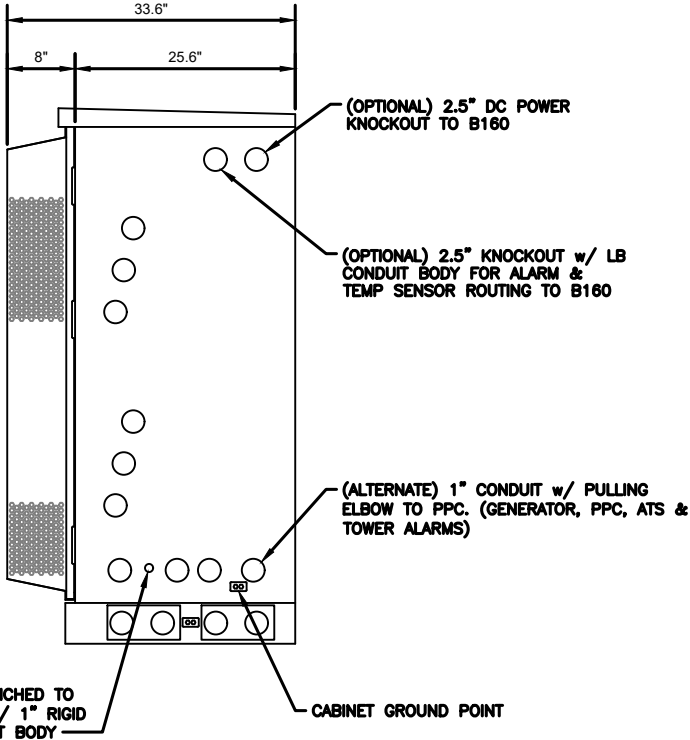
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



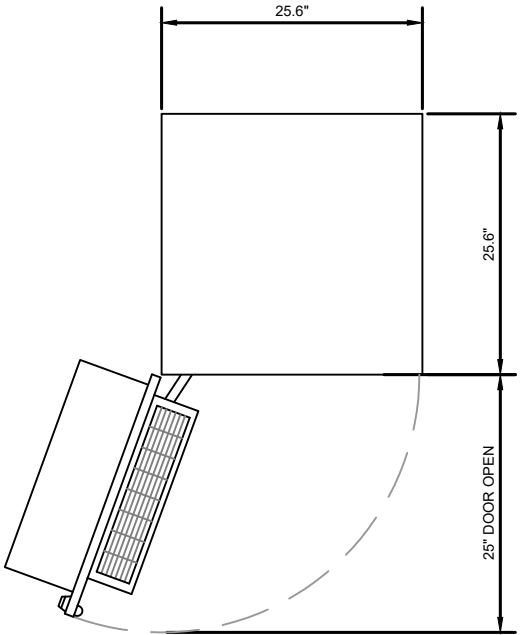
LEFT VIEW



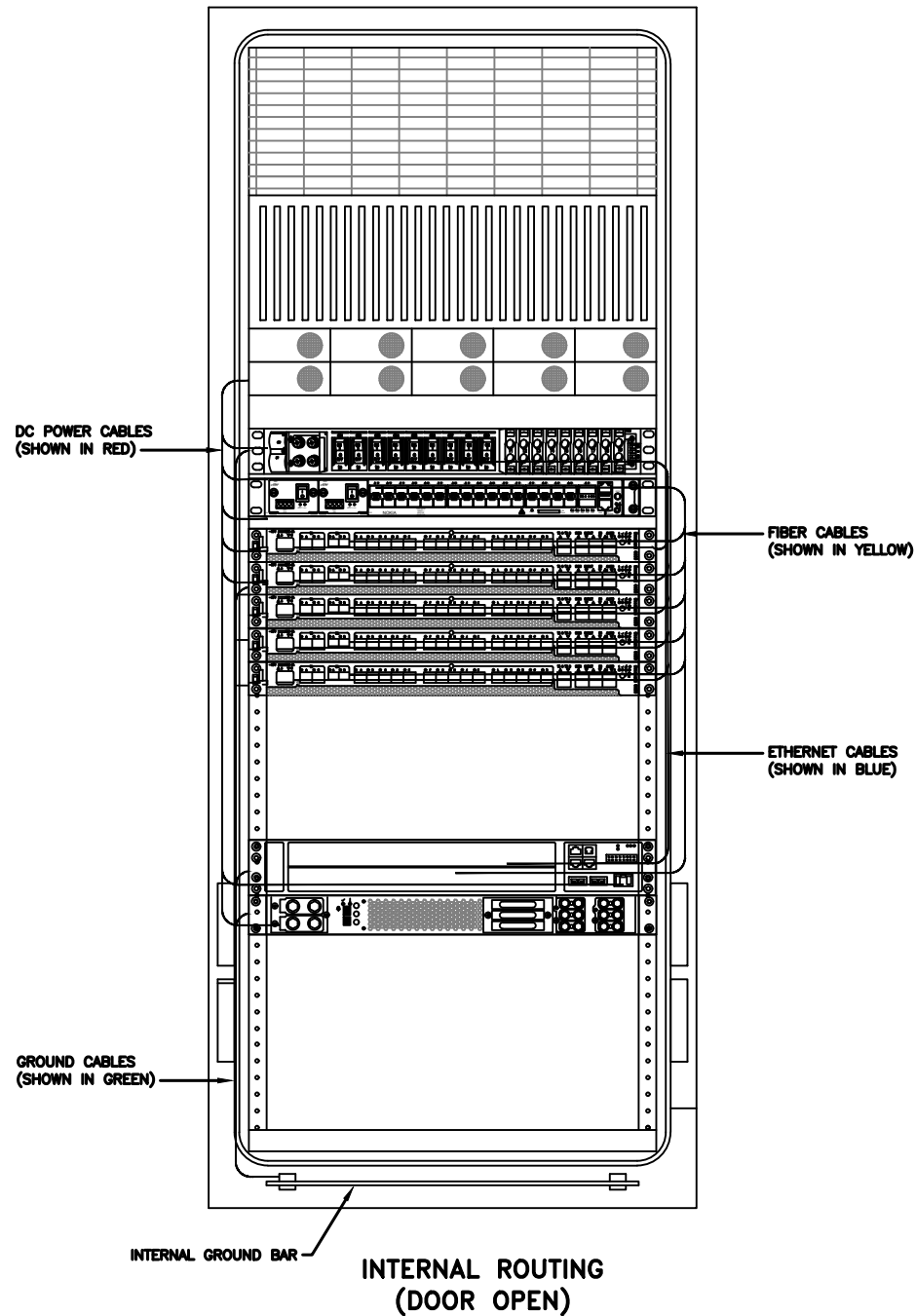
FRONT VIEW



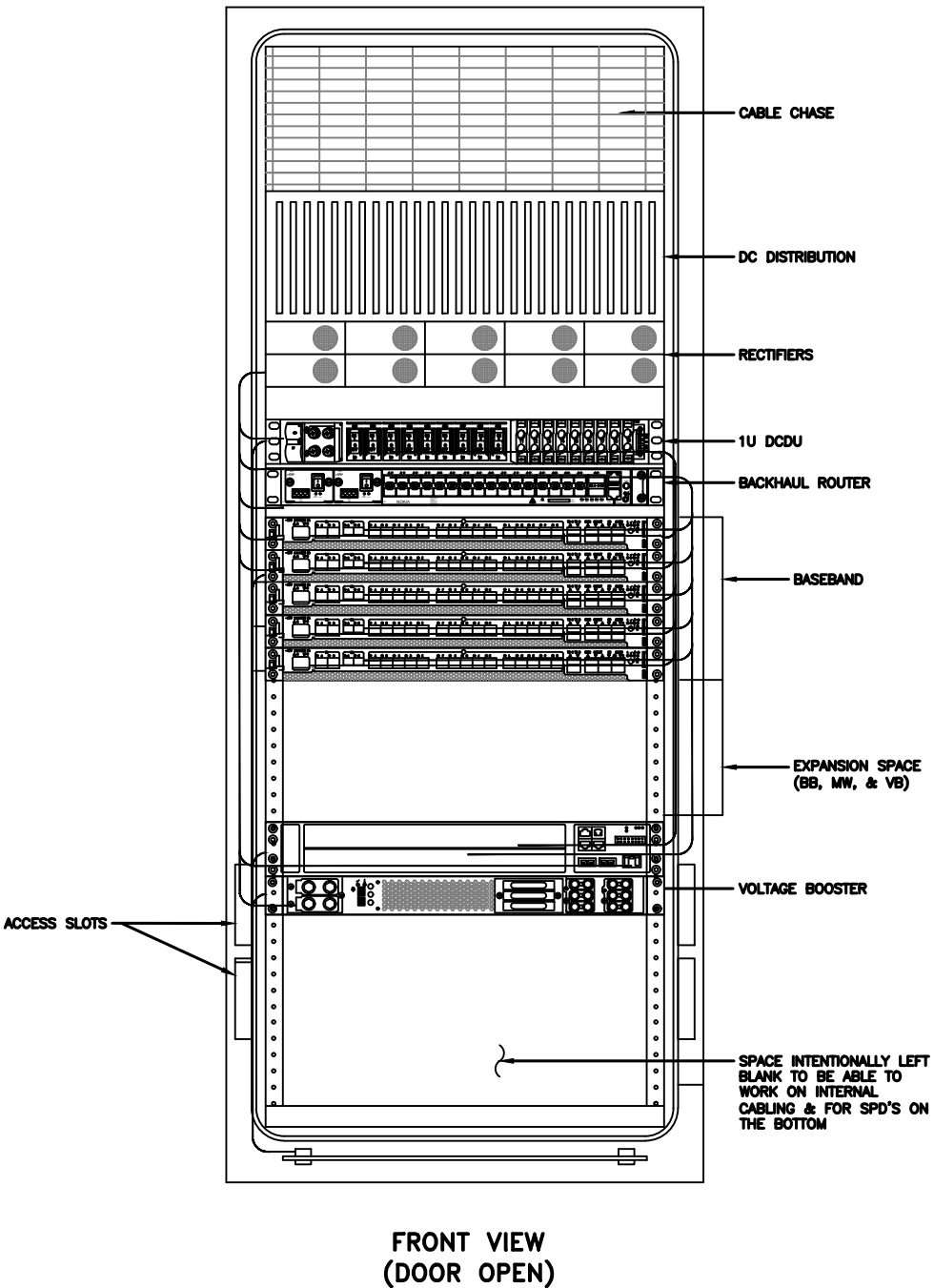
RIGHT VIEW



PLAN VIEW

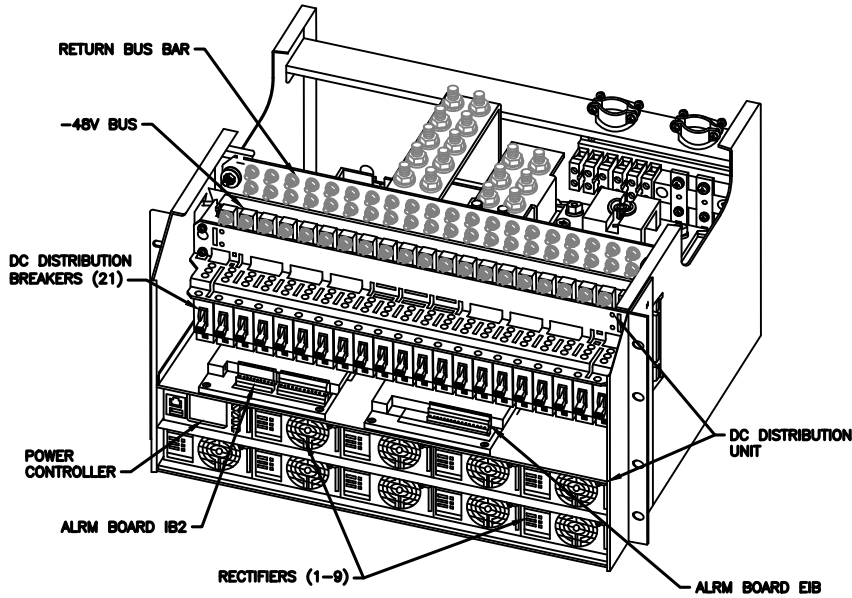


RACK ASSIGNMENTS	
RU SLOTS	DESCRIPTION
1	DC DISTRIBUTION
2	
3	
4	
5	RECTIFIER SHELF
6	
7	FIBER BOX
8	DCDU
9	BACKHAUL ROUTER
10	
11	1ST BASEBAND
12	2ND BASEBAND
13	3RD BASEBAND
14	4TH BASEBAND
15	5TH BASEBAND
16	EXPANSION
17	
18	
19	EXPANSION / LEGACY BASEBAND / VOLTAGE BOOSTER
20	
21	VOLTAGE BOOSTER
22	OPEN SPACE FOR SPD ACCESS
23	
24	
25	

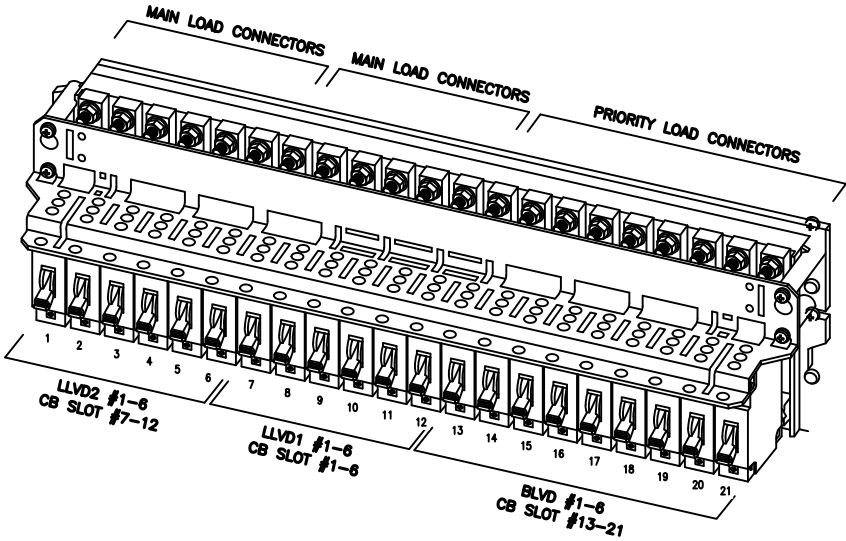


NOTE:
THIS IS FOR REFERENCE ONLY, CHECK
FOR SPECIFIC DETAIL IN T-MOBILE
CABINET SPECIFIC INSTALLATION GUIDES

Breaker Allocation for E6160					
CB SLOT	Ckt #		w/ DCDU Prior to availability of the 4460 and 4480	w/ DCDU Later Design Post-4460 and Post-4480	w/ DCDU 4 and 6 Sector designs
1	LVD1 47.0V	1	Router PS-2*/Future		Radio 4460 B25/66 ζ-1
2		2	Future		Radio 4460 B25/66 ζ-2
3		3	PSU 4813 feeding B25/66 α, β and γ (AIR 1641s)		PSU 4813 feeding B41-δ & B71/12-δ
4		4			(Air 6449s and Radio 4480s)
5		5	PSU 4813 feeding B41 α, β and γ (AIR 6449s)		
6		6			
7	LVD2 45.1V	1	PSU 4813 feeding B71/12 α, β and γ (Radio 4449s)	PSU 4813 feeding B71/12 α, β and γ (Radio 4480s)	
8		2			
9		3	Future		Radio 4460 B25/66 δ-1
10		4	Future		Radio 4460 B25/66 δ-2
11		5	Future		Radio 4460 B25/66 ε-1
12		6	Future		Radio 4460 B25/66 ε-2
13	BLVD 43.2V	1	Router PS-1		
14		2	Radio 4415 B25/66 α	Radio 4460 B25/66 α-1	
15		3	Radio 4415 B25/66 β	Radio 4460 B25/66 α-2	
16		4	Radio 4415 B25/66 γ	Radio 4460 B25/66 β-1	
17		5	PSU 4813 feeding B2/25 α, β and γ (Radio 4424s)	Radio 4460 B25/66 β-2	
18		6		Radio 4460 B25/66 γ-1	
19		7	Future	Radio 4460 B25/66 γ-2	
20		8	DCDU		
21		9	AAV		
Sector Identification α = Alpha, β = Beta, γ = Gamma, δ = Delta, ε = Epsilon, ζ = Zeta					



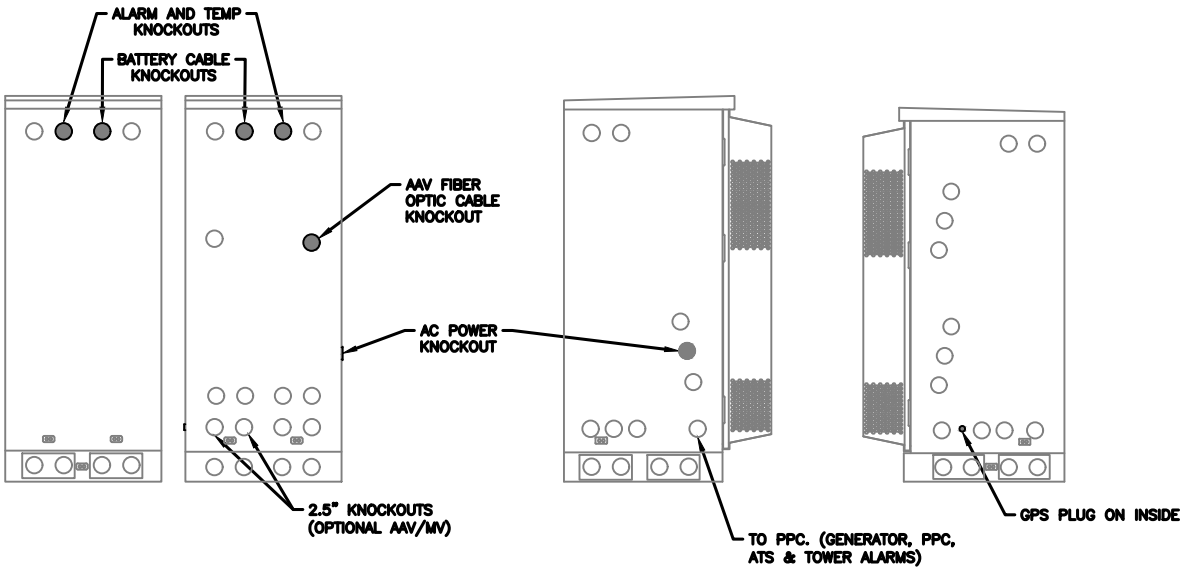
POWER SUBRACK



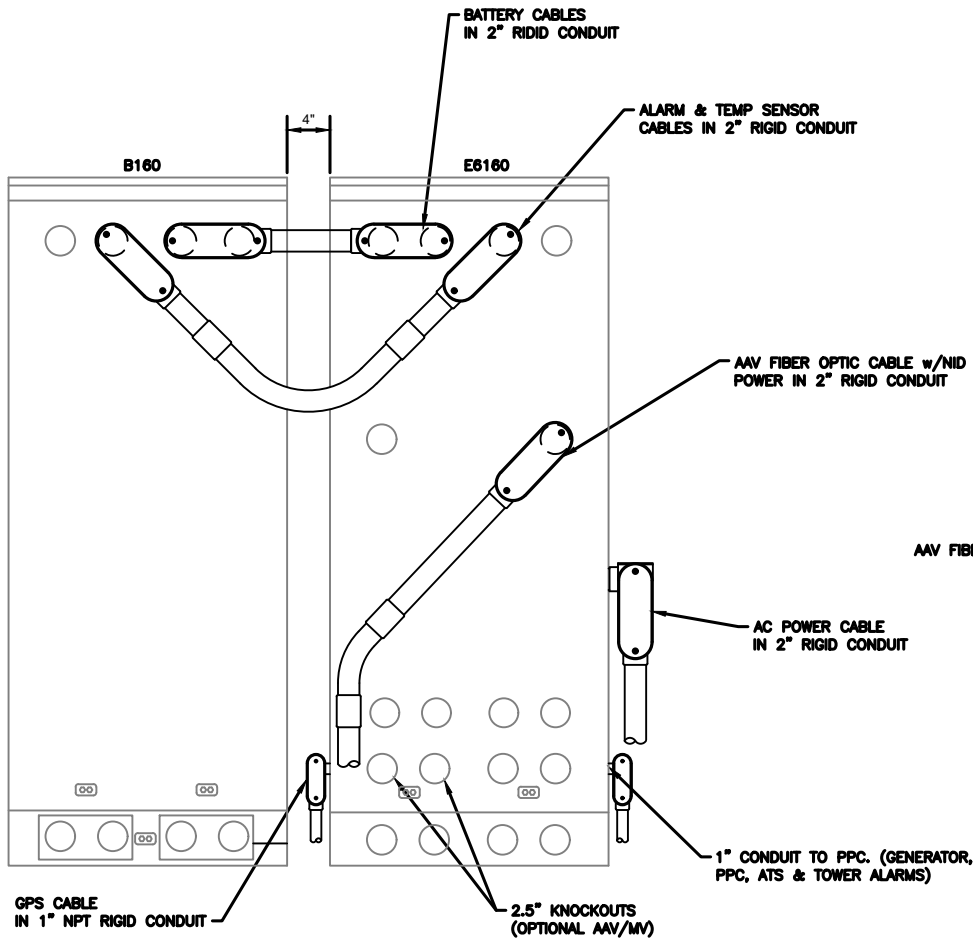
DC DISTRIBUTION

NOTE:

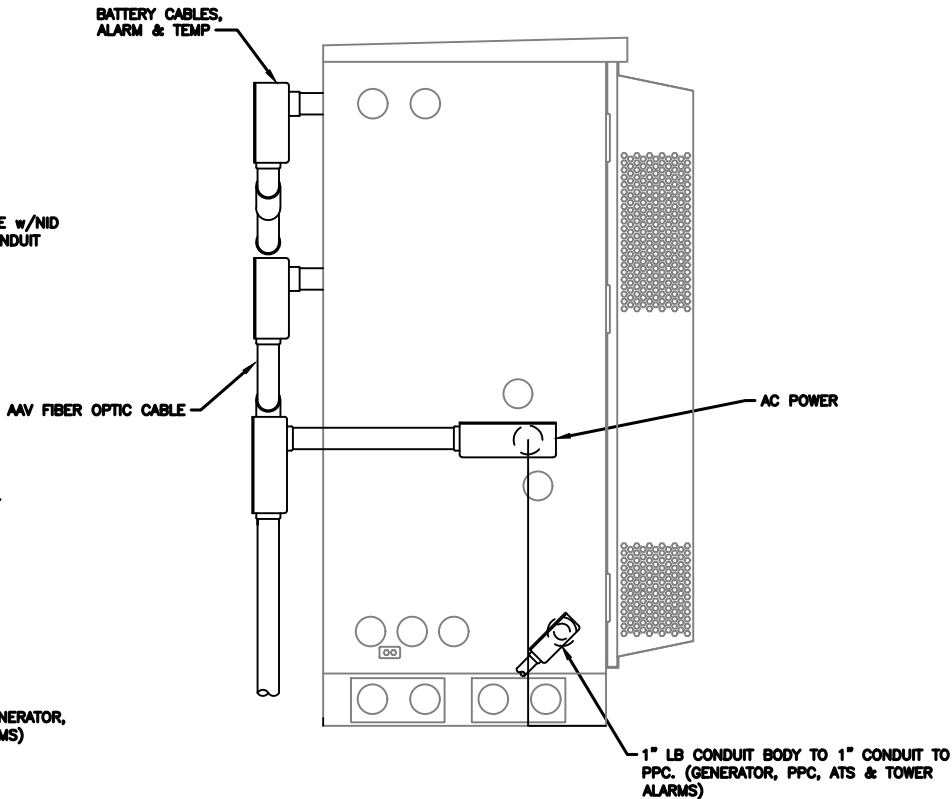
1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS OR SEALING WASHERS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT BENDS AND RUNS SUBJECT TO UL AND NEC LIMITATIONS. 6' MAX PER CONDUIT RUN.
3. POWER CONDUIT BODY ATTACHED WITH SHORT NIPPLE AND SEALING WASHER INSIDE & OUT. (FOR DOOR HOOD CLEARANCE)
4. PULLING ELBOWS MAY BE USED IN LIEU OF A CONDUIT BODIES WHEN CLEARANCE IS LIMITED.
5. ALL EXTERNAL ALARM CONDUITS ARE TOO TERMINATE AT THE PPC WITH A SINGLE 1" ALARM CONDUIT TO THE 6160.
6. (DO NOT USE CHASE NIPPLES) CONDUIT SHOULD HAVE SEALING WASHERS INSIDE AND OUT w/ LOCK NUT AND CAP.



CONDUIT LOCATIONS

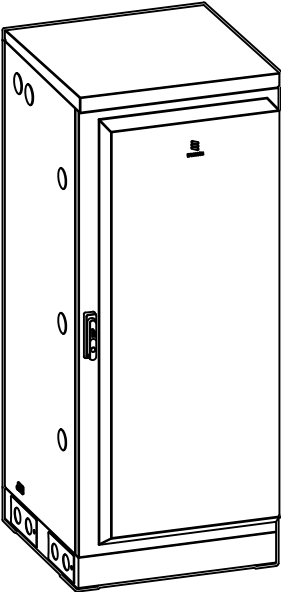


REAR VIEW



SIDE VIEW

MANUFACTURER:	ERICSSON
MODEL:	B160 BATTERY CABINET
DIMENSIONS:	63" x 25.6" x 29.5" (H x W x D)
WEIGHT:	295 LBS (WITHOUT BATTERIES)

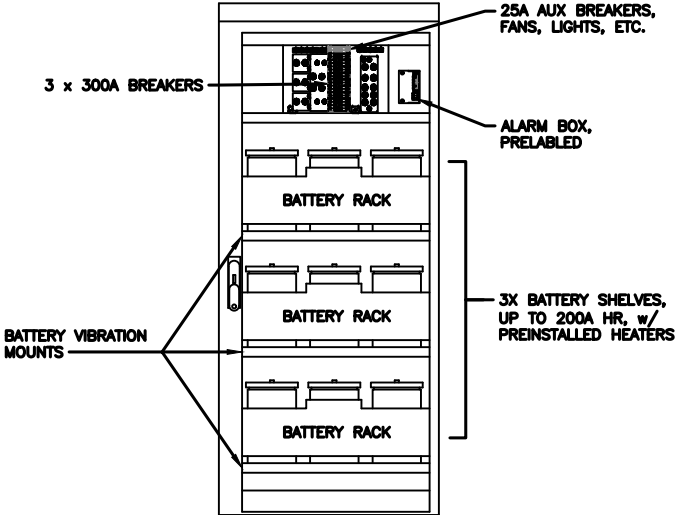


2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR ALARM CABLE & TEMP SENSOR ROUTING. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

CABINET GROUND POINTS

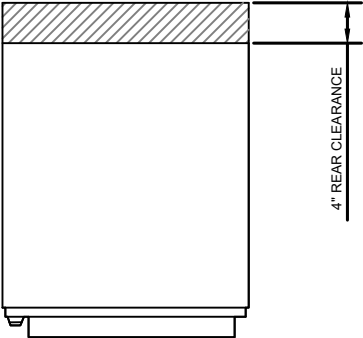
REAR VIEW

2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR BATTERY CABLE CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE



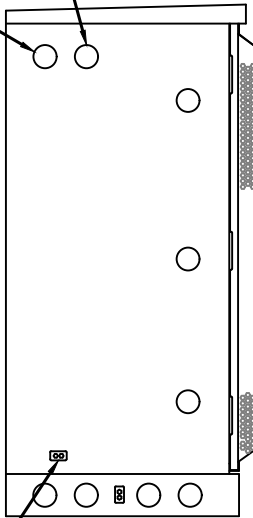
FRONT VIEW
(DOOR OPEN)

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



(OPTIONAL) 2.5" KNOCKOUTS FOR ALARM & TEMP SENSOR ROUTING TO 6160

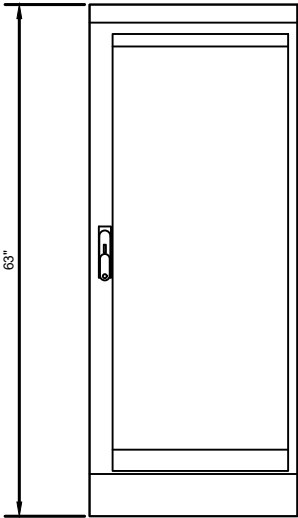
(OPTIONAL) 2.5" DC POWER KNOCKOUTS TO 6160



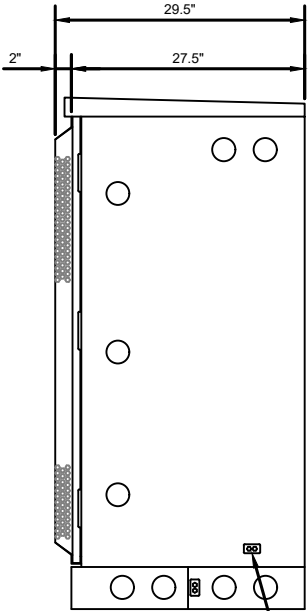
CABINET GROUND POINT

LEFT VIEW

GROUNDING NOTE:
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."

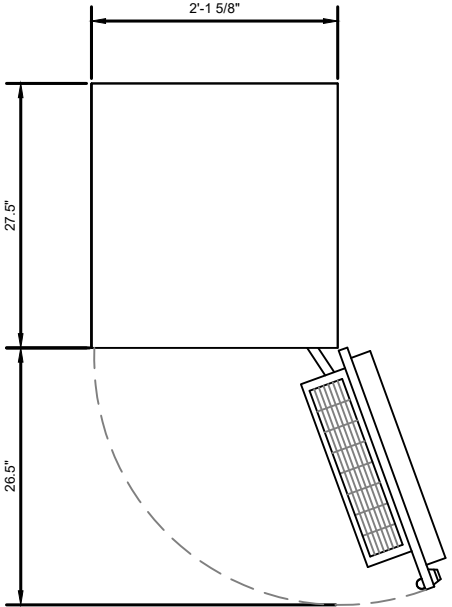


FRONT VIEW



CABINET GROUND POINT

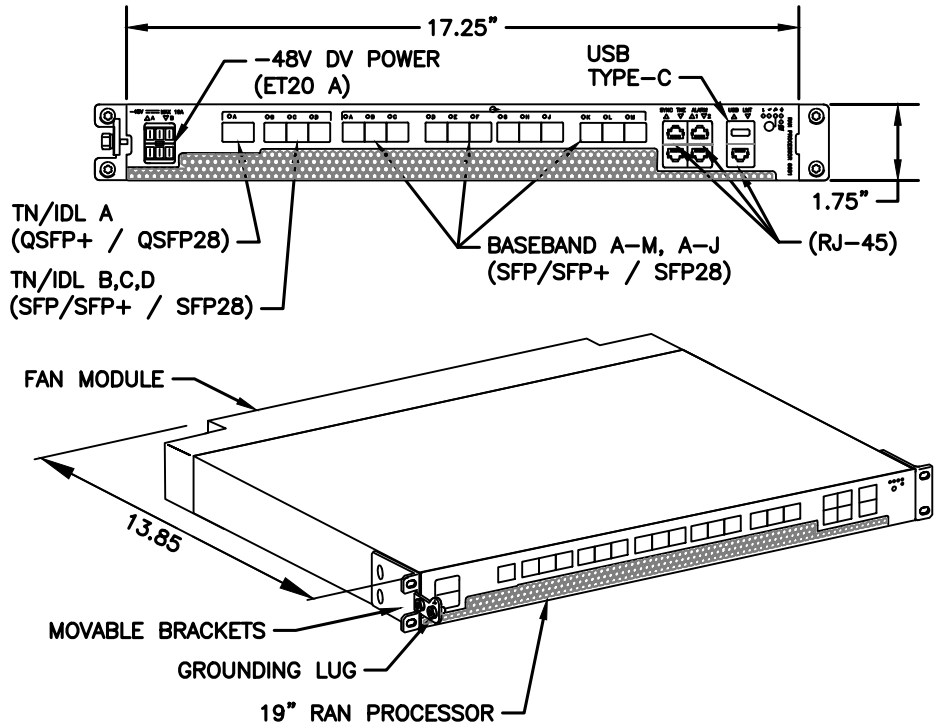
RIGHT VIEW



PLAN VIEW

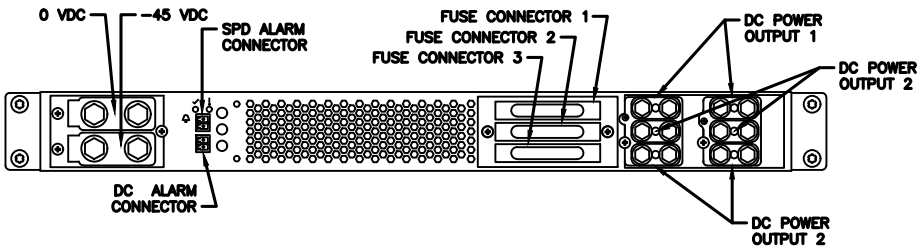
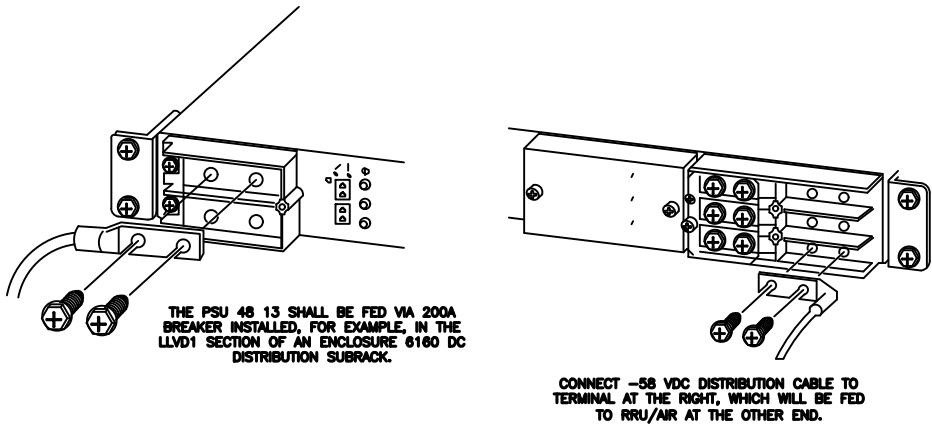
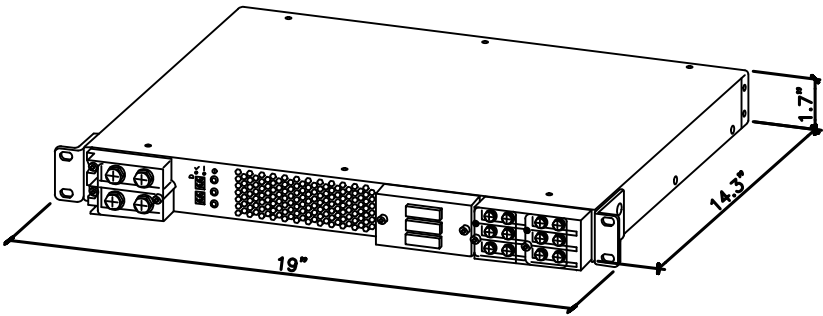
B160 ERICSSON SITE SUPPORT BATTERY CABINET

MANUFACTURER:	ERICSSON
MODEL:	6651 RAN PROCESSOR (KDU1370093/11)
DIMENSIONS:	1.75" x 17.25" x 13.85" (H" x W" x D")
WEIGHT:	16.53 LBS



1 34553 - ERICSSON 6651 RAN PROCESSOR
SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	PSU 48 13
WEIGHT:	17.1 LBS
DIMENSIONS:	19"x 1.7"x 14.3"



2 SKU# 34132 - PSU 48 13
SCALE: N.T.S.

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

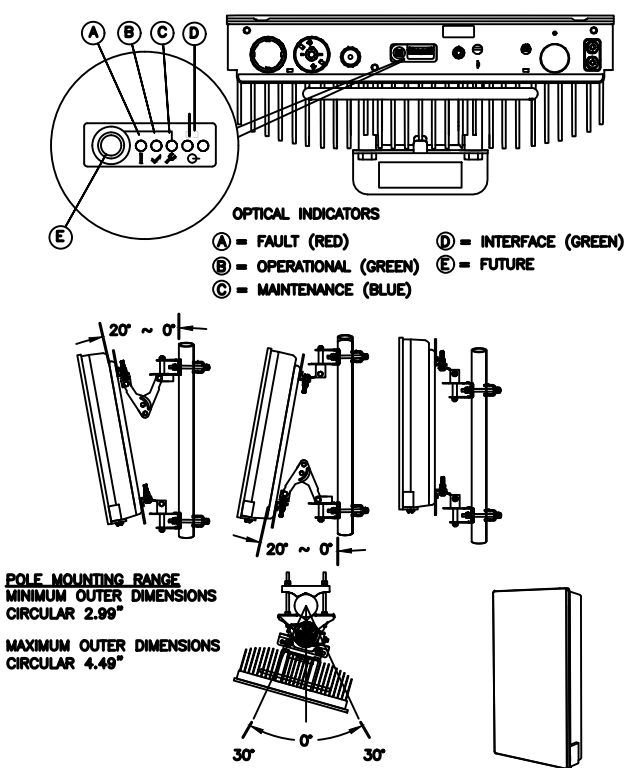
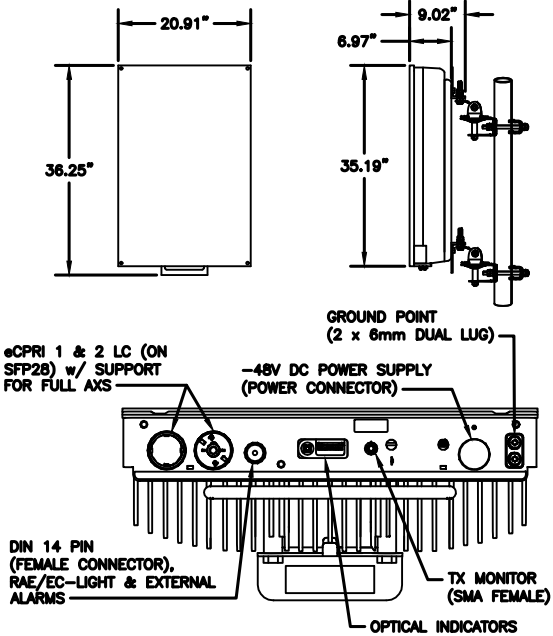
SHEET NUMBER:

R-607

REVISION:

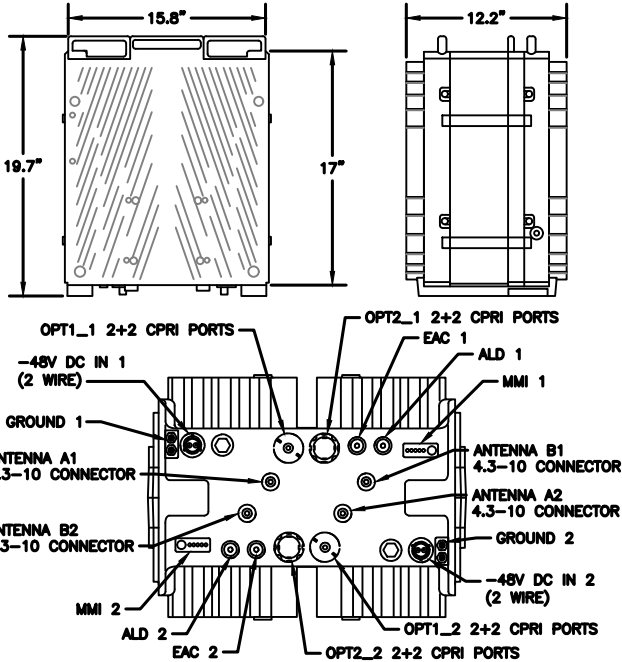
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MANUFACTURER:	ERICSSON
MODEL:	AIR 6419 B41 (2.5GHz M-MIMO)
DIMENSIONS:	36.25" x 20.91" x 9.02" NOT TO EXCEED (H x W x D)
WEIGHT:	83 LBS (EXCLUDING MOUNTING KIT)
MOUNT WEIGHT:	13.5 LBS (SXX109 2016/1)



1 34552 - ERICSSON AIR 6419 BAND 41
SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	4460 RADIO B2/25 B66 (KRC 161 912/3)
DIMENSIONS:	19.7" x 15.8" x 12.2" (H" x W" x D")
WEIGHT:	109 LBS
BRACKET WEIGHT:	4.8 LBS (ERS HEAVY #SXX1255983/1)



2 34373 - ERICSSON 4460 RADIO B2/25 B66
SCALE: N.T.S.

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.



Eng. Number 14089639_C8_01
April 7, 2022
Page 1

Mount Analysis Report

ATC Site Name : BETHANY CT, CT
ATC Site Number : 88008
Engineering Number : 14089639_C8_01
Mount Elevation : 221 ft
Carrier : T-Mobile
Carrier Site Name : CTNH217/ATC-Bethany
Carrier Site Number : CTNH217A
Site Location : 9 Meyers Road
Bethany, CT 06524-3400
41.40475833 , -72.99998333
County : New Haven
Date : April 7, 2022
Max Usage : 50%
Result : Pass

Prepared By:
Pedro Morales Mendoza
Structural Engineer

Reviewed By:



Authorized by "EOR"
08 Apr 2022 05:08:22 cosign

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 221 ft.

Supporting Documents

Specifications Sheet	Perfect Vision PV-SFA12-B, dated September 21, 2017
Radio Frequency Data Sheet	RFDS ID #CTNH217A, dated March 7, 2022
Reference Photos	Site photos from 2020

Analysis

This mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	119 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.2, S1 = 0.054
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

SUPPLEMENTAL

SHEET NUMBER:

R-609

REVISION:

0

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED
BY REQUEST OF CUSTOMER WITHOUT EDIT.



AMERICAN TOWER®
C O R P O R A T I O N

Mount Analysis Report

ATC Site Name : BETHANY CT, CT
ATC Site Number : 88008
Engineering Number : 14089639_C8_01
Mount Elevation : 221 ft
Carrier : T-Mobile
Carrier Site Name : CTNH217/ATC-Bethany
Carrier Site Number : CTNH217A
Site Location : 9 Meyers Road
Bethany, CT 06524-3400
41.40475833 , -72.99998333
County : New Haven
Date : April 7, 2022
Max Usage : 50%
Result : Pass

Prepared By:
Pedro Morales Mendoza
Structural Engineer

Reviewed By:



Authorized by "EOR"
08 Apr 2022 05:08:22

cosign

COA: PEC.0001553



Table of Contents

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Structure Usages.....	2
Mount Layout	3
Equipment Layout	4
Standard Conditions.....	5
Calculations	Attached



Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 221 ft.

Supporting Documents

Specifications Sheet	Perfect Vision PV-SFA12-B, dated September 21, 2017
Radio Frequency Data Sheet	RFDS ID #CTNH217A, dated March 7, 2022
Reference Photos	Site photos from 2020

Analysis

This mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	119 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	$S_s = 0.2$, $S_1 = 0.054$
Site Class:	D - Stiff Soil
Live Loads:	$L_m = 500$ lbs, $L_v = 250$ lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

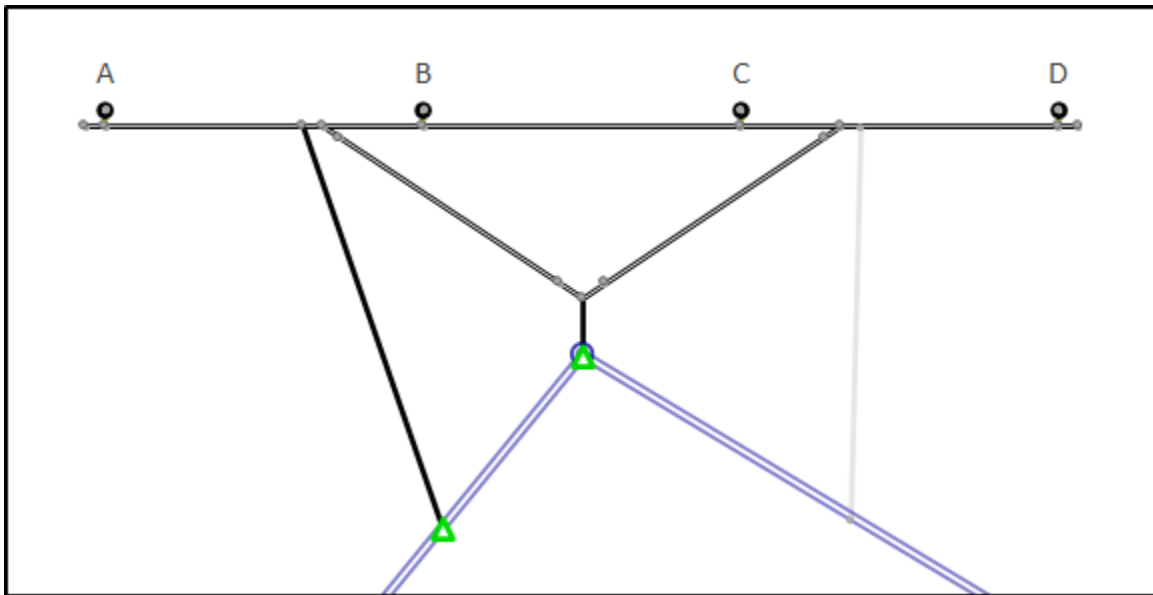
**Application Loading**

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
221.0	222.0	3	Ericsson AIR 6419 B41
		3	RFS APXVAARR24_43-U-NA20
		3	Ericsson Radio 4449 B71 B85A
		3	Ericsson 4460 BAND 2/25

Structure Usages

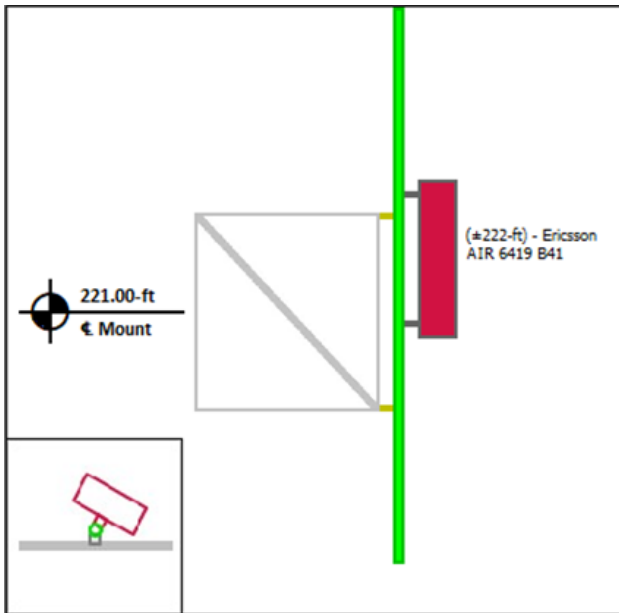
Structural Component	Controlling Usage	Pass/Fail
Horizontals	38%	Pass
Verticals	36%	Pass
Diagonals	19%	Pass
Mount Pipes	50%	Pass
Tower Leg Check	47%	Pass

Mount Layout

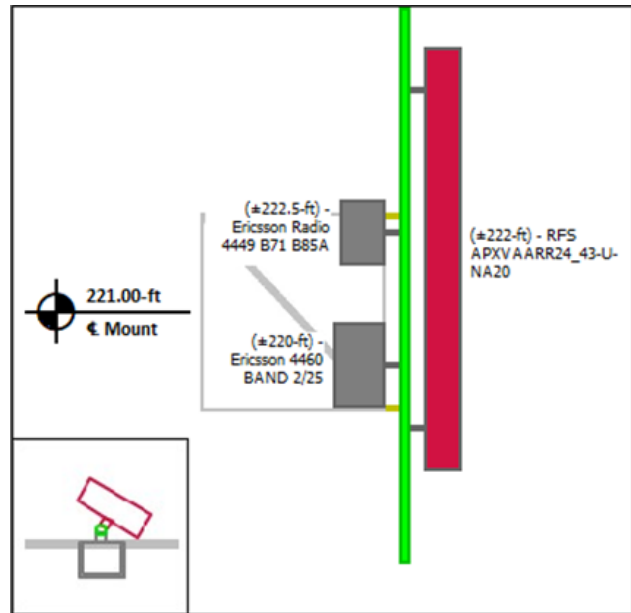


Equipment Layout

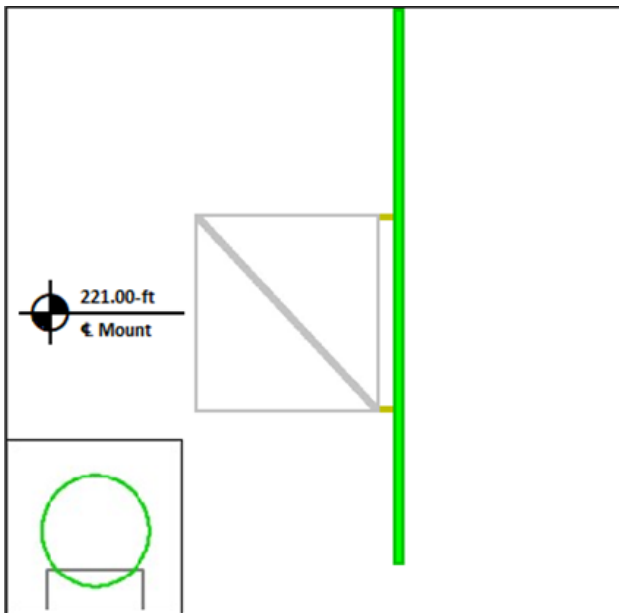
Mount Pipe A



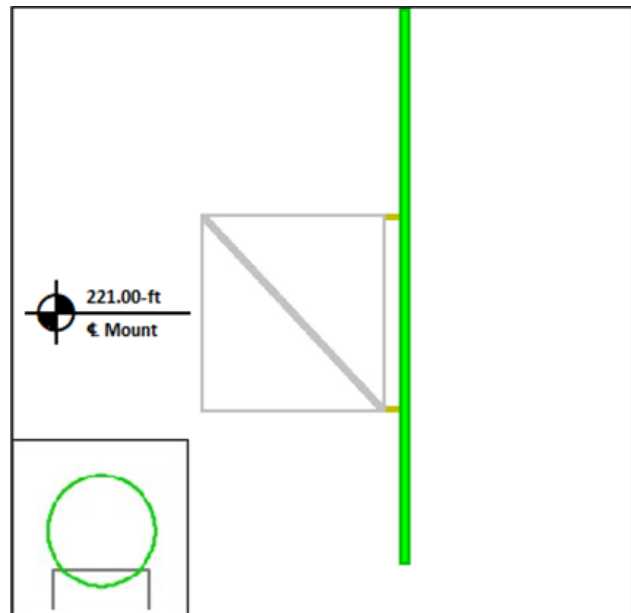
Mount Pipe B



Mount Pipe C



Mount Pipe D





Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding equipment, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

Installation of all equipment and steel should be confirmed not to cause tower conflicts nor impede the tower climbing pegs.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Site Number: 88008
 Project Number: 14089639_C8_01
 Carrier: T-Mobile
 Mount Elevation: 221 ft
 Date: 4/7/2022

Mount Analysis Force Calculations

Wind & Ice Load Calculations				
Velocity Pressure Coefficient	K_z	1.24		
Topographic Factor	K_{zt}	1.00		
Rooftop Wind Speed-up Factor	K_s	1.00		
Shielding Factor	K_a	0.90		
Ground Elevation Factor	K_e	0.98		
Wind Direction Probability Factor	K_d	0.95		
Basic Wind Speed	V	119	mph	
Velocity Pressure	q_z	41.7	psf	
Height Escalation Factor	K_{iz}	1.21		
Thickness of Radial Glaze Ice	T_{iz}	1.21	in	

Seismic Load Calculations				
Short Period DSRAP	S_{Ds}	0.213		
1 Second DSRAP	S_{D1}	0.086		
Importance Factor	I	1.0		
Response Modification Coefficient	R	2.0		
Seismic Response Coefficient	C_s	0.107		
Amplification Factor	A	1.0		
Total Weight	W	1042.3	lbs	
Total Shear Force	V_s	111.2	lbs	
Horizontal Seismic Load	E_h	111.2	lbs	
Vertical Seismic Load	E_v	44.5	lbs	

Antenna Calculations (Elevations per Application/RFDS)*								
Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
Ericsson AIR 6419 B41	36.3	20.9	9.0	83.3	6.32	1.82	7.52	2.46
RFS APXVAARR24_43-U-NA20	95.9	24.0	8.7	127.9	20.24	3.48	22.84	4.55
Ericsson Radio 4449 B71 B85A	15.0	13.2	10.5	75.0	1.65	1.31	2.27	1.88
Ericsson 4460 BAND 2/25	19.6	15.7	12.1	109.0	2.56	1.98	3.32	2.66

* Equipment with EPA values N/A were not considered in the mount analysis

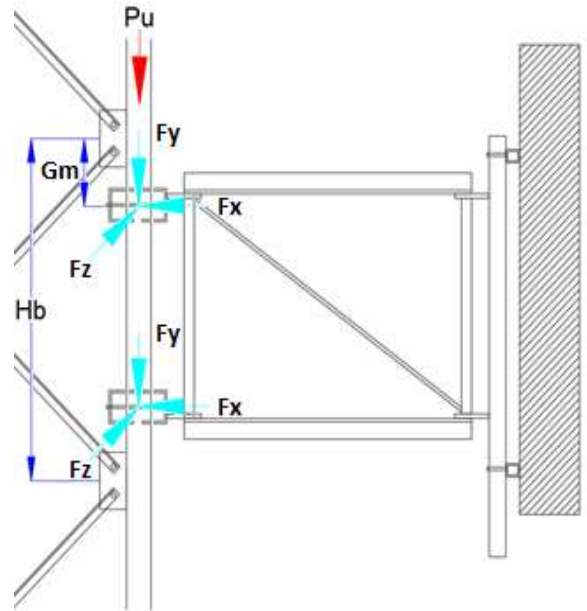
Tower Leg Reaction Analysis

Applied Loads from RISA 3D

Controlling Load Combination	12			
Leg Node Label(s)	N047	N048		
Force in X, F_x	-2145.7	-476.6		lbs
Force in Y, F_y	720.7	360.5		lbs
Force in Z, F_z	-1445.7	1724.6		lbs
Moment about X, M_x	-800.0	-381.8		lb-ft
Moment about Y, M_y	-2077.4	-535.7		lb-ft
Moment about Z, M_z	138.4	-10.4		lb-ft

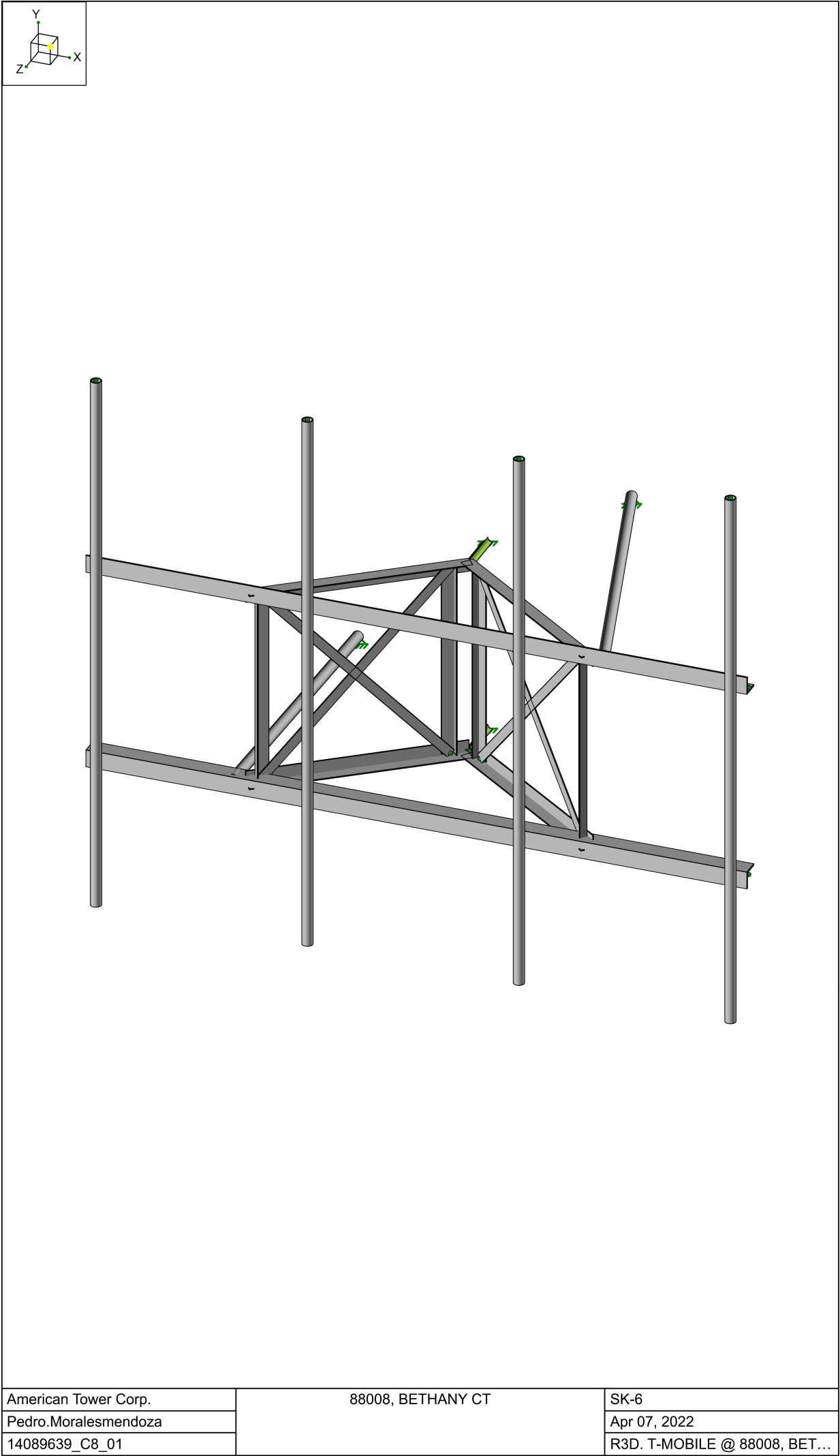
Tower Leg Properties

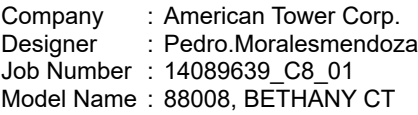
Leg Type	Single Angle		
Leg Member	L8x8x3/4		
Leg Bay Height	Hb	8.36	ft
Upper Mount Offset	Gm	33.44	in
Tower Axial Load	P_{uT}	97.919	k
Leg Grade	A36		
Leg Yield Strength	Fy	36	ksi
Cross Sectional Area	Ag	11.500	in ²
Radius of Gyration	r	1.570	in
Moment of Inertia	I	28.500	in ⁴
Section Modulus	S_{min}	8.900	in ³
Torsional Constant	J	2.210	in ⁴
Elastic Modulus	E	29,000	ksi
Shear Modulus	G	11,200	ksi
Slenderness Limit	$4.71 \sqrt{E/F_y}$	133.7	-
Member Slenderness	KL/r	63.9	-
Rotation of Leg	Θ	0.0000	rads
Leg Torsional Stiffness	k	41.3	k-in/rad



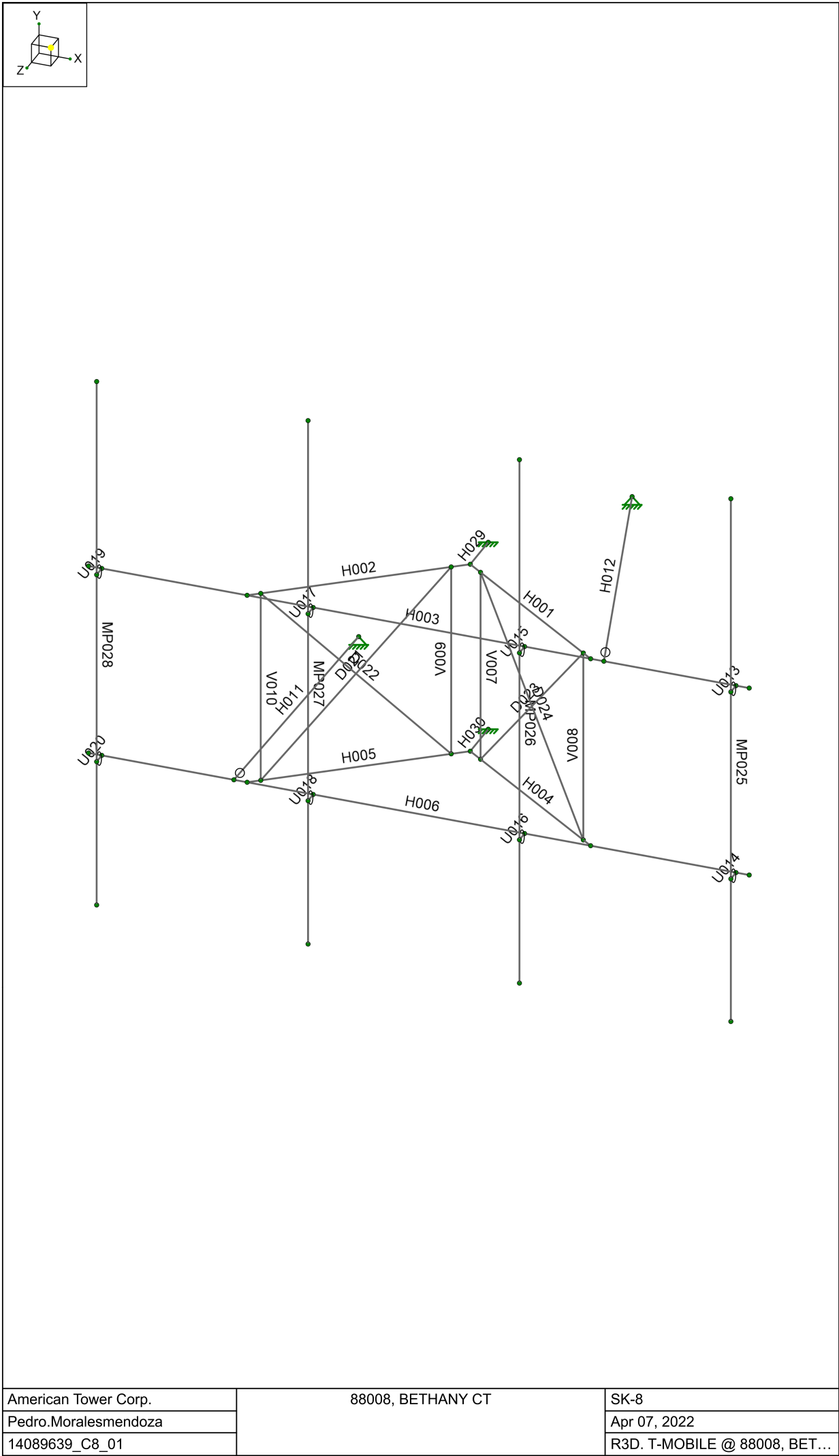
Tower Leg Analysis

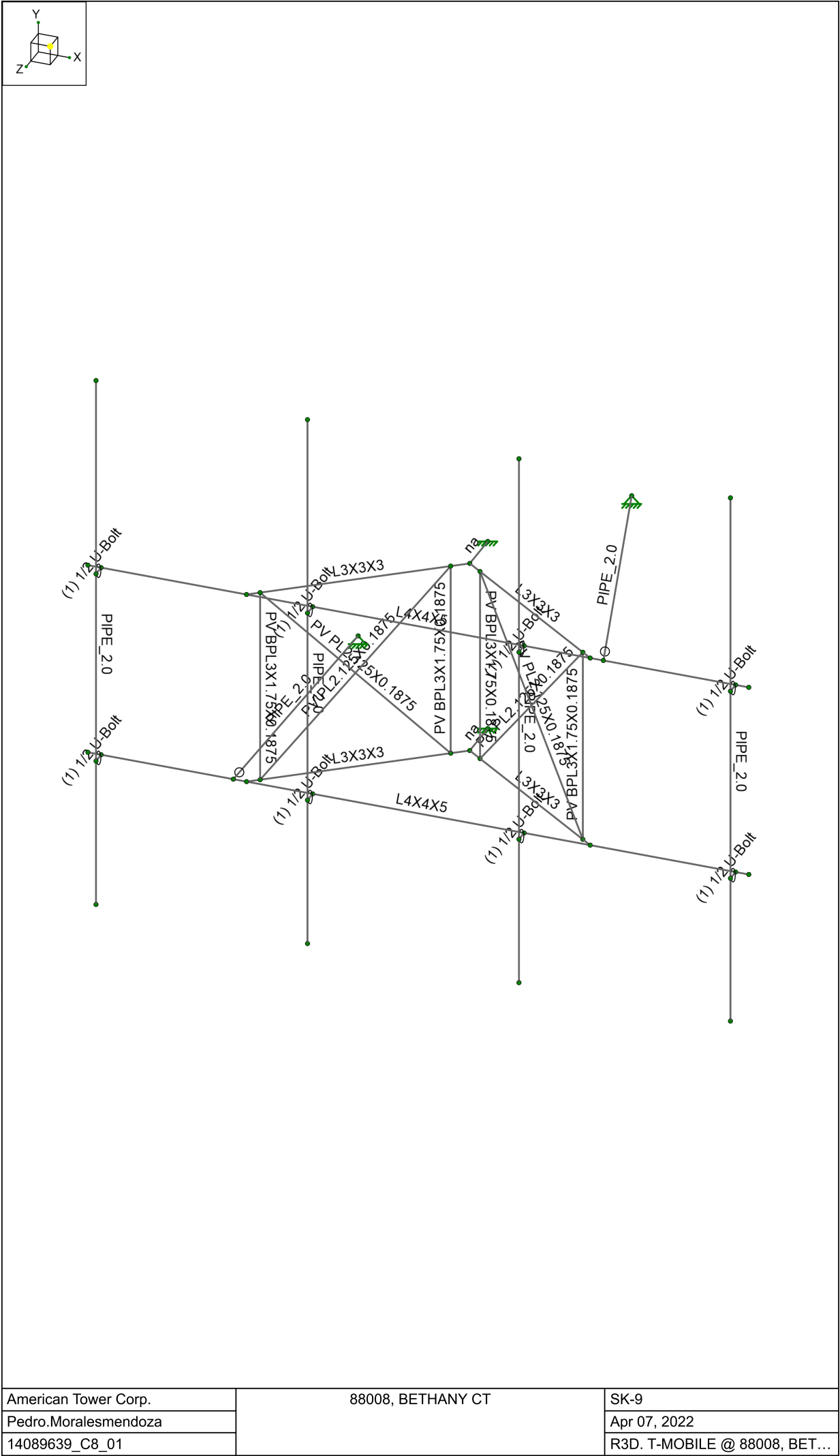
Critical Stress	F_{cr}	31.4	ksi
Axial Stress	σ_a	8.61	ksi
Shear Stress	τ_b	0.08	ksi
Bending Stress	σ_b	6.09	ksi
Torsional Stress	τ_t	6.11	ksi
Normal Stress Limit State	f_{un}	32.4	ksi
Shear Stress Limit State	f_{uv}	19.4	ksi
Buckling Limit State	$f_{un} \& f_{uv}$	31.4	ksi
Torsional/Shear Capacity	$\Sigma \tau / f_{uv}$	32%	Pass
Buckling/Axial Capacity	$\Sigma \sigma / f_{un}$	47%	Pass

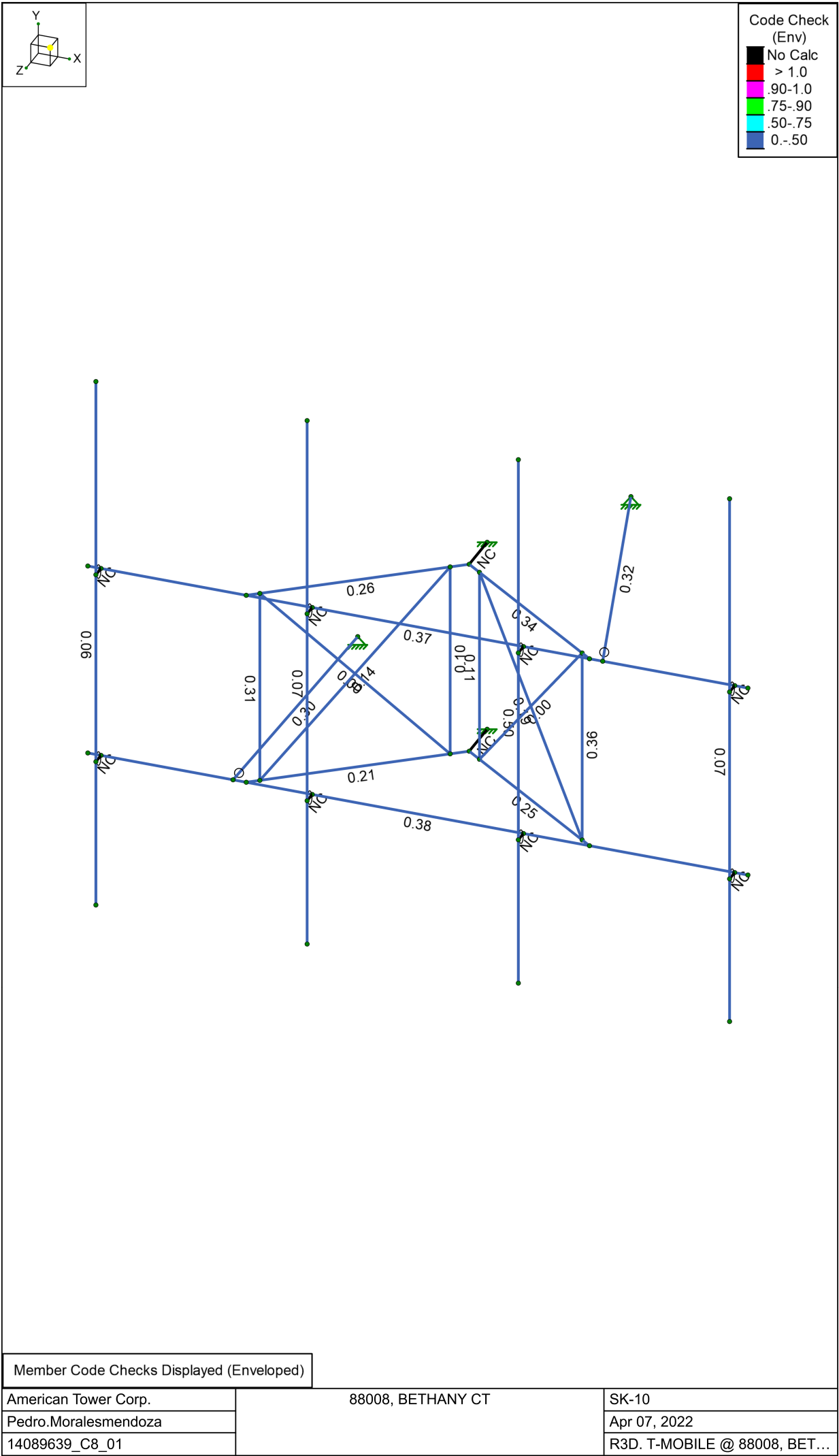


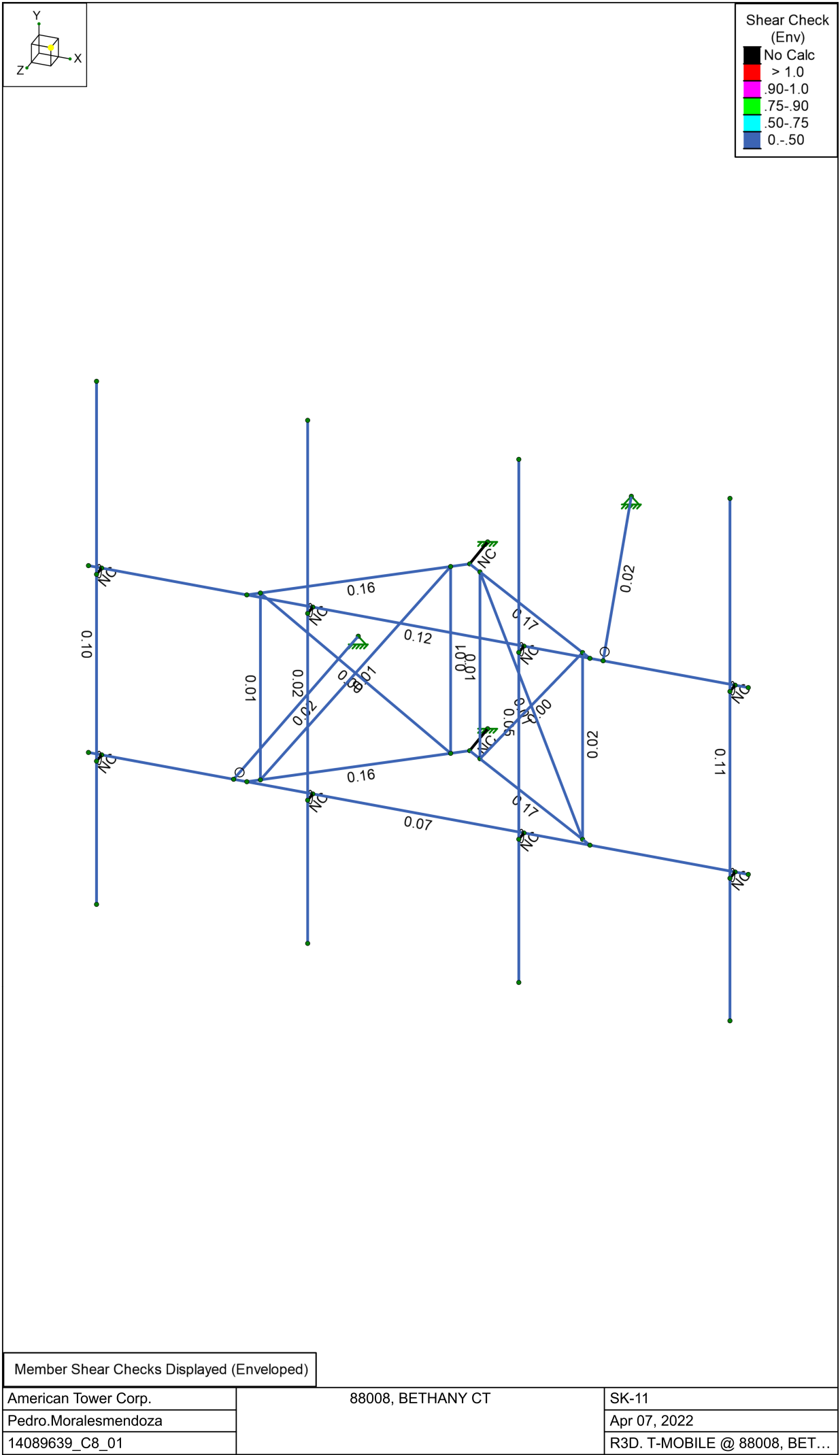


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Checked By : -











Basic Load Cases

BLC Description		Category	Y Gravity	Nodal	Point	Distributed
1	D	DL	-1		6	
2	Di	IL			6	20
3	W 0	WL			6	30
4	W 30	WL			12	58
5	W 60	WL			12	58
6	W 90	WL			6	30
7	W 120	WL			12	58
8	W 150	WL			12	58
9	W 180	WL			6	30
10	W 210	WL			12	58
11	W 240	WL			12	58
12	W 270	WL			6	30
13	W 300	WL			12	58
14	W 330	WL			12	58
15	Wi 0	WL			6	30
16	Wi 30	WL			12	58
17	Wi 60	WL			12	58
18	Wi 90	WL			6	30
19	Wi 120	WL			12	58
20	Wi 150	WL			12	58
21	Wi 180	WL			6	30
22	Wi 210	WL			12	58
23	Wi 240	WL			12	58
24	Wi 270	WL			6	30
25	Wi 300	WL			12	58
26	Wi 330	WL			12	58
27	Ws 0	WL			6	30
28	Ws 30	WL			12	58
29	Ws 60	WL			12	58
30	Ws 90	WL			6	30
31	Ws 120	WL			12	58
32	Ws 150	WL			12	58
33	Ws 180	WL			6	30
34	Ws 210	WL			12	58
35	Ws 240	WL			12	58
36	Ws 270	WL			6	30
37	Ws 300	WL			12	58
38	Ws 330	WL			12	58
39	Ev -Y	ELY				20
40	Eh -Z	ELZ				20
41	Eh -X	ELX				20
42	Lv (1)	LL			1	
43	Lv (2)	LL			1	
44	Lv (3)	LL			1	
45	Lv (4)	LL			1	
46	Lv (5)	LL			1	
47	Lv (6)	LL			1	
48	Lv (7)	LL			1	
49	Lv (8)	LL			1	
50	Lv (9)	LL		1		
51	Lv (10)	LL		1		
52	Lv (11)	LL		1		
53	Lv (12)	LL		1		
54	Lm (1)	LL		1		
55	Lm (2)	LL		1		
56	Lm (3)	LL		1		
57	Lm (4)	LL		1		

Node Boundary Conditions

Node Label		X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot [k-in/rad]	Y Rot [k-in/rad]	Z Rot [k-in/rad]
1	N019	Reaction	Reaction	Reaction			
2	N022	Reaction	Reaction	Reaction			
3	N047	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N048	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

Label		I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	H001	N002	N001	180	L3X3X3	Beam	None	A36	Typical
2	H002	N003	N001	90	L3X3X3	Beam	None	A36	Typical
3	H003	N004	N005		L4X4X5	Beam	None	A36	Typical
4	H004	N007	N006	270	L3X3X3	Beam	None	A36	Typical
5	H005	N008	N006		L3X3X3	Beam	None	A36	Typical



Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
6	H006	N009	N010	90	L4X4X5	Beam	None	A36	Typical
7	V007	N014	N013	218	PV BPL3X1.75X0.1875	Column	None	A36	Typical
8	V008	N012	N011	322	PV BPL3X1.75X0.1875	Column	None	A36	Typical
9	V009	N018	N017	38	PV BPL3X1.75X0.1875	Column	None	A36	Typical
10	V010	N015	N016	142	PV BPL3X1.75X0.1875	Column	None	A36	Typical
11	H011	N020	N019		PIPE 2.0	Beam	None	A53 Gr. B	Typical
12	H012	N021	N022		PIPE 2.0	Beam	None	A53 Gr. B	Typical
13	U013	N023	N027		(1) 1/2 U-Bolt	Beam	None	A36	Typical
14	U014	N028	N029		(1) 1/2 U-Bolt	Beam	None	A36	Typical
15	U015	N024	N030		(1) 1/2 U-Bolt	Beam	None	A36	Typical
16	U016	N031	N032		(1) 1/2 U-Bolt	Beam	None	A36	Typical
17	U017	N025	N033		(1) 1/2 U-Bolt	Beam	None	A36	Typical
18	U018	N034	N035		(1) 1/2 U-Bolt	Beam	None	A36	Typical
19	U019	N026	N036		(1) 1/2 U-Bolt	Beam	None	A36	Typical
20	U020	N037	N038		(1) 1/2 U-Bolt	Beam	None	A36	Typical
21	D021	N017	N016		PV PL2.125X0.1875	Column	None	A36	Typical
22	D022	N018	N015		PV PL2.125X0.1875	Column	None	A36	Typical
23	D023	N011	N013		PV PL2.125X0.1875	Column	None	A36	Typical
24	D024	N012	N014		PV PL2.125X0.1875	Column	None	A36	Typical
25	MP025	N039	N040		PIPE 2.0	Column	None	A53 Gr. B	Typical
26	MP026	N041	N042		PIPE 2.0	Column	None	A53 Gr. B	Typical
27	MP027	N043	N044		PIPE 2.0	Column	None	A53 Gr. B	Typical
28	MP028	N045	N046		PIPE 2.0	Column	None	A53 Gr. B	Typical
29	H029	N047	N001		RIGID	None	None	RIGID	Typical
30	H030	N048	N006		RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	T/C Only	Physical	Deflection Ratio Options	Activation	Seismic DR
1	H001			Yes	N/A		None
2	H002			Yes	N/A		None
3	H003			Yes	N/A		None
4	H004			Yes	N/A		None
5	H005			Yes	N/A		None
6	H006			Yes	N/A		None
7	V007			Yes	** NA **		None
8	V008			Yes	** NA **		None
9	V009			Yes	** NA **		None
10	V010			Yes	** NA **		None
11	H011	BenPIN		Yes	N/A		None
12	H012	BenPIN		Yes	N/A		None
13	U013	OOOXOO		Yes	Default	Exclude	None
14	U014	OOOXOO		Yes	Default	Exclude	None
15	U015	OOOXOO		Yes	Default	Exclude	None
16	U016	OOOXOO		Yes	Default	Exclude	None
17	U017	OOOXOO		Yes	Default	Exclude	None
18	U018	OOOXOO		Yes	Default	Exclude	None
19	U019	OOOXOO		Yes	Default	Exclude	None
20	U020	OOOXOO		Yes	Default	Exclude	None
21	D021		Tension Only	Yes	** NA **		None
22	D022		Tension Only	Yes	** NA **		None
23	D023		Tension Only	Yes	** NA **		None
24	D024		Tension Only	Yes	** NA **		None
25	MP025			Yes	** NA **		None
26	MP026			Yes	** NA **		None
27	MP027			Yes	** NA **		None
28	MP028			Yes	** NA **		None
29	H029			Yes	** NA **		None
30	H030			Yes	** NA **		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	L-Torque [in]	K y-y	K z-z	Function
1	H001	L3X3X3	49.204			Lbyy		1	1	Lateral
2	H002	L3X3X3	49.204			Lbyy		1	1	Lateral
3	H003	L4X4X5	150			Lbyy		1	1	Lateral
4	H004	L3X3X3	49.204			Lbyy		1	1	Lateral
5	H005	L3X3X3	49.204			Lbyy		1	1	Lateral
6	H006	L4X4X5	150			Lbyy		1	1	Lateral
7	V007	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
8	V008	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
9	V009	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
10	V010	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
11	H011	PIPE 2.0	69.016			Lbyy		1	1	Lateral
12	H012	PIPE 2.0	73.561			Lbyy		1	1	Lateral



Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	L-Torque [in]	K y-y	K z-z	Function
13	U013	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
14	U014	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
15	U015	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
16	U016	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
17	U017	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
18	U018	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
19	U019	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
20	U020	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
21	D021	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
22	D022	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
23	D023	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
24	D024	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
25	MP025	PIPE 2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
26	MP026	PIPE 2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
27	MP027	PIPE 2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
28	MP028	PIPE 2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm. Coeff. [1e ⁶ F ⁻¹]	Density [lb/ft ³]	Yield [psi]	Ry	Fu [psi]	Rt
1	A36	2.9e+07	1.115e+07	0.3	0.65	490	36000	1.5	58000	1.2
2	A53 Gr. B	2.9e+07	1.115e+07	0.3	0.65	490	35000	1.6	60000	1.2

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N019	max	17.466	5	199.48	68	585.224	18	0	121	0	121	0	121
2		min	-16.723	23	8.969	16	-620.626	12	0	1	0	1	0	1
3	N022	max	439.374	24	200.275	69	1564.672	24	0	121	0	121	0	121
4		min	-455.101	6	9.22	25	-1619.784	6	0	1	0	1	0	1
5	N047	max	1576.407	18	1625.756	32	824.689	15	-536.281	19	1561.419	18	327.465	84
6		min	-2145.726	12	482.533	14	-1915.733	9	-1734.854	37	-2077.387	12	-159.203	114
7	N048	max	1481.57	78	840.754	26	2062.201	13	-267.231	20	1371.784	78	152.829	78
8		min	-813.797	120	213.075	20	-882.198	19	-911.535	26	-863.007	120	-123.63	120
9	Totals:	max	2190.517	6	2495.618	32	2824.059	14						
10		min	-2190.517	24	829.209	14	-2824.059	8						

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code	Check	Loc[in]	LC	Shear	Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1	H001	L3X3X3	0.34	49.204	84	0.167	2.563	y	74	23632.878	35316	1320.097	2664.955	1.5	H2-1		
2	H002	L3X3X3	0.256	49.204	115	0.155	2.563	z	112	23632.878	35316	1320.097	2664.955	1.5	H2-1		
3	H003	L4X4X5	0.37	35.938	74	0.116	37.5	y	2	14698.419	77760	3776.855	6667.424	1.5	H2-1		
4	H004	L3X3X3	0.252	2.563	80	0.173	2.563	z	78	23632.878	35316	1320.097	2664.955	1.5	H2-1		
5	H005	L3X3X3	0.214	2.563	120	0.16	2.563	y	118	23632.878	35316	1320.097	2664.955	1.5	H2-1		
6	H006	L4X4X5	0.381	35.938	80	0.07	37.5	z	8	14698.419	77760	3776.855	6667.424	1.5	H2-1		
7	V007	PV BPL3X1.75X0.1875	0.115	0	62	0.006	45	z	6	19894.332	27717.188	493.139	1478.77	1.5	H2-1		
8	V008	PV BPL3X1.75X0.1875	0.362	0	77	0.016	45	y	82	19894.332	27717.188	493.139	1478.77	1.5	H2-1		
9	V009	PV BPL3X1.75X0.1875	0.099	22.5	10	0.005	0	z	8	19894.332	27717.188	506.517	1327.636	1.069	H2-1		
10	V010	PV BPL3X1.75X0.1875	0.307	45	119	0.015	45	y	120	19894.332	27717.188	493.139	1478.77	1.5	H2-1		
11	H011	PIPE 2.0	0.298	34.508	68	0.021	69.016	68	21610.709	32130	1871.625	1871.625	1.309	H1-1b			
12	H012	PIPE 2.0	0.318	36.781	69	0.021	73.561	69	20475.616	32130	1871.625	1871.625	1.309	H1-1b			
13	D021	PV PL2.125X0.1875	0.144	0	116	0.007	61.555	y	2	164.729	12909.375	50.427	362.903	2.315	H1-1b*		
14	D022	PV PL2.125X0.1875	0.002	61.555	74	0.002	61.555	y	80	164.729	12909.375	50.427	470.201	3	H1-1b*		
15	D023	PV PL2.125X0.1875	0	61.555	121	0	61.555	y	121	164.729	12909.375	50.427	156.734	1	H1-1a		
16	D024	PV PL2.125X0.1875	0.188	61.555	80	0.008	0	y	74	164.729	12909.375	50.427	360.151	2.298	H1-1b*		
17	MP025	PIPE 2.0	0.071	47.25	80	0.114	69.562	80	15275.24	32130	1871.625	1871.625	1.607	H1-1b			
18	MP026	PIPE 2.0	0.498	45.938	7	0.046	47.25	7	14524.495	32130	1871.625	1871.625	2.55	H1-1b			
19	MP027	PIPE 2.0	0.069	47.25	104	0.022	47.25	103	15275.24	32130	1871.625	1871.625	1.607	H1-1b			
20	MP028	PIPE 2.0	0.063	47.25	116	0.105	47.25	118	15275.24	32130	1871.625	1871.625	1.75	H1-1b			



Structural Analysis Report

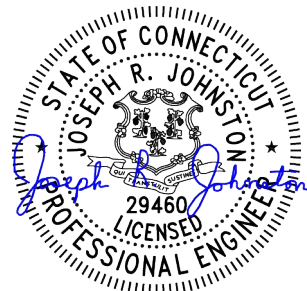
Structure : 340 ft Self Support Tower
ATC Site Name : BETHANY CT, CT
ATC Site Number : 88008
Engineering Number : 14089639_C3_03
Proposed Carrier : T-MOBILE
Carrier Site Name : CTNH217/ATC-Bethany
Carrier Site Number : CTNH217A
Site Location : 9 Meyers Road
Bethany, CT 06524-3400
41.4048, -73.00
County : New Haven
Date : April 14, 2022
Max Usage : 86%
Result : Pass

Prepared By:

Tiffany Ta
Airosmith Engineering

A handwritten signature in black ink, appearing to read 'Tiffany Ta', is written over the printed name.

Reviewed By:



4/15/2022

COA : PEC.0001553

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 340 ft Self Support tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	CSEI Analysis ATC Engineering #73115244, dated November 18, 2002
Foundation Drawing	Mapping by ETS Project #120302.01, dated June 18, 2012
Geotechnical Report	Geotel Report #E12-221, dated June 5, 2012
Modifications	ATC Job #OAA712592_C6_13, dated August 13, 2018

Analysis

The tower was analyzed using Power Line Systems, Inc. tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	119 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
344.0	1	Rohde & Schwarz ADD090	Leg	(2) 7/8" Coax	US DEPT OF HOMELAND SECURITY
326.0	1	Kathrein Scala 750 10074	Side Arm	(1) 1 5/8" Coax	LIGADO NETWORKS LLC
320.0	1	Sinclair SC281-L	Sector Frame	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
315.0	1	Sinclair SC381-HL (160")		(1) 7/8" Coax	
300.0	-	-		(1) 1/2" Coax	
291.0	2	Generic 8' Omni	Side Arm	-	UNKNOWN
285.0	1	Sinclair SC281-L	Leg	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
266.0	1	Generic 8' Omni	Side Arm	-	UNKNOWN
253.0	12	Decibel DB844H90E-XY	Leg	(12) 1 5/8" Coax	SPRINT NEXTEL
240.0	3	Commscope NNVV-65B-R4	Pipes	(4) 1 1/4" Hybriflex Cable	
	3	RFS APXVTM14-ALU-I20			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	Alcatel-Lucent 1900 MHz 4X45 RRH			
	6	Alcatel-Lucent 800 MHz 2X50W RRH w/ Filter			
222.0	3	RFS APXVAARR24_43-U-NA20	Sector Frame	(3) 1 1/4" (1.25"-31.8mm) Fiber	T-MOBILE
213.0	1	Andrew DB616E-BC	Side Arm	(1) 1 1/4" Coax	US DEPT OF HOMELAND SECURITY
180.0	6	JMA Wireless MX06FRO660-03	Sector Frame	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Samsung MT6407-77A			
	1	Raycap RCMDC-6627-PF-48			
	6	Andrew DB844H90E-XY			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung RT4401-48A			
	3	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna			
158.0	3	Ericsson RRUS 11 (Band 12)	Sector Frame	(1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (1) 3" conduit	AT&T MOBILITY
	3	Powerwave Allgon 7770.00			
	3	Powerwave Allgon LGP21901			
	3	Raycap DC2-48-60-0-9E			
	6	Powerwave Allgon LGP21401			
	1	Raycap FC12-PC6-10E			
	2	Andrew SBNH-1D6565C (60.8 lbs)			
	1	KMW AM-X-CD-16-65-00T-RET			
147.0	1	Generic 5" x 3" x 2" Cavity Filter	Side Arm	(1) 1/2" Coax	SIGFOX S.A.
	1	Generic Low Noise Amplifier			
	1	Procom CXL 900-3LW			
140.0	1	Commscope RDIDC-9181-PF-48	Sector Frame	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B605			
	3	Fujitsu TA08025-B604			
	3	JMA Wireless MX08FRO665-21			
100.0	3	RFS APXV18-206517S-C	Leg	(6) 1 5/8" Coax	METRO PCS INC
48.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	SPRINT NEXTEL

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
222.0	3	Andrew ETT19V2A12UB	-	(6) 1 5/8" Coax	T-MOBILE
	3	RFS APX16DWV-16DWVS-E-A20			
	3	Ericsson Radio 4449 B12,B71			

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
222.0	3	Ericsson Radio 4449 B71 B85A	Sector Frame	(3) 1.99" (50.7mm) Hybrid	T-MOBILE
	3	Ericsson 4460 BAND 2/25			
	3	Ericsson AIR 6419 B41			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines alongside existing T-MOBILE coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	63%	Pass
Diagonals	86%	Pass
Truss Diagonals	83%	Pass
Horizontals	80%	Pass
Truss Horizontals	66%	Pass
Anchor Bolts	48%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	332.6	59%
Download (kips)	464.4	3%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

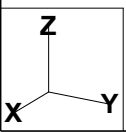
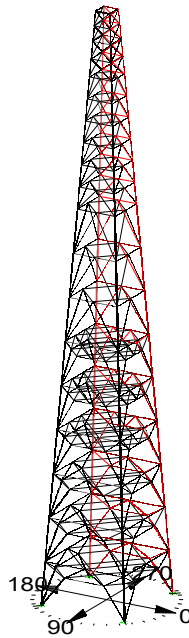
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively “American Tower”) are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Project Name : 88008 - Bethany CT
Project Notes : Dish Wireless - 13709244 c3_03
Project File : X:\A-B\Bethany CT, CT (88008)\14089639 T-MOBILE\14089639_03_CUST_STR\88008- 14089639_c3_03.TOW
Date run : 4:30:43 PM Thursday, April 14, 2022
by : Tower Version 16.73
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: ANSI/TIA 222-G-1
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: X:\A-B\Bethany CT, CT (88008)\14089639 T-MOBILE\14089639_03_CUST_STR\88008- 14089639_c3_03.eia

*** Analysis Results:

Maximum element usage is 86.41% for Angle "D 12X" in load case "W -90"

Foundation Design Forces For All Load Cases:

Note: loads are factored.

Load Case	Foundation Description	Axial Force (kips)	Shear Force (kips)	Bending Moment (ft-k)	Foundation Usage %
W 0	OP	333.43	53.53	5.53	0.00
W 0	OX	326.89	52.45	5.24	0.00
W 0	OXY	-202.76	39.50	5.84	0.00
W 0	OY	-201.69	40.28	6.08	0.00
W 180	OP	-197.90	40.13	6.15	0.00
W 180	OX	-198.71	39.44	5.93	0.00
W 180	OXY	322.83	52.39	5.33	0.00
W 180	OY	329.64	53.38	5.59	0.00
W 45	OP	464.35	70.17	4.84	0.00
W 45	OX	62.14	26.01	6.08	0.00
W 45	OXY	-332.64	58.05	6.37	0.00
W 45	OY	62.02	25.95	6.06	0.00
W -45	OP	67.84	27.34	6.37	0.00
W -45	OX	458.65	69.70	4.88	0.00
W -45	OXY	60.10	25.15	6.87	0.00
W -45	OY	-330.74	58.17	6.45	0.00
W 90	OP	333.53	53.57	5.54	0.00
W 90	OX	-202.68	40.31	6.09	0.00
W 90	OXY	-202.66	39.47	5.83	0.00
W 90	OY	326.66	52.41	5.23	0.00
W -90	OP	-198.00	40.16	6.15	0.00
W -90	OX	329.86	53.42	6.60	0.00
W -90	OXY	322.73	52.36	5.32	0.00
W -90	OY	-198.72	39.42	5.92	0.00
W 0 Ice	OP	69.18	22.78	1.70	0.00
W 0 Ice	OX	163.96	22.26	1.58	0.00
W 0 Ice	OXY	24.76	4.07	3.41	0.00
W 0 Ice	OY	28.99	4.13	3.49	0.00
W 180 Ice	OP	33.65	4.35	3.56	0.00
W 180 Ice	OX	29.80	4.29	3.51	0.00
W 180 Ice	OXY	158.92	22.11	1.55	0.00
W 180 Ice	OY	164.52	22.51	1.71	0.00
W 45 Ice	OP	203.75	28.06	0.83	0.00
W 45 Ice	OX	96.38	12.12	2.73	0.00
W 45 Ice	OXY	-9.51	6.61	3.77	0.00
W 45 Ice	OY	96.26	12.11	7.12	0.00
W -45 Ice	OP	101.41	12.71	2.83	0.00
W -45 Ice	OX	198.73	27.67	0.80	0.00
W -45 Ice	OXY	91.84	12.00	2.66	0.00
W -45 Ice	OY	-5.08	6.47	3.85	0.00
W 90 Ice	OP	169.20	22.79	1.70	0.00
W 90 Ice	OX	29.09	4.14	3.50	0.00
W 90 Ice	OXY	24.79	4.06	3.41	0.00
W 90 Ice	OY	163.81	22.25	1.57	0.00
W -90 Ice	OP	33.62	4.35	3.56	0.00
W -90 Ice	OX	164.67	22.52	1.71	0.00
W -90 Ice	OXY	158.90	22.11	1.55	0.00
W -90 Ice	OY	29.70	4.28	3.51	0.00

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Tran. Moment (ft-k)	Long. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Found. Usage %
W 0	OP	-48.64	-22.35	-333.43	53.53	-1.05	-5.42	5.53	-3.23	0.00
W 0	OX	-47.09	23.09	-326.89	52.45	0.75	-5.19	5.24	3.22	0.00
W 0	OXY	-36.75	14.50	-326.76	39.50	0.61	5.82	5.84	2.84	0.00
W 0	OY	-37.86	13.76	201.69	40.28	-0.38	-6.07	6.08	-2.82	0.00
W 180	OP	37.82	13.42	197.90	40.13	-0.36	6.14	6.15	2.83	0.00
W 180	OX	36.79	14.23	198.71	39.44	0.52	5.91	5.93	-2.85	0.00
W 180	OXY	47.13	22.88	-322.83	52.39	0.73	5.28	5.33	-3.23	0.00
W 180	OY	48.61	-22.07	-329.64	53.38	-1.06	5.49	5.59	3.25	0.00
W 45	OP	-49.59	-49.64	-464.35	70.17	3.43	-3.42	4.84	0.00	0.00
W 45	OX	-22.43	23.20	-42.14	26.01	4.80	3.72	6.08	4.36	0.00
W 45	OXY	-41.07	-41.03	332.64	58.05	4.50	-4.51	6.37	-0.00	0.00
W 45	OY	-13.15	-22.37	-62.02	25.95	3.72	-4.79	6.06	-4.36	0.00
W -45	OP	-23.65	13.71	-67.84	27.34	-5.03	-3.90	6.37	-4.37	0.00
W -45	OX	-48.41	50.15	-458.65	69.70	-3.66	3.24	4.88	-0.01	0.00
W -45	OXY	-12.43	21.86	-60.10	25.15	-3.65	-4.60	5.87	4.37	0.00
W -45	OY	-41.74	40.51	330.74	58.17	-4.43	-4.68	6.45	0.02	0.00
W 90	OP	-22.33	-48.69	-333.53	53.57	5.43	1.06	5.54	3.23	0.00
W 90	OX	13.73	-37.90	201.68	40.31	6.08	0.37	6.09	2.82	0.00
W 90	OXY	-14.51	-36.71	202.66	39.47	5.81	-0.52	5.83	-2.84	0.00
W 90	OY	23.11	-47.04	-326.66	52.41	5.18	-0.74	5.23	-3.22	0.00
W -90	OP	13.40	37.86	198.00	40.16	-6.14	0.36	6.15	2.83	0.00
W -90	OX	-22.05	48.65	-329.86	53.42	-5.50	1.07	5.60	-3.25	0.00
W -90	OXY	22.91	47.08	-322.73	52.36	-5.27	-0.72	5.32	3.23	0.00
W -90	OY	-14.26	16.75	198.72	39.42	-5.90	-0.53	5.92	2.85	0.00
W 0 Ice	OP	-18.85	-12.79	-169.18	22.78	1.69	0.19	1.70	-0.75	0.00
W 0 Ice	OX	-18.12	12.93	-163.96	22.26	1.56	0.26	1.58	0.73	0.00
W 0 Ice	OXY	-3.44	2.18	-24.76	4.07	1.63	-3.00	3.41	0.73	0.00
W 0 Ice	OY	-3.42	-2.32	-28.99	4.13	-1.68	3.06	3.49	-0.71	0.00
W 180 Ice	OP	3.38	-2.74	-33.65	4.35	-1.66	3.15	3.56	0.72	0.00
W 180 Ice	OX	3.48	2.51	-29.80	4.29	1.64	3.11	3.51	-0.74	0.00
W 180 Ice	OXY	18.17	12.60	-158.92	22.11	1.54	-0.15	1.55	-0.75	0.00
W 180 Ice	OY	18.80	-12.37	-164.52	22.51	-1.71	-0.10	1.71	0.76	0.00
W 45 Ice	OP	-19.84	-19.85	-203.75	28.06	-0.59	0.59	0.83	0.00	0.00
W 45 Ice	OX	-11.65	3.35	-96.38	12.12	2.65	0.63	2.73	1.07	0.00
W 45 Ice	OXY	-4.57	4.67	-9.51	6.61	2.66	2.66	3.77	0.00	0.00
W 45 Ice	OY	3.36	-11.63	-96.26	12.11	-0.63	-2.65	2.72	-1.07	0.00
W -45 Ice	OP	-12.29	-3.27	-101.41	12.71	-2.77	0.57	2.83	-1.08	0.00
W -45 Ice	OX	-19.20	19.93	-198.73	27.67	0.47	0.65	0.80	-0.01	0.00
W -45 Ice	OXY	3.25	11.55	-91.84	12.00	0.56	-2.60	2.66	1.08	0.00
W -45 Ice	OY	-4.57	4.59	5.08	6.47	-2.73	3.85	3.85	0.02	0.00
W 90 Ice	OP	-12.78	-18.87	-169.20	22.79	-0.18	1.69	1.70	0.75	0.00
W 90 Ice	OX	-2.33	-3.43	-29.09	4.14	3.07	1.68	3.50	0.71	0.00
W 90 Ice	OXY	2.18	-3.43	-24.79	4.06	3.00	-1.63	3.41	-0.73	0.00
W 90 Ice	OY	12.93	-18.11	-163.81	22.25	-0.26	-1.55	1.57	-0.73	0.00
W -90 Ice	OP	-2.74	3.38	-33.62	4.35	-3.15	1.66	3.56	-0.72	0.00
W -90 Ice	OX	-12.37	18.82	-164.67	22.52	0.10	1.71	1.71	-0.76	0.00
W -90 Ice	OXY	12.61	18.16	-158.90	22.11	0.15	-1.54	1.55	0.75	0.00
W -90 Ice	OY	2.50	3.48	-29.70	4.28	-3.11	-1.64	3.51	0.74	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support Origin Joint	Leg Force In Residual Shear	Residual Shear Dir. Perpendicular To Leg	Residual Shear To Leg	Residual Shear - Res. To Leg	Long. Force	Long. Force - Tran. Force	Total Force	Total Force	Total Force
		(kips)	(kips)	(kips)	(kips)	(kips)	(kips)	(kips)	(kips)	(kips)
W 0	OP	1P	L 1P	336.583	27.428	27.428	1.174	-48.64	-22.35	-333.43
W 0	OX	1X	L 1X	330.018	26.364	26.427	26.324	-2.325	-47.09	23.09
W 0	OXY	1XY	L 1XY	-205.194	23.866	23.920	23.866	1.614	-36.75	-14.50
W 0	OY	1Y	L 1Y	-206.147	25.008	25.062	25.044	-0.946	-37.86	13.76
W 180	OP	1P	L 1P	-200.346	25.206	25.260	25.246	-0.845	37.82	13.42
W 180	OX	1X	L 1X	-201.141	24.160	24.215	-24.162	1.608	36.79	-14.23
W 180	OXY	1XY	L 1XY	325.966	26.662	26.725	-26.619	-2.372	47.13	22.88
W 180	OY	1Y	L 1Y	327.788	27.690	27.744	27.690	1.125	48.61	-22.07
W 45	OP	1P	L 1P	468.763	28.337	28.451	20.093	20.143	-49.59	-49.64
W 45	OX	1X	L 1X	62.472	25.199	25.200	18.470	17.143	-22.42	-13.20
W 45	OXY	1XY	L 1XY	-336.502	28.055	28.168	19.939	19.897	-41.07	-41.03
W 45	OY	1Y	L 1Y	62.352	25.134	25.134	17.092	18.427	-13.15	-22.37
W -45	OP	1P	L 1P	68.198	26.436	19.343	19.343	-18.019	-23.65	13.71
W -45	OX	1X	L 1X	463.048	28.395	28.509	19.269	-21.010	-48.41	50.15
W -45	OXY	1XY	L 1XY	60.459	24.280	17.281	16.248	-19.043	-12.43	21.86
W -45	OY	1Y	L 1Y	-334.614	28.351	28.465	20.733	-19.504	-41.74	40.51
W 90	OP	1P	L 1P	336.689	27.466	27.525	1.140	27.502	-22.33	-48.69
W 90	OX	1X	L 1X	-204.133	25.048	25.102	-0.919	25.085	13.73	-37.90

W 90	OXY	1XY	L 1XY	-205.087	23.835	23.889	1.640	23.833	-14.51	-36.71	202.66
W 90	OXY	1XY	L 1XY	229.449	26.791	26.389	-2.609	26.293	23.17	-47.04	-326.66
W 90	OP	1P	L 1P	-200.452	25.238	25.292	-0.820	-25.278	13.40	37.86	198.00
W 90	OXY	1X	L 1X	333.015	27.660	27.720	1.091	-27.698	-22.05	48.65	-329.86
W 90	OXY	1XY	L 1XY	325.859	26.626	26.689	-2.406	-26.580	22.91	47.08	-322.73
W 90	OXY	1X	L 1X	-201.232	24.122	24.177	1.635	-24.122	-14.26	36.75	198.72
W 0 tce	OP	1P	L 1P	170.501	8.333	8.358	8.105	2.042	-18.85	-12.79	-169.18
W 0 tce	OXY	1X	L 1X	165.264	8.082	8.108	7.709	-2.512	-18.12	12.93	-163.96
W 0 tce	OXY	1XY	L 1XY	24.586	5.038	5.045	5.009	-0.605	-3.44	2.18	-24.76
W 0 tce	OXY	1X	L 1X	165.264	5.277	5.286	5.075	0.475	-3.42	-2.32	-28.99
W 180 tce	OP	1P	L 1P	33.472	5.537	5.546	-5.513	0.606	3.38	-2.74	-33.65
W 180 tce	OXY	1X	L 1X	29.617	5.404	5.412	-5.377	-0.616	3.48	2.51	-29.80
W 180 tce	OXY	1XY	L 1XY	21.232	8.429	8.478	8.478	2.507	-19.20	19.93	198.73
W 180 tce	OXY	1Y	L 1Y	165.832	8.546	8.570	8.570	1.917	18.80	-12.37	-164.52
W 45 tce	OP	1P	L 1P	205.442	9.718	9.757	6.892	6.907	-19.84	-19.85	-203.75
W 45 tce	OXY	1X	L 1X	96.947	6.179	6.181	5.525	2.772	-11.65	3.35	-96.38
W 45 tce	OXY	1XY	L 1XY	-10.059	5.073	5.074	4.075	4.066	-4.67	-4.67	9.51
W 45 tce	OXY	1Y	L 1Y	96.823	6.167	6.169	2.759	5.518	3.36	-11.63	-96.26
W 45 tce	OP	1P	L 1P	101.982	6.649	6.651	5.844	-3.176	-12.29	-3.27	-101.41
W 45 tce	OXY	1X	L 1X	200.407	9.716	9.731	6.573	7.309	-19.20	19.93	198.73
W 45 tce	OXY	1XY	L 1XY	92.404	6.268	6.271	2.982	-5.715	3.25	11.55	-91.84
W 45 tce	OXY	1Y	L 1Y	-5.641	5.994	6.018	4.248	-4.263	-4.57	4.59	5.08
W 90 tce	OP	1P	L 1P	170.523	8.343	8.368	2.031	8.117	-12.78	-18.87	-169.20
W 90 tce	OXY	1X	L 1X	28.904	5.288	5.296	0.478	5.275	-2.33	-3.43	-29.09
W 90 tce	OXY	1XY	L 1XY	24.608	5.035	5.043	-0.603	5.006	2.18	-3.43	-24.79
W 90 tce	OXY	1Y	L 1Y	165.118	8.081	8.107	-2.523	7.704	12.93	-18.11	-163.81
W 90 tce	OP	1P	L 1P	33.449	5.540	5.546	5.607	-5.515	-2.74	3.38	-33.62
W 90 tce	OXY	1X	L 1X	165.979	8.548	8.573	1.908	-8.358	-12.37	18.82	-164.67
W 90 tce	OXY	1XY	L 1XY	160.211	8.421	8.447	-2.518	-8.063	12.61	18.16	-158.90
W 90 tce	OXY	1Y	L 1Y	29.515	5.393	5.402	-0.613	-5.367	2.50	3.48	-29.70

Overturning Moment Summary For All Load Cases:

Load Case	Transverse Force (ft-k)	Longitudinal Force (ft-k)	Torsional Moment (ft-k)	Resultant Moment (ft-k)	Transverse Force (kips)	Longitudinal Force (kips)	Vertical Force (kips)
W 0	197.502	-27620.180	-107.326	27620.886	-0.000	-170.337	255.861
W 180	197.661	27213.069	-107.416	27213.787	-0.000	-170.337	255.861
W 45	20670.783	-20677.025	-4.819	29237.316	126.232	255.861	
W 45	-20276.005	-20677.437	156.720	28959.847	-126.232	255.861	
W 90	27613.958	-20.337	-114.477	27614.708	-0.000	-170.337	255.861
W 90	-27219.319	-203.916	114.238	27220.082	-170.337	-0.000	255.861
W 0 tce	244.981	-7247.140	25.746	7251.279	-0.000	43.835	386.888
W 180 tce	245.018	6744.301	-25.751	6748.750	-0.000	-43.835	386.888
W 45 tce	5528.590	-5535.014	-1.021	7823.151	32.802	386.888	
W 45 tce	-5038.617	-5535.067	37.453	7484.960	-32.802	386.888	
W 90 tce	7240.717	-251.407	-27.189	7245.081	43.835	-0.000	386.888
W 90 tce	-6750.833	-251.452	27.194	6755.515	-43.835	-0.000	386.888

EIA Sections Information:

Section Label	Top Z (ft)	Bottom Z (ft)	Joint Count	Member Count	Top Width (ft)	Bottom Width (ft)	Gross Area (ft²)	Face A Factor	Face B Factor	Dead Load Factor
328.9-337.5	337.500	328.917	8	20	9.00	10.09	81.93	1.1220	1.1220	1.146
320.3-328.9	328.917	320.334	8	16	10.09	11.18	91.29	1.1610	1.1610	1.193
310.2-320.3	320.334	310.167	8	16	11.18	12.47	120.24	1.1970	1.1970	1.236
300.0-310.2	310.167	300.000	12	24	12.47	13.76	133.38	1.1540	1.1540	1.185
287.5-300.0	300.000	287.500	16	24	13.76	15.35	181.98	1.2010	1.2010	1.242
275.0-287.5	287.500	275.000	16	24	15.35	16.94	201.83	1.2080	1.2080	1.249
262.5-275.0	275.000	262.500	16	24	16.94	18.53	221.69	1.2140	1.2140	1.257
250.0-262.5	262.500	250.000	16	24	18.53	20.12	241.54	1.2200	1.2200	1.264
237.5-250.0	250.000	237.500	16	24	20.12	21.71	261.39	1.2260	1.2260	1.271
225.0-237.5	237.500	225.000	16	24	21.71	23.29	281.24	1.2320	1.2320	1.278
200.0-225.0	225.000	200.000	16	24	23.29	25.47	302.04	1.2640	1.2640	1.316
175.0-200.0	200.000	175.000	16	24	25.47	29.65	342.82	1.2730	1.2730	1.328
150.0-175.0	175.000	150.000	20	32	29.65	32.82	382.85	1.2750	1.2750	1.338
125.0-150.0	150.000	125.000	36	76	32.82	36.00	426.26	1.2300	1.2300	1.276
100.0-125.0	125.000	100.000	36	76	36.00	39.17	469.67	1.2250	1.2250	1.270
75.0-100.0	100.000	75.000	32	68	39.17	42.35	510.97	1.2270	1.2270	1.272
50.0-75.0	75.000	50.000	24	52	42.35	45.53	559.48	1.3380	1.3380	1.406
25.0-50.0	50.000	25.000	24	52	45.53	48.70	607.19	1.3250	1.3250	1.395
0.00-25.00	25.000	0.000	20	40	48.70	51.88	655.30	1.3210	1.3210	1.385

Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Angle Desc.	Type	Angle Size	Steel Strength	Max Usage	Max Control	Comp. In Member	Comp. Force	Comp. Control	L/r	Comp. Connect.	Comp. Connect.	RLX	RLY	RLZ	L/r	RL/r	Length	Curve No.	No. Bolts	Of Comp.
			(ksi)	%	(kips)					(kips)								(ft)			
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	62.96	Comp	62.96	L 1P	-407.545	W 45	647.310	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	61.09	Comp	61.09	L 2P	-363.441	W 45	594.930	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	58.82	Comp	58.82	L 3P	-320.492	W 45	544.890	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0
Leg S4	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	48.13	Comp	48.13	L 4P	-263.195	W 45	546.883	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0
Leg S5	L 8" x 8" x 1"	SAE	8X8X1	36.0	45.31	Comp	45.31	L 5P	-222.199	W 45	490.433	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.101	1	0
Leg S6	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	41.53	Comp	41.53	L 6P	-168.338	W 45	451.358	0.000	0.000	0.333	0.333	0.333	63.82	63.82	12.550	1	0
Leg S7	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	40.53	Comp	40.53	L 7P	-168.338	W 45	451.358	0.000	0.000	0.333	0.333	0.333	63.82	63.82	12.550	1	0
Leg S8	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	37.03	Comp	37.03	L 8P	-133.056	W 45	359.355	0.000	0.000	0.333	0.333	0.333	63.82	63.82	12.550	1	0
Leg S9	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	28.18	Comp	28.18	L 9P	-101.260	W 45	359.355	0.000	0.000	0.333	0.333	0.333	63.82	63.82	12.550	1	0
Leg S10	L 6" x 6" x 0.75"	SAE	6X6X0.88	36.0	27.93	Comp	27.93	L 10P	-85.192	W 45	304.972	0.000	0.000	0.500	0.500	0.500	64.36	64.36	12.550	1	0
Leg S11	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	26.57	Comp	26.57	L 11P	-70.296	W 45	264.572	0.000	0.000	0.500	0.500	0.500	64.36	64.36	12.550	1	0
Leg S12	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	22.35	Comp	22.35	L 12P	-59.127	W 45	264.572	0.000	0.000	0.500	0.500	0.500	64.36	64.36	12.550	1	0
Leg S13	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	23.79	Comp	23.79	L 13P	-48.085	W 45	202.137	0.000	0.000	0.500	0.500	0.500	63.82	63.82	12.550	1	0
Leg S14	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	18.47	Comp	18.47	L 14P	-37.335	W 45	202.137	0.000	0.000	0.500	0.500	0.500	63.82	63.82	12.550	1	0
Leg S15	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	16.81	Comp	16.81	L 15P	-26.764	W 45	159.214	0.000	0.000	0.500	0.500	0.500	63.82	63.82	12.550	1	0
Leg S16	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	19.90	Comp	19.90	L 16P	-26.345	W 45	132.414	0.000	0.000	0.500	0.500	0.500	62.12	62.12	10.208	1	0
Leg S17	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	13.57	Comp	13.57	L 17P	-9.646	W 45	96.703	0.000	0.000	0.500	0.500	0.500	52.02	52.02	8.618	1	0
Leg S18	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	9.97	Comp	9.97	L 18P	-9.646	W 45	96.703	0.000	0.000	0.500	0.500	0.500	52.02	52.02	8.618	1	0
Leg S19	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	5.43	Comp	5.43	L 19P	-5.255	W 45	96.703	0.000	0.000	0.500	0.500	0.500	52.02	52.02	8.618	1	0
Diag S1	B/B 1.5"x2"x0.375"	DAS	4X3X0.38	36.0	52.80	Comp	52.80	D 2X	-49.097	W 90	92.986	0.000	0.000	0.333	0.333	0.333	118.88	118.88	22.661	1	0
Diag S2	B/B 1.5"x2"x0.375"	DAS	4X3X0.38	36.0	74.73	Comp	74.73	D 3X	-47.428	W 90	64.138										

LD 17	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	57.83	Comp	57.83	LD 33X	-29.690	W -90	51.340	0.000	0.000	0.850	0.850	0.850	102.47	102.47	7.876	1	0
LD 18	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	71.12	Comp	18.92	LD 33X	-31.424	W -90	43.000	0.000	0.000	0.850	0.850	0.850	117.40	117.40	8.919	1	0
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	11.38	Tens	0.00	LH 2X	0.000		0.001	0.000	0.000	100.000	100.000	100.000	38807.73	23912.96	24.352	6	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	7.15	Tens	0.00	LH 4X	0.000		0.002	0.000	0.000	100.000	100.000	100.000	36276.82	22356.44	22.764	6	0
LH 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	7.36	Tens	0.00	LH 6X	0.000		0.002	0.000	0.000	100.000	100.000	100.000	33745.91	20799.93	21.176	6	0
LH 4	B/B L2.5"x3"x0.25"	DAS	3X3X0.38	36.0	52.81	Comp	52.81	LH 7X	-27.113	W -45	51.338	0.000	0.000	0.940	1.880	0.940	170.36	150.97	10.648	6	0
LH 5	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	66.16	Comp	66.16	LH 9X	-24.313	W -90	36.752	0.000	0.000	0.940	1.880	0.940	152.80	140.17	9.821	6	0
LH 6	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	51.29	Comp	51.29	LH 11X	-21.220	W -45	41.375	0.000	0.000	0.940	1.880	0.940	139.93	132.25	8.993	6	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 13X7	-1.034	W 45	0.324	0.000	0.000	1.000	1.000	1.000	2.52	2.52	20.963	1	0

Group Summary (Tension Portion):

Group Label	Group Desc.	Group Angle Type	Angle Size	Steel Strength	Max Usage	Max Usage Control	Max Tension Use Control	Tension Force In Member	Tension Control Load Case	Net Section Capacity	Tension Connect. Shear	Tension Connect. Bearing	Tension Rupture Member	Tension Length	No. Of Bolts	No. Of Holes	Hole Diameter	
			(ksi)	%			Tens. %	(kips)		(kips)	(kips)	(kips)	(kips)	(ft)			(in)	
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	62.96	Comp	52.01	L 1X7	281.946	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	61.09	Comp	46.69	L 2X7	253.076	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	58.82	Comp	40.83	L 3X7	221.340	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S4	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	48.13	Comp	33.98	L 4X7	184.206	W 45	542.051	0.000	0.000	0.000	25.101	0	0.000	0
Leg S5	L 8" x 8" x 1"	SAE	8X8X1	36.0	45.31	Comp	31.70	L 5X7	154.862	W 45	485.999	0.000	0.000	0.000	25.101	0	0.000	0
Leg S6	L 8" x 8" x 1"	SAE	8X8X1	36.0	36.53	Comp	25.83	L 6X7	125.548	W 45	485.999	0.000	0.000	0.000	25.101	0	0.000	0
Leg S7	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	45.03	Comp	28.23	L 7X7	120.995	W 45	428.651	0.000	0.000	0.000	25.101	0	0.000	0
Leg S8	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	37.03	Comp	25.68	L 8X7	95.186	W 45	370.655	0.000	0.000	0.000	25.101	0	0.000	0
Leg S9	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	32.35	Comp	14.67	L 9X7	70.120	W 45	370.655	0.000	0.000	0.000	25.101	0	0.000	0
Leg S10	L 6" x 6" x 0.75"	SAE	6X6X0.88	36.0	27.93	Comp	18.75	L 10X7	59.100	W 45	315.252	0.000	0.000	0.000	12.550	0	0.000	0
Leg S11	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	26.57	Comp	17.98	L 11X	49.169	W -45	273.456	0.000	0.000	0.000	12.550	0	0.000	0
Leg S12	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	22.35	Comp	14.67	L 12X	40.121	W -45	273.456	0.000	0.000	0.000	12.550	0	0.000	0
Leg S13	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	19.90	Comp	14.88	L 13X	30.992	W -45	208.332	0.000	0.000	0.000	12.550	0	0.000	0
Leg S14	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	18.47	Comp	10.71	L 14X	22.302	W -45	208.332	0.000	0.000	0.000	12.550	0	0.000	0
Leg S15	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	16.81	Comp	8.55	L 15X	14.013	W -45	163.944	0.000	0.000	0.000	12.550	0	0.000	0
Leg S16	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	15.90	Comp	5.62	L 16X	7.165	W -45	109.512	0.000	0.000	0.000	10.208	0	0.000	0
Leg S17	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	13.57	Comp	1.53	L 17X	2.066	W -45	135.432	0.000	0.000	0.000	10.208	0	0.000	0
Leg S18	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	9.97	Comp	0.31	L 18X	0.306	W -45	98.172	0.000	0.000	0.000	8.618	0	0.000	0
Leg S19	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	5.43	Comp	0.00	L 19X	0.000		0.000	0.000	0.000	8.618	0	0.000	0	
Diag S1	B/B L3"x4"x0.25"	DAS	4X3X0.38	36.0	52.80	Comp	26.65	D 2P	42.907	W -90	161.028	0.000	0.000	0.000	22.664	0	0.000	0
Diag S2	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	74.73	Comp	38.94	D 4P	42.643	W -90	109.512	0.000	0.000	0.000	22.191	0	0.000	0
Diag S3	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	70.27	Comp	38.49	D 6P	42.153	W -90	109.512	0.000	0.000	0.000	21.737	0	0.000	0
Diag S4	B/B L3"x3"x0.25"	DAS	3.5X3X0.25	36.0	60.58	Comp	43.10	D 8P	43.705	W -90	101.412	0.000	0.000	0.000	20.858	0	0.000	0
Diag S5	B/B L3"x3"x0.25"	DAS	3.5X3X0.25	36.0	57.68	Comp	41.90	D 10P	42.495	W -90	101.412	0.000	0.000	0.000	20.484	0	0.000	0
Diag S6	B/B L2.5"x3"x0.25"	DAS	3.5X2.5X0.25	36.0	86.41	Comp	42.42	D 12P	39.587	W -90	93.312	0.000	0.000	0.000	20.133	0	0.000	0
Diag S7	B/B L3"x3"x0.375"	DAE	3X3X0.38	36.0	58.46	Comp	19.46	D 13P	26.614	W -90	136.728	0.000	0.000	0.000	29.947	0	0.000	0
Diag S8	B/B L2.5"x2"x0.25"	DAS	3X2.5X0.25	36.0	78.24	Comp	27.18	D 14P	23.156	W -90	87.180	0.000	0.000	0.000	29.107	0	0.000	0
Diag S9	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	70.28	Comp	26.02	D 17P	22.175	W -90	85.212	0.000	0.000	0.000	28.332	0	0.000	0
Diag S10	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	53.07	Comp	15.27	D 19P	11.777	W -90	77.112	0.000	0.000	0.000	17.103	0	0.000	0
Diag S11	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	48.83	Comp	12.28	D 21P	9.471	W -90	77.112	0.000	0.000	0.000	16.573	0	0.000	0
Diag S12	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	34.97	Comp	11.13	D 23P	8.581	W -90	77.112	0.000	0.000	0.000	16.064	0	0.000	0
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	53.13	Comp	12.22	D 25P	8.431	W -90	69.012	0.000	0.000	0.000	15.579	0	0.000	0
Diag S14	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	45.69	Comp	11.07	D 27P	7.636	W -90	69.012	0.000	0.000	0.000	15.120	0	0.000	0
Diag S15	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	40.01	Comp	10.16	D 29P	6.013	W -90	69.012	0.000	0.000	0.000	14.690	0	0.000	0
Diag S16	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	14.90	Tens	14.90	D 31P	8.157	W 180	54.756	0.000	0.000	0.000	16.610	0	0.000	0
Diag S17	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	11.49	Tens	11.49	D 33P	6.291	W 180	54.756	0.000	0.000	0.000	15.610	0	0.000	0
Diag S18	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	8.92	Tens	8.92	D 35P	4.161	W 180	46.656	0.000	0.000	0.000	13.678	0	0.000	0
Diag S19	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	6.84	Tens	6.84	D 37P	3.192	W 180	46.656	0.000	0.000	0.000	12.848	0	0.000	0
Horiz 1	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	63.81	Comp	41.35	H 1X	45.281	W -90	109.512	0.000	0.000	0.000	24.352	0	0.000	0
Horiz 2	B/B L3.5"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	80.35	Comp	45.54	H 3X	42.495	W -90	93.312	0.000	0.000	0.000	22.764	0	0.000	0
Horiz 3	B/B L3"x2"x0.25"	DAL	3X2.5X0.25	36.0	71.93	Comp	46.99	H 5X	40.037	W -90	85.212	0.000	0.000	0.000	21.176	0	0.000	0
Horiz 4	B/B L3.5"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	73.02	Comp	43.74	H 7X	40.813	W -90	93.312	0.000	0.000	0.000	13.058	0	0.000	0
Horiz 5	B/B L3.5"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	67.59	Comp	39.78	H 9X	37.118	W -90	93.312	0.000	0.000	0.000	12.000	0	0.000	0
Horiz 6	B/B L3"x2"x0.25"	DAL	3X2.5X0.25	36.0	65.35	Comp	36.56	H 11P	31.153	W 90	85.212	0.000	0.000	0.000	10.941	0	0.000	0
Horiz 7	B/B L3"x2"x0.25"	DAL	3X2.5X0.25	36.0	48.81	Comp	16.50	H 14P	14.059	W 0	85.212	0.000	0.000	0.000	14.823	0	0.000	0
Horiz 8	B/B L3"x2"x0.25"	DAL	3X2.5X0.25	36.0	33.02	Comp	13.19	H 15P	11.236	W 90	85.212	0.000	0.000	0.000	13.235	0	0.000	0
Horiz 9	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	53.07	Comp	13.22	H 17P	10.191	W 90	77.112	0.000	0.000	0.000	11.647	0	0.000	0
Horiz 10	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	48.83	Comp	10.24	H 19X	7.895	W -90	77.112	0.000	0.000	0.000	10.853	0	0.000	0
Horiz 11	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	17.79	Comp	8.10	H 21X	6.245	W -90	77.112	0.000	0.000	0.000	10.059	0	0.000	0
Horiz 12	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	13.97	Comp	7.02	H 23P	5.416	W 90	77.112	0.000	0.000	0.000	9.264	0	0.000	0
Horiz 13	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	12.57	Comp	6.99	H 25P	5.388	W 90	77.112	0.000	0.000	0.000	8.470	0	0.000	0
Horiz 14	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	9.34	Comp	5.80	H 28P	4.473	W 0	77.112	0.000	0.000	0.000	7.676	0	0.000	0
Horiz 15	B/B L2.5"x2"x0.25"	DAE	2.5X2.5X0.25	36.0	12.22	Comp	0.77	H 29X7	0.590	W -90	77.112	0.000	0.000	0.000	6.882	0	0.000	0
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X															

Site #:	88008
Name:	Bethany CT, CT

Engineer:	Tiffany.Ta
Date:	04/14/22

Windspeed:	No Ice:	119 mph	Ice:	50 mph
Carrier	T-Mobile			

Taper:	-0.127052
FW @ Base:	51.88

Taper Change:	337.5	ft
FW @ Top:	9	ft

											Spreadsheet Version Last Updated: 11/12/2014										
Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop Sub-Brace (Y or Blank)								# Sub-Brace		
												# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)			
0	XY-Symmetry	25.94	25.94	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		3	7.030	25	1	0	51.88	3			
1	XY-Symmetry	24.35185185	24.35185185	25	Free	Free	Free	Free	Free	Free		3	7.030	25	1	2	25	48.7037037	3		
2	XY-Symmetry	22.7637037	22.7637037	50	Free	Free	Free	Free	Free	Free		3	7.030	25	1	3	50	45.52740741	3		
3	XY-Symmetry	21.17555556	21.17555556	75	Free	Free	Free	Free	Free	Free		3	7.030	25	2	4	75	42.35111111	3		
4	XY-Symmetry	19.58740741	19.58740741	100	Free	Free	Free	Free	Free	Free		3	7.030	25	2	5	100	39.17481481	3		
5	XY-Symmetry	17.99925926	17.99925926	125	Free	Free	Free	Free	Free	Free		3	7.03	25	2	6	125	35.99851852	3		
6	XY-Symmetry	16.41111111	16.41111111	150	Free	Free	Free	Free	Free	Free		3	7.03	25	2	7	150	32.82222222	2		
7	XY-Symmetry	14.82296296	14.82296296	175	Free	Free	Free	Free	Free	Free		3	7.03	25	2	8	175	29.64502593	2		
8	XY-Symmetry	13.23481481	13.23481481	200	Free	Free	Free	Free	Free	Free		3	7.03	25	2	9	200	26.46962963	2		
9	XY-Symmetry	11.64666667	11.64666667	225	Free	Free	Free	Free	Free	Free		3	7.03	12.5	A	10	225	23.29333333	1		
10	XY-Symmetry	10.85259259	10.85259259	237.5	Free	Free	Free	Free	Free	Free		3	7.03	12.5	A	11	237.5	21.70518519	1		
11	XY-Symmetry	10.05851852	10.05851852	250	Free	Free	Free	Free	Free	Free		3	7.03	12.5	A	12	250	20.11703704	1		
12	XY-Symmetry	9.26444444	9.26444444	262.5	Free	Free	Free	Free	Free	Free		3	7.03	12.5	A	13	262.5	18.52888889	1		
13	XY-Symmetry	8.47037037	8.47037037	275	Free	Free	Free	Free	Free	Free		3	7.03	12.5	A	14	275	16.94074074	1		
14	XY-Symmetry	7.676296296	7.676296296	287.5	Free	Free	Free	Free	Free	Free		3	7.03	12.5	A	15	287.5	15.35259259	1		
15	XY-Symmetry	6.882222222	6.882222222	300	Free	Free	Free	Free	Free	Free		3	10.167	X	16	300	13.76444444	1			
16	XY-Symmetry	6.236354133	6.236354133	310.167	Free	Free	Free	Free	Free	Free		1	10.167	X	17	310.167	12.47270827	1			
17	XY-Symmetry	5.590486044	5.590486044	320.334	Free	Free	Free	Free	Free	Free		3	8.583	X	18	320.334	11.18097209	1			
18	XY-Symmetry	5.045243022	5.045243022	328.917	Free	Free	Free	Free	Free	Free		3	8.583	X	19	328.917	10.09048604	1			
19	XY-Symmetry	4.5	4.5	337.5	Free	Free	Free	Free	Free	Free		3	8.583	X	20	337.5	9	1			
A1	Y-Symmetry	24.35185185	0	25	Free	Free	Free	Free	Free	Free		3	7.03	25	2	21	24.35185185	0	1		
A2	X-Symmetry	0	24.35185185	25	Free	Free	Free	Free	Free	Free		3	7.03	25	2	22	0	24.35185185	1		
A3	Y-Symmetry	22.7637037	0	50	Free	Free	Free	Free	Free	Free		3	7.03	25	2	23	22.7637037	0	1		
A4	X-Symmetry	0	22.7637037	50	Free	Free	Free	Free	Free	Free		3	7.03	25	2	24	0	22.7637037	1		
A5	Y-Symmetry	21.17555556	0	75	Free	Free	Free	Free	Free	Free		3	7.03	25	2	25	21.17555556	0	1		
A6	X-Symmetry	0	21.17555556	75	Free	Free	Free	Free	Free	Free		3	7.03	25	2	26	0	21.17555556	1		
A7	XY-Symmetry	19.58740741	6.529135802	100	Free	Free	Free	Free	Free	Free		3	7.03	25	2	27	19.58740741	6.529135802	1		
A8	XY-Symmetry	6.529135802	19.58740741	100	Free	Free	Free	Free	Free	Free		3	7.03	25	2	28	6.529135802	19.58740741	1		
A9	XY-Symmetry	17.99925926	5.999753086	125	Free	Free	Free	Free	Free	Free		3	7.03	25	2	29	17.99925926	5.999753086	1		
A10	XY-Symmetry	5.999753086	17.99925926	125	Free	Free	Free	Free	Free	Free		3	7.03	25	2	30	5.999753086	17.99925926	1		
A11	XY-Symmetry	16.41111111	5.47037037	150	Free	Free	Free	Free	Free	Free		3	7.03	25	2	31	16.41111111	5.47037037	1		
A12	XY-Symmetry	5.47037037	16.41111111	150	Free	Free	Free	Free	Free	Free		3	7.03	25	2	32	5.47037037	16.41111111	1		
A13	XY-Symmetry	14.82296296	0	175	Free	Free	Free	Free	Free	Free		3	7.03	25	2	33	14.82296296	0	1		
A14	X-Symmetry	0	14.82296296	175	Free	Free	Free	Free	Free	Free		3	7.03	25	2	34	0	14.82296296	1		
A15	Y-Symmetry	13.23481481	0	200	Free	Free	Free	Free	Free	Free		3	7.03	25	2	35	13.23481481	0	1		
A16	X-Symmetry	0	13.23481481	200	Free	Free	Free	Free	Free	Free		3	7.03	25	2	36	0	13.23481481	1		
A17	Y-Symmetry	11.64666667	0	225	Free	Free	Free	Free	Free	Free		3	7.03	25	2	37	11.64666667	0	1		
A18	X-Symmetry	0	11.64666667	225	Free	Free	Free	Free	Free	Free		3	7.03	25	2	38	0	11.64666667	1		
A19	Y-Symmetry	10.85259259	0	237.5	Free	Free	Free	Free	Free	Free		3	7.03	25	2	39	10.85259259	0	1		
A20	X-Symmetry	0	10.85259259	237.5	Free	Free	Free	Free	Free	Free		3	7.03	25	2	40	0	10.85259259	1		
A21	Y-Symmetry	10.05851852	0	250	Free	Free	Free	Free	Free	Free		3	7.03	25	2	41	10.05851852	0	1		
A22	X-Symmetry	0	10.05851852	250	Free	Free	Free	Free	Free	Free		3	7.03	25	2	42	0	10.05851852	1		
A23	Y-Symmetry	9.26444444	0	262.5	Free	Free	Free	Free	Free	Free		3	7.03	25	2	43	9.26444444	0	1		
A24	X-Symmetry	0	9.26444444	262.5	Free	Free	Free	Free	Free	Free		3	7.03	25	2	44	0	9.26444444	1		
A25	Y-Symmetry	8.47037037	0	275	Free	Free	Free	Free	Free	Free		3	7.03	25	2	45	8.47037037	0	1		
A26	X-Symmetry	0	8.47037037	275	Free	Free	Free	Free	Free	Free		3	7.03	25	2	46	0	8.47037037	1		
A27	Y-Symmetry	7.676296296	0	287.5	Free	Free	Free	Free	Free	Free		3	7.03	25	2	47	7.676296296	0	1		
A28	X-Symmetry	0	7.676296296	287.5	Free	Free	Free	Free	Free	Free		3	7.03	25	2	48	0	7.676296296	1		
A29	Y-Symmetry	6.882222222	0	300	Free	Free	Free	Free	Free	Free		3	7.03	25	2	49	6.882222222	0	1		
A30	X-Symmetry	0	6.882222222	300	Free	Free	Free	Free	Free	Free		3	7.03	25	2	50	0	6.882222222	1		
H1	XY-Symmetry	24.79843911	12.17592593	17.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	51	24.79843911	12.17592593	1		
H2	XY-Symmetry	12.17592593	24.79843911	17.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	52	12.17592593	24.79843911	1		
H5	XY-Symmetry	23.21029096	11.38185185	42.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	53	23.21029096	11.38185185	1		
H6	XY-Symmetry	11.38185185	23.21029096	42.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	54	11.38185185	23.21029096	1		
H9	XY-Symmetry	21.62214281	10.58777778	67.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	55	21.62214281	10.58777778	1		
H10	XY-Symmetry	10.58777778	21.62214281	67.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	56	10.58777778	21.62214281	1		
H13	XY-Symmetry	20.03399467	10.64770904	92.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	57	20.03399467	10.64770904	1		
H14	XY-Symmetry	10.64770904	20.03399467	92.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	58	10.64770904	20.03399467	1		
H15	Y-Symmetry	20.03399467	0	92.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	59	20.03399467	0	1		
H16	X-Symmetry	0	20.03399467	92.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	60	0	20.03399467	1		
H17	XY-Symmetry	18.44584652	9.820601481	117.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	61	18.44584652	9.820601481	1		
H18	XY-Symmetry	9.820601481	18.44584652	117.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	62	9.820601481	18.44584652	1		
H19	Y-Symmetry	18.44584652	0	117.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	63	18.44584652	0	1		
H20	X-Symmetry	0	18.44584652	117.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	64	0	18.44584652	1		
H21	XY-Symmetry	16.85769837	9.93493926	142.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	65	16.85769837	9.93493926	1		
H22	XY-Symmetry	9.93493926	16.85769837	142.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	66	9.93493926	16.85769837	1		
H23	Y-Symmetry	16.85769837	0	142.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	67	16.85769837	0	1		
H24	X-Symmetry	0	16.85769837	142.97	Free	Free	Free	Free	Free	Free		3	7.03	25	2	68	0	16.85769837	1		

Legs

Site No.:	88008
Engineer:	Tiffany.Ta
Date:	04/14/2022
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape	Diameter or Length (in)	Thickness ^[2] (in)	F _y (ksi)
1	0.000-25.00	L	8	1.125	36
2	25.00-50.00	L	8	1.125	36
3	50.00-75.00	L	8	1.125	36
4	75.00-100.0	L	8	1.125	36
5	100.0-125.0	L	8	1	36
6	125.0-150.0	L	8	1	36
7	150.0-175.0	L	8	0.875	36
8	175.0-200.0	L	8	0.75	36
9	200.0-225.0	L	8	0.75	36
10	225.0-237.5	L	6	0.875	36
11	237.5-250.0	L	6	0.75	36
12	250.0-262.5	L	6	0.75	36
13	262.5-275.0	L	6	0.5625	36
14	275.0-287.5	L	6	0.5625	36
15	287.5-300.0	L	6	0.4375	36
16	300.0-310.2	L	5	0.4375	36
17	310.2-320.3	L	5	0.4375	36
18	320.3-328.9	L	5	0.3125	36
19	328.9-337.5	L	5	0.3125	36

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifflerized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88008
Engineer:	Tiffany.Ta
Date:	04/14/2022
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-25.00	2L		3	4	0.375	36	
2	25.00-50.00	2L		3	4	0.25	36	
3	50.00-75.00	2L		3	4	0.25	36	
4	75.00-100.0	2L		3	3.5	0.25	36	
5	100.0-125.0	2L		3	3.5	0.25	36	
6	125.0-150.0	2L		2.5	3.5	0.25	36	
7	150.0-175.0	2L		3	3	0.375	36	
8	175.0-200.0	2L		2.5	3	0.25	36	
9	200.0-225.0	2L		2.5	3	0.25	36	
10	225.0-237.5	2L		2.5	2.5	0.25	36	
11	237.5-250.0	2L		2.5	2.5	0.25	36	
12	250.0-262.5	2L		2.5	2.5	0.25	36	
13	262.5-275.0	2L		2.5	2	0.25	36	
14	275.0-287.5	2L		2.5	2	0.25	36	
15	287.5-300.0	2L		2.5	2	0.25	36	
16	300.0-310.2	L		3.5	3.5	0.25	36	Y
17	310.2-320.3	L		3.5	3.5	0.25	36	Y
18	320.3-328.9	L		3	3	0.25	36	Y
19	328.9-337.5	L		3	3	0.25	36	Y

Notes:
[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.
[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
[3] Applies to Single-Angle and Double-Angle Shapes only.
[4] Applies to Double-Angle Shapes only.
[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88008
Engineer:	Tiffany.Ta
Date:	04/14/2022
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	B/B Spacing (in.)
1	0.000-25.00	2L		4	3	0.25	36	
2	25.00-50.00	2L		3.5	2.5	0.25	36	
3	50.00-75.00	2L		3	2.5	0.25	36	
4	75.00-100.0	2L		3.5	2.5	0.25	36	
5	100.0-125.0	2L		3.5	2.5	0.25	36	
6	125.0-150.0	2L		3	2.5	0.25	36	
7	150.0-175.0	2L		3	2.5	0.25	36	
8	175.0-200.0	2L		3	2.5	0.25	36	
9	200.0-225.0	2L		2.5	2.5	0.25	36	
10	225.0-237.5	2L		2.5	2.5	0.25	36	
11	237.5-250.0	2L		2.5	2.5	0.25	36	
12	250.0-262.5	2L		2.5	2.5	0.25	36	
13	262.5-275.0	2L		2.5	2.5	0.25	36	
14	275.0-287.5	2L		2.5	2.5	0.25	36	
15	287.5-300.0	2L		2.5	2.5	0.25	36	
16	300.0-310.2	L		3	2.5	0.25	36	
17	310.2-320.3	2L		3	2.5	0.25	36	
18	320.3-328.9	L		3	2.5	0.25	36	
19	328.9-337.5	C		8	11.5		36	

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88008
Engineer:	Tiffany.Ta
Date:	04/14/2022
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.
Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations (ft)	Type of Shape	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)
1	0.000-25.00	2L		3	2.5	0.3125	36
2	0.000-25.00	2L		4	3	0.3125	36
3	25.00-50.00	2L		3	2	0.25	36
4	25.00-50.00	2L		4	3	0.25	36
5	50.00-75.00	2L		2.5	2.5	0.375	36
6	50.00-75.00	2L		3.5	3	0.25	36
7	75.00-100.0	2L		3	3	0.25	36
8	75.00-100.0	2L		2.5	2	0.25	36
9	75.00-100.0	2L		3	2	0.25	36
10	100.0-125.0	2L		2.5	2	0.25	36
11	100.0-125.0	2L		2.5	2	0.25	36
12	100.0-125.0	2L		3	3	0.25	36
13	125.0-150.0	2L		2.5	2	0.25	36
14	125.0-150.0	2L		2.5	2	0.25	36
15	125.0-150.0	2L		2.5	2	0.25	36

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

Site No.:	88008
Engineer:	Tiffany.Ta
Date:	04/14/2022
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of shape	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Horiz. Tension Only? (Y/N)
1	0.000-25.00	2L		2.5	3	0.25	36	Y
2	25.00-50.00	2L		2.5	3	0.25	36	Y
3	50.00-75.00	2L		2.5	3	0.25	36	Y
4	75.00-100.0	2L		3	3	0.375	36	
5	100.0-125.0	2L		2.5	3	0.25	36	
6	125.0-150.0	2L		2.5	3	0.25	36	

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Site No.	88008
Engineer	Tiffany Ts
Date	04/14/12
Carrier	T-Mobile

Exposure	B
Topo Cat:	1

Ke 0.977806
Kz 7 Kz max 2.01
Kx 1200 Kx max 0.7
Kc 0.9 Kc

Site No.	88008
Engineer	Tiffany Ts
Date	04/14/12
Carrier	T-Mobile

Description	From	To	Quantity	Shape	Width or Diameter**	Perimeter	Unit Weight	In Face Zone?	Include in Wind Load
	(ft)	(ft)			(ft)	(ft)	(lb/ft)	(Yes/No)	(Yes/No)
1 Climbing Ladder	0	337.5	1	Flat	2.000	8.0	6	No	Yes
2 US Dept	0	337.5	2	Round	1.090	3.4	0.33	Yes	Yes
3 US Dept	0	337.5	1	Round	0.630	2.0	0.15	Yes	Yes
4 Ligalo	0	339	1	Round	1.980	6.2	0.82	Yes	Yes
5 US Dept	0	330	2	Round	1.090	3.4	0.33	Yes	Yes
6 US Dept	0	275	1	Round	1.090	3.4	0.33	Yes	Yes
7 Sprint	0	240	4	Round	1.540	4.8	1	No	Yes
8 TMO	0	220	3	Round	1.990	6.3	1.3	Yes	Yes
9 TMO	0	220	3	Round	1.210	3.9	1.05	Yes	Yes
10 US Dept	0	194	1	Round	1.510	4.9	0.63	Yes	Yes
11 Verizon	0	180	1	Flat	8.190	43.7	9.84	Yes	Yes
12 ATT	0	165	6	Round	1.980	6.2	0.82	Yes	Yes
13 ATT	0	165	1	Round	0.990	1.2	0.17	Yes	Yes
14 ATT	0	165	2	Round	0.780	2.5	0.59	Yes	Yes
15 ATT	0	165	1	Round	3.500	11.0	7.58	Yes	Yes
16 Metro	0	100	6	Round	1.990	6.2	0.82	Yes	Yes
17 Sprint	0	48	1	Round	0.620	2.0	0.15	No	Yes
18 Coax Cage	12.5	32.5	2	Flat	12.000	48.0	25	Yes	Yes
19 Coax Cage	12.5	32.5	2	Flat	12.000	48.0	25	Yes	Yes
20 Wake Guide	0	180	1	Flat	2.000	8.0	2	Yes	Yes
21 Wake Guide	0	165	1	Flat	2.000	8.0	2	Yes	Yes
22 Wake Guide	0	100	1	Flat	2.000	8.0	2	Yes	Yes
23 Sigfox	0	147	1	Flat	0.630	2.5	0.15	No	Yes
24 Sprint	0	204.8	1	Flat	1.980	25.8	4.92	No	Yes
25 Verizon	0	180	1	Round	1.980	18.2	1.64	Yes	Yes
26 Dish	0	140	1	Round	2.000	5.0	2.34	No	Yes
27 US Dept	0	213	1	Round	2.000	4.9	0.63	Yes	Yes
28 Sprint Nextel	0	253	12	Round	2.000	6.2	0.82	No	Yes

Description	From	To	Quantity	Face #	Coax Width	Coax Shape	Block / Flat / Ind	% Exposed	Spacing	Shape	Block Width	Block Depth	Perimeter	Unit Weight	In Face Zone	Include in Wind Load
	(ft)	(ft)		(1-4, A-D)	(ft)				(ft)	(Round/Flat)	(ft rows)	(ft rows)	(ft)	(lb/ft)	(Yes/No)	(Yes/No)
Climbing Ladder	0	337.5	1	6	2.00	Flat	100			Flat	1	1	8.0	6	No	Yes
US Dept	0	337.5	2	2	1.09	Ind	100			Round	2	1	3.4	0.33	Yes	Yes
US Dept	0	337.5	1	2	0.63	Ind	100			Round	1	1	2.0	0.15	Yes	Yes
Ligalo	0	339	1	6	1.98	Ind	100			Round	1	1	6.2	0.82	Yes	Yes
US Dept	0	330	2	2	1.09	Ind	100			Round	2	1	3.4	0.33	Yes	Yes
US Dept	0	275	1	2	1.09	Ind	100			Round	1	1	3.4	0.33	Yes	Yes
Sprint	0	240	4	8	1.54	Ind	100			Round	4	1	4.8	1	No	Yes
TMO	0	220	3	1	1.99	Ind	100			Round	3	1	6.3	1.3	Yes	Yes
TMO	0	220	3	1	1.21	Ind	100			Round	3	1	3.9	1.05	Yes	Yes
US Dept	0	194	1	2	1.51	Ind	100			Round	1	1	4.9	0.63	Yes	Yes
Verizon	0	180	12	4	1.98	Block	50	1		Flat	6	2	43.7	9.84	Yes	Yes
ATT	0	165	6	2	1.98	Ind	100			Round	6	1	6.2	0.82	Yes	Yes
ATT	0	165	1	2	0.99	Ind	100			Round	1	1	1.2	0.17	Yes	Yes
ATT	0	165	2	2	0.78	Ind	100			Round	2	1	2.5	0.59	Yes	Yes
ATT	0	165	1	2	3.50	Ind	100			Round	1	1	11.0	7.58	Yes	Yes
Metro	0	100	6	6	1.99	Ind	100			Round	6	1	6.2	0.82	Yes	Yes
Sprint	0	48	1	6	0.62	Ind	100			Round	1	1	2.0	0.15	No	Yes
Coax Cage	12.5	32.5	2	6	12.00	Flat	100			Flat	2	1	48.0	25	Yes	Yes
Coax Cage	12.5	32.5	2	3	12.00	Flat	100			Flat	2	1	48.0	25	Yes	Yes
Wake Guide	0	180	1	4	2.00	Flat	100			Flat	1	1	8.0	2	Yes	Yes
Wake Guide	0	165	1	1	2.00	Flat	100			Flat	1	1	8.0	2	Yes	Yes
Wake Guide	0	100	1	1	2.00	Flat	100			Flat	1	1	8.0	2	Yes	Yes
Sigfox	0	147	1	5	0.63	Flat	100			Flat	1	1	2.5	0.15	No	Yes
Sprint	0	204.8	6	8	1.98	Block	50	1		Flat	3	2	25.8	4.92	No	Yes
Verizon	0	180	2	8	1.98	Ind	8			Round	1	2	18.2	1.64	Yes	Yes
Dish	0	140	1	8	1.60	Ind	100			Round	1	1	5.0	2.34	No	Yes
US Dept	0	213	1	4	1.35	Ind	100			Round	1	1	4.9	0.63	Yes	Yes
Sprint Nextel	0	253	12	8	1.98	Ind	100			Round	12	1	6.2	0.82	No	Yes

**Note: Actual block width multiplied by 0.75 (1.5 block drag factor actual divided by 2.0)

Task:	Determine Point Loads
Tower Height:	337.5 ft
Gh:	0.85
Wind Speed:	119 mph, Vult
Ice Wind Speed:	50
Ice Density:	56
Tower Type:	S

Ice Thick:	1 in
Topographic Category (1-4):	1
Exposure Category (B-D):	8
Risk Category (1-4):	1
Height of Crest (H) If Topo Cat. >1:	0 ft
Load Factor; Wind:	1
Load Factor; Dead:	1.2

Rooftop Speed Up Factor (Ks)	1
Ground Elevation (AMSL)	620 ft
Topographic Factor Procedure	Method 1

Site No.	
Engineer:	
Date:	
Carrier:	

No.	Carrier	Elevation (ft)	Quantity	# of Azimuths	Proposed?	Manufacturer	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction	C _a C _s (ft ²)	Weight (lb)	Ka
1	US Dept	338	1	1	-	-	-	0.001	0.001	0.001	0.001	F	0.001	20.76	0.09	1
2	US Dept	338	1	1	-	Rohde & Schwarz	ADD090	0.001	0.001	0.001	0.001	F	1.000	70.00	6.00	1
3	Ligado	338	1	4	-	-	Platform	0.001	0.001	0.001	0.001	F	1.000	1.73	0.02	1
4	Ligado	319	1	1	-	Kathrein Scala	750 10074	0.001	0.001	0.001	0.001	F	0.001	5.20	0.15	1
5	Ligado	319	1	1	-	-	Side Arm	0.001	0.001	0.001	0.001	F	1.000	6.00	0.05	1
6	US Dept	310	1	1	-	Sinclair	SC381-HL (160")	0.001	0.001	0.001	0.001	F	1.000	10.46	0.08	1
7	US Dept	310	1	1	-	Sinclair	SC281-L	0.001	0.001	0.001	0.001	F	1.000	14.90	0.30	1
8	Unknown	287	2	2	-	-	Sector Frame	0.001	0.001	0.001	0.001	F	1.000	2.40	0.03	1
9	US Dept	275	1	1	-	Generic	8' Omni	0.001	0.001	0.001	0.001	F	0.001	10.46	0.08	1
10	US Dept	275	1	1	-	Sinclair	SC281-L	0.001	0.001	0.001	0.001	F	1.000	14.90	0.30	1
11	US Dept	275	1	1	-	-	Sector Frame	0.001	0.001	0.001	0.001	F	1.000	2.40	0.03	1
12	Unknown	262	1	1	-	Generic	8' Omni	0.001	0.001	0.001	0.001	F	0.001	10.46	0.08	1
13	Sprint	253	12	3	-	Decibel	DB844H90E-XY	48	6.5	8	14	F	0.730	0.00	0.00	1
14	Sprint	253	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	2.40	0.03	1
15	US Dept	213	1	1	-	Andrew	DB616E-BC	231	3.5	3.5	51	F	1.000	5.20	0.15	1
16	US Dept	213	1	1	-	-	Side Arm	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
17	T-MOBILE	222	3	3	Proposed	Ericsson	Radio 4449 B71,B85A	15	13.2	10.5	75	F	0.500	0.00	0.00	0.8
18	T-MOBILE	222	3	3	Proposed	Ericsson	4460 BAND 2/25	19.6	15.7	12.1	109	F	0.670	0.00	0.00	1
19	T-MOBILE	222	3	3	Proposed	Ericsson	AIR 6419 B41	36.3	20.9	9	83.3	F	0.630	0.00	0.00	1
20	T-MOBILE	222	3	3	-	RFS	APXVAARR24_43-U-NA20	95.9	24	8.7	127.9	F	0.630	17.90	0.30	0.75
21	T-MOBILE	222	3	3	-	Powerwave Allion	PV-SFA-B Sector Frames	4	6	3	5.5	F	0.500	0.00	0.00	0.8
22	ATT	165	3	3	-	Raycap	DC2-48-60-O-9E	10.3	10.3	6.2	16	F	0.500	0.00	0.00	1
23	ATT	165	6	3	-	Powerwave Allion	LGP21401	14.4	9.2	2.6	14.1	F	0.500	0.00	0.00	0.8
24	ATT	165	1	1	-	Raycap	FC12-PCG-10E	15.5	16.3	6.6	25	F	0.500	0.00	0.00	0.8
25	ATT	165	3	3	-	Ericsson	RRUS 11 (Band 12)	17.8	17.3	7.2	50	F	0.500	0.00	0.00	0.8
26	ATT	165	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	2.40	0.03	1
27	ATT	165	3	3	-	Powerwave Allion	7770	55	11	5	35	F	0.650	0.00	0.00	0.8
28	ATT	165	1	1	-	KMW	AM-X-CD-16-65-00T-RET	72	11.8	5.9	48.5	F	0.670	0.00	0.00	0.8
29	ATT	165	2	2	-	Andrew	SBNH-1D6565C (60.8 lbs)	96.4	11.9	7.1	60.8	F	0.700	14.40	0.30	0.75
30	ATT	165	3	3	-	-	Sector Frame	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
31	Metro	100	3	3	-	RFS	APXV18-2065175-C	72	6.8	3.2	26.4	F	0.680	0.00	0.00	1
32	Metro	100	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
33	Sprint	48	1	1	-	PCTEL	GPS-TMG-HR-26N	5	3.2	3.2	0.6	F	0.001	0.00	0.00	1
34	Sprint	48	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	30.00	5.00	1
35	-	320	1	4	-	-	Access Platform	0.001	0.001	0.001	0.001	F	0.001	15.00	0.50	1
36	-	287.5	1	1	-	-	Rest Platform	0.001	0.001	0.001	0.001	F	1.000	30.00	5.00	1
37	-	287.5	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	10.00	0.50	1
38	-	237	1	3	-	-	Catwalk	0.001	0.001	0.001	0.001	F	1.000	10.00	0.50	1
39	-	200	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	70.00	8.00	1
40	-	200	1	1	-	-	Rest Platform	0.001	0.001	0.001	0.001	F	1.000	10.00	0.50	1
41	-	150	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	10.00	0.50	1
42	-	125	1	1	-	-	Rest Platform	0.001	0.001	0.001	0.001	F	1.000	70.00	8.00	1
43	-	125	1	3	-	-	Catwalk	0.001	0.001	0.001	0.001	F	1.000	10.00	0.50	1
44	SIGFOX S.A.	147	1	1	-	Procom	CXL 900-3LW	27.6	0.6	0.6	1.5	R	1.000	0.00	0.00	1
45	SIGFOX S.A.	147	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
46	SIGFOX S.A.	147	1	1	-	Generic	5" x 3" x 2" Cavity Filter	5.3	3.2	1.9	1.5	F	1.000	0.00	0.00	1
47	SIGFOX S.A.	147	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
48	SIGFOX S.A.	147	1	1	-	Generic	Low Noise Amplifier	5	4	2	2	F	1.000	6.30	0.15	1
49	Sprint	240	3	3	-	-	Side Arm	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	0.8
50	Sprint	240	1	1	-	-	APXVSP18-C-A20	72	11.8	7	57	F	0.680	0.00	0.00	1
51	Sprint	240	3	3	-	-	-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
52	Sprint	240	3	3	-	-	1900 MHz 4x45 RRH	25.1	11.1	10.7	60	F	0.500	4.05	0.07	0.8
53	Sprint	240	6	3	-	Alcatel-Lucent	TD-RRH8x20-25	19	13	12.2	64	F	0.610	8.00	0.20	1
54	Sprint	240	3	3	-	-	800 MHz 2x50W RRH w/ Filter	19	13	12.2	64	F	0.500	0.00	0.00	0.8
55	Sprint	240	3	3	-	-	Pipes	56.3	12.6	6.3	56.2	F	0.660	12.27	0.08	1
56	Sprint	240	3	3	-	RFS	APXVTM14-ALU-I20	5	3.2	3.2	0.6	F	0.640	0.00	0.00	1
57	Sprint	48	1	1	-	Commscope	NNVV-65R-R4	5	3.2	3.2	0.6	F	1.000	0.00	0.00	1
58	Sprint	48	1	1	-	-	GPS	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
59	VERIZON WIRELESS	180	3	3	-	Samsung	Outdoor CBRS 20W RRH - Clip-on Antenna	12.3	8.7	1.4	4.4	F	0.500	17.60	0.40	0.75
60	VERIZON WIRELESS	180	3	3	-	-	Flat Sector Frames	13.9	8.6	4.2	18.6	F	0.500	9.87	0.06	0.8
61	VERIZON WIRELESS	180	6	3	-	Samsung	RT4401-48A	15	15	8.1	70.3	F	0.710	4.71	0.08	0.8
62	VERIZON WIRELESS	180	3	3	-	JMA Wireless	MX06FR0660-03	15	15	10	84.4	F	0.610	10.00	0.30	0.75
63	VERIZON WIRELESS	180	3	3	-	Samsung	BS/B13 RRH-BR04C	15	15	10	84.4	F	0.610	10.00	0.30	0.75
64	VERIZON WIRELESS	180	3	3	-	Samsung	MT6407-77A	15	15	10	84.4	F	0.610	10.00	0.30	0.75
65	VERIZON WIRELESS	180	3	3	-	Samsung	B2/B66A RRH-BR049	15	15	10	84.4	F	0.610	10.00	0.30	0.75
66	VERIZON WIRELESS	180	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	0.8
67	VERIZON WIRELESS	180	6	3	-	Andrew	DB844H90E-XY	48	6.5	8	14	F	0.670	0.00	0.00	0.8
68	VERIZON WIRELESS	180	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	0.8
69	VERIZON WIRELESS	180	1	1	-	Raycap	RCMDC-6627-PF-48	29.5	16.5	12.6	32	F	0.670	0.00	0.00	0.8
70	VERIZON WIRELESS	180	1	1	-	-	-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	0.8
71	DISH WIRELESS	140	1	1	-	Commscope	RDIDC-9181-PF-48	16	14	8	21.9	F	1.000	1.96	0.06	0.8
72	DISH WIRELESS	140	3	3	-	Fujitsu	TA08025-B604	15.7	15	9.1	75	F	0.500	12.49	0.06	1
73	DISH WIRELESS	140	3	3	-	Fujitsu	TA08025-B605	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	0.8
74	DISH WIRELESS	140	3	3	-	JMA Wireless	MX08FR0665-21	0.001	0.001	0.001	0.001	F	0.001	17.60	0.40	0.75
75	DISH WIRELESS	140	3	3	-	-	Flat Sector Frames	0.001	0.001	0.001	0.001	F	0.750	17.60	0.40	0.75

No.	Elevation	C _a A _c	C _a A _c (Ice)	Force	Force (Ice)	Weight	Weight (Ice)	60 Azi		Force	F (Ice)	Height	Sum of Forces (No	
		(ft ²)	(ft ²)	(lb)	(lb)	(lb)	(lb)	Mult.	mean	mean	Flag	60 Azi	180 Azi	
1	338	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00				
	338	20.76	28.03	744.097	177.341	108	140	1.00	409.25	97.54	0.0000010	744.0967354		
2	338	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	0.0000020			
	338	94.50	97.971	2508.997	97.971	7200	9360	1.00	1379.95	328.88	1.5029596	3253.093435		
3	319	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5029596			
	319	1.73	2.34	60.991	14.536	24	31	1.00	33.55	7.99	1.5029596	60.99149672		
4	319	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5029606			
	319	5.20	7.02	183.327	43.692	180	234	1.00	100.83	24.03	1.5031348	244.3185389		
5	310	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031358			
	310	8.10	10.99	209.809	50.004	78	102	1.00	115.39	27.50	1.5031358	209.8086061		
6	310	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031368			
	310	10.46	14.12	365.766	87.173	96	125	1.00	201.17	47.95	1.5031368	575.5749428		
7	310	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031378			
	310	14.90	20.12	521.025	124.176	360	468	1.00	286.56	68.30	1.5032258	1096.599648		
8	287	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5032268			
	287	164.190	164.190	39.132	94	272	354	1.00	90.30	21.52	1.5034843	164.1903502		
9	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034853			
	275	10.46	14.12	353.458	84.240	96	125	1.00	194.40	46.33	1.5034853	353.4583974		
10	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034863			
	275	14.90	20.12	503.492	119.998	360	468	1.00	276.92	66.00	1.5036364	856.9507609		
11	262	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5036374			
	262	2.40	3.24	79.985	19.063	47	61	1.00	43.99	10.48	1.5038168	79.98506261		
12	253	32.70	42.58	1079.099	248.054	202	325	1.00	593.50	136.43	1.5038178			
	253	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5039526	1079.098674		
13	213	11.23	17.80	352.739	98.705	61	283	1.00	194.01	54.29	1.5039536			
	213	5.20	7.02	163.346	38.930	180	234	1.00	89.84	21.41	1.5046948	516.0850421		
14	222	3.98	5.31	62.337	16.017	270	364	1.00	34.62	9.30	1.5046958			
	222	0.00	0.00	0.000	0.000	0	2	1.00	1.00	0.00	1.5045045	62.93705179		
15	222	4.12	5.98	131.069	33.540	392	532	1.00	72.09	18.45	1.5045055			
	222	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5045045	194.0065428		
16	222	9.56	12.89	303.854	72.350	300	488	1.00	167.12	39.79	1.5045055			
	222	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5045045	497.8602134		
17	222	30.61	37.42	972.879	209.972	460	932	1.00	535.08	115.48	1.5045055			
	222	30.21	40.78	720.110	171.624	1080	1404	1.00	396.06	94.39	1.5045045	2190.849909		
18	165	0.24	0.56	7.009	2.887	20	28	1.00	3.85	1.59	1.5045055			
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	7.008649051		

19	165	1.06	1.77	30.981	9.100	58	89	1.00	17.04	5.00	1.5060616	
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	37.98969824
20	165	2.65	4.29	77.375	22.096	102	144	1.00	42.56	12.15	1.5060616	
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	115.3648906
21	165	0.84	1.25	24.593	6.421	30	78	1.00	13.53	3.53	1.5060616	
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	139.9583615
22	165	3.08	4.46	89.926	22.985	180	267	1.00	49.46	12.64	1.5060616	
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	229.8848239
23	165	8.59	11.24	250.945	57.940	126	256	1.00	138.02	31.87	1.5060616	
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	480.8296765
24	165	4.30	5.32	125.603	27.435	58	218	1.00	69.08	15.09	1.5060616	
	165	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5060606	606.432999
25	165	12.82	14.92	374.339	76.927	146	383	1.00	205.89	42.31	1.5060616	
	165	21.71	29.31	475.447	113.314	1080	1404	1.00	261.50	62.32	1.5060606	1456.219416
26	100	10.54	13.35	266.762	59.645	95	199	1.00	146.72	32.80	1.5060616	
	100	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5100000	266.7618034
27	48	0.16	0.35	3.192	1.282	1	4	1.00	1.76	0.71	1.5100010	
	48	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5208333	3.19225355
28	320	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5208343	
	320	30.00	40.50	1058.602	252.297	6000	7800	1.00	582.23	138.76	1.5031250	1058.60225
29	287.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5031260	
	287.5	15.00	20.25	513.350	122.347	600	780	1.00	282.34	67.29	1.5034783	513.3500838
30	237	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034793	
	237	30.00	40.50	971.572	231.555	6000	7800	1.00	534.36	127.36	1.5042194	971.5724769
31	200	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5042204	
	200	10.00	13.50	308.526	73.531	600	780	1.00	169.69	40.44	1.5050000	308.528539
32	150	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5050010	
	150	10.00	13.50	284.181	67.729	600	780	1.00	156.30	37.25	1.5066667	284.1808317
33	125	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5066677	
	125	70.00	94.50	1888.294	450.038	9600	12480	1.00	1038.56	247.52	1.5080000	1888.293977
34	147	0.14	0.48	3.899	2.392	2	10	1.00	2.14	1.32	1.5080010	
	147	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5068027	3.89915212
35	147	0.14	0.37	3.993	1.841	2	6	1.00	2.20	1.01	1.5068037	
	147	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5068027	7.892485977
36	147	0.17	0.41	4.709	2.037	2	7	1.00	2.59	1.12	1.5068037	
	147	6.30	8.51	178.003	42.424	180	234	1.00	97.90	23.33	1.5068027	190.6050536
37	240	13.10	16.20	425.647	92.973	205	406	1.00	234.11	51.14	1.5068037	
	240	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5041667	425.6473543
38	240	3.13	4.14	101.840	23.766	216	321	1.00	56.01	13.07	1.5041677	
	240	7.40	10.00	240.653	57.355	252	328	1.00	132.36	31.55	1.5041667	768.1407697
39	240	5.41	7.35	175.794	42.174	461	607	1.00	96.69	23.20	1.5041677	
	240	16.08	21.71	522.638	124.561	720	936	1.00	287.45	68.51	1.5041667	1466.572956
40	240	12.56	16.39	408.165	94.018	202	371	1.00	224.49	51.71	1.5041677	
	240	23.56	31.81	765.766	182.505	279	362	1.00	421.17	100.38	1.5041667	2640.504173
41	48	0.16	0.35	3.192	1.282	1	4	1.00	1.76	0.71	1.5041677	
	48	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5208333	3.19225355
42	180	1.07	1.79	32.036	9.435	16	37	1.00	17.62	5.19	1.5208343	
	180	26.53	35.82	595.730	141.981	1440	1872	1.00	327.65	78.09	1.5055556	627.7659921
43	180	1.20	1.97	35.787	10.392	67	102	1.00	19.68	5.72	1.5055566	
	180	33.64	45.42	805.773	192.040	432	562	1.00	443.18	105.62	1.5055556	1469.326488
44	180	2.70	4.05	80.832	21.384	253	343	1.00	44.46	11.76	1.5055566	
	180	6.89	9.31	165.112	39.351	294	382	1.00	90.81	21.64	1.5055556	1715.269859
45	180	2.84	4.25	84.873	22.453	304	406	1.00	46.68	12.35	1.5055566	
	180	5.03	6.78	112.828	26.890	360	468	1.00	62.06	14.79	1.5055556	1912.970746
46	180	12.01	15.63	359.444	82.626	101	201	1.00	197.69	45.44	1.5055566	
	180	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5055556	2272.414404
47	180	2.17	3.04	65.089	16.050	38	140	1.00	35.80	8.83	1.5055566	
	180	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5055556	2337.503408
48	140	1.49	2.24	41.609	11.019	26	71	1.00	22.89	6.06	1.5055566	
	140	2.35	3.18	52.481	12.508	230	299	1.00	28.86	6.88	1.5071429	94.0905611
49	140	2.36	3.51	65.618	17.268	270	365	1.00	36.09	9.50	1.5071439	
	140	19.18	25.90	427.605	101.911	232	302	1.00	235.18	56.05	1.5071429	587.3137847
50	140	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5071439	
	140	29.70	40.10	620.657	147.922	1440	1872	1.00	341.36	81.36	1.5071429	1207.970663

Foundation

Design Loads (Factored)

Compression/Leg:	464.35	k
Uplift/Leg:	332.64	k
Shear/Leg:	70.17	k

Face Width @ Top of Pier (d_1):	4.00	ft
Face Width @ Bottom of Pier (d_2):	7.50	ft
Total Length of Pier (l):	7.25	ft
Height of Pedestal Above Ground (h):	0.50	ft
Width of Pad (W):	21.50	ft
Length of Pad (L):	21.50	ft
Thickness of Pad (t):	2.50	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	131.0	pcf
Unit Weight of Soil (Below Water Table):	68.6	pcf
Friction Angle of Uplift (A):	30	°
Ultimate Compressive Bearing Pressure:	48200	psf
Ultimate Skin Friction:	0	psf

Volume Pier (Total):	247.10	ft ³
Volume Pad (Total):	1155.63	ft ³
Volume Soil (Total):	4120.07	ft ³
Volume Pier (Buoyant):	0.00	ft ³
Volume Pad (Buoyant):	0.00	ft ³
Volume Soil (Buoyant):	0.00	ft ³
Weight Pier:	37.07	k
Weight Pad:	173.34	k
Weight Soil:	539.73	k
Uplift Skin Friction:	0.00	k

Uplift Check

ϕ s Uplift Resistance (k)	Ratio	Result
562.60	0.59	OK

Axial Check

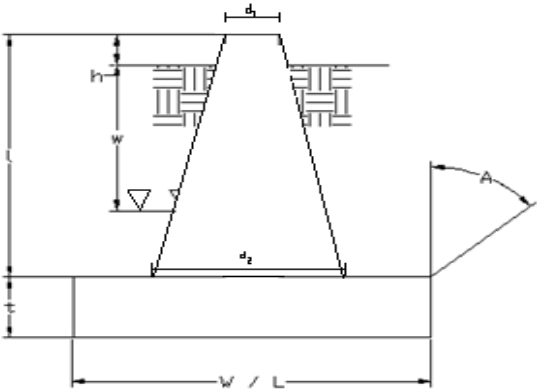
ϕ s Axial Resistance (k)	Ratio	Result
16710.34	0.03	OK

Anchor Bolt Check

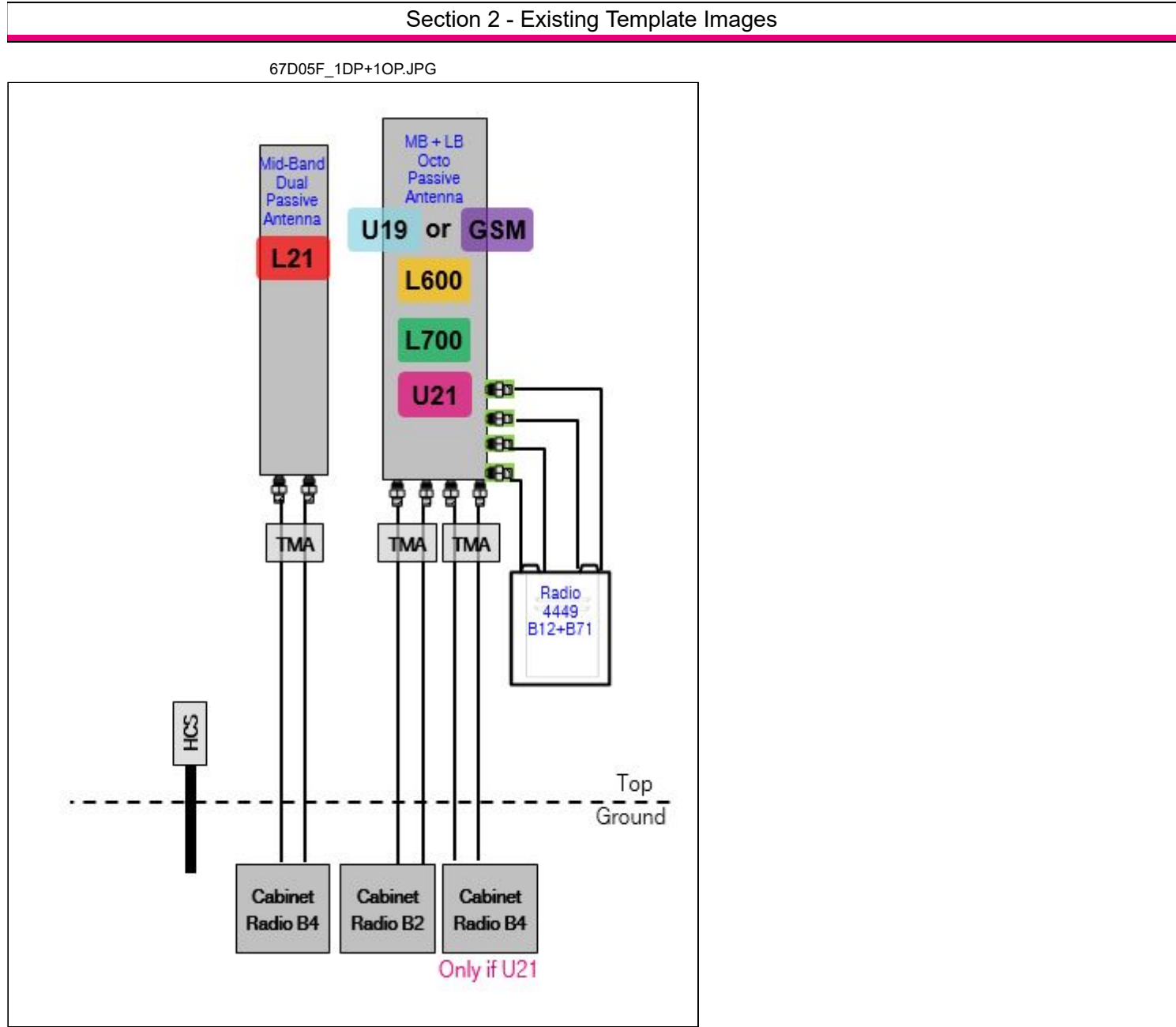
Bolt Diameter (in)	2.25
# of Bolts	6
Steel Grade	A36
Steel Fy	36
Steel Fu	58
Detail Type	B

Usage Ratio	Result
0.48	OK

Site No.:	88008
Engineer:	Tiffany.Ta
Date:	04/14/22
Carrier:	T-Mobile

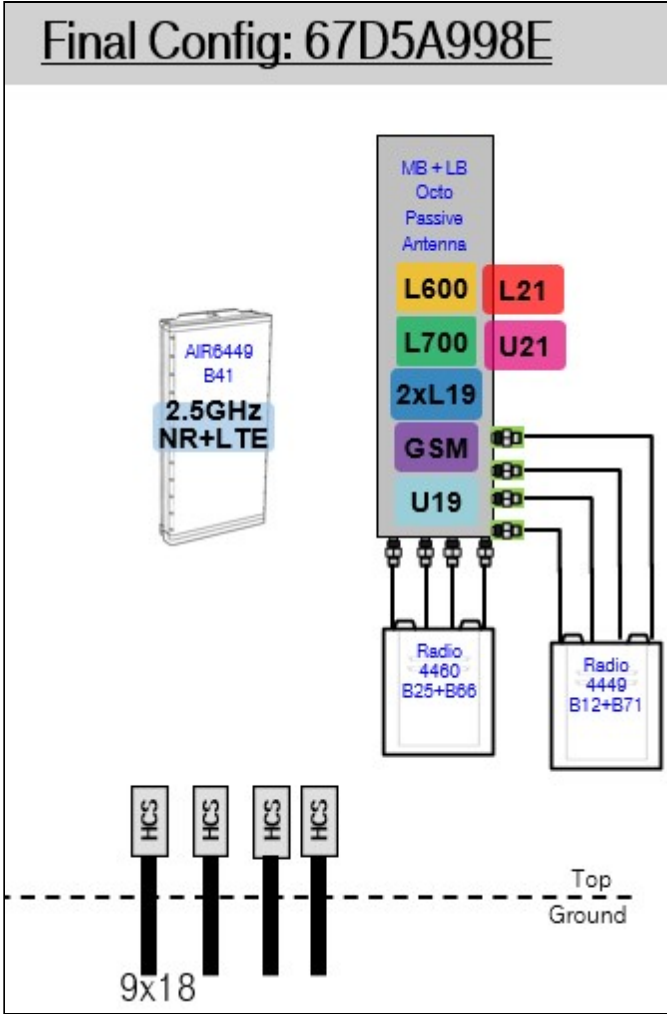


Section 1 - Site Information				
Site ID: CTNH217A Status: Final Version: 4 Project Type: Anchor Approved: 3/7/2022 8:39:16 AM Approved By: Pratik.Patil30@T-Mobile.com Last Modified: 3/7/2022 8:39:16 AM Last Modified By: Pratik.Patil30@T-Mobile.com Site Name: CTNH217/ATC-Bethany Site Class: Self Support Tower Site Type: Structure Non Building Plan Year: 2022 Market: CONNECTICUT CT Vendor: Ericsson Landlord: American Tower Latitude: 41.40475677 Longitude: -72.99980500 Address: 9 Meyers Road City, State: Bethany, CT Region: NORTHEAST				
RAN Template: 67D5D998E ODE+6160		AL Template: 67D5998E_1xAIR+1OP		
Sector Count: 3	Antenna Count: 6	Coax Line Count: 0	TMA Count: 0	RRU Count: 6



Section 3 - Proposed Template Images

67D5A998E.jpg



Notes:

Section 4 - Siteplan Images

----- This section is intentionally blank. -----

RAN Template:
67D5D998E ODE+6160

A&L Template:
67D5998E_1xAIR+1OP

CTNH217A_Anchor_4

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Section 5 - RAN Equipment

Existing RAN Equipment

Template: 67D05F

Enclosure	1	2
Enclosure Type	RBS 6201 ODE	RBS 6102 MU AC
Baseband	DUG20 G1900 BB 6630 L2100 BB 6630 L700 L600 N600	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x 3)	
Multiplexer		XMU L2100
Radio	RUS01 B2 (x 3) G1900 RUS01 B4 (x 6) L2100	

Proposed RAN Equipment

Template: 67D5D998E ODE+6160

Enclosure	1	2	3	4
Enclosure Type	RBS 6201 ODE	Ancillary Equipment (Ericsson)	Enclosure 6160 AC V1	B160
Baseband	BB 6630 L2100 L1900 DUG20 G1900 BB 6630 L700 L600 N600		RP 6651 N2500 L2500	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x 3)		Ericsson Hybrid Trunk 6/24 4AWG 90m (x 3) PSU 4813 vR4A (Kit)	
Transport System			CSR IXRe V2 (Gen2)	

RAN Scope of Work:

Remove and return all cabinet radios from existing base station cabinet.

Existing (2) ODE's on site.

(1) ODE not referenced in the RFDS will be removed.

Remove 6102 MUAC.

Add 150A Breaker for 6160.

Add (1) Enclosure 6160.

Add (1) iXRe Router to new Enclosure 6160.

Add (1) RP 6651 for L2500/N2500 to new Enclosure 6160.

Add (1) PSU4813 Voltage Booster to new Enclosure 6160.

Add (1) Battery Cabinet B160.

Existing : (3) 6x12,

Remove all Coax,

Add (3) 6X24 HCS terminating at the Enclosure 6160. Connect DC for the AIR6419 B41 to the PSU4813 Voltage Booster.

RAN Template: 67D5D998E ODE+6160	A&L Template: 67D5998E_1xAIR+1OP
--	--

Section 6 - A&L Equipment

Existing Template: 67D05F_1DP+1OP
Proposed Template: 67D5998E_1xAIR+1OP

Sector 1 (Existing) view from behind							
Coverage Type	A - Outdoor Macro						
Antenna	1		2		3		4
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAARR24_43-U-NA20 (Octo)		Empty Antenna Mount (Empty mount)		Empty Antenna Mount (Empty mount)
Azimuth	(30)		(30)				
M. Tilt	(0)		(0)				
Height	(220)		(220)				
Ports	P1	P2	P3	P4	P5	P6	
Active Tech.	L2100 G1900		L700 L600 N600	L700 L600 N600			
Dark Tech.							
Restricted Tech.							
Decomm. Tech.							
E. Tilt	(2)		(2)	(2)			
Cables	1-5/8" Coax - 265 ft. (x2)		Coax Jumper (x2)	Coax Jumper (x2)			
TMA's	CommScope Style 2 - ETT19V2S12UB (E15S08P78) (AtAntenna)						
Diplexers / Combiners	Generic AWS/PCS Diplexer (AtCabinet) (x2)						
Radio			Radio 4449 B71 +B8 5 (At Antenna)	SHARED Radio 4449 B71 +B8 5 (At Antenna)			
Sector Equipment							

Unconnected Equipment:

Scope of Work:

*** Existing Four Mounts Per Sector. Positions 3 and 4 are empty ***
 *** Existing 6 Diplexers at Ground ***
 *** No TMA's at site currently ***

Add (1) PCS/AWS TMA to Position 1.

Replace LB Dual in Position 2 with (1) LB/MB Octo.
 Install (1) Radio 4449 B71+B12 for L600 and L700 at antenna.
 Remove (2) Coaxial Lines in Position 2.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template: 67D5D998E ODE+6160	A&L Template: 67D5998E_1xAIR+1OP
--	--

Sector 1 (Proposed) view from behind								
Coverage Type	A - Outdoor Macro							
Antenna	1		2			3		4
Antenna Model	AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)			Empty Antenna Mount (Empty mount)		Empty Antenna Mount (Empty mount)
Azimuth	(30)		(30)					
M. Tilt	(0)		(0)					
Height	(220)		(220)					
Ports	P1	P2	P3	P4	P5	P6		
Active Tech.	N2500 L2500	N2500 L2500	L700 L600 N600	L700 L600 N600	L2100 L1900 G1900	L2100 L1900 G1900		
Dark Tech.								
Restricted Tech.								
Decomm. Tech.								
E. Tilt								
Cables	Fiber Jumper (x2)	Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper		
TMA's								
Diplexers / Combiners								
Radio			Radio 4449 B71 +B85 (Antenna)	SHARED Radio 4449 B71 +B85 (Antenna)	Radio 4460 B25 +B66 (Antenna)	SHARED Radio 4460 B25 +B66 (Antenna)		
Sector Equipment								

Unconnected Equipment:

Scope of Work:

There will be two antennae per sector.

Skew to be minimized after MA, mounts to be replaced if MA fails.

Remove all TMA's.

Remove all diplexers.

Remove all Coaxial Lines.

Replace APXV16DWV with (1) AIR6419 B41 for L2500 and N2500 in Position 1.

Add (1) Radio 4460 B25+B66 for L2100, L1900 (Both carriers), and GSM to Position 2 at antenna.

Ensure RET control is enabled for all technology layers according to the Design Documents

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:
67D5D998E ODE+6160

A&L Template:
67D5998E_1xAIR+1OP

CTNH217A_Anchor_4

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 2 (Existing) view from behind							
Coverage Type	A - Outdoor Macro						
Antenna	1		2		3		4
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAARR24_43-U-NA20 (Octo)		Empty Antenna Mount (Empty mount)		Empty Antenna Mount (Empty mount)
Azimuth	150		150				
M. Tilt	0		0				
Height	220		220				
Ports	P1	P2	P3	P4	P5	P6	
Active Tech.	L2100 G1900		L700 L600 N600	L700 L600 N600			
Dark Tech.							
Restricted Tech.							
Decomm. Tech.							
E. Tilt	2		2	2			
Cables	1-5/8" Coax - 265 ft. (x2)		Coax Jumper (x2)	Coax Jumper (x2)			
TMA's	CommScope Style 2 - ETT19V2S12UB (E15S08P78) (AtAntenna)						
Diplexers / Combiners	Generic AWS/PCS Diplexer (AtCabinet) (x2)						
Radio			Radio 4449 B71 +B85 (AtAntenna)	SHARED Radio 4449 B71 +B85 (AtAntenna)			
Sector Equipment							

Unconnected Equipment:**Scope of Work:**

*** Existing Four Mounts Per Sector. Positions 3 and 4 are empty ***
 *** Existing 6 Diplexers at Ground ***
 *** No TMAs at site currently ***

Add (1) PCS/AWS TMA to Position 1.

Replace LB Dual in Position 2 with (1) LB/MB Octo.
 Install (1) Radio 4449 B71+B12 for L600 and L700 at antenna.
 Remove (2) Coaxial Lines in Position 2.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template: 67D5D998E ODE+6160	A&L Template: 67D5998E_1xAIR+1OP
--	--

Sector 2 (Proposed) view from behind

Coverage Type	A - Outdoor Macro								
Antenna	1		2			3		4	
Antenna Model	AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)			Empty Antenna Mount (Empty mount)		Empty Antenna Mount (Empty mount)	
Azimuth	150		150						
M. Tilt	0		0						
Height	220		220						
Ports	P1	P2	P3	P4	P5	P6			
Active Tech.	L2500 N2500	L2500 N2500	L700 L600 N600	L700 L600 N600	L2100 L1900 G1900	L2100 L1900 G1900			
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt									
Cables	Fiber Jumper (x2)	Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper			
TMA's									
Diplexers / Combiners									
Radio			Radio 4449 B71 +B8 5 (Antenna)	SHARED Radio 4449 B71 +B8 5 (Antenna)	Radio 4460 B25 +B6 6 (Antenna)	SHARED Radio 4460 B25 +B6 6 (Antenna)			
Sector Equipment									

Unconnected Equipment:

Scope of Work:

There will be two antennae per sector.

Skew to be minimized after MA, mounts to be replaced if MA fails.

Remove all TMA's.

Remove all diplexers.

Remove all Coaxial Lines.

Replace APXV16DWV with (1) AIR6419 B41 for L2500 and N2500 in Position 1.

Add (1) Radio 4460 B25+B66 for L2100, L1900 (Both carriers), and GSM to Position 2 at antenna.

Ensure RET control is enabled for all technology layers according to the Design Documents

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:
67D5D998E ODE+6160

A&L Template:
67D5998E_1xAIR+1OP

CTNH217A_Anchor_4

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 3 (Existing) view from behind							
Coverage Type	A - Outdoor Macro						
Antenna	1		2		3		4
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAARR24_43-U-NA20 (Octo)		Empty Antenna Mount (Empty mount)		Empty Antenna Mount (Empty mount)
Azimuth	270		270				
M. Tilt	0		0				
Height	220		220				
Ports	P1	P2	P3	P4	P5	P6	
Active Tech.	L2100 G1900		L700 L600 N600	L700 L600 N600			
Dark Tech.							
Restricted Tech.							
Decomm. Tech.							
E. Tilt	2		2	2			
Cables	1-5/8" Coax - 265 ft. (x2)		Coax Jumper (x2)	Coax Jumper (x2)			
TMA's	CommScope Style 2 - ETT19V2S12UB (E15S08P78) (AtAntenna)						
Diplexers / Combiners	Generic AWS/PCS Diplexer (AtCabinet) (x2)						
Radio			Radio 4449 B71 +B85 (AtAntenna)	SHARED Radio 4449 B71 +B85 (AtAntenna)			
Sector Equipment							

Unconnected Equipment:**Scope of Work:**

*** Existing Four Mounts Per Sector. Positions 3 and 4 are empty ***
 *** Existing 6 Diplexers at Ground ***
 *** No TMAs at site currently ***

Add (1) PCS/AWS TMA to Position 1.

Replace LB Dual in Position 2 with (1) LB/MB Octo.
 Install (1) Radio 4449 B71+B12 for L600 and L700 at antenna.
 Remove (2) Coaxial Lines in Position 2.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template: 67D5D998E ODE+6160	A&L Template: 67D5998E_1xAIR+1OP
--	--

Sector 3 (Proposed) view from behind

Coverage Type	A - Outdoor Macro							
Antenna	1		2			3		4
Antenna Model	AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)			Empty Antenna Mount (Empty mount)		Empty Antenna Mount (Empty mount)
Azimuth	270		270					
M. Tilt	0		0					
Height	220		220					
Ports	P1	P2	P3	P4	P5	P6		
Active Tech.	L2500 N2500	L2500 N2500	L700 L600 N600	L700 L600 N600	L2100 L1900 G1900	L2100 L1900 G1900		
Dark Tech.								
Restricted Tech.								
Decomm. Tech.								
E. Tilt								
Cables	Fiber Jumper (x2)	Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper	Coax Jumper (x2) Fiber Jumper		
TMA's								
Diplexers / Combiners								
Radio			Radio 4449 B71 +B85 (Antenna)	SHARED Radio 4449 B71 +B85 (Antenna)	Radio 4460 B25 +B66 (Antenna)	SHARED Radio 4460 B25 +B66 (Antenna)		
Sector Equipment								

Unconnected Equipment:

Scope of Work:

There will be two antennae per sector.

Skew to be minimized after MA, mounts to be replaced if MA fails.

Remove all TMA's.

Remove all diplexers.

Remove all Coaxial Lines.

Replace APXV16DWV with (1) AIR6419 B41 for L2500 and N2500 in Position 1.

Add (1) Radio 4460 B25+B66 for L2100, L1900 (Both carriers), and GSM to Position 2 at antenna.

Ensure RET control is enabled for all technology layers according to the Design Documents

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

Section 7 - Power Systems Equipment	
Existing Power Systems Equipment	
----- This section is intentionally blank. -----	
Proposed Power Systems Equipment	
Enclosure	1
Enclosure Type	Enclosure 6160 AC V1



EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CTNH217A

CTNH217/ATC-Bethany
9 Meyers Road
Bethany, Connecticut 06524

April 28, 2022

EBI Project Number: 6222002874

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	8.71%



April 28, 2022

T-Mobile

Attn: Jason Overbey, RF Manager

35 Griffin Road South

Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTNH217A - CTNH217/ATC-Bethany

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **9 Meyers Road in Bethany, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 9 Meyers Road in Bethany, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.



- 7) I LTE Traffic channel (LTE IC and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.
- 8) I LTE Broadcast channel (LTE IC and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.
- 9) I NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 10) I NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.
- 11) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 12) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 13) The antennas used in this modeling are the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative



estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 14) The antenna mounting height centerline of the proposed antennas is 222 feet above ground level (AGL).
- 15) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 16) All calculations were done with respect to uncontrolled / general population threshold limits.



T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd
Height (AGL):	222 feet	Height (AGL):	222 feet	Height (AGL):	222 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts
ERP (W):	31,011.95	ERP (W):	31,011.95	ERP (W):	31,011.95
Antenna A1 MPE %:	2.39%	Antenna B1 MPE %:	2.39%	Antenna C1 MPE %:	2.39%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd
Height (AGL):	222 feet	Height (AGL):	222 feet	Height (AGL):	222 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts
ERP (W):	18,052.03	ERP (W):	18,052.03	ERP (W):	18,052.03
Antenna A2 MPE %:	1.82%	Antenna B2 MPE %:	1.82%	Antenna C2 MPE %:	1.82%



Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	4.21%
SIGFOX	0%
AT&T	1.29%
Metro PCS	0.77%
Verizon	0.67%
Sprint	1.01%
Indus'l Commcns	0.16%
Nextel	0.16%
Rescue 21	0.22%
Dept Homeland Security	0.2%
Light Squared, Inc.	0.02%
Site Total MPE % :	8.71%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	4.21%
T-Mobile Sector B Total:	4.21%
T-Mobile Sector C Total:	4.21%
Site Total MPE % :	8.71%

T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	9619.47	222.0	7.41	2500 MHz LTE IC & 2C Traffic	1000	0.74%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	717.84	222.0	0.55	2500 MHz LTE IC & 2C Broadcast	1000	0.06%
T-Mobile 2500 MHz NR Traffic	1	19238.94	222.0	14.82	2500 MHz NR Traffic	1000	1.48%
T-Mobile 2500 MHz NR Broadcast	1	1435.69	222.0	1.11	2500 MHz NR Broadcast	1000	0.11%
T-Mobile 600 MHz LTE	2	591.73	222.0	0.91	600 MHz LTE	400	0.23%
T-Mobile 600 MHz NR	1	1577.94	222.0	1.22	600 MHz NR	400	0.30%
T-Mobile 700 MHz LTE	2	648.82	222.0	1.00	700 MHz LTE	467	0.21%
T-Mobile 1900 MHz GSM	4	1101.85	222.0	3.40	1900 MHz GSM	1000	0.34%
T-Mobile 1900 MHz LTE	2	2203.69	222.0	3.40	1900 MHz LTE	1000	0.34%
T-Mobile 2100 MHz LTE	2	2589.11	222.0	3.99	2100 MHz LTE	1000	0.40%
						Total:	4.21%

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	4.21%
Sector B:	4.21%
Sector C:	4.21%
T-Mobile Maximum MPE % (Sector A):	4.21%
Site Total:	8.71%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **8.71%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.