



Northeast Site Solutions
Denise Sabo
4 Angela's Way, Burlington CT 06013
203-435-3640
denise@northeastsitesolutions.com

July 25, 2021

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

RE: Exempt Modification Application
197 North Chestnut Hill Road, Killingworth CT 06419
Latitude: 41.386139
Longitude: -72.604056
Site#: 807134_Crown_VZW

Dear Ms. Bachman:

Verizon Wireless is requesting to file an exempt modification for an existing tower located at 197 North Chestnut Hill Road, Killingworth CT 06419. Verizon Wireless currently maintains fifteen (15) antennas at the 170-foot level of the existing 170-foot tower. The property and the tower are both owned by Crown Castle. Verizon now intends to replace nine (9) of the existing antenna. The new antennas would be installed at the 170-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable.

Verizon Planned Modifications:

Remove: (2) Coax

Remove and Replace:

(6) Antel LPA-171063-12CF Antenna (REMOVE) – (6) Andrew JAHH 65B R3B Antenna (REPLACE)
(3) Antel BXA-70063-6CF Antenna (REMOVE) – (3) VZS01 Antenna (REPLACE)

Install New:

(3) Diplexers
(1) Raycap
(2) Hybrid
(3) Samsung B2/B66A -BRO49 – RFV01U-D1A RRH
(3) Samsung B5/B13 -BRO4C – RFV01U-D2A RRH

Existing to Remain:

(6) LPA-80063/6CF Antenna
(1) Raycap
(16) 1-5/8" Coax



The facility was approved by the CT Siting Council Docket No. 164 on December 5, 1994. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16- SOj-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-SOj-73, a copy of this letter is being sent to The Honorable Catherine Iino, First Selectwoman, and Cathie S. Jefferson, Zoning Enforcement Officer, for the Town of Killingworth. A copy is also being sent to the tower owner, 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, Verizon 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,

Denise Sabo
Mobile: 203-435-3640
Fax: 413-521-0558
Office: 4 Angela's Way, Burlington CT 06013
Email: denise@northeastsitesolutions.com



NORTHEAST
SITE SOLUTIONS

Turnkey Wireless Development

Attachments

cc: The Honorable Catherine Iino, First Selectwoman (ciino@townofkillingworth.com)

Town of Killingworth 323 Route 81 Killingworth, CT 06419

Cathie S. Jefferson, Zoning Enforcement Officer (cjefferson@townofkillingworth.com)

Town of Killingworth 323 Route 81 Killingworth, CT 06419

Crown Castle, Property and Tower Owner (attn: Sarah.Snell@crowncastle.com)

Exhibit A

Original Facility Approval

Connecticut Siting Council^(/CSC)

[CT.gov Home](#) [\(/\)](#) [Connecticut Siting Council](#) [\(/CSC\)](#) DOCKET NO. 164

- [Decisions \(/CSC/Decisions/Decisions\)](#) >
- [Meetings and Minutes \(/CSC/Common-Elements/v4-template/Council-Activity\)](#) >
- [Pending Matters \(/CSC/1_Applications-and-Other-Pending-Matters/Pending-Matters\)](#) >
- [About Us \(/CSC/Common-Elements/Common-Elements/Connecticut-Siting-Council---Description\)](#) >
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DOCKET NO. 164 - An Application of Metro Mobile CTS of Hartford, Inc. and Metro Mobile CTS of New Haven, Inc., for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telecommunications facility. The proposed prime site is located approximately 700 feet northeast from the end of the North Chestnut Hill Road cul-de-sac (Lot No. 7), Killingworth. The proposed alternate site is located approximately 350 feet east of 828 Summer hill Road, Madison, Connecticut.

Connecticut Siting Council

December 5, 1994

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact, and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a cellular telecommunications tower and equipment building at the proposed prime site in Killingworth, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by section 16-50k of the Connecticut General Statutes (CGS) , be issued to Metro Mobile CTS of Hartford, Inc., (Metro Mobile), for the construction, operation,

and maintenance of a cellular telecommunications tower, associated equipment, and building at the proposed prime site located off of North Chestnut Hill Road, Killingworth, Connecticut. We find the effects on scenic resources and adjacent landuses of the alternative site to be significant, and therefore deny certification of this site.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The self-supporting lattice tower shall be no taller than necessary to provide the proposed telecommunications service, and the tower shall not exceed a total height of 170 feet above ground level (AGL).
2. The Certificate Holder shall prepare a Development and Management (D&M) plan for this site in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M plan shall include detailed plans for the tower location and tower foundation; the placement of all antennas to be attached to this tower; placement of the emergency generator, equipment building, fuel storage tank, access road, utility line, and security fence; site and accessway clearing and tree trimming; and water drainage and erosion and sedimentation controls consistent with the Connecticut Guidelines for Soil Erosion and Sedimentation Control (as amended.)
3. The Certificate Holder shall acquire all regulatory permits and approvals prior to the operation of the facility and submit copies upon receipt to the Council.
4. The Certificate Holder shall comply with any existing and future radio frequency (RF) standard promulgated by State or federal regulatory agencies. Upon the establishment of any new government RF standards, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.
6. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
7. If the facility does not initially provide, or permanently ceases to provide cellular services following completion of construction, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapplication for any continued or new use shall be made to the Council before any such use is made.
8. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

9. The Certificate Holder shall notify the Council upon completion of construction.

Pursuant to CGS section 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant, The Middletown Press, and New Haven Register.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors of this proceeding are:

<u>APPLICANT</u>	<u>ITS REPRESENTATIVE</u>
Metro Mobile CTS of Hartford, Inc.	Brian C.S. Freeman, Esq. Robinson & Cole One Commercial Plaza Hartford, CT 06103-3597
	David S. Malko, P.E.,General Manager - Engineering Sandy M. Ranciato, Manager Metro Mobile CTS of New Haven, Inc. 20 Alexander Drive Wallingford, CT 06492
<u>INTERVENOR</u>	<u>ITS REPRESENTATIVE</u>
Springwich Cellular Limited Partnership	Peter J. Tyrrell, Esq., Senior Attorney Springwich Cellular Limited Partnership 227 Church Street New Haven, CT 06506

Exhibit B

Property Card

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2016.



Information on the Property Records for the Municipality of Killingworth was last updated on 6/12/2021.

Property Summary Information

- [Parcel Data And Values](#)
- [Building](#)
 - [Building 1](#)
- [Outbuildings](#)
- [Sales](#)
- [Permits](#)

Parcel Information					
Location:	197 N CHESTNUT HILL ROAD	Property Use:	Industrial	Primary Use:	Utility Building
Unique ID:	00082800	Map Block Lot:	14-12G	Acres:	6.60
490 Acres:	0.00	Zone:	R-2	Volume / Page:	0154/0542
Developers Map / Lot:	TC 1179/LOT 7	Census:	6401		

Value Information		
	Appraised Value	Assessed Value
Land	246,240	172,360
Buildings	42,152	29,510
Detached Outbuildings	222,525	155,770
Total	510,917	357,640

Owner's Information

Owner's Data

CROWN ATLANTIC COMPANY LLC
C/O PMB 353
4017 WASHINGTON ROAD
MCMURRAY PA 15317-2520

Building 1



Category:	Industrial	Use:	Utility Building	GLA:	780
Stories:	1.00	Construction:	Average	Year Built:	1995
Heating:		Fuel:		Cooling Percent:	100%
Siding:	Pre-Cast Concrete	Roof Material:		Beds/Units:	0

Special Features

Attached Components

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Fencing	1995	280	8	2,240
Concrete/Masonry Patio	1995	34	34	1,156
Paving	1995			2,000
Cell Tower	1995			1

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
CROWN ATLANTIC COMPANY LLC	0154	0542	04/19/1999	Warranty Deed	Yes	\$83,000

Building Permits

Permit Number	Permit Type	Date Opened	Date Closed	Permit Status	Reason
12-411	Commercial	12/27/2012		Closed	CELL TOWER MAINTENANCE
12-066	Commercial	03/03/2012		Closed	REPLACE 6 ANTENNAS ON EXISTING TOWER

Google Map

Unique Id:

Location:

MBL:

Primary Use:

Zone:

Acres:

Appraised Value:

Assessed Value:

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Information Published With Permission From The Assessor

197 n chestnut

About
Layers
Identify

Summary

197 N CHESTNUT HILL ROAD

CROWN ATLANTIC COMPANY

Parcel_ID: 14-12G [View Details](#)



Exhibit C

Construction Drawings



VERIZON SITE NUMBER: 324178

VERIZON SITE NAME: KILLINGWORTH 2 CT

SITE TYPE: SELF SUPPORT TOWER

TOWER HEIGHT: 170-0"

BUSINESS UNIT #: 807134

SITE ADDRESS: 197 NORTH CHESTNUT HILL ROAD
KILLINGWORTH, CT 06419

COUNTY: MIDDLESEX

JURISDICTION: CITY OF KILLINGWORTH

VERIZON FUZE PROJECT #: 16271961

verizon

20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CC

CROWN
CASTLE

1500 CORPORATE DRIVE
CANONSBURG, PA 15317

INFINIGY

FROM ZERO TO INFINIGY
the solutions are endless

BELLEVUE, WA 98004

VERIZON SITE NUMBER:
324178

BU #: 807134
NHV 031B 943108

197 NORTH CHESTNUT HILL
ROAD
KILLINGWORTH, CT 06419

EXISTING 170-0" SELF
SUPPORT TOWER

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	07/09/2021	RCD	FINAL	--

STATE OF CONNECTICUT

SHUHEI SAKANAKU

34916

PROFESSIONAL ENGINEER

7/14/2021

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

SHEET NUMBER:
T-1

REVISION:
A

SITE INFORMATION

CROWN CASTLE USA INC.
SITE NAME:

NHV 031B 943108

SITE ADDRESS:

197 NORTH CHESTNUT HILL ROAD
KILLINGWORTH, CT 06419

COUNTY:

MIDDLESEX

MAP/PARCEL #:

VERIFY

AREA OF CONSTRUCTION:

EXISTING

LATTITUDE:

41° 23' 10.10" N (41.386139°)

LONGITUDE:

72° 36' 14.60" W (-72.604056°)

LAT/LONG TYPE:

NAD83

GROUND ELEVATION:

430'

CURRENT ZONING:

TBD

JURISDICTION:

CITY OF KILLINGWORTH

OCCUPANCY CLASSIFICATION:

U

TYPE OF CONSTRUCTION:

IIB

A.D.A. COMPLIANCE:

FACILITY IS UNMANNED AND NOT FOR
HUMAN HABITATION

PROPERTY OWNER:

TBD

TOWER OWNER:

CCATT LLC
2000 CORPORATE DRIVE
CANONSBURG, PA 15317

CARRIER/APPLICANT:

VERIZON WIRELESS
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

ELECTRIC PROVIDER:

TBD

TELCO PROVIDER:

TBD

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1	SITE PLAN
C-2	TOWER ELEVATION & ANTENNA PLANS
C-3	EQUIPMENT SCHEDULES
C-4	EQUIPMENT DETAILS
C-5	EQUIPMENT DETAILS
C-6	PLUMBING DIAGRAM
G-1	GROUNDING DETAILS
G-2	GROUNDING DETAILS

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

APPROVALS

SIGNATURE	DATE

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT

https://pmi.vxwsmart.com

SMART TOOL VENDOR

PROJECT NUMBER

6039-Z0001-C

VzW LOCATION CODE (PSLC)

470988

*** PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

MOUNT MODIFICATION REQUIRED

N

VzW APPROVED SMART KIT VENDORS

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR
VzW SMART KIT APPROVED VENDORS

LOCATION MAP

DRIVING DIRECTIONS FROM VERIZON LOCAL OFFICE (SPACE E-116, FARMINGTON, CT 06032)
DEPART AND HEAD TOWARD WESTFARMS MALL, BEAR LEFT ONTO WESTFARMS MALL, TURN RIGHT ONTO CT-71 / S EAST RD, TURN LEFT ONTO ROAD TOWARD CT-9 SOUTH, TAKE THE RAMP ON THE LEFT FOR CT-9 S, KEEP STRAIGHT TO GET ONTO CT-17 / CT-9 S, KEEP STRAIGHT TO GET ONTO CT-9 S, TURN RIGHT ONTO CT-81 / KILLINGWORTH RD, BEAR RIGHT ONTO CT-148 / ROUTE 148, TURN LEFT ONTO BECKWITH RD, UNPAVED ROAD, KEEP RIGHT TO GET ONTO ABNER LN, UNPAVED ROAD, TURN RIGHT ONTO N CHESTNUT HILL RD, ARRIVE AT N CHESTNUT HILL RD, 197 NORTH CHESTNUT HILL ROAD KILLINGWORTH, CT 06419.

APPLICABLE CODES/REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2018 CT STATE BUILDING CODE
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:

DATED:

BY OTHERS

MOUNT ANALYSIS:

DATED:

MASER CONSULTING CONNECTICUT

RFDS REVISION:

DATED:

TBD

ORDER ID:

552653

REVISION:

0

CALL CONNECTICUT ONE CALL
(800) 922-4455 CBYD.COM
CALL 2 WORKING DAYS
BEFORE YOU DIG!

001

PROJECT DESCRIPTION

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

TOWER SCOPE OF WORK:

- REMOVE (9) ANTENNAS
- REMOVE (2) COAX CABLES
- INSTALL (9) ANTENNAS
- INSTALL (6) RRHs
- INSTALL (3) DIPLEXERS
- INSTALL (1) OVP
- INSTALL (2) HYBRID CABLES

GROUND SCOPE OF WORK:

- REMOVE (3) RRHs

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

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800–788–7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING LANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS." IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS. LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GREENFIELD GROUNDING NOTES:

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

GENERAL NOTES:

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

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

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

ELECTRICAL INSTALLATION NOTES:

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

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

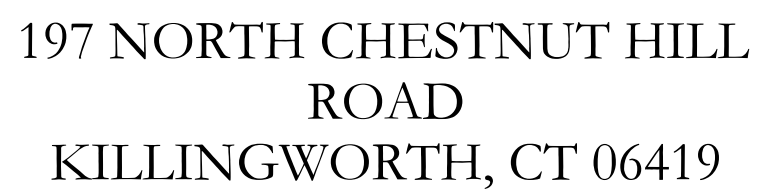
* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

ABBREVIATIONS:

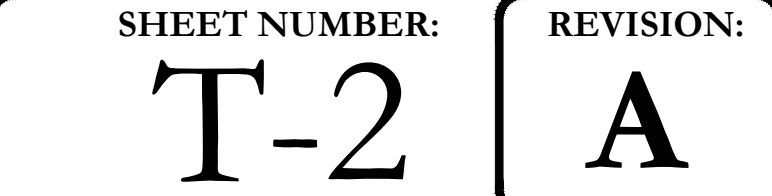
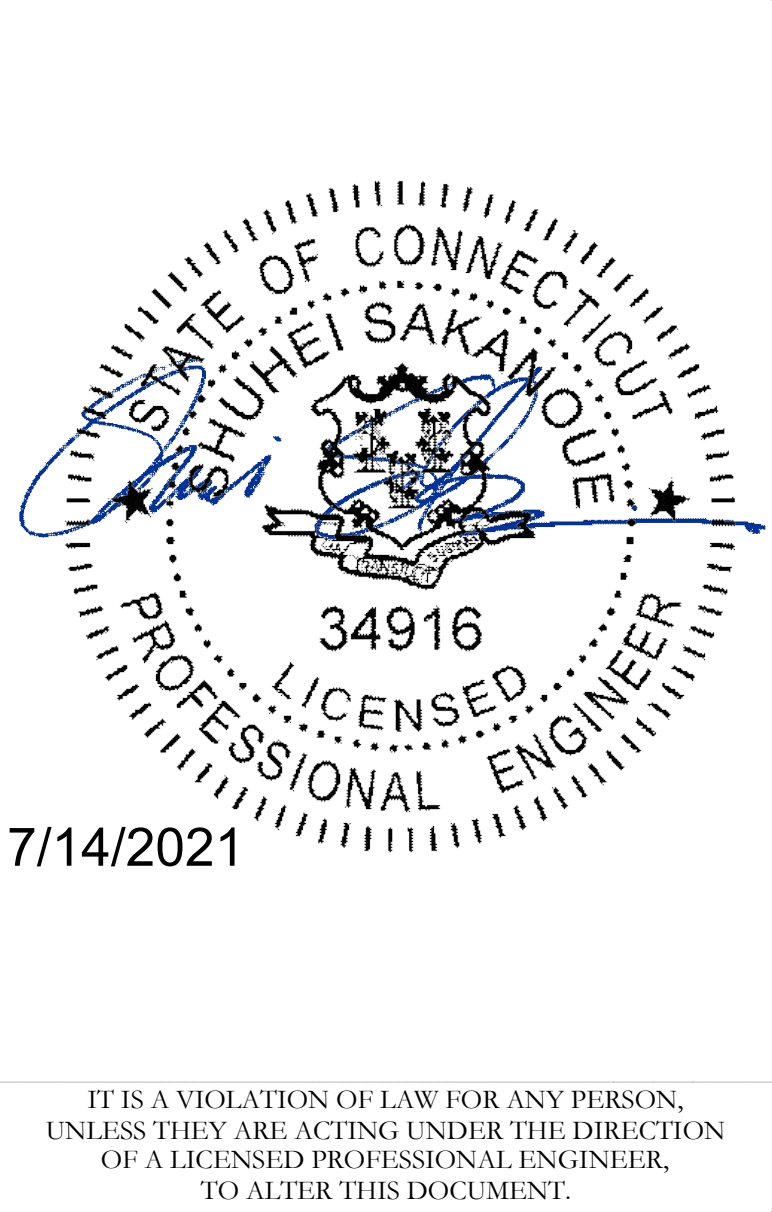
ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET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

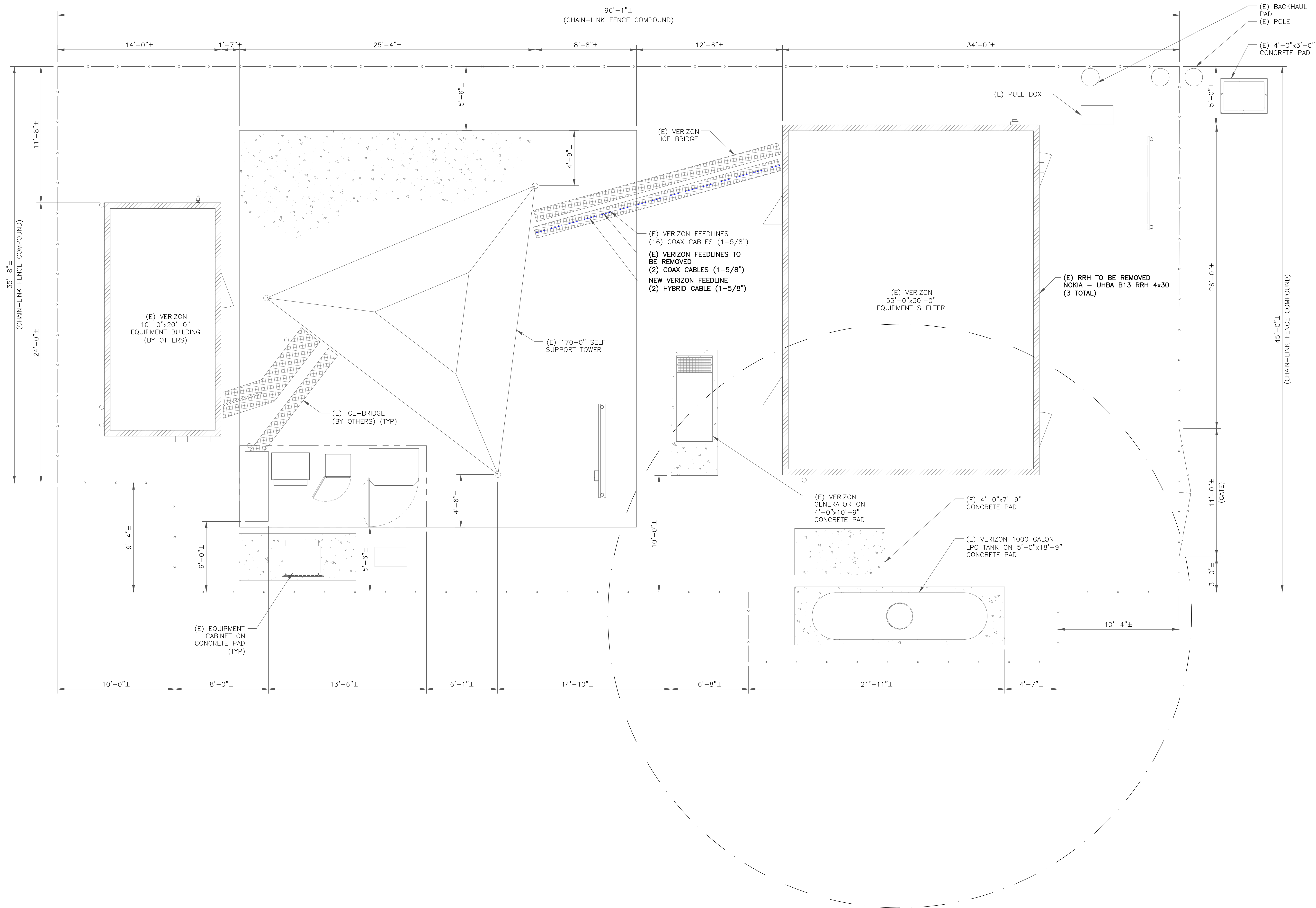
APWA UNIFORM COLOR CODE:

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



ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	07/09/2021	RCD	FINAL	--





verizon

20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE

1500 CORPORATE DRIVE
CANONSBURG, PA 15317

INFINIGY

FROM ZERO TO INFINIGY
the solutions are endless

BELLEVUE, WA 98004

VERIZON SITE NUMBER:
324178

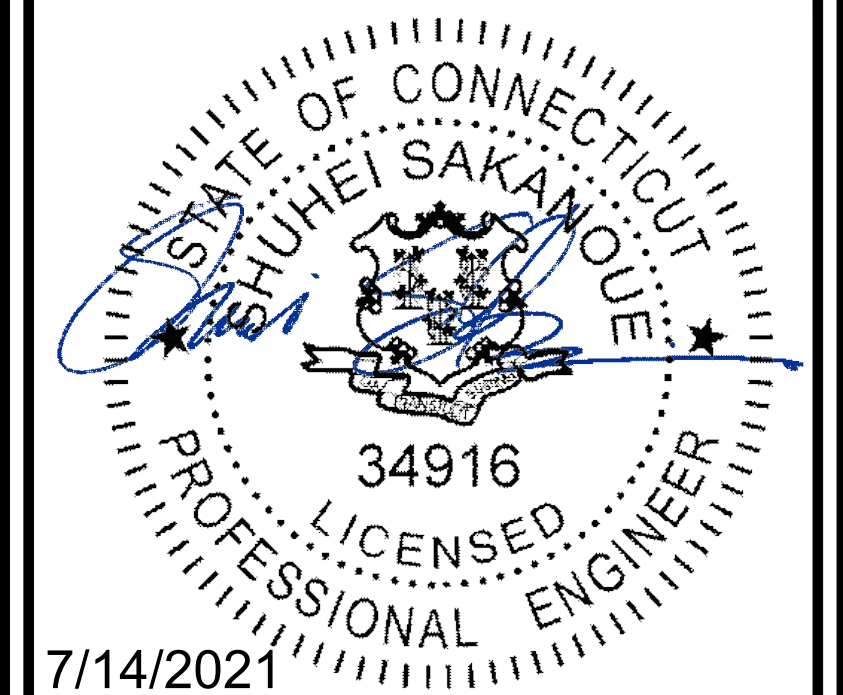
BU #: 807134
NHV 031B 943108

197 NORTH CHESTNUT HILL
ROAD
KILLINGWORTH, CT 06419

EXISTING 170'-0" SELF
SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	07/09/2021	RCD	FINAL	--



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

SHEET NUMBER:

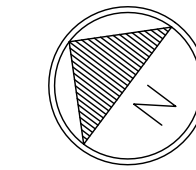
C-1

REVISION:

A

1 SITE PLAN

SCALE: 1/4"=1'-0" (FULL SIZE)
1/8"=1'-0" (11x17)



NEW VERIZON EQUIPMENT
(3) SAMSUNG - VZS01 ANTENNAS
(3) COMMSCOPE - JAHH-65B-R3B ANTENNS
(3) SAMSUNG - B2/B66A RRH-BR049 RRHs
(3) SAMSUNG - B5/B13 RRH-BR04C RRs
(3) COMMSCOPE - CBC78T-DS-43-2X DIPLEXERS
(1) RAYCAP - RVZDC-6627-PF-48 OVP
INSTALLED ON EXISTING MOUNTS

(E) VERIZON EQUIPMENT TO REMAIN
ANTEL-LPA-80063/6CF
INSTALLED ON EXISTING MOUNTS

(E) PANEL ANTENNAS
(BY OTHERS) (TYP)

(E) VERIZON FEEDLINES TO
BE REMOVED
(2) COAX CABLES (1-5/8")

(E) VERIZON FEEDLINES
(16) COAX CABLES (1-5/8")

NEW VERIZON FEEDLINE
(2) HYBRID CABLE (1-5/8")

VERIZON EQUIPMENT

ANTENNA CL: 170'-0"
MOUNT CL: 167'-6"

(E) VERIZON GENERATOR

(E) VERIZON ICE BRIDGE

(E) VERIZON 55'-0"x30'-0"
EQUIPMENT BUILDING

(E) 170'-0" SELF
SUPPORT TOWER

(E) VERIZON ICE BRIDGE
?(BY OTHERS)

(E) VERIZON
10'-0"x20'-0" EQUIPMENT
BUILDING (BY OTHERS)

(E) FENCE

TIP OF LIGHTNING ROD
ELEV. = 182'-0"
TIP OF ANTENNA
ELEV. = 172'-10"
TIP OF SELF SUPPORT TOWER
ELEV. = 170'-0"
CENTERLINE OF ANTENNA
ELEV. = 170'-0"
CENTERLINE OF MOUNT
ELEV. = 167'-6"
CENTERLINE OF MW ANTENNA
ELEV. = 158'-0"
CENTERLINE OF ANTENNA (BY OTHERS)
ELEV. = 146'-0"
CENTERLINE OF ANTENNA (BY OTHERS)
ELEV. = 135'-0"

1 TOWER ELEVATION
SCALE: NOT TO SCALE

(E) ANTENNA TO BE REMOVED
ANTEL - BXA-70063-6CF (3
TOTAL, 1 PER SECTOR)

(E) ANTENNA TO REMAIN
ANTEL-LPA-80063/6CF
(6 TOTAL, 2 PER SECTOR)

(E) SECTOR FRAME
MOUNT TO REMAIN

(E) ANTENNA TO BE REMOVED
ANTEL - LPA-171063-12CF
(6 TOTAL, 2 PER SECTOR)

(E) 170'-0" SELF
SUPPORT TOWER

2 EXISTING ANTENNA PLAN
SCALE: NOT TO SCALE

NEW DIPLEXER
COMMSCOPE - CBC78T-DS-43-2X
(3 TOTAL, 1 PER SECTOR)

(E) ANTENNA TO REMAIN
ANTEL-LPA-80063/6CF
(6 TOTAL, 2 PER SECTOR)

(E) SECTOR FRAME
MOUNT TO REMAIN

NEW OVP
RAYCAP // RVZDC-6627-PF-48
(1 TOTAL)

(E) 170'-0" SELF
SUPPORT TOWER

NEW RRU
SAMSUNG - B5/B13 RRH-BR04C
(3 TOTAL, 1 PER SECTOR)

NEW RRU
SAMSUNG - B2/B66A RRH-BR049
(3 TOTAL, 1 PER SECTOR)

NEW ANTENNA
ANDREW - JAHH-65B-R3B ANTENNA
(6 TOTAL, 2 PER SECTOR)

NEW ANTENNA
SAMSUNG - VZS01 ANTENNA
(3 TOTAL, 1 PER SECTOR)

3 NEW ANTENNA PLAN
SCALE: NOT TO SCALE

verizon

20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN
CASTLE

1500 CORPORATE DRIVE
CANONSBURG, PA 15317

INFINIGY

FROM ZERO TO INFINIGY
the solutions are endless

BELLEVUE, WA 98004

VERIZON SITE NUMBER:
324178

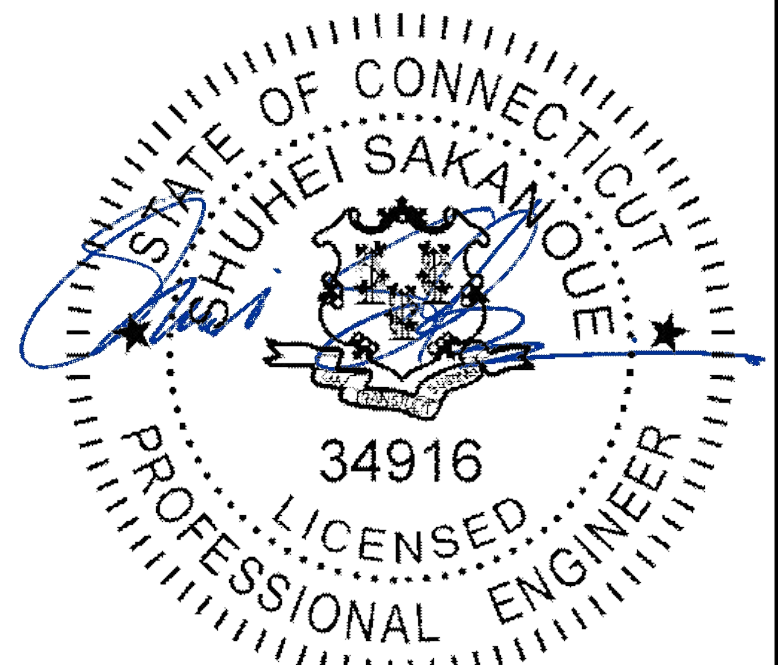
BU #: 807134
NHV 031B 943108

197 NORTH CHESTNUT HILL
ROAD
KILLINGWORTH, CT 06419

EXISTING 170'-0" SELF
SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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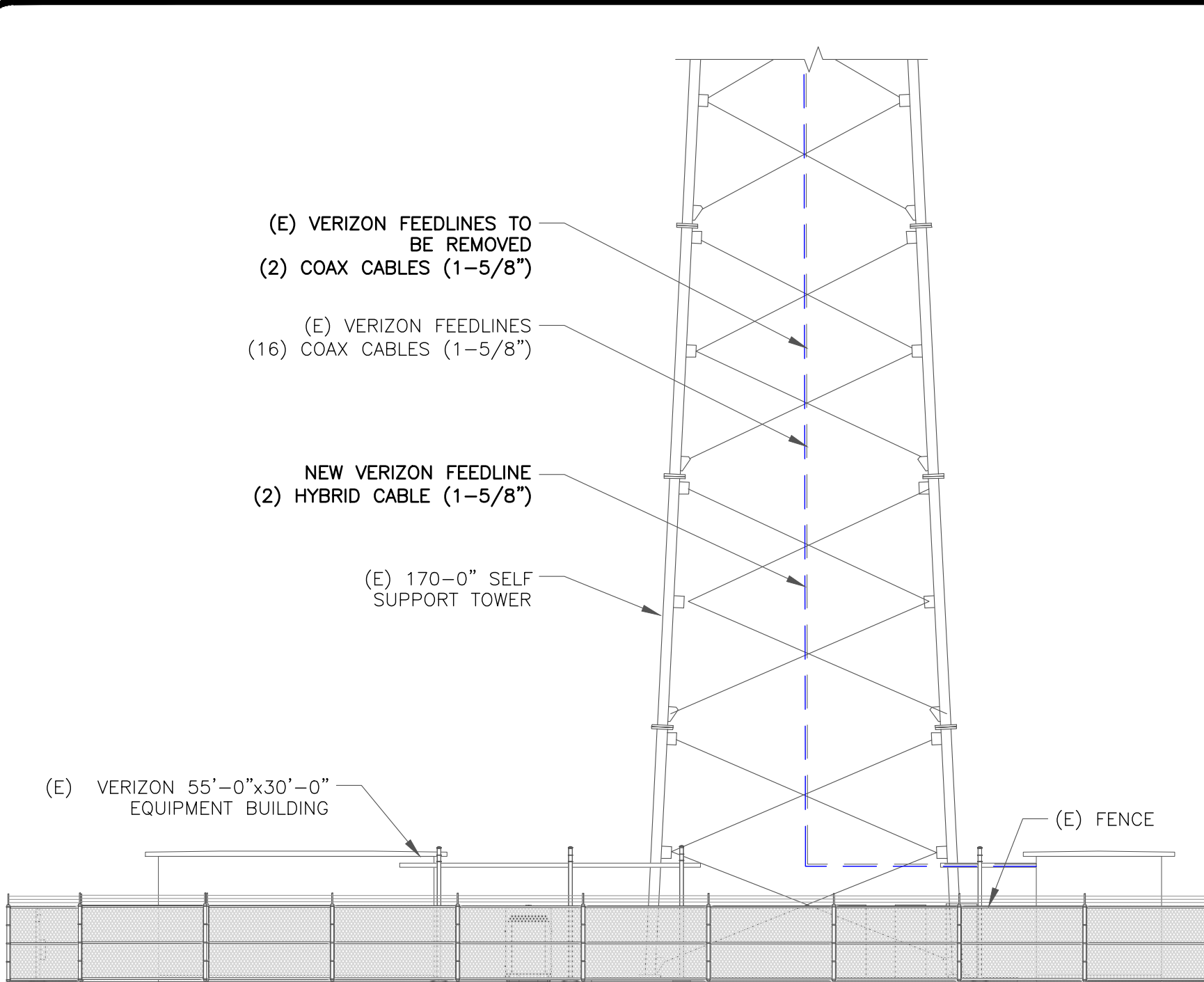
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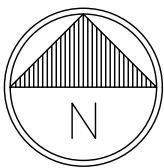
ANTENNA/RRH SCHEDULE									
SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	ANTENNA CENTERLINE	AZIMUTH	MECHANICAL DOWNTILTS	ELECTRICAL DOWNTILTS	TOWER EQUIPMENT MANUFACTURER	TOWER EQUIPMENT QTY/MODEL
A1	EXISTING	ANTEL	LPA-80063/6CF	170'-0"	0°	2°	0°	RFS/CELWAVE	(1) RVZDC-6627-PF-48
A2	NEW	ANDREW	(2) JAHH-65B-R3B	170'-0"	0°	0°	3°/3°/2°/2°	SAMSUNG SAMSUNG COMMSCOPE	(1) B2/B66A RRH-BR049 (1) B5/B13 RRH-BR04C (1) CBC78T-DS-43-2X
A3	NEW	SAMSUNG	VZS01	170'-0"	0°	0°	6°	-	-
A4	EXISTING	ANTEL	LPA-80063/6CF	170'-0"	0°	2°	0°	-	-
A1	EXISTING	ANTEL	LPA-80063/6CF	170'-0"	120°	2°	0°	-	-
A2	NEW	ANDREW	(2) JAHH-65B-R3B	170'-0"	120°	0°	2°/2°/2°/2°	SAMSUNG SAMSUNG COMMSCOPE	(1) B2/B66A RRH-BR049 (1) B5/B13 RRH-BR04C (1) CBC78T-DS-43-2X
A3	NEW	SAMSUNG	VZS01	170'-0"	120°	0°	6°	-	-
A4	EXISTING	ANTEL	LPA-80063/6CF	170'-0"	120°	2°	0°	-	-
C1	EXISTING	ANTEL	LPA-80063/6CF	170'-0"	210°	4°	0°	-	-
C2	NEW	ANDREW	(2) JAHH-65B-R3B	170'-0"	210°	0°	4°/4°/2°/2°	SAMSUNG SAMSUNG COMMSCOPE	(1) B2/B66A RRH-BR049 (1) B5/B13 RRH-BR04C (1) CBC78T-DS-43-2X
C3	NEW	SAMSUNG	VZS01	170'-0"	210°	0°	6°	-	-
C4	EXISTING	ANTEL	LPA-80063/6CF	170'-0"	210°	4°	0°	-	-

1 VERIZON TOWER EQUIPMENT SCHEDULE
SCALE: NOT TO SCALE

CABLE SCHEDULE				
STATUS	CABLE TYPE	SIZE	LENGTH	QTY
NEW	HYBRID	1-5/8"	220'-0"±	2
EXISTING	COAX	1-5/8"	220'-0"±	16
TOTAL CABLE QTY:				18



2 BASE LEVEL DETAIL
SCALE: NOT TO SCALE



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VERIZON SITE NUMBER:
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BU #: 807134
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197 NORTH CHESTNUT HILL
ROAD
KILLINGWORTH, CT 06419

EXISTING 170-0" SELF
SUPPORT TOWER

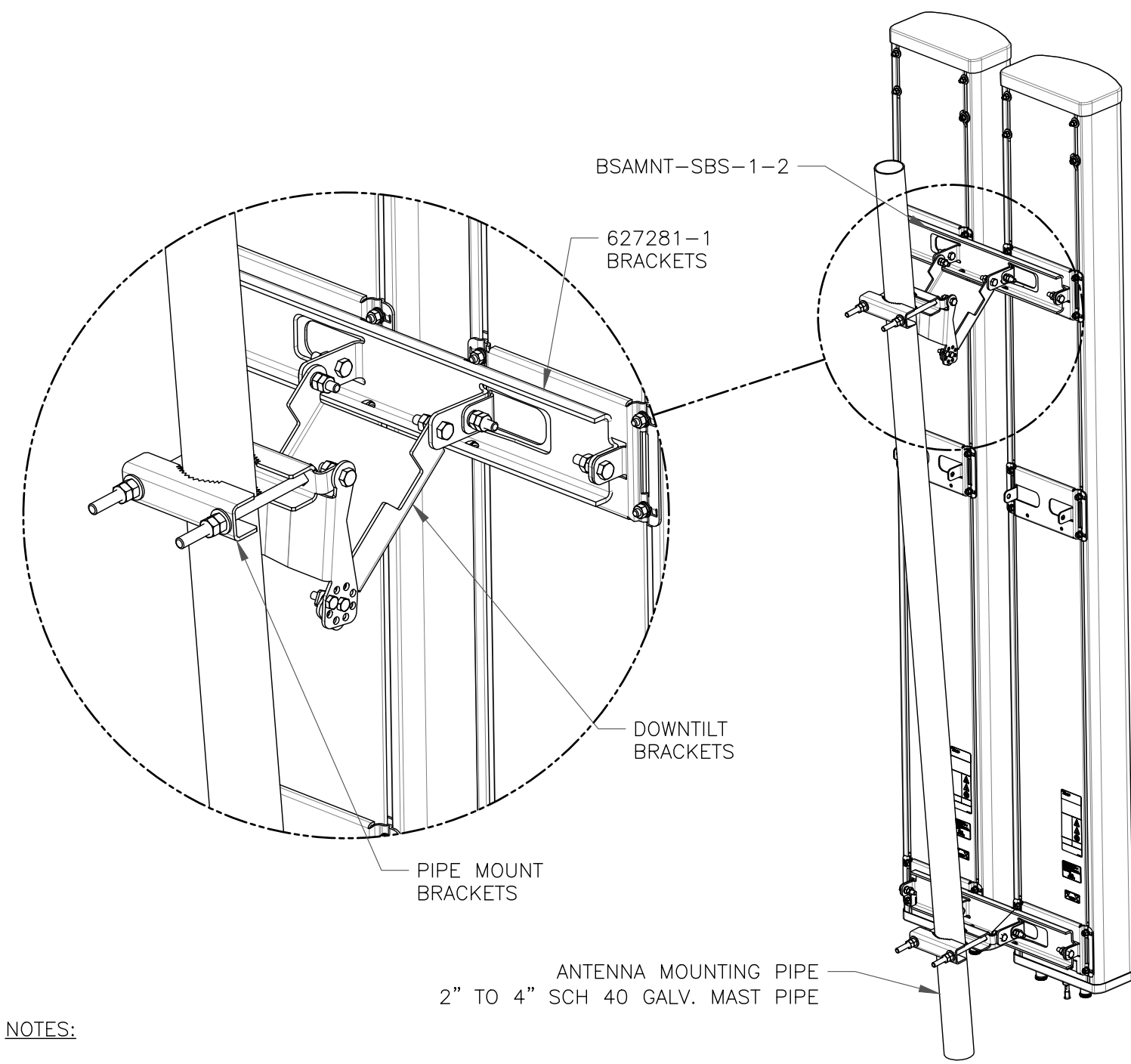
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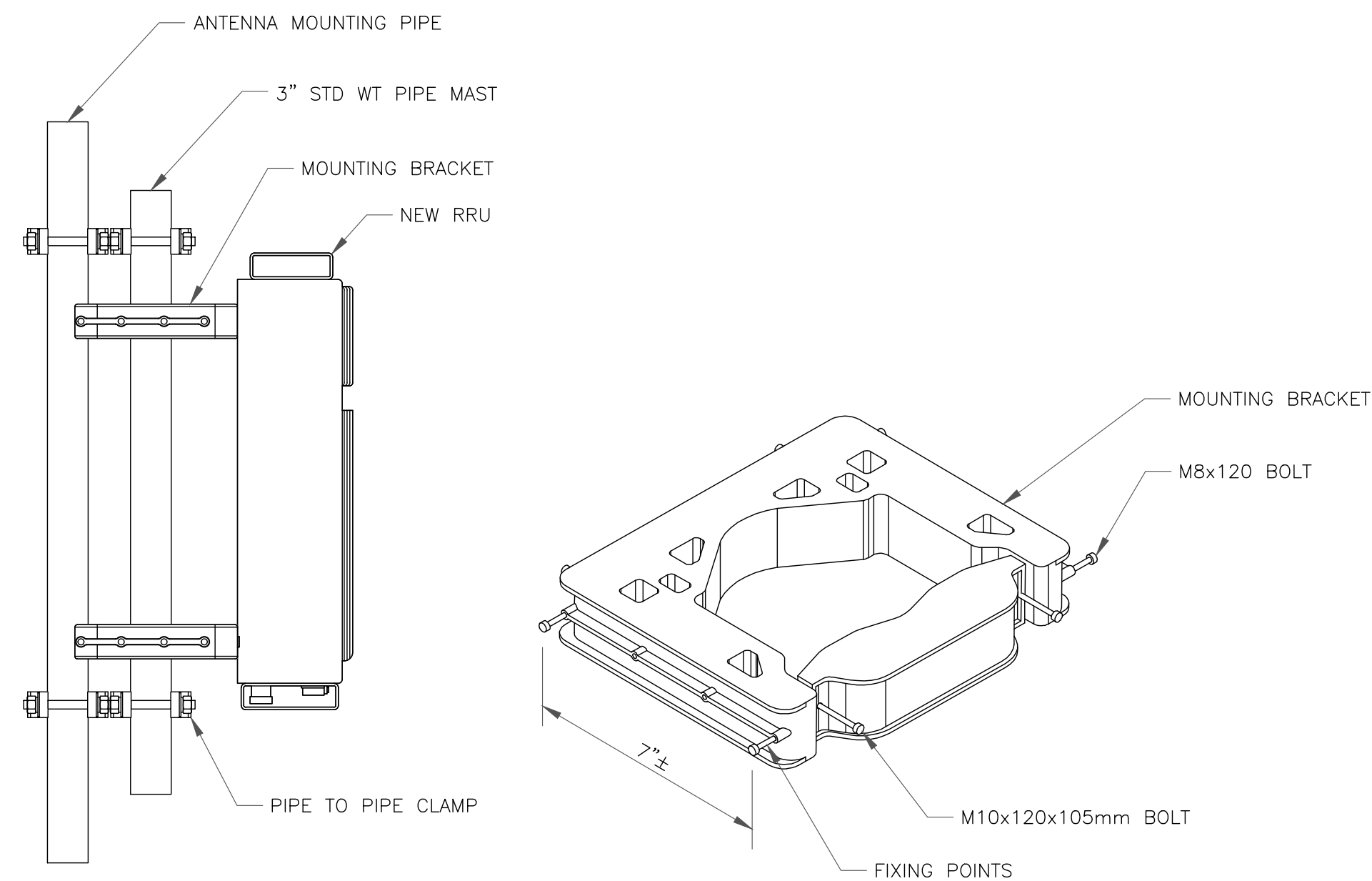
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REVISION:
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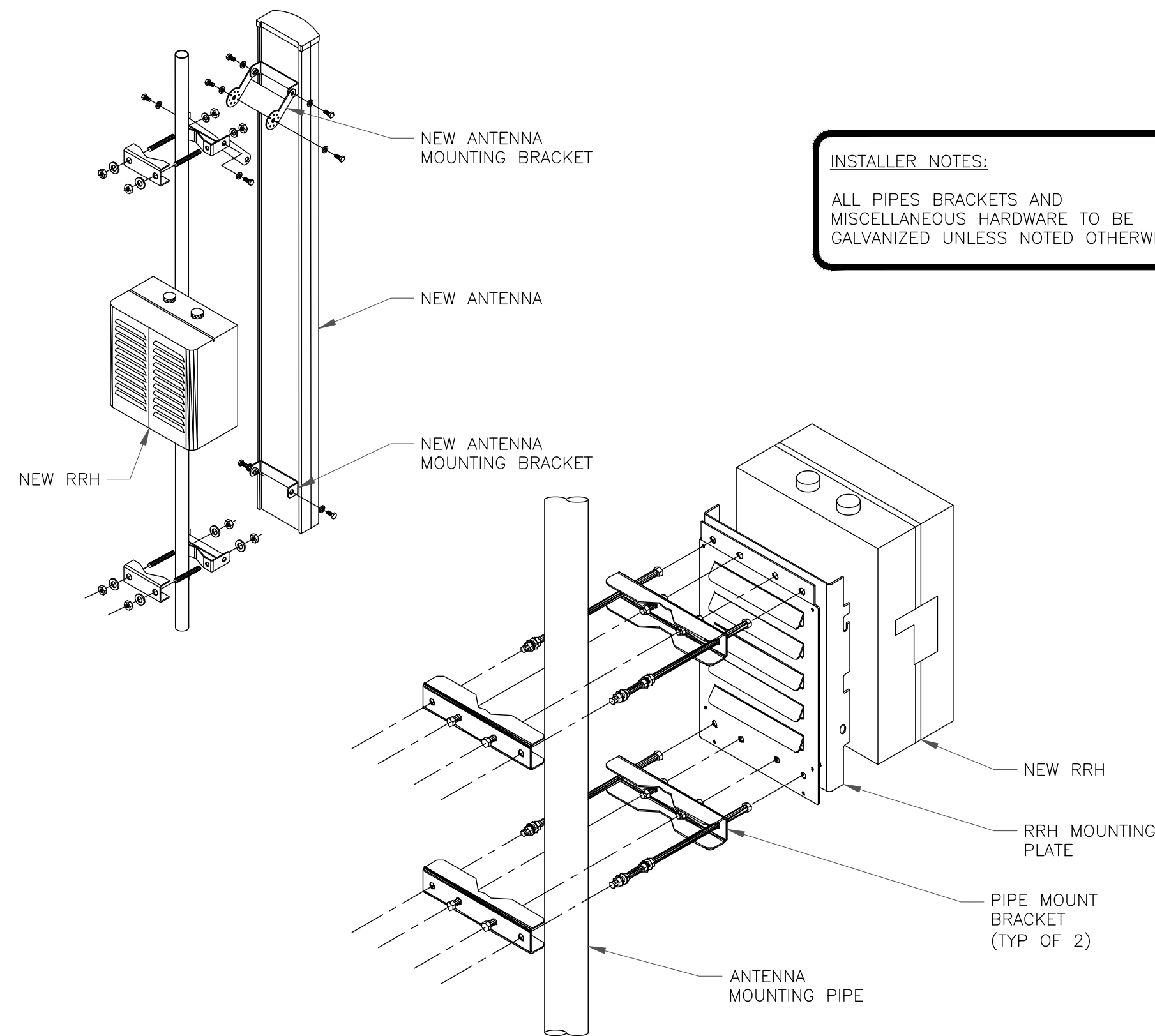


- NOTES:
- BSAMNT-SBS-1-2 KIT CONTAINS (2) 627281 MOUNTING BRACKETS.
 - TORQUE THE M10 BOLT ASSEMBLY TO 37 N.m. PER MANUFACTURE'S RECOMMENDATIONS.

1 COMMSCOPE – BSAMNT-SBS-1-2
SCALE: NOT TO SCALE



3 NOKIA – FPKA BRACKET MOUNTING DETAIL
SCALE: NOT TO SCALE



INSTALLER NOTES:
ALL PIPES BRACKETS AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

4 ANTENNA & RRU MOUNTING DETAIL
SCALE: NOT TO SCALE

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VERIZON SITE NUMBER:
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197 NORTH CHESTNUT HILL ROAD
KILLINGWORTH, CT 06419

EXISTING 170-0" SELF SUPPORT TOWER

ISSUED FOR:				
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STATE OF CONNECTICUT

SHUHEI SAKANoue

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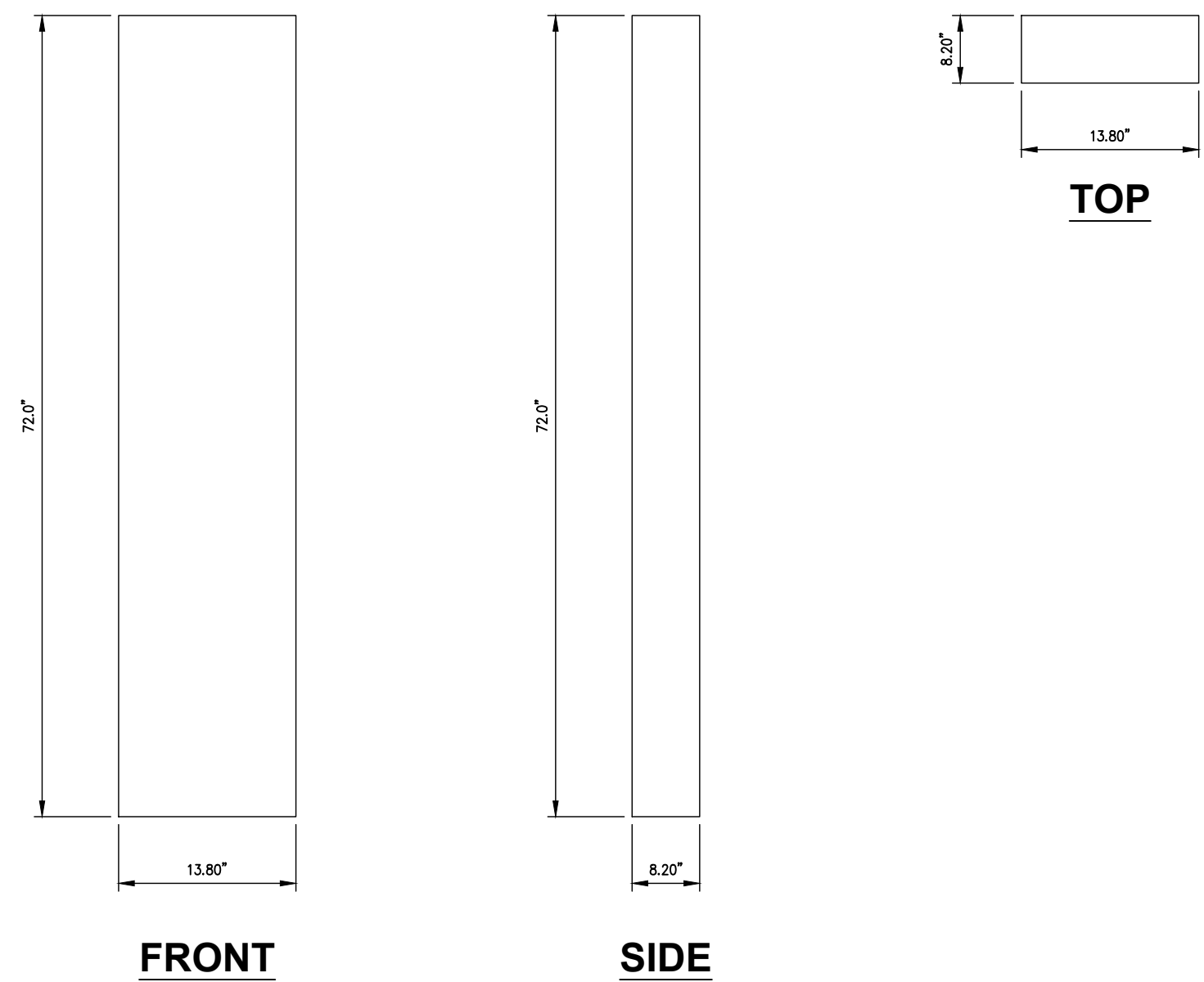
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COMMSCOPE PANEL ANTENNA (JAHH-65B-R3B)

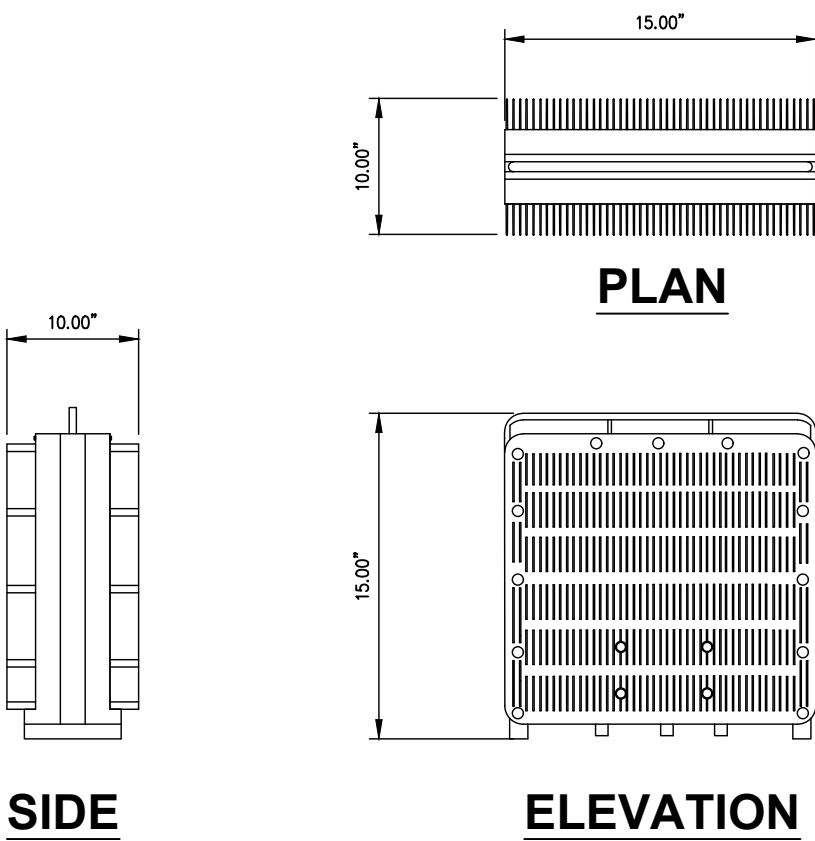
DIMENSIONS, HxWxD: 72.0"x13.80"x8.20"
WEIGHT, W/O BRACKETS: 63.3 lbs



1 COMMSCOPE JAHH-65B-R3B ANTENNA DETAIL
SCALE: NOT TO SCALE

SAMSUNG RADIO-B2/B66A RRH-BR049

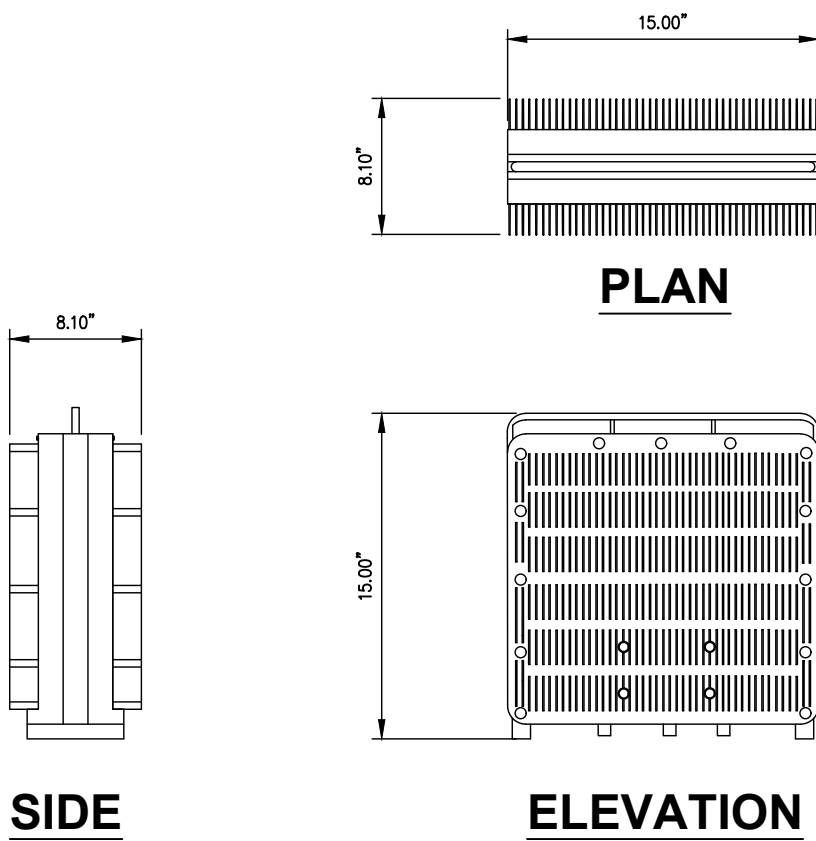
DIMENSIONS, WxDxH: 15.00" X 15.00" X 10.00"
POWER CONSUMPTION: 320 WATTS
TOTAL WEIGHT: 84.40 lbs
TEMPERATURE: -40° TO 55° C



2 SAMSUNG RADIO-B2/B66A RRH-BR049 RRH DETAIL
SCALE: NOT TO SCALE

SAMSUNG RADIO-B5/B13 RRH-BR04C

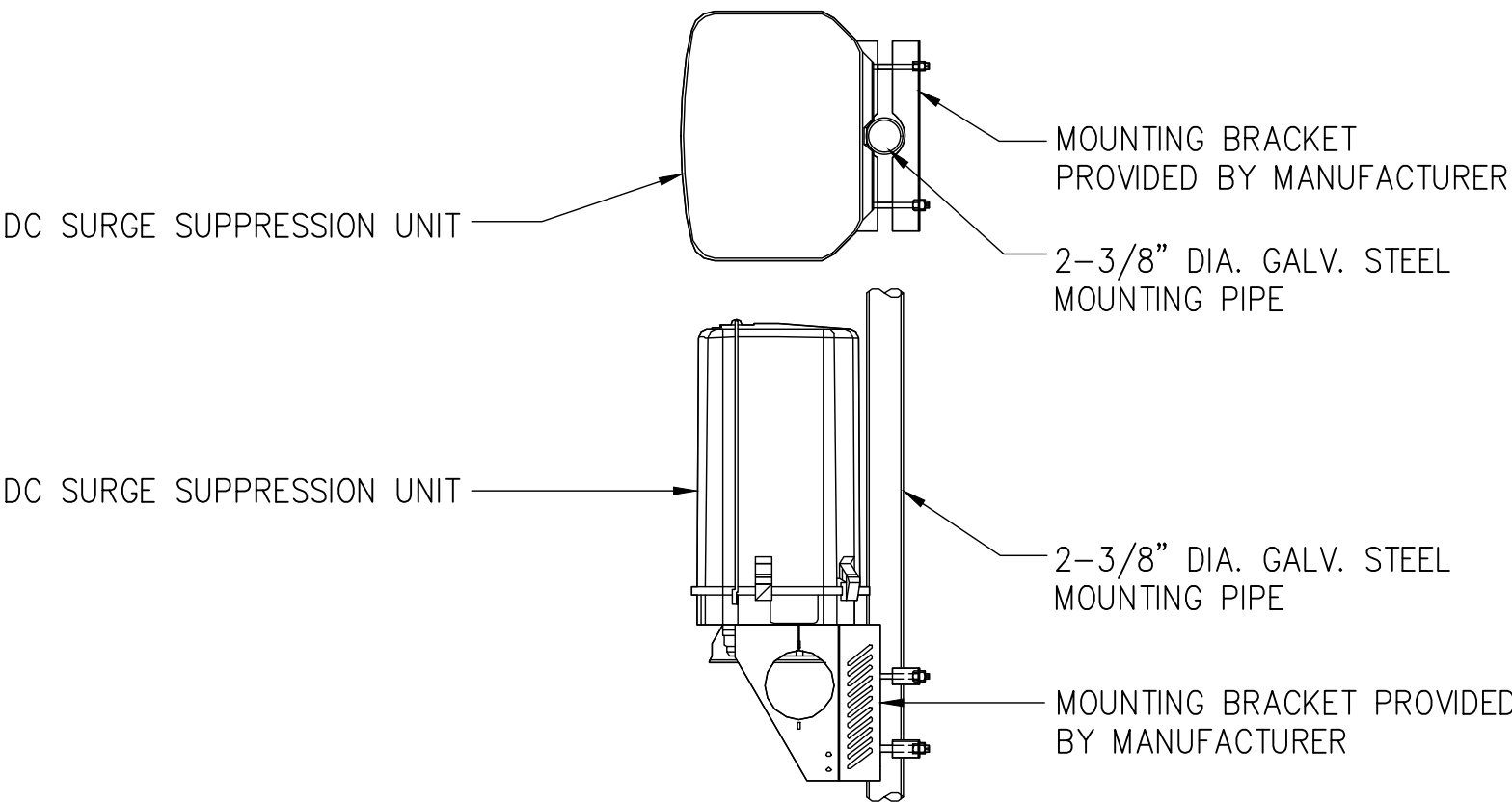
DIMENSIONS, WxDxH: 15.00" X 15.00" X 8.10"
POWER CONSUMPTION: 320 WATTS
TOTAL WEIGHT: 70.30 lbs
TEMPERATURE: -40° TO 55° C



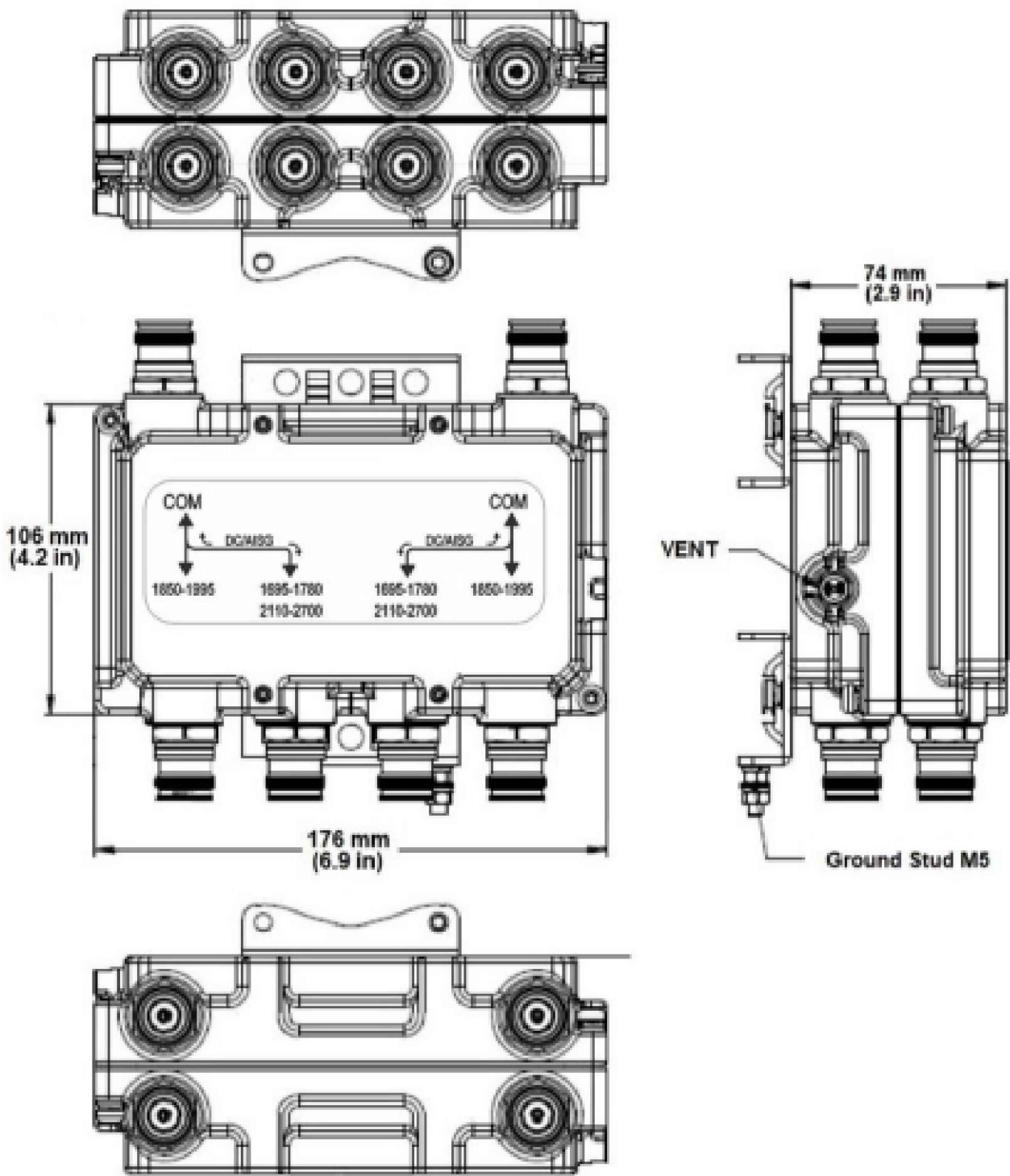
3 SAMSUNG RADIO-B5/B13 RRH-BR04C
SCALE: NOT TO SCALE

RAYCAP (RVZDC-6627-PF-48)

DIMENSIONS, HxWxD: 25.66"x15.73"x10.25"
WEIGHT, W/O BRACKETS: 21.40 lbs



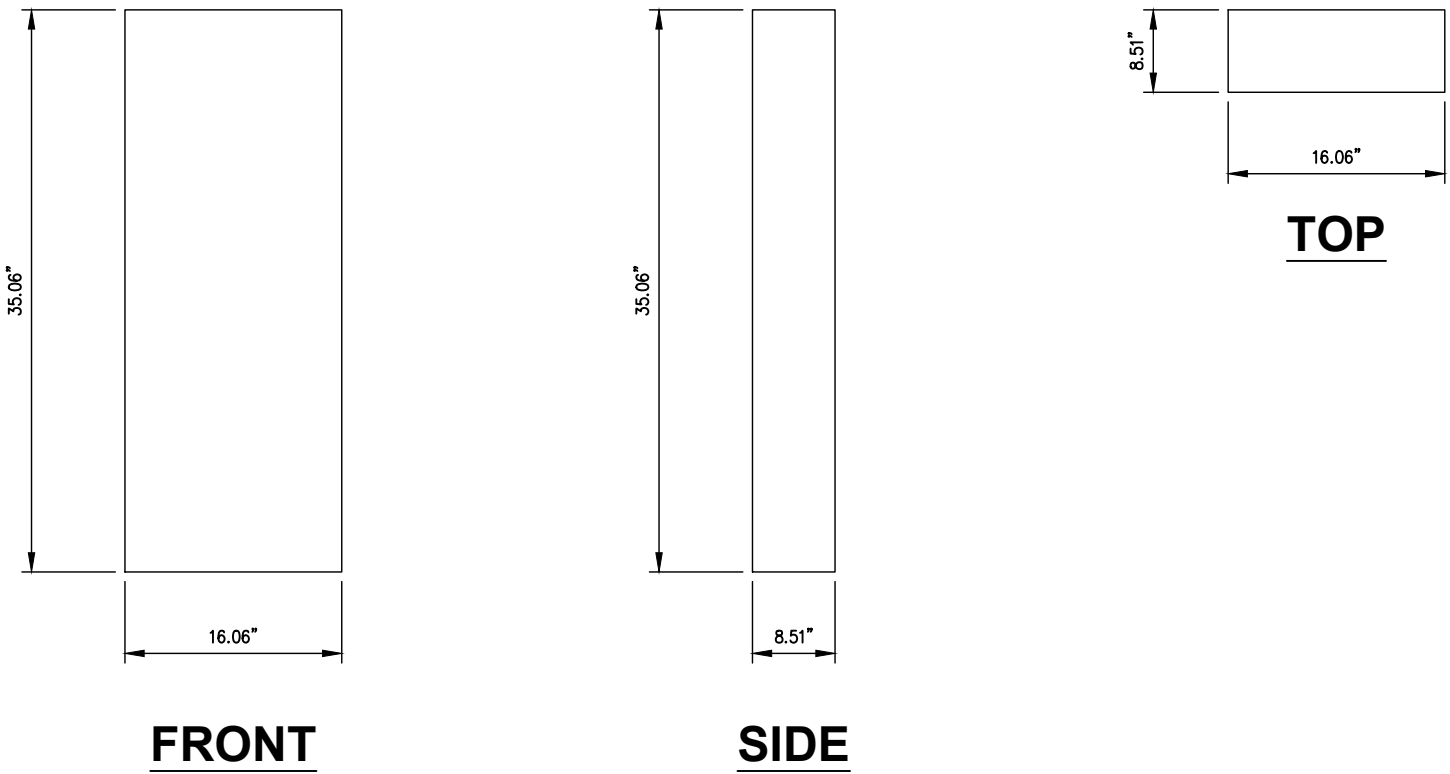
4 RVZDC-6627-PF-48 OVP DETAIL
SCALE: NOT TO SCALE



5 COMMSCOPE CBC78T-DS-43-2X DIPLEXER DETAIL
SCALE: NOT TO SCALE

SAMSUNG PANEL ANTENNA (VZS01)

DIMENSIONS, HxWxD: 35.12"x16.06"x5.51"
WEIGHT, W/O BRACKETS: 81.10 lbs



6 SANSUNG VZS01 ANTENNA DETAIL
SCALE: NOT TO SCALE

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VERIZON SITE NUMBER:
324178

BU #: 807134
NHV 031B 943108

197 NORTH CHESTNUT HILL
ROAD
KILLINGWORTH, CT 06419

EXISTING 170-0" SELF
SUPPORT TOWER

ISSUED FOR:				
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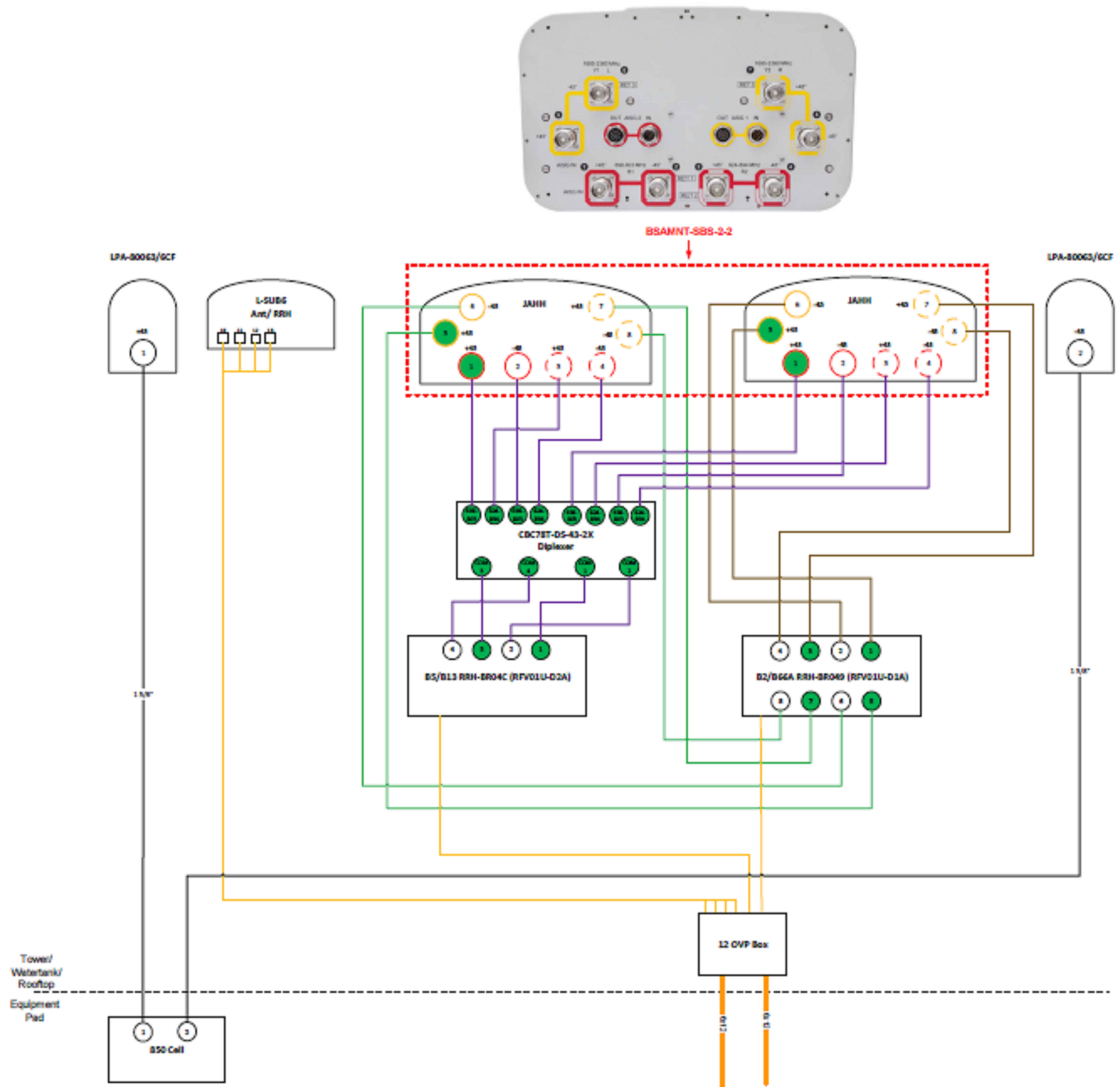
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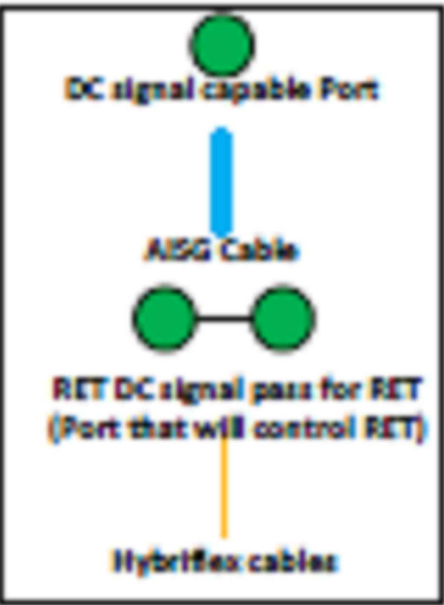
C-5

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- Port 1 & 2 are for low band (698-896 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
- Smart Bias Tee (SBT) is through port 1 & 3 for low band and port 1 for high band.
- AISG cable is only needed when drawn in the diagrams below, if it is not drawn then SBT is enough to control all RET motors.
- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.



Comments:

Diagram shows antenna port configuration as viewed from below antennas.

Antenna positions are indicated as viewed from IN FRONT of antennas.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybridex cable. (For the coax colors follow Coax Colors guide above)

20 ALEXANDER DRIVE, 2ND FLOOR
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197 NORTH CHESTNUT HILL
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KILLINGWORTH, CT 06419

EXISTING 170-0" SELF
SUPPORT TOWER

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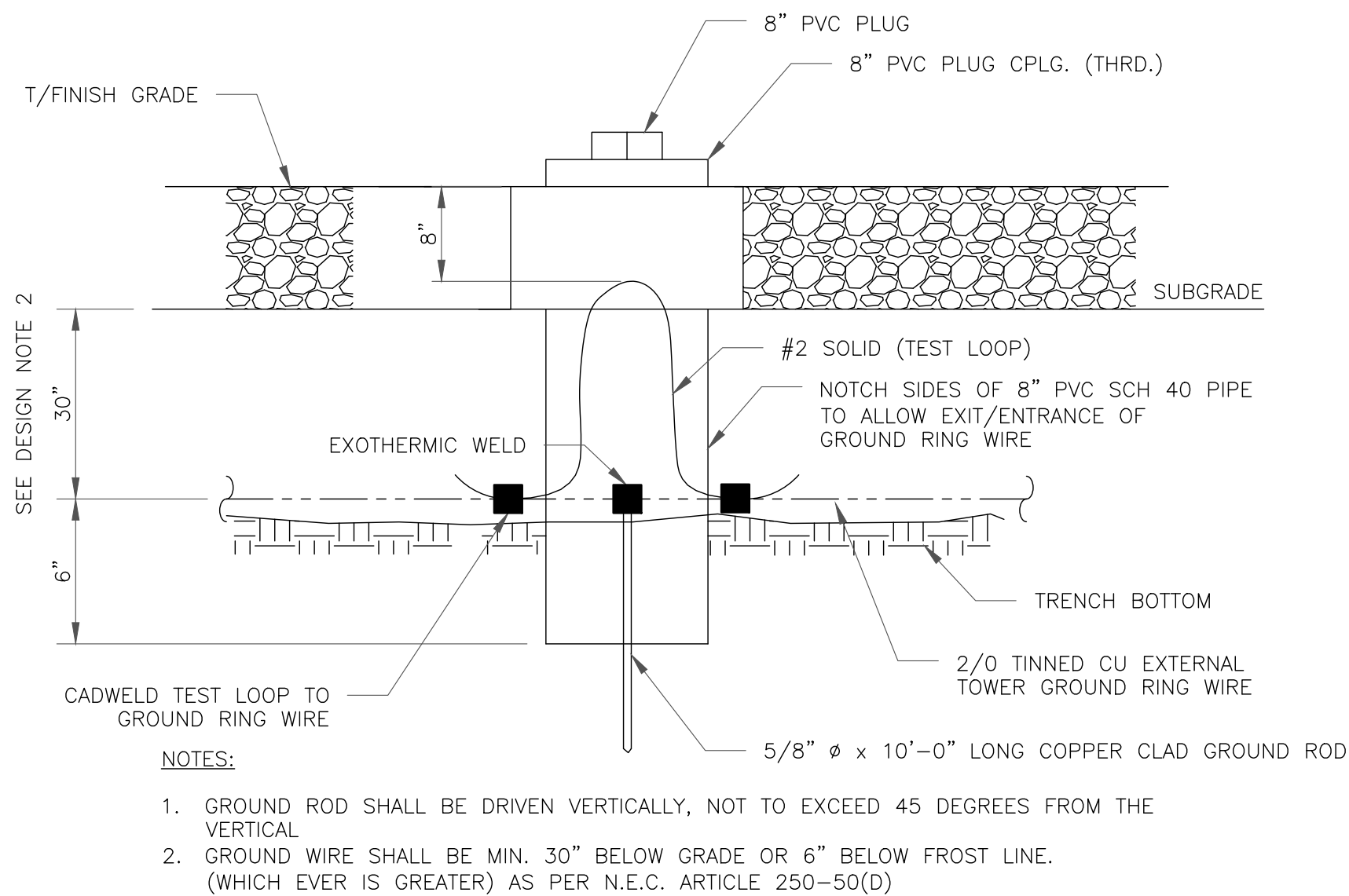
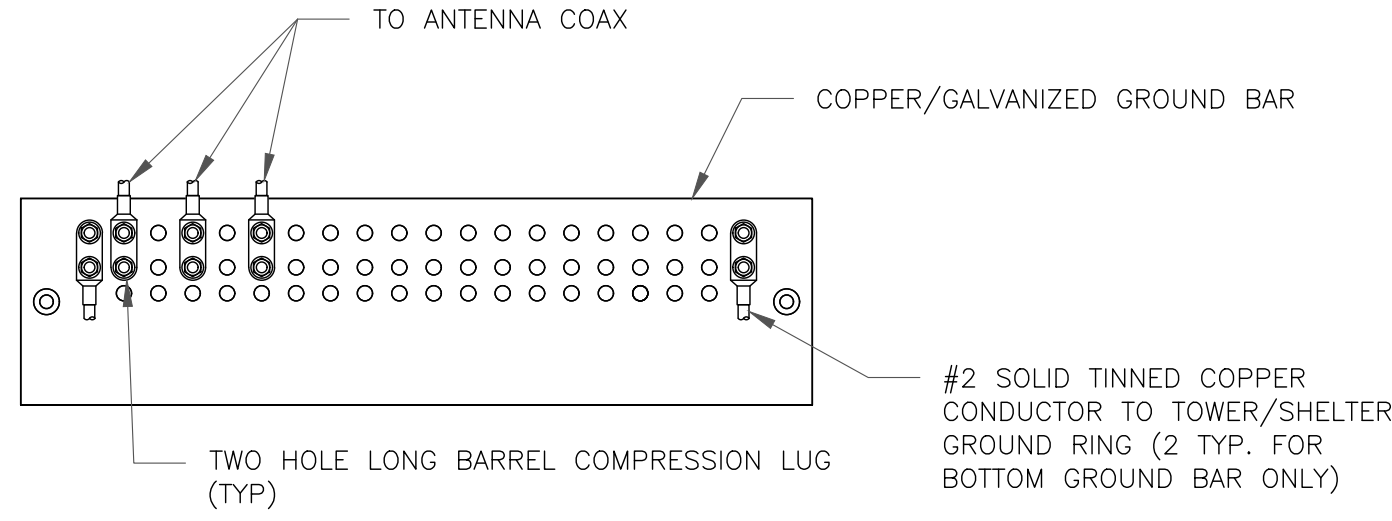
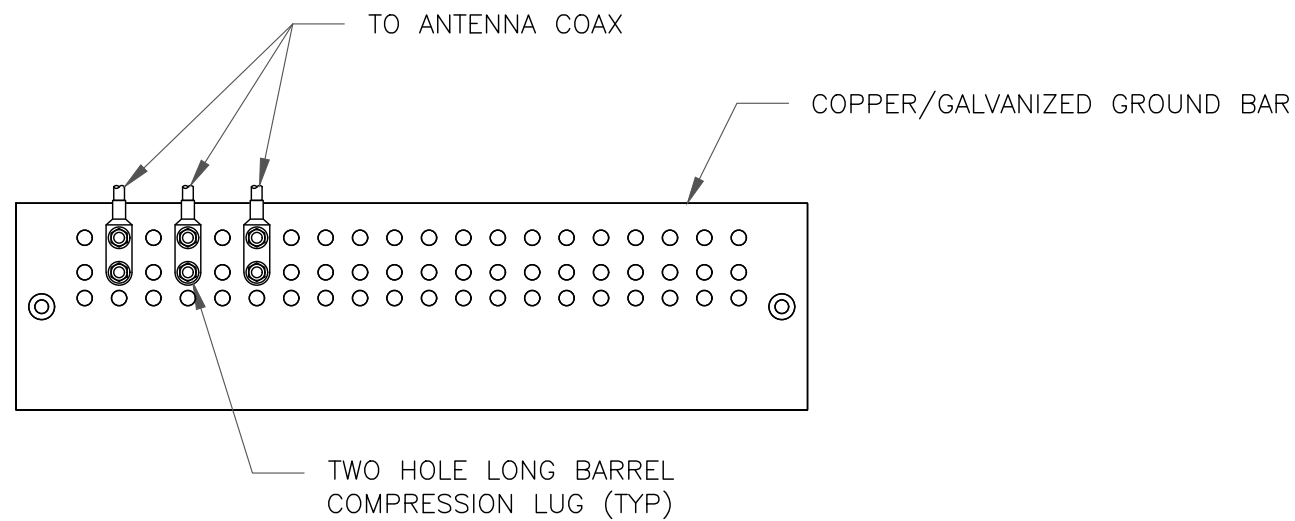
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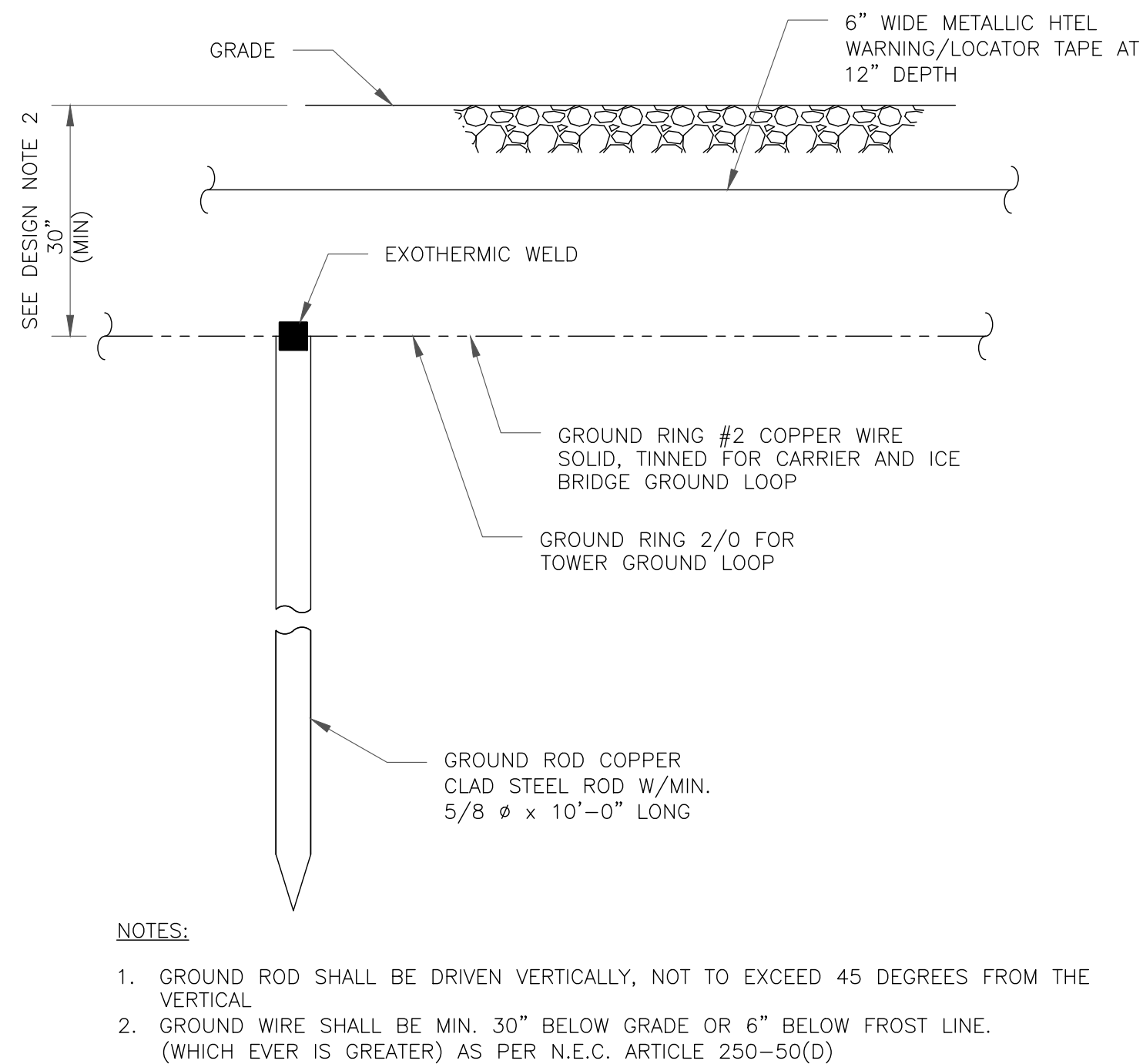
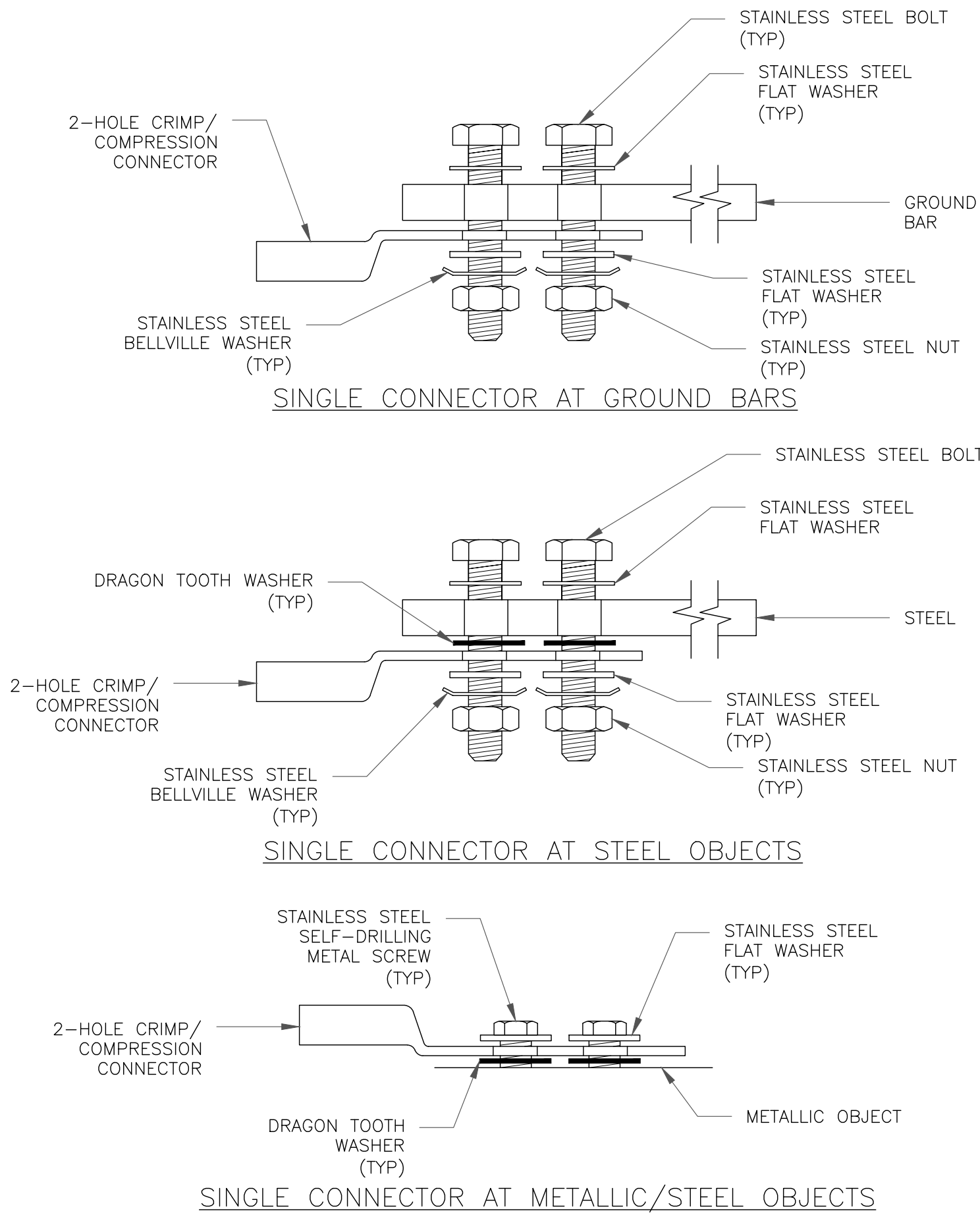
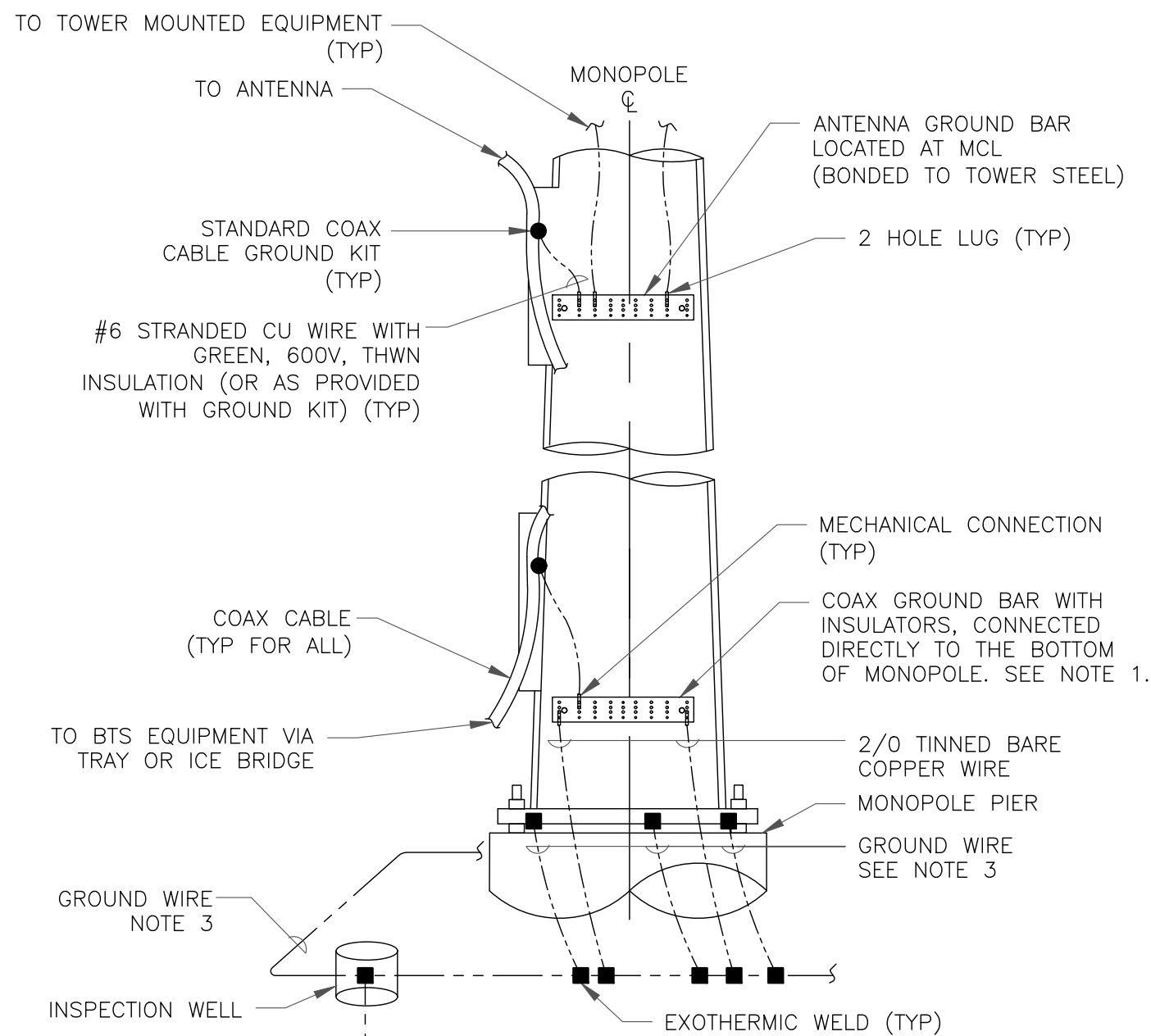
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1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

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

3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

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CASTLE

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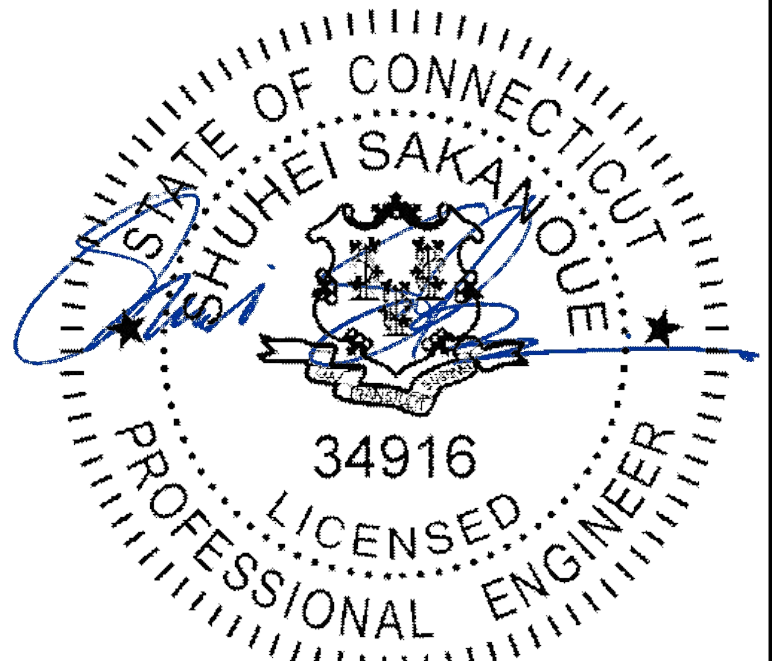
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197 NORTH CHESTNUT HILL
ROAD
KILLINGWORTH, CT 06419

EXISTING 170'-0" SELF
SUPPORT TOWER

ISSUED FOR:

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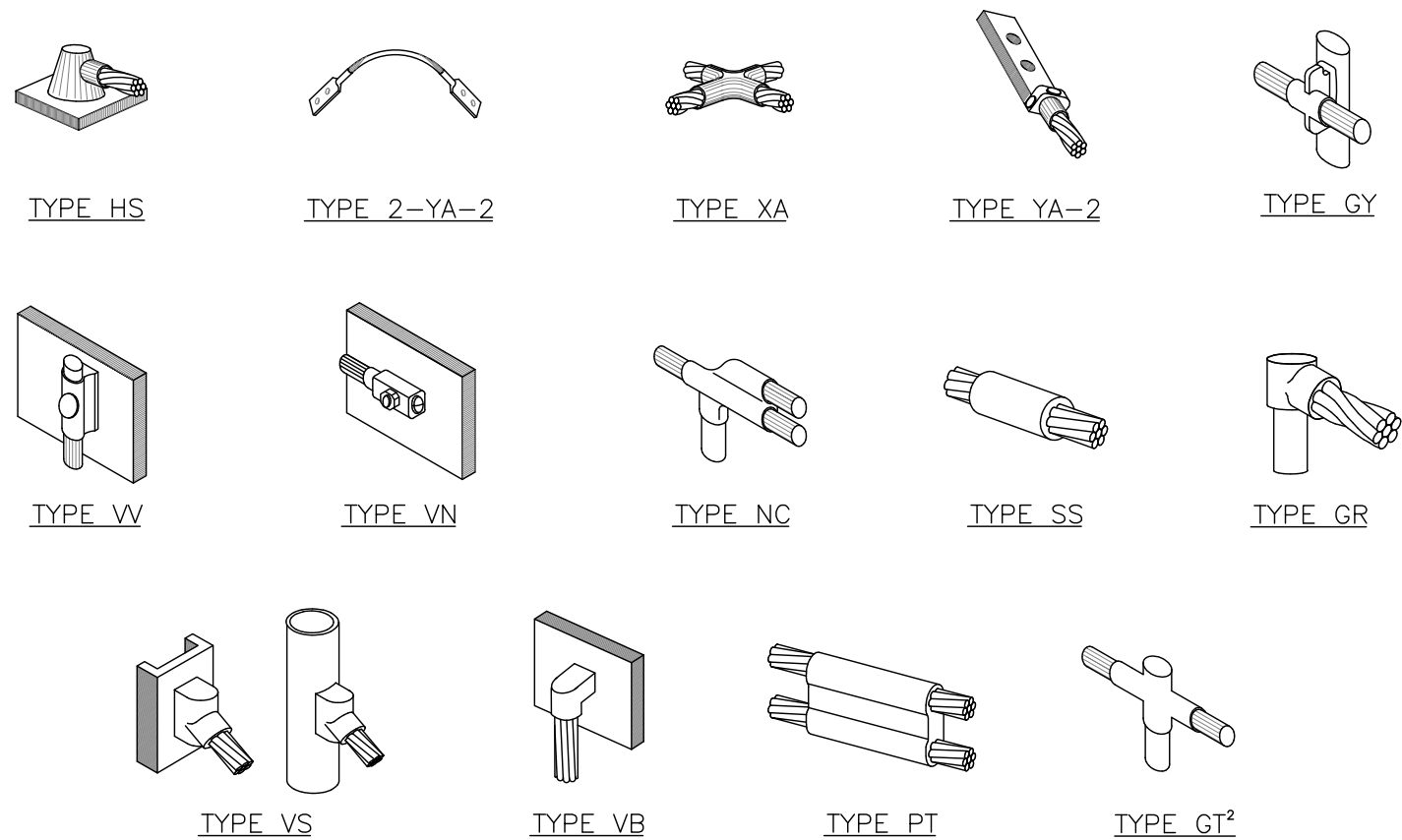
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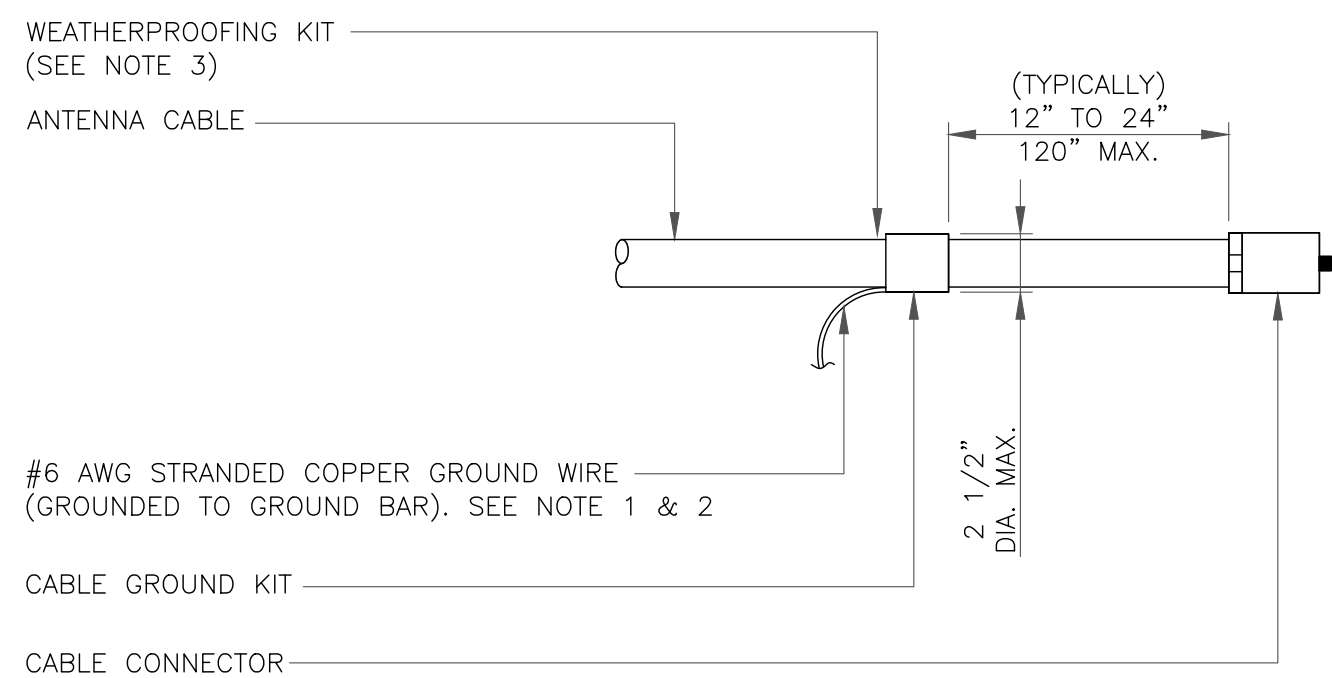
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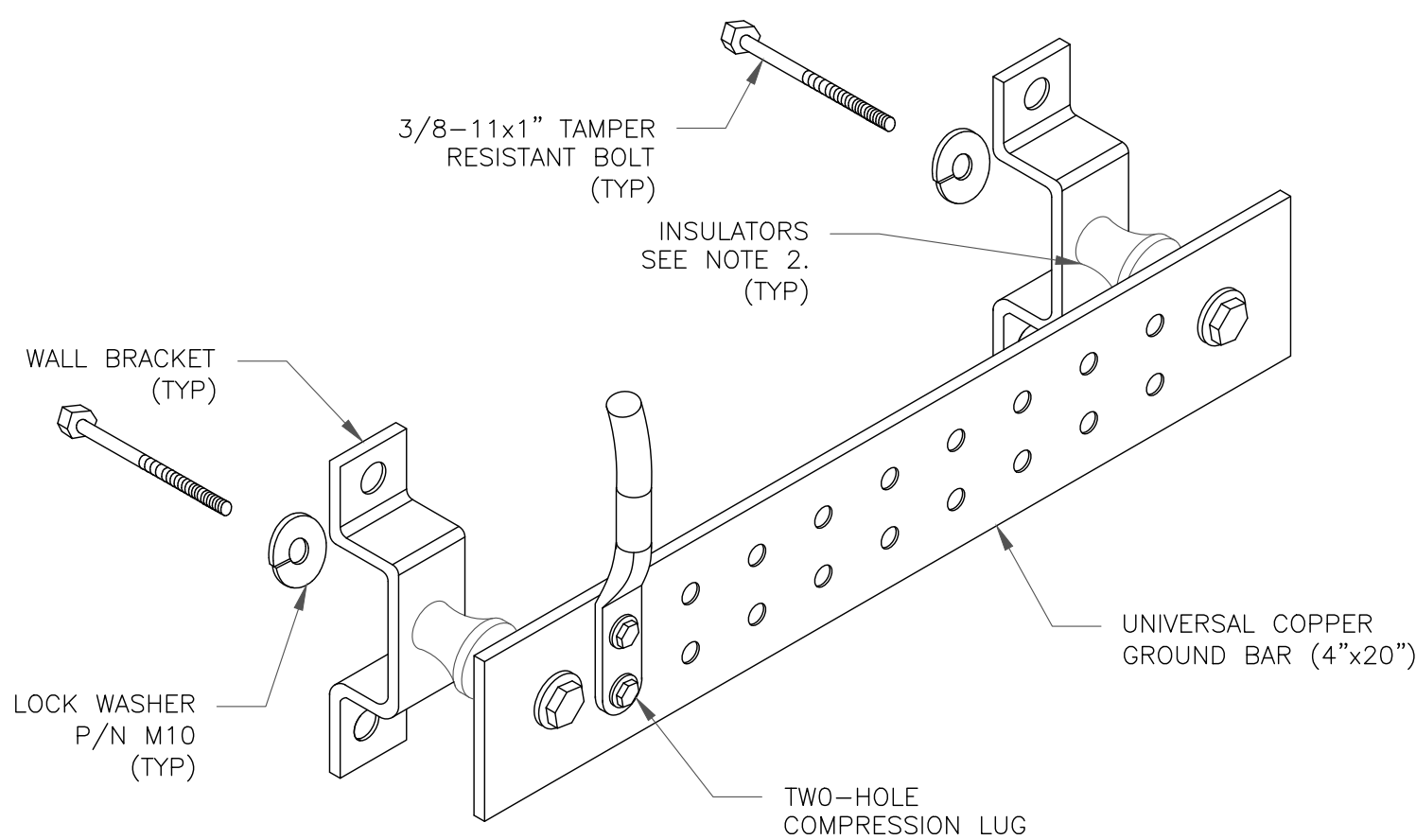
- NOTE:
1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
 2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

1 CADWELD GROUNDING CONNECTIONS SCALE: NOT TO SCALE



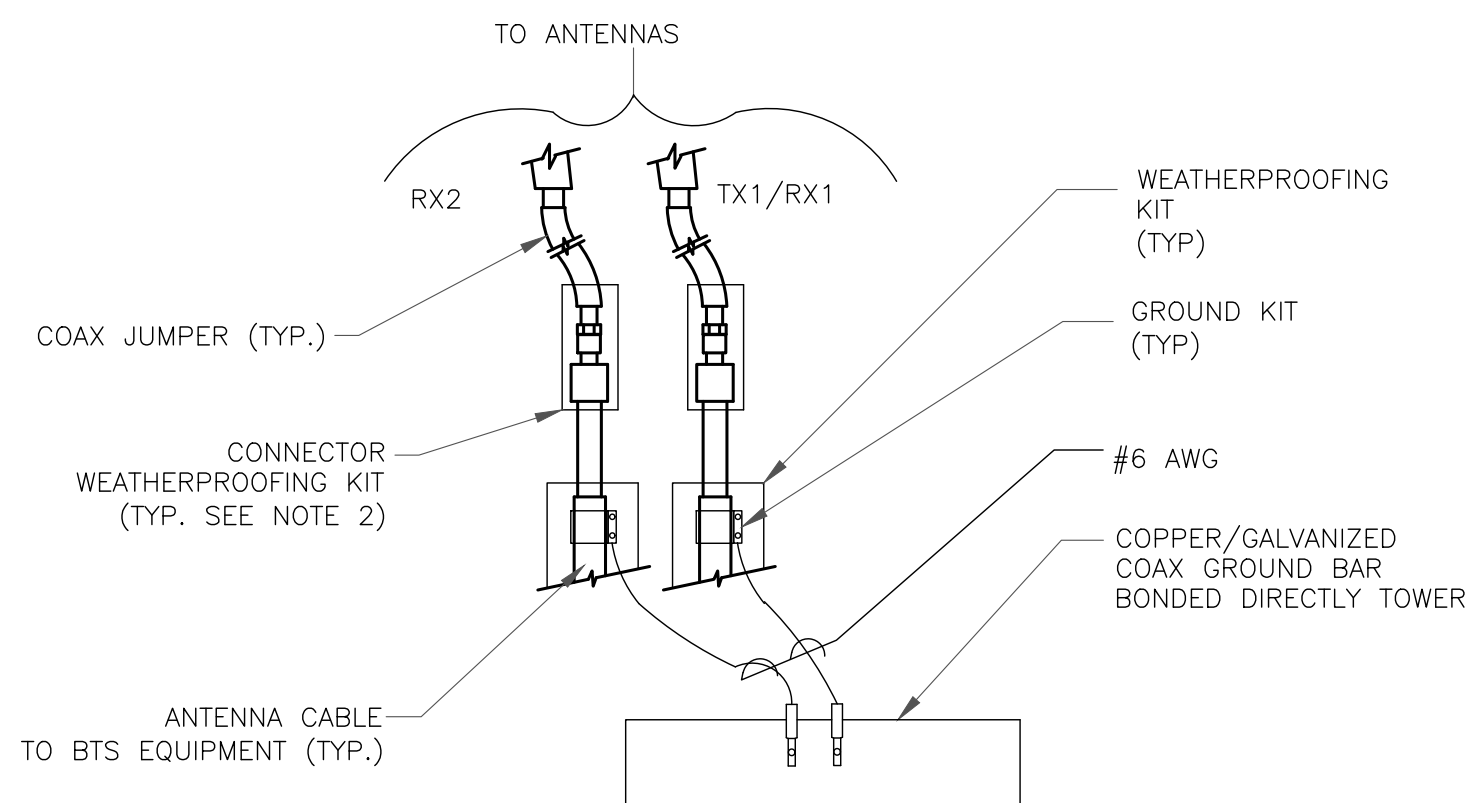
- NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

3 CABLE GROUND KIT CONNECTION SCALE: NOT TO SCALE



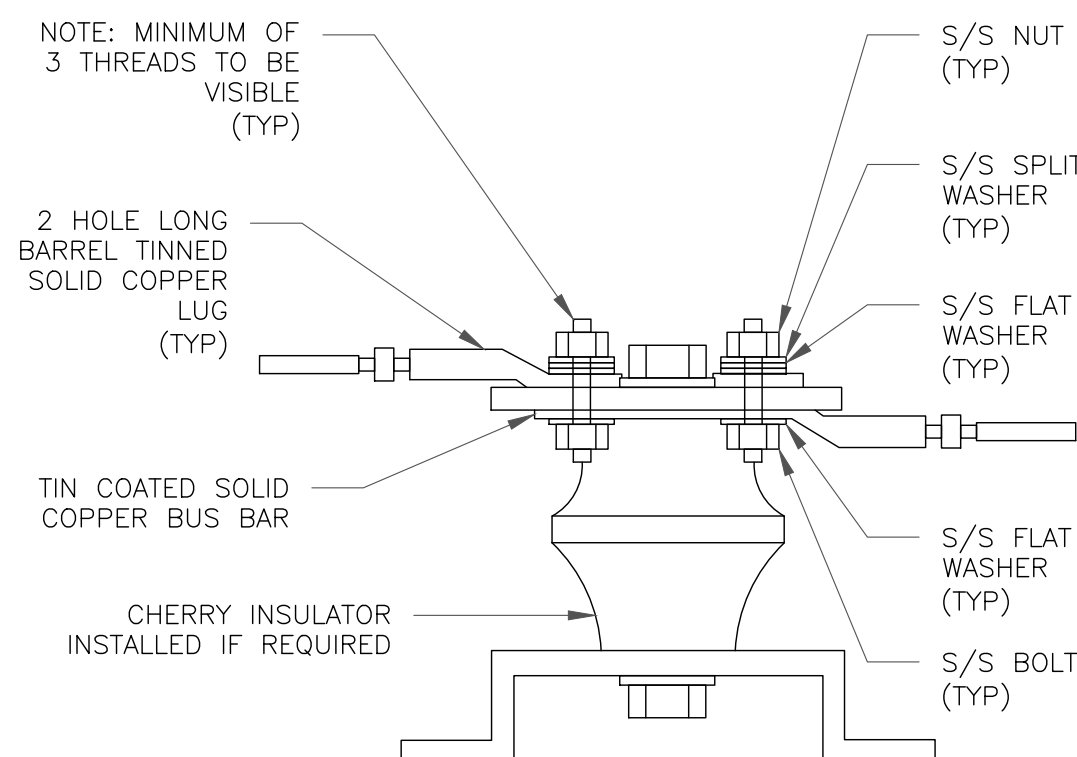
- NOTES:
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
 2. OMIT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

6 GROUND BAR DETAIL SCALE: NOT TO SCALE



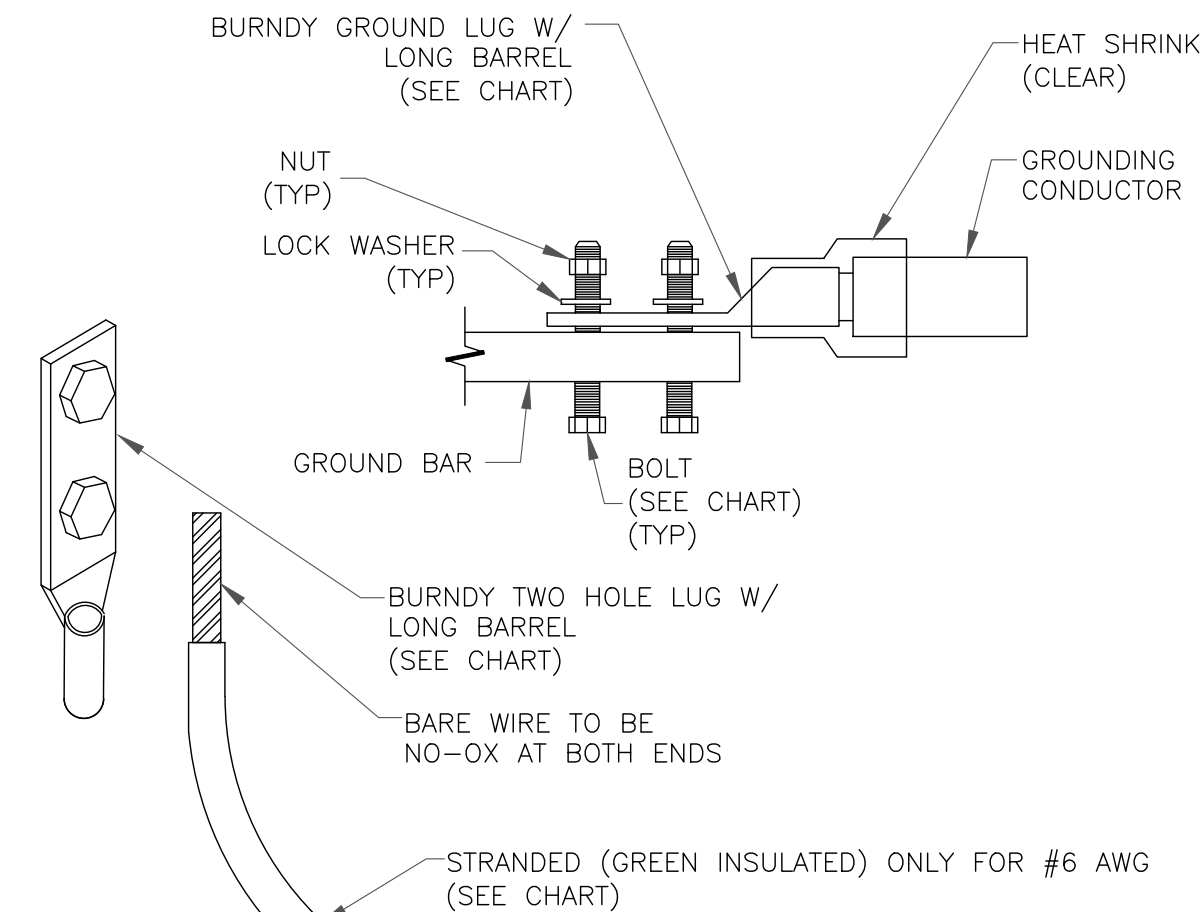
- NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
 2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTION SCALE: NOT TO SCALE



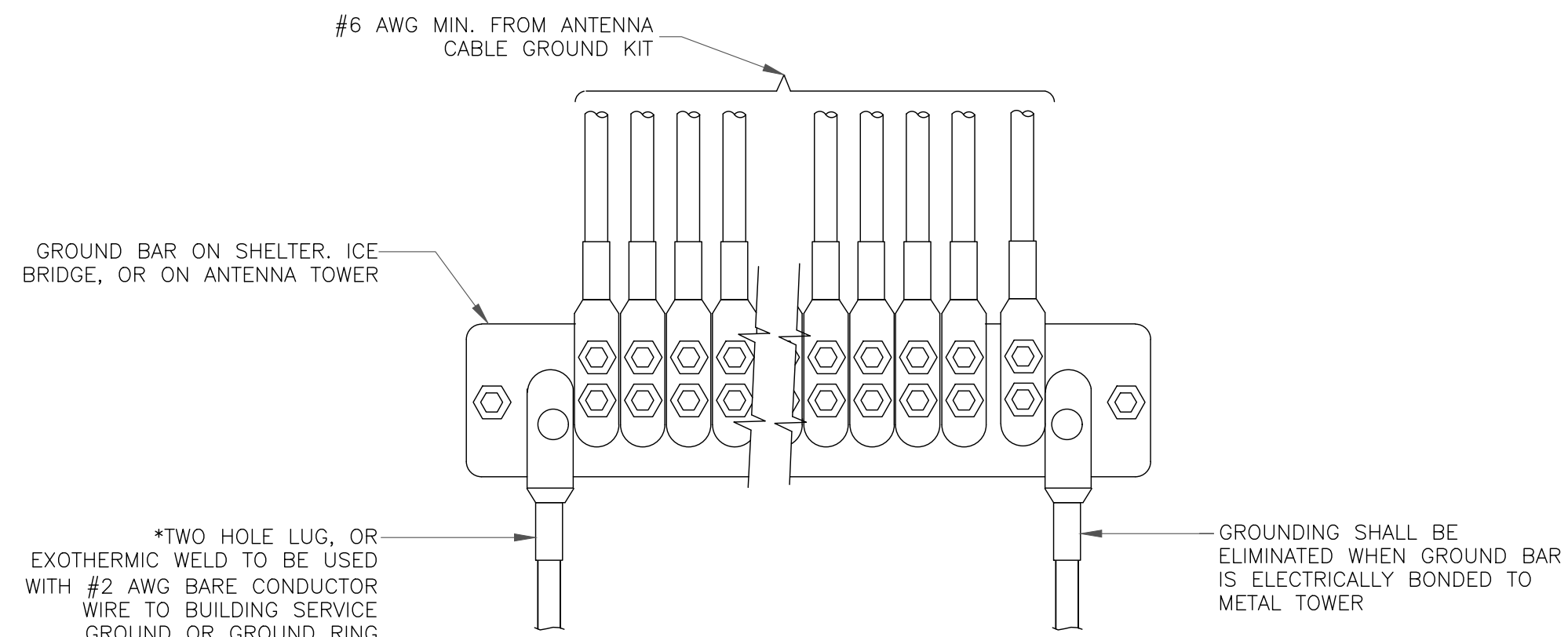
7 LUG DETAIL SCALE: NOT TO SCALE

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

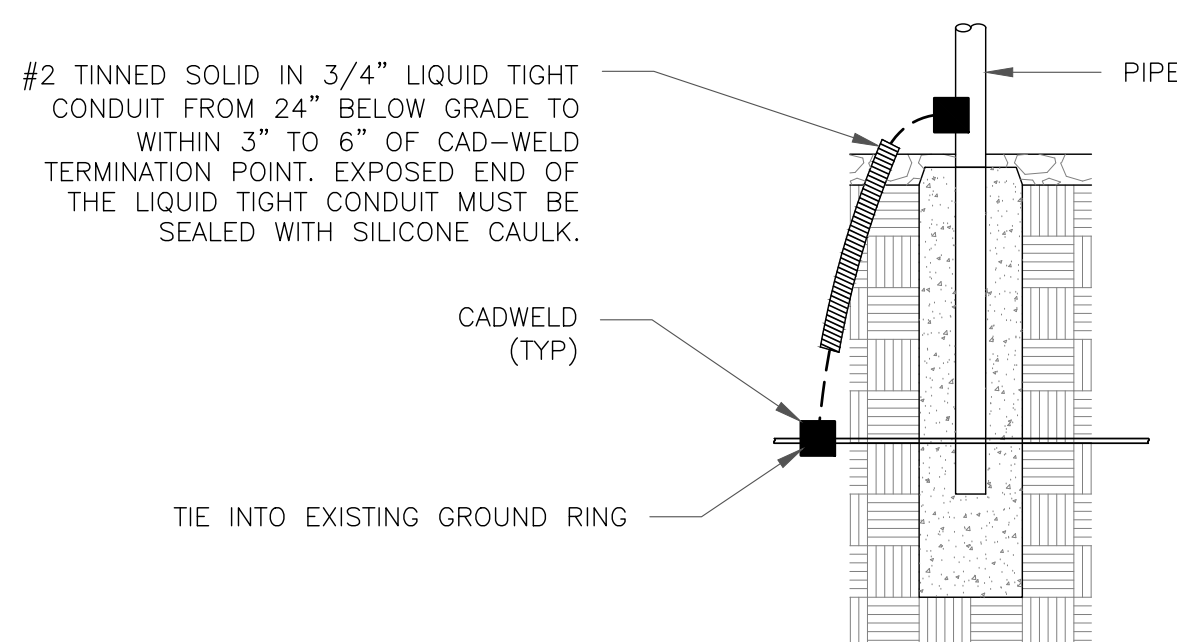


- NOTES:
1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

2 MECHANICAL LUG CONNECTION SCALE: NOT TO SCALE



5 GROUNDWIRE INSTALLATION SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL SCALE: NOT TO SCALE

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Exhibit D

Structural Analysis Report

Date: **May 02, 2021**



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

Subject: **Structural Analysis Report**

Carrier Designation: **Verizon Wireless Co-Locate**
Site Number: 470988
Site Name: Killingworth 2 CT

Crown Castle Designation: **BU Number:** 807134
Site Name: NHV 031B 943108
JDE Job Number: 644619
Work Order Number: 1957241
Order Number: 552653 Rev. 0

Engineering Firm Designation: **B+T Group Project Number:** 150161.001.01

Site Data: **197 North Chestnut Hill Road, Killingworth, Middlesex County, CT**
Latitude 41° 23' 9.93", Longitude -72° 36' 14.39"
170 Foot - Self Support Tower

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

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

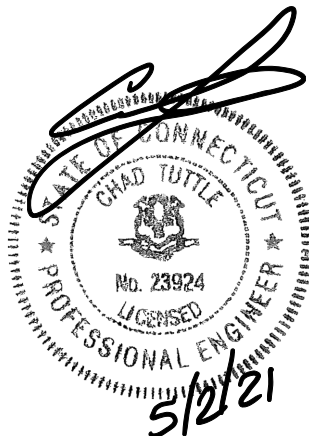
LC7: Proposed Equipment Configuration

Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 130 mph as required by the 2015 International Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: John Landon

Respectfully submitted by: B+T Engineering, Inc.
COA: PEC.0001564; Expires: N/A



Chad E. Tuttle, P.E.

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4) ANALYSIS RESULTS

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5) APPENDIX A

tnxTower Output

6) APPENDIX B

Base Level Drawing

7) APPENDIX C

Additional Calculations

1) INTRODUCTION

This tower is a 170 ft. Self-Support tower designed by Rohn.

This tower was modified by GPD associates in August of 2008, modification includes replacing existing diagonal bolts from 0'-20'.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	130 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
170.0	170.0	6	Antel	LPA-80063/6CF	18	1-5/8
		3	Commscope	CBC78T-DS-43-2X		
		6	Commscope	JAHH-65B-R3B		
		1	Raycap	RVZDC-6627-PF-48		
		3	Samsung Telecomm.	RFV01U-D1A		
		3	Samsung Telecomm.	RFV01U-D2A		
		1	--	Sector Mount [SM 510-3]		
		3	Vzw	Sub6 Antenna - VZS01		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
148.0	148.0	3	Fujitsu	TA08025-B604	1	1-1/2
		3	Fujitsu	TA08025-B605		
		3	JMA Wireless	MX08FRO665-20		
		1	Raycap	RDIDC-9181-PF-48		
		3	Commscope	MTC3975083		
135.0	136.0	2	KMW Comm.	AM-X-CD-16-65-00T-RET	12 2 1	1-1/4 7/16 3/8
		6	Powerwave Tech.	7770.00		
		1	Powerwave Tech.	P65-16-XLH-RR		
	135.0	3	Ericsson	RRUS-11		
		6	Powerwave Tech.	LGP21401		
		6	Powerwave Tech.	LGP21901		
		1	Raycap	DC6-48-60-18-8F		
		1	--	Sector Mount [SM 402-3]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower Manufacturer Drawing	258477	CCI Sites
Tower Modification Drawing	2303423	CCI Sites
Post Modification Inspection	2354059	CCI Sites
Foundation Drawing	301178	CCI Sites
Geotech Report	258466	CCI Sites
Crown CAD Package	Date: 04/19/2021	CCI Sites

3.1) Analysis Method

tnxTower (version 8.0.9.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

3.2) Assumptions

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

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	170 - 160	Leg	ROHN 2.5 STD	2	-7.829	60.052	13.0	Pass
T2	160 - 140	Leg	ROHN 2.5 EH	21	-27.030	61.437	44.0	Pass
T3	140 - 120	Leg	ROHN 3 EH	45	-53.841	99.054	54.4	Pass
T4	120 - 100	Leg	ROHN 4 EH	66	-81.847	167.909	48.7	Pass
T5	100 - 80	Leg	ROHN 5 EH	87	-107.884	211.295	51.1	Pass
T6	80 - 60	Leg	ROHN 6 EHS	102	-136.930	256.266	53.4	Pass
T7	60 - 40	Leg	ROHN 6 EH	117	-165.948	318.900	52.0	Pass
T8	40 - 20	Leg	ROHN 8 EHS	132	-195.059	405.717	48.1	Pass
T9	20 - 0	Leg	ROHN 8 EHS	147	-224.423	405.717	55.3	Pass
T1	170 - 160	Diagonal	L2x2x3/16	9	-2.555	10.352	24.7	Pass
T2	160 - 140	Diagonal	L2 1/2x2 1/2x1/4	28	-4.270	16.198	26.4	Pass
T3	140 - 120	Diagonal	L2 1/2x2 1/2x1/4	49	-5.678	12.425	45.7	Pass
T4	120 - 100	Diagonal	L3x3x1/4	70	-6.764	17.340	39.0	Pass
T5	100 - 80	Diagonal	L3 1/2x3 1/2x1/4	91	-8.197	18.922	43.3	Pass
T6	80 - 60	Diagonal	L4x4x5/16	106	-9.274	29.616	31.3	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T7	60 - 40	Diagonal	L4x4x5/16	121	-9.720	24.783	39.2	Pass
T8	40 - 20	Diagonal	L4x4x5/16	136	-10.877	21.559	50.5	Pass
T9	20 - 0	Diagonal	L4x4x3/8	151	-12.035	22.004	54.7	Pass
T1	170 - 160	Top Girt	L2 1/2x2 1/2x3/16	4	-0.958	6.934	13.8	Pass
T2	160 - 140	Top Girt	L2 1/2x2 1/2x3/16	23	-0.469	6.934	6.8	Pass
							Summary	
						Leg (T9)	55.3	Pass
						Diagonal (T9)	54.7	Pass
						Top Girt (T1)	13.8	Pass
						Bolt Checks	80.9	Pass
						Rating =	80.9	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft.)	% Capacity	Pass / Fail
1,2	Anchor Rods	Base	39.4	Pass
1,2	Concrete Breakout	Base	34.3	Pass
1,2	Anchor Rod Pullout	Base	58.3	Pass
1,2	Base Foundation (Structural)	Base	19.0	Pass
1,2	Base Foundation (Soil Interaction)	Base	43.3	Pass

Structure Rating (max from all components) =	80.9%
---	--------------

Notes:

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

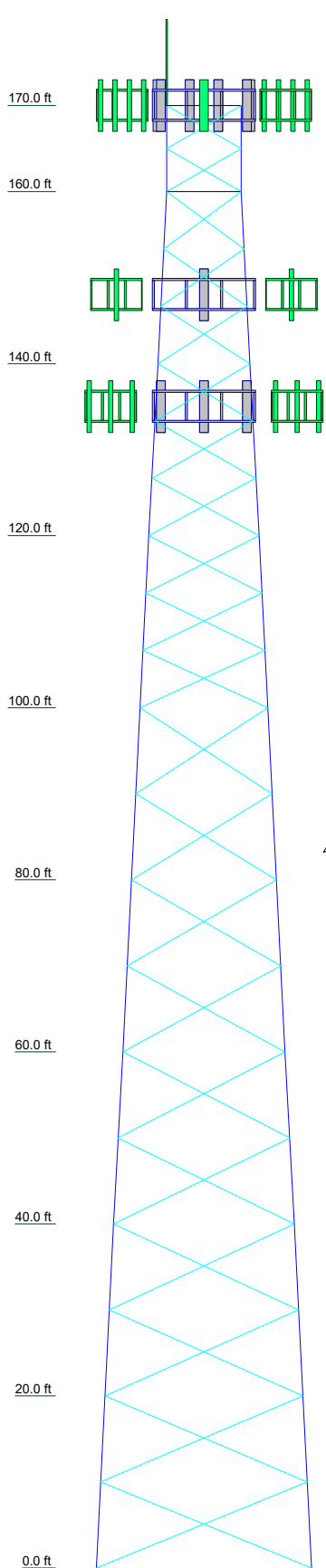
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	
Legs	A	ROHN 2.5 EH	ROHN 3 EH	ROHN 4 EH	ROHN 5 EH	ROHN 6 EHS	ROHN 6 EH	ROHN 8 EHS		
Leg Grade										
Diagonals	L2x2x3/16									
Diagonal Grade										
Top Girts										
Face Width (ft)	8.64583									
# Panels @ (ft)	2 @ 5									
Weight (K)	0.6									



SYMBOL LIST			
MARK	SIZE	MARK	SIZE
A	ROHN 2.5 STD		

MATERIAL STRENGTH					
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

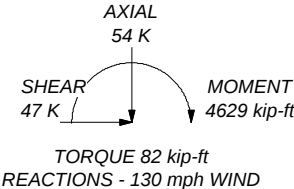
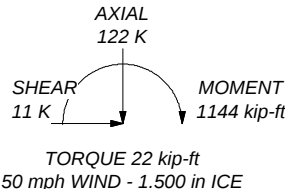
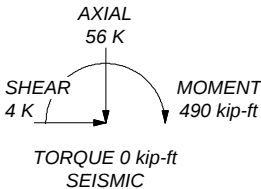
1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 130 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0'
8. TIA-222-H Annex S
9. TOWER RATING: 80.9%

△ ALL REACTIONS
ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 232 K
SHEAR: 29 K

UPLIFT: -188 K
SHEAR: 25 K

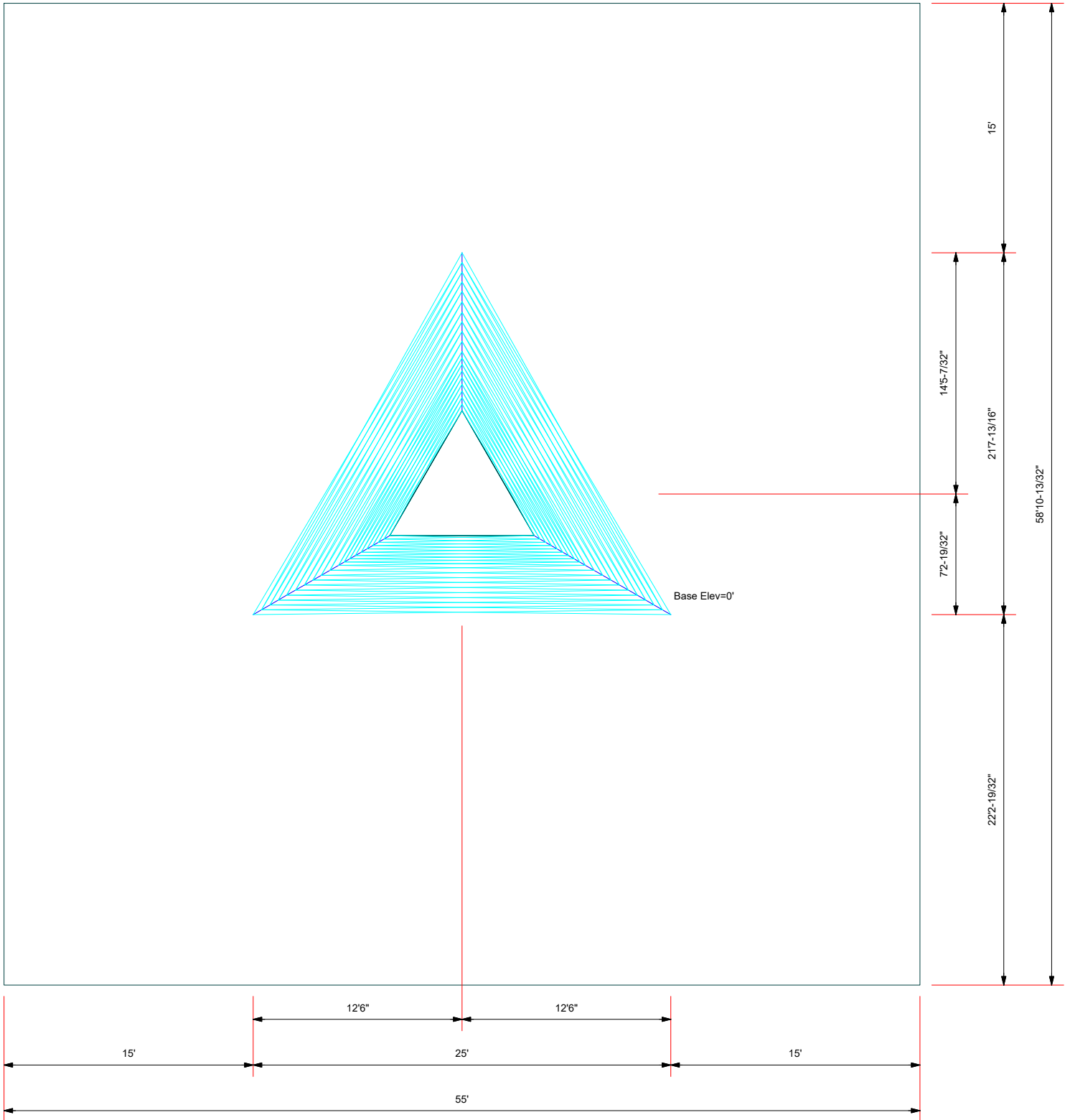




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FAX: (918) 295-0265

Job:	150161.001.01 - NHV 031B 943108, CT (BU# 807134)		
Project:			
Client:	Crown Castle	Drawn by:	Chinmaya
Code:	TIA-222-H	Date:	04/29/21
Path:			
		Scale:	NTS
		Dwg No.	E-1

Plot Plan
Total Area - 0.07 Acres



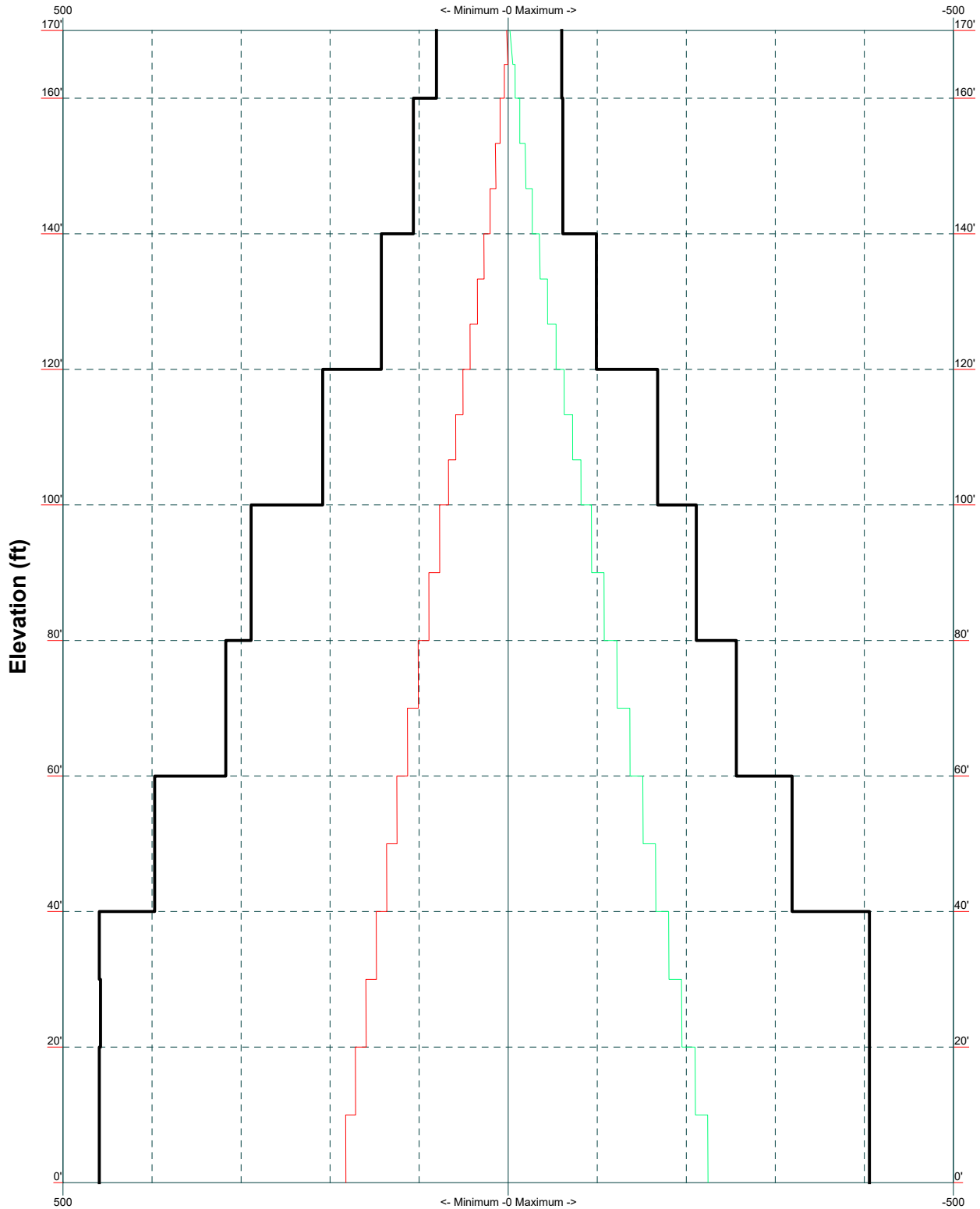
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Job: **150161.001.01 - NHV 031B 943108, CT (BU# 807134)**
Project:
Client: Crown Castle
Code: TIA-222-H
Path:
Drawn by: Chinmaya
Date: 04/29/21
App'd:
Scale: NTS
Dwg No. E-2

TIA-222-H - 130 mph/50 mph 1.500 in Ice Exposure B

Leg Capacity ———

Leg Compression (K)



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Project:		
Client: Crown Castle	Drawn by: Chinmaya	App'd:
Code: TIA-222-H	Date: 04/29/21	Scale: NTS
Path:	Dwg No. E-3	

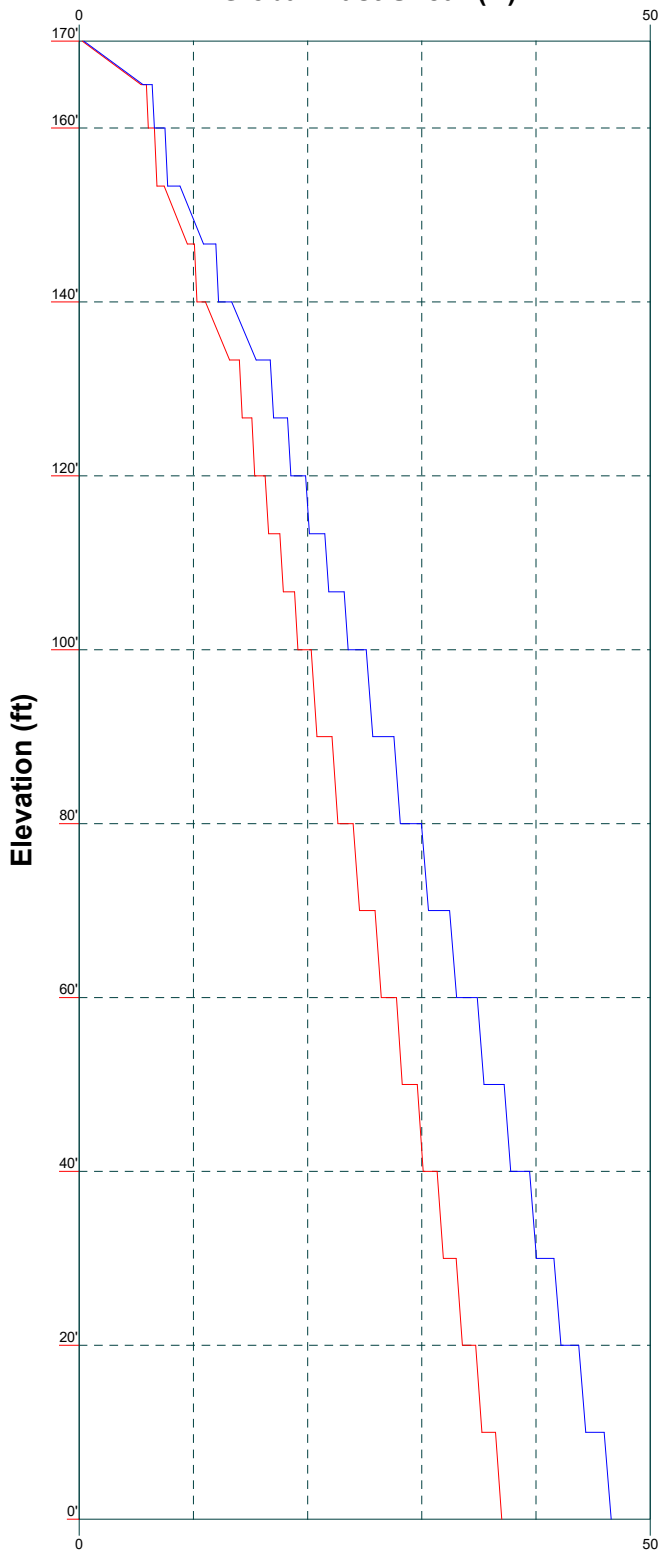
Vx

Vz

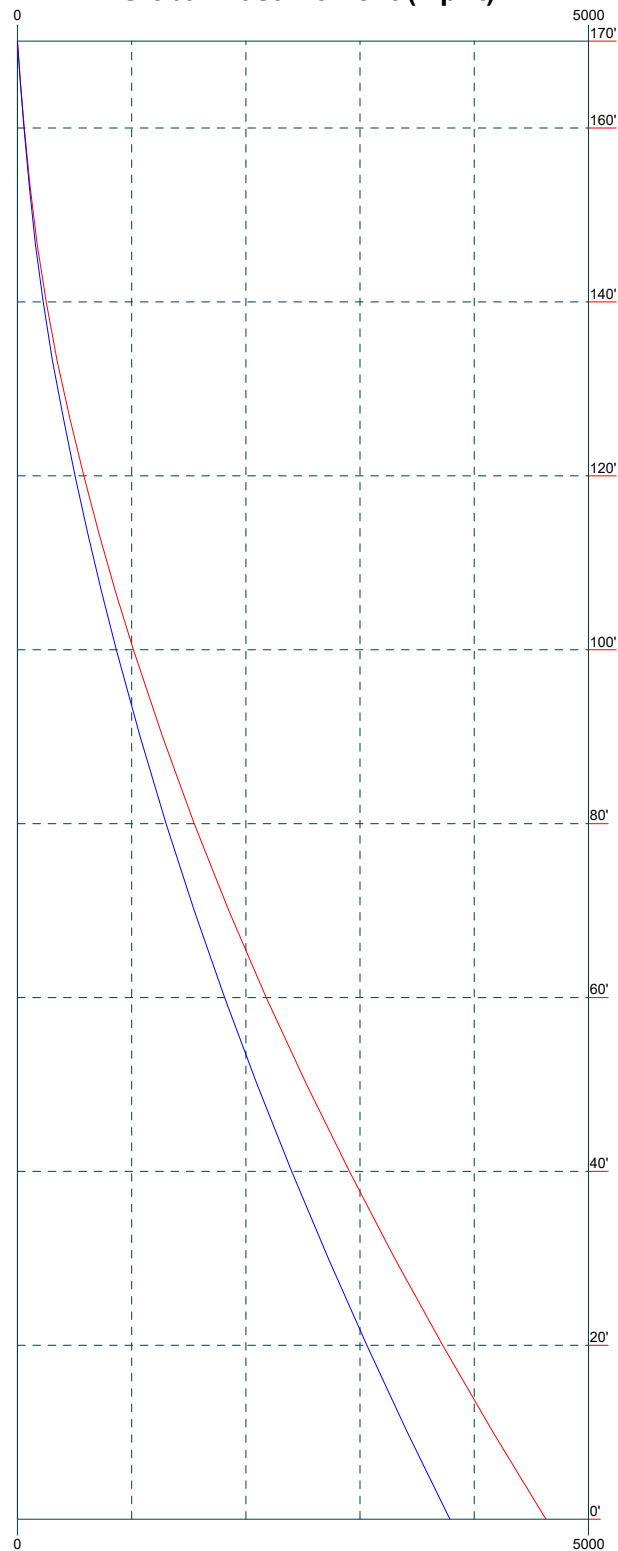
Mx

Mz

Global Mast Shear (K)

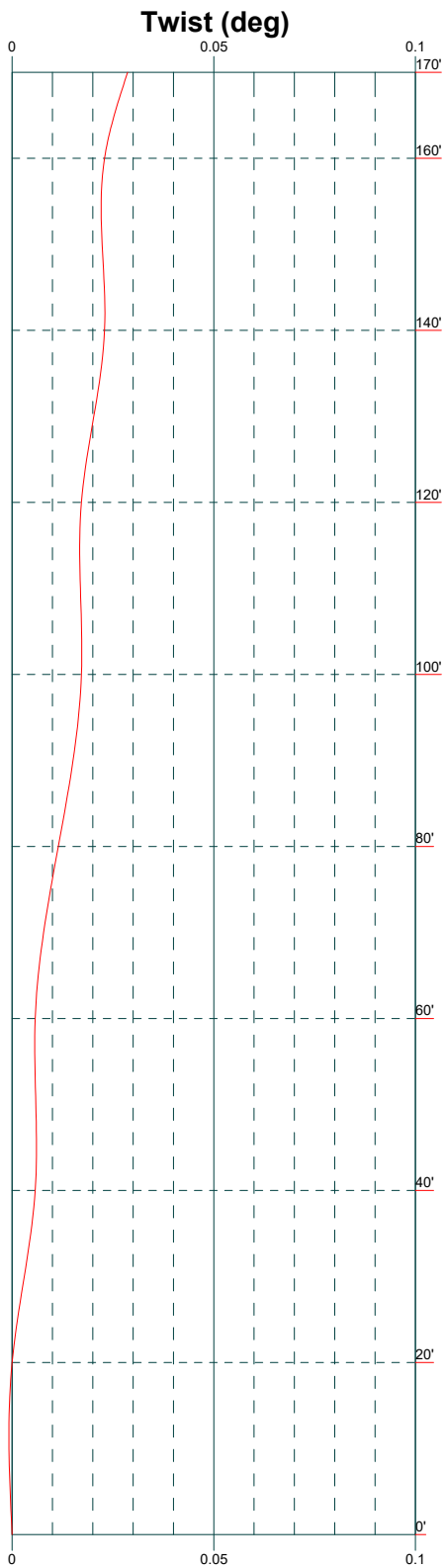
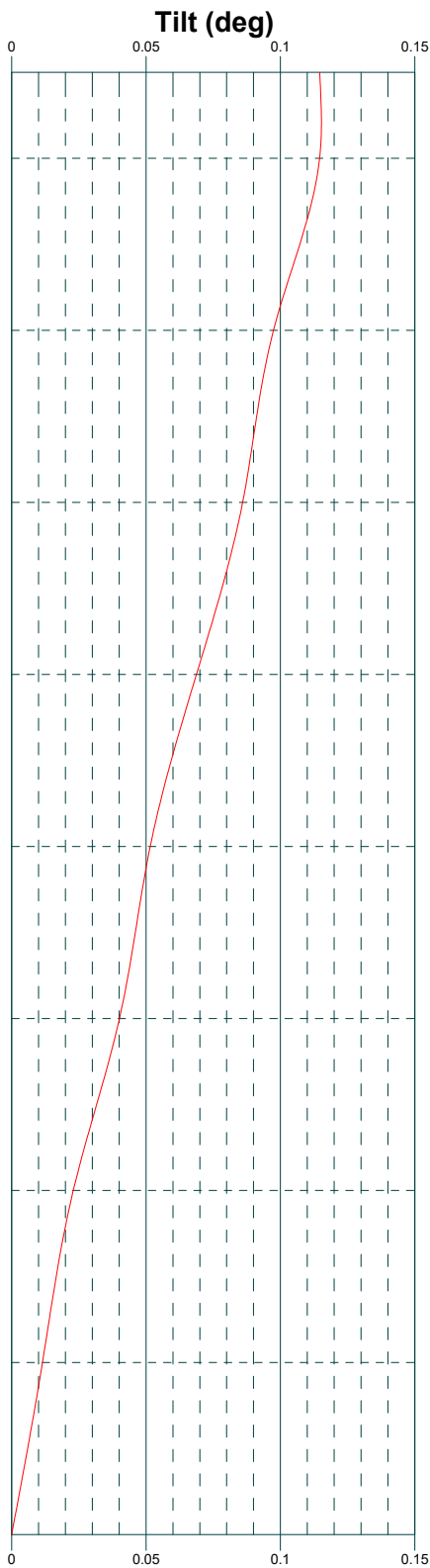
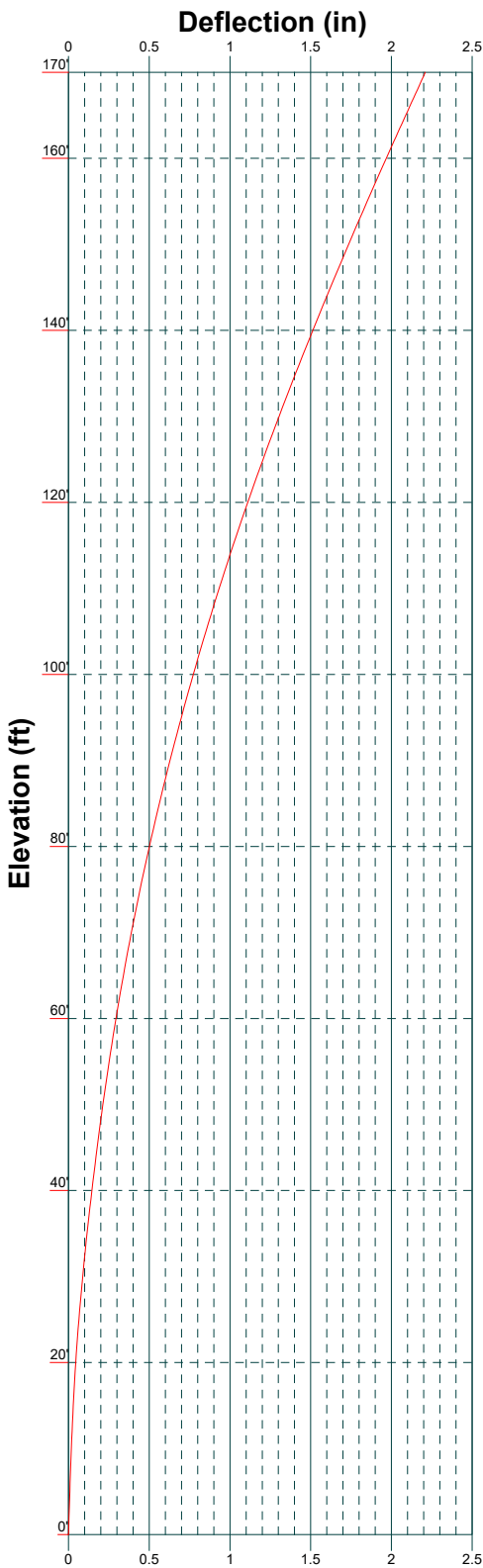


Global Mast Moment (kip-ft)



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Project:		
Client: Crown Castle	Drawn by: Chinmaya	App'd:
Code: TIA-222-H	Date: 04/29/21	Scale: NTS
Path:	Dwg No. E-4	



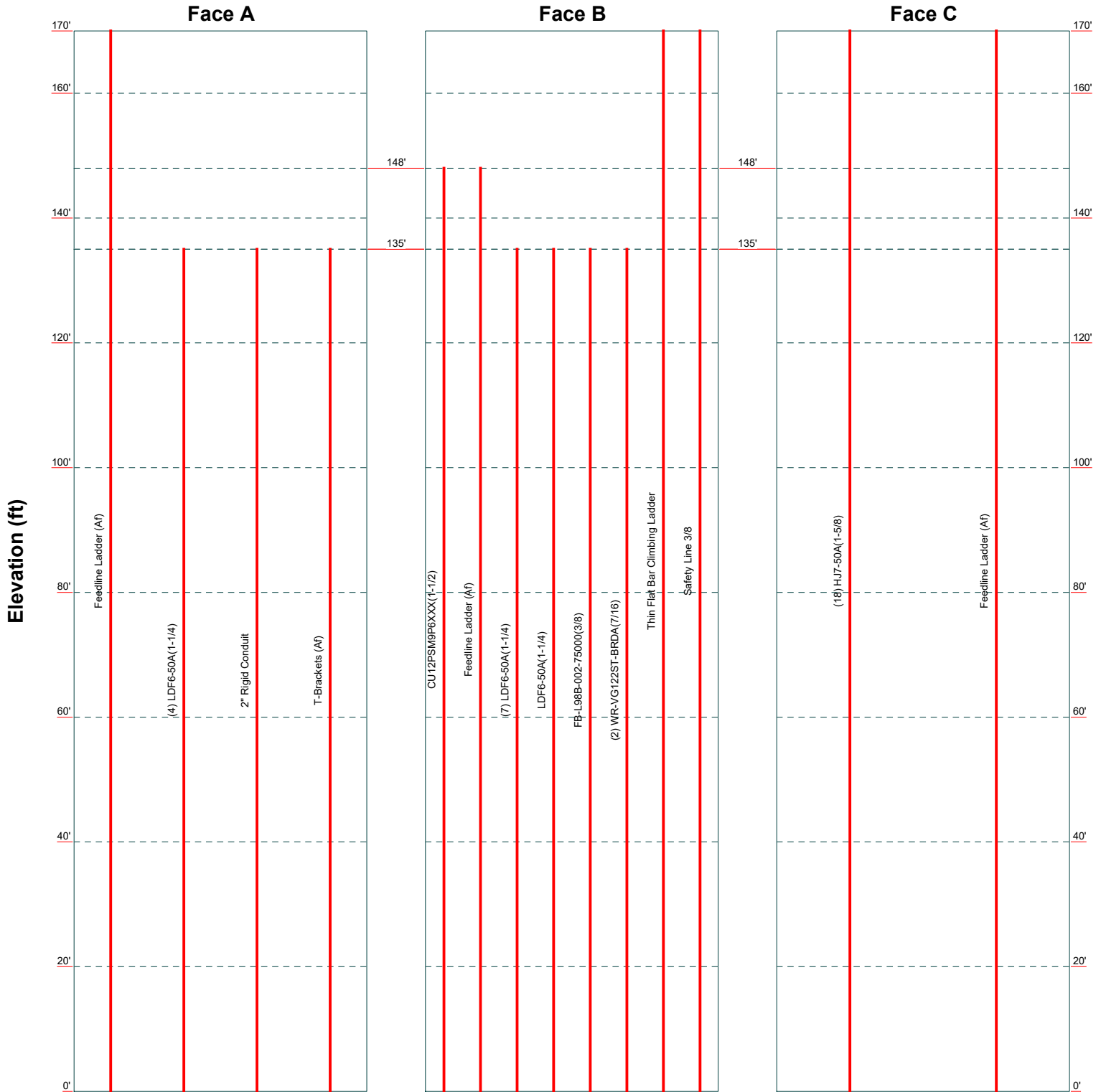


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Project:		
Client: Crown Castle	Drawn by: Chinmaya	App'd:
Code: TIA-222-H	Date: 04/29/21	Scale: NTS
Path:	Dwg No. E-5	

Feed Line Distribution Chart 0' - 170'

Round Flat App In Face App Out Face Truss Leg



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Job: **150161.001.01 - NHV 031B 943108, CT (BU# 807134)**

Project:	Client: Crown Castle	Drawn by: Chinmaya	App'd:
Code: TIA-222-H	Date: 04/29/21	Scale: NTS	
Path:	Dwg No. E-7		

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	Project	Date 19:02:06 04/29/21
	Client Crown Castle	Designed by Chinmaya

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 170' above the ground line.

The base of the tower is set at an elevation of 0' above the ground line.

The face width of the tower is 8'7-3/4" at the top and 25' at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Middlesex County, Connecticut.

Tower base elevation above sea level: 382'.

Basic wind speed of 130 mph.

Risk Category II.

Exposure Category B.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0'.

Nominal ice thickness of 1.500 in.

Ice thickness is considered to increase with height.

Ice density of 56.000 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50.000 °F.

Deflections calculated using a wind speed of 60 mph.

TIA-222-H Annex S.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Tower analysis based on target reliabilities in accordance with Annex S.

Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$, $K_{es}(E_v \text{ and } E_h) = 1.0$.

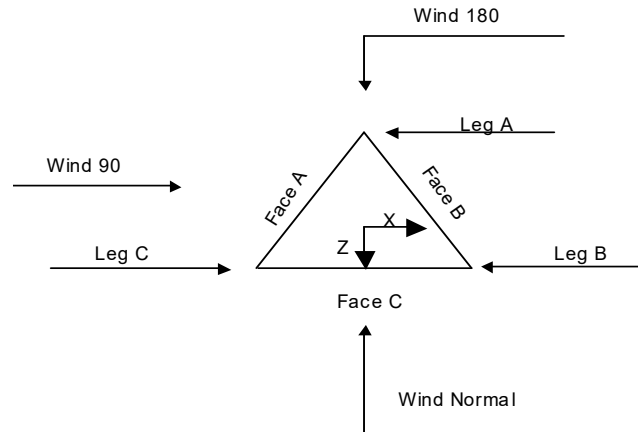
Maximum demand-capacity ratio is: 1.05.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	√ Calculate Redundant Bracing Forces
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	√ Use Clear Spans For Wind Area	√ SR Leg Bolts Resist Compression
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
√ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Include Angle Block Shear Check
Use Special Wind Profile	√ Project Wind Area of Appurt.	Use TIA-222-H Bracing Resist. Exemption
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Use TIA-222-H Tension Splice Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Poles
√ Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Include Shear-Torsion Interaction
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Always Use Sub-Critical Flow
SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Use Top Mounted Sockets
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	Pole Without Linear Attachments
		Pole With Shroud Or No Appurtenances
		Outside and Inside Corner Radii Are
		Known

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	Client Crown Castle	Designed by Chinmaya



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	170'-160'			8'7-3/4"	1	10'
T2	160'-140'			8'7-3/4"	1	20'
T3	140'-120'			10'8-1/4"	1	20'
T4	120'-100'			12'9-1/8"	1	20'
T5	100'-80'			14'9-1/4"	1	20'
T6	80'-60'			16'10-1/4"	1	20'
T7	60'-40'			18'10-1/4"	1	20'
T8	40'-20'			21'	1	20'
T9	20'-0'			23'	1	20'

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	170'-160'	5'	X Brace	No	Yes	0.000	0.000
T2	160'-140'	6'8"	X Brace	No	Yes	0.000	0.000
T3	140'-120'	6'8"	X Brace	No	No	0.000	0.000
T4	120'-100'	6'8"	X Brace	No	No	0.000	0.000

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	Project	Date
	Client	Designed by
	Crown Castle	Chinmaya

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T5	100'-80'	10'	X Brace	No	No	0.000	0.000
T6	80'-60'	10'	X Brace	No	No	0.000	0.000
T7	60'-40'	10'	X Brace	No	No	0.000	0.000
T8	40'-20'	10'	X Brace	No	No	0.000	0.000
T9	20'-0'	10'	X Brace	No	No	0.000	0.000

Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
ft						
T1 170'-160'	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T2 160'-140'	Pipe	ROHN 2.5 EH	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T3 140'-120'	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T4 120'-100'	Pipe	ROHN 4 EH	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A572-50 (50 ksi)
T5 100'-80'	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T6 80'-60'	Pipe	ROHN 6 EHS	A572-50 (50 ksi)	Equal Angle	L4x4x5/16	A572-50 (50 ksi)
T7 60'-40'	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Equal Angle	L4x4x5/16	A572-50 (50 ksi)
T8 40'-20'	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Equal Angle	L4x4x5/16	A572-50 (50 ksi)
T9 20'-0'	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Equal Angle	L4x4x3/8	A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
ft						
T1 170'-160'	Single Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T2 160'-140'	Single Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft ²	in					in	in	in

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	Project	Date
	Client	19:02:06 04/29/21
	Crown Castle	Designed by
		Chinmaya

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft ²	in							
T1 170'-160'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T2 160'-140'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T3 140'-120'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T4 120'-100'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T5 100'-80'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T6 80'-60'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T7 60'-40'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T8 40'-20'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T9 20'-0'	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors ¹						
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
T1 170'-160'	Yes	No	1	1	1	1	1	1	1	1
T2 160'-140'	Yes	No	1	1	1	1	1	1	1	1
T3 140'-120'	Yes	No	1	1	1	1	1	1	1	1
T4 120'-100'	Yes	No	1	1	1	1	1	1	1	1
T5 100'-80'	Yes	No	1	1	1	1	1	1	1	1
T6 80'-60'	Yes	No	1	1	1	1	1	1	1	1
T7 60'-40'	Yes	No	1	1	1	1	1	1	1	1
T8 40'-20'	Yes	No	1	1	1	1	1	1	1	1
T9 20'-0'	Yes	No	1	1	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

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	Project	Date 19:02:06 04/29/21
	Client Crown Castle	Designed by Chinmaya

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T9 20'-0"	Flange	1.000 A354-BC	0	0.750 A490N	1	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
HJ7-50A(1-5/8)	C	No	No	Ar (CaAa)	170' - 0'	0.000	-0.4	18	15	0.850 0.750	1.980		0.001
Feedline Ladder (Af) *	C	No	No	Af (CaAa)	170' - 0'	0.000	-0.4	1	1	3.000	3.000		0.008
CU12PSM9P6 XXX(1-1/2)	B	No	No	Ar (CaAa)	148' - 0'	0.000	0.475	1	1	0.850 0.750	1.600		0.002
Feedline Ladder (Af) *	B	No	No	Af (CaAa)	148' - 0'	0.000	0.475	1	1	3.000	3.000		0.008
Feedline Ladder (Af) *	A	No	No	Af (CaAa)	170' - 0'	0.000	0.38	1	1	3.000	3.000		0.008
LDF6-50A(1-1/4)	B	No	No	Ar (CaAa)	135' - 0'	-2.500	-0.47	7	4	0.500	1.550		0.001
LDF6-50A(1-1/4)	A	No	No	Ar (CaAa)	135' - 0'	-2.000	0.465	4	3	0.500	1.550		0.001
LDF6-50A(1-1/4)	B	No	No	Ar (CaAa)	135' - 0'	-2.500	-0.45	1	1	0.500	1.550		0.001
FB-L98B-002-75000(3/8)	B	No	No	Ar (CaAa)	135' - 0'	0.000	0	1	1	0.394	0.394		0.000
WR-VG122S T-BRDA(7/16)	B	No	No	Ar (CaAa)	135' - 0'	0.000	0	2	2	0.460	0.460		0.000
2" Rigid Conduit	A	No	No	Ar (CaAa)	135' - 0'	-6.000	0.463	1	1	2.000	2.000		0.003
T-Brackets (Af) *	A	No	No	Af (CaAa)	135' - 0'	-2.000	0.48	1	1	1.000	1.000		0.008
Thin Flat Bar Climbing Ladder	B	No	No	Af (CaAa)	170' - 0'	-2.500	0.48	1	1	2.000	2.000		0.004
Safety Line 3/8 *	B	No	No	Ar (CaAa)	170' - 0'	0.200	0.48	1	1	0.375	0.375		0.000

Feed Line/Linear Appurtenances - Entered As Area

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Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight klf
*								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	170'-160'	A	0.000	0.000	5.000	0.000	0.084
		B	0.000	0.000	3.708	0.000	0.042
		C	0.000	0.000	40.640	0.000	0.271
T2	160'-140'	A	0.000	0.000	10.000	0.000	0.168
		B	0.000	0.000	12.697	0.000	0.170
		C	0.000	0.000	81.280	0.000	0.542
T3	140'-120'	A	0.000	0.000	24.800	0.000	0.372
		B	0.000	0.000	41.187	0.000	0.377
		C	0.000	0.000	81.280	0.000	0.542
T4	120'-100'	A	0.000	0.000	29.733	0.000	0.440
		B	0.000	0.000	48.044	0.000	0.402
		C	0.000	0.000	81.280	0.000	0.542
T5	100'-80'	A	0.000	0.000	29.733	0.000	0.440
		B	0.000	0.000	48.044	0.000	0.402
		C	0.000	0.000	81.280	0.000	0.542
T6	80'-60'	A	0.000	0.000	29.733	0.000	0.440
		B	0.000	0.000	48.044	0.000	0.402
		C	0.000	0.000	81.280	0.000	0.542
T7	60'-40'	A	0.000	0.000	29.733	0.000	0.440
		B	0.000	0.000	48.044	0.000	0.402
		C	0.000	0.000	81.280	0.000	0.542
T8	40'-20'	A	0.000	0.000	29.733	0.000	0.440
		B	0.000	0.000	48.044	0.000	0.402
		C	0.000	0.000	81.280	0.000	0.542
T9	20'-0'	A	0.000	0.000	29.733	0.000	0.440
		B	0.000	0.000	48.044	0.000	0.402
		C	0.000	0.000	81.280	0.000	0.542

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	170'-160'	A	1.498	0.000	0.000	7.995	0.000	0.187
		B		0.000	0.000	9.699	0.000	0.156
		C		0.000	0.000	64.565	0.000	1.106
T2	160'-140'	A	1.483	0.000	0.000	15.934	0.000	0.371
		B		0.000	0.000	29.311	0.000	0.521
		C		0.000	0.000	128.992	0.000	2.199
T3	140'-120'	A	1.462	0.000	0.000	50.326	0.000	0.948
		B		0.000	0.000	89.349	0.000	1.376
		C		0.000	0.000	128.786	0.000	2.179
T4	120'-100'	A	1.438	0.000	0.000	61.358	0.000	1.126
		B		0.000	0.000	103.543	0.000	1.533

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Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T5	100'-80'	C	1.410	0.000	0.000	128.549	0.000	2.156
		A		0.000	0.000	60.815	0.000	1.109
		B		0.000	0.000	102.460	0.000	1.504
T6	80'-60'	C	1.375	0.000	0.000	128.270	0.000	2.129
		A		0.000	0.000	60.150	0.000	1.088
		B		0.000	0.000	101.135	0.000	1.469
T7	60'-40'	C	1.329	0.000	0.000	127.928	0.000	2.096
		A		0.000	0.000	59.286	0.000	1.061
		B		0.000	0.000	99.412	0.000	1.424
T8	40'-20'	C	1.263	0.000	0.000	127.485	0.000	2.054
		A		0.000	0.000	58.029	0.000	1.023
		B		0.000	0.000	96.905	0.000	1.360
T9	20'-0'	C	1.132	0.000	0.000	126.839	0.000	1.992
		A		0.000	0.000	55.532	0.000	0.949
		B		0.000	0.000	91.931	0.000	1.238
		C		0.000	0.000	125.561	0.000	1.871

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
T1	170'-160'	17.737	3.293	18.895	4.130
T2	160'-140'	20.668	4.568	22.582	5.844
T3	140'-120'	22.902	-7.656	25.024	-7.515
T4	120'-100'	23.072	-11.221	26.102	-11.812
T5	100'-80'	26.346	-12.813	29.859	-13.550
T6	80'-60'	27.029	-13.020	31.360	-14.129
T7	60'-40'	28.782	-13.828	33.751	-15.159
T8	40'-20'	30.221	-14.428	35.207	-15.640
T9	20'-0'	31.731	-15.128	37.112	-16.352

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	2	HJ7-50A(1-5/8)	160.00 - 170.00	0.6000	0.6000
T1	4	Feedline Ladder (Af)	160.00 - 170.00	0.6000	0.6000
T1	10	Feedline Ladder (Af)	160.00 - 170.00	0.6000	0.6000
T1	20	Thin Flat Bar Climbing Ladder	160.00 - 170.00	0.6000	0.6000
T1	21	Safety Line 3/8	160.00 - 170.00	0.6000	0.6000
T2	2	HJ7-50A(1-5/8)	140.00 - 160.00	0.6000	0.6000
T2	4	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T2	6	CU12PSM9P6XXX(1-1/2)	140.00 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _o No Ice	K _o Ice
			148.00		
T2	7	Feedline Ladder (Af)	140.00 -	0.6000	0.6000
			148.00		
T2	10	Feedline Ladder (Af)	140.00 -	0.6000	0.6000
			160.00		
T2	20	Thin Flat Bar Climbing Ladder	140.00 -	0.6000	0.6000
			160.00		
T2	21	Safety Line 3/8	140.00 -	0.6000	0.6000
			160.00		
T3	2	HJ7-50A(1-5/8)	120.00 -	0.6000	0.6000
			140.00		
T3	4	Feedline Ladder (Af)	120.00 -	0.6000	0.6000
			140.00		
T3	6	CU12PSM9P6XXX(1-1/2)	120.00 -	0.6000	0.6000
			140.00		
T3	7	Feedline Ladder (Af)	120.00 -	0.6000	0.6000
			140.00		
T3	10	Feedline Ladder (Af)	120.00 -	0.6000	0.6000
			140.00		
T3	12	LDF6-50A(1-1/4)	120.00 -	0.6000	0.6000
			135.00		
T3	13	LDF6-50A(1-1/4)	120.00 -	0.6000	0.6000
			135.00		
T3	14	LDF6-50A(1-1/4)	120.00 -	0.6000	0.6000
			135.00		
T3	15	FB-L98B-002-75000(3/8)	120.00 -	0.6000	0.6000
			135.00		
T3	16	WR-VG122ST-BRDA(7/16)	120.00 -	0.6000	0.6000
			135.00		
T3	17	2" Rigid Conduit	120.00 -	0.6000	0.6000
			135.00		
T3	18	T-Brackets (Af)	120.00 -	0.6000	0.6000
			135.00		
T3	20	Thin Flat Bar Climbing Ladder	120.00 -	0.6000	0.6000
			140.00		
T3	21	Safety Line 3/8	120.00 -	0.6000	0.6000
			140.00		
T4	2	HJ7-50A(1-5/8)	100.00 -	0.6000	0.6000
			120.00		
T4	4	Feedline Ladder (Af)	100.00 -	0.6000	0.6000
			120.00		
T4	6	CU12PSM9P6XXX(1-1/2)	100.00 -	0.6000	0.6000
			120.00		
T4	7	Feedline Ladder (Af)	100.00 -	0.6000	0.6000
			120.00		
T4	10	Feedline Ladder (Af)	100.00 -	0.6000	0.6000
			120.00		
T4	12	LDF6-50A(1-1/4)	100.00 -	0.6000	0.6000
			120.00		
T4	13	LDF6-50A(1-1/4)	100.00 -	0.6000	0.6000
			120.00		
T4	14	LDF6-50A(1-1/4)	100.00 -	0.6000	0.6000
			120.00		
T4	15	FB-L98B-002-75000(3/8)	100.00 -	0.6000	0.6000
			120.00		
T4	16	WR-VG122ST-BRDA(7/16)	100.00 -	0.6000	0.6000
			120.00		
T4	17	2" Rigid Conduit	100.00 -	0.6000	0.6000
			120.00		
T4	18	T-Brackets (Af)	100.00 -	0.6000	0.6000
			120.00		
T4	20	Thin Flat Bar Climbing	100.00 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _o No Ice	K _o Ice
		Ladder	120.00		
T4	21	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T5	2	HJ7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T5	4	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T5	6	CU12PSM9P6XXX(1-1/2)	80.00 - 100.00	0.6000	0.6000
T5	7	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T5	10	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T5	12	LDF6-50A(1-1/4)	80.00 - 100.00	0.6000	0.6000
T5	13	LDF6-50A(1-1/4)	80.00 - 100.00	0.6000	0.6000
T5	14	LDF6-50A(1-1/4)	80.00 - 100.00	0.6000	0.6000
T5	15	FB-L98B-002-75000(3/8)	80.00 - 100.00	0.6000	0.6000
T5	16	WR-VG122ST-BRDA(7/16)	80.00 - 100.00	0.6000	0.6000
T5	17	2" Rigid Conduit	80.00 - 100.00	0.6000	0.6000
T5	18	T-Brackets (Af)	80.00 - 100.00	0.6000	0.6000
T5	20	Thin Flat Bar Climbing	80.00 - 100.00	0.6000	0.6000
		Ladder			
T5	21	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T6	2	HJ7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T6	4	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T6	6	CU12PSM9P6XXX(1-1/2)	60.00 - 80.00	0.6000	0.6000
T6	7	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T6	10	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T6	12	LDF6-50A(1-1/4)	60.00 - 80.00	0.6000	0.6000
T6	13	LDF6-50A(1-1/4)	60.00 - 80.00	0.6000	0.6000
T6	14	LDF6-50A(1-1/4)	60.00 - 80.00	0.6000	0.6000
T6	15	FB-L98B-002-75000(3/8)	60.00 - 80.00	0.6000	0.6000
T6	16	WR-VG122ST-BRDA(7/16)	60.00 - 80.00	0.6000	0.6000
T6	17	2" Rigid Conduit	60.00 - 80.00	0.6000	0.6000
T6	18	T-Brackets (Af)	60.00 - 80.00	0.6000	0.6000
T6	20	Thin Flat Bar Climbing	60.00 - 80.00	0.6000	0.6000
		Ladder			
T6	21	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T7	2	HJ7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T7	4	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T7	6	CU12PSM9P6XXX(1-1/2)	40.00 - 60.00	0.6000	0.6000
T7	7	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T7	10	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T7	12	LDF6-50A(1-1/4)	40.00 - 60.00	0.6000	0.6000
T7	13	LDF6-50A(1-1/4)	40.00 - 60.00	0.6000	0.6000
T7	14	LDF6-50A(1-1/4)	40.00 - 60.00	0.6000	0.6000
T7	15	FB-L98B-002-75000(3/8)	40.00 - 60.00	0.6000	0.6000
T7	16	WR-VG122ST-BRDA(7/16)	40.00 - 60.00	0.6000	0.6000
T7	17	2" Rigid Conduit	40.00 - 60.00	0.6000	0.6000
T7	18	T-Brackets (Af)	40.00 - 60.00	0.6000	0.6000
T7	20	Thin Flat Bar Climbing	40.00 - 60.00	0.6000	0.6000
		Ladder			
T7	21	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T8	2	HJ7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T8	4	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T8	6	CU12PSM9P6XXX(1-1/2)	20.00 - 40.00	0.6000	0.6000
T8	7	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T8	10	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T8	12	LDF6-50A(1-1/4)	20.00 - 40.00	0.6000	0.6000
T8	13	LDF6-50A(1-1/4)	20.00 - 40.00	0.6000	0.6000
T8	14	LDF6-50A(1-1/4)	20.00 - 40.00	0.6000	0.6000
T8	15	FB-L98B-002-75000(3/8)	20.00 - 40.00	0.6000	0.6000
T8	16	WR-VG122ST-BRDA(7/16)	20.00 - 40.00	0.6000	0.6000
T8	17	2" Rigid Conduit	20.00 - 40.00	0.6000	0.6000
T8	18	T-Brackets (Af)	20.00 - 40.00	0.6000	0.6000
T8	20	Thin Flat Bar Climbing	20.00 - 40.00	0.6000	0.6000
		Ladder			

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	Client Crown Castle	Designed by Chinmaya

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _o No Ice	K _o Ice
T8	21	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T9	2	HJ7-50A(1-5/8)	0.00 - 20.00	0.6000	0.6000
T9	4	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T9	6	CU12PSM9P6XXX(1-1/2)	0.00 - 20.00	0.6000	0.6000
T9	7	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T9	10	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T9	12	LDF6-50A(1-1/4)	0.00 - 20.00	0.6000	0.6000
T9	13	LDF6-50A(1-1/4)	0.00 - 20.00	0.6000	0.6000
T9	14	LDF6-50A(1-1/4)	0.00 - 20.00	0.6000	0.6000
T9	15	FB-L98B-002-75000(3/8)	0.00 - 20.00	0.6000	0.6000
T9	16	WR-VG122ST-BRDA(7/16)	0.00 - 20.00	0.6000	0.6000
T9	17	2" Rigid Conduit	0.00 - 20.00	0.6000	0.6000
T9	18	T-Brackets (Af)	0.00 - 20.00	0.6000	0.6000
T9	20	Thin Flat Bar Climbing Ladder	0.00 - 20.00	0.6000	0.6000
T9	21	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000

User Defined Loads - Seismic

Description	Elevation	Offset From Centroid	Azimuth Angle	E _v	E _{hx}	E _{hz}	E _h
	ft	ft	°	K	K	K	K
CCISeismic Tower Section 1	145'	0'	0.000	0.055	0.000	0.000	0.170
CCISeismic Tower Section 2	130'	0'	0.000	0.105	0.000	0.000	0.287
CCISeismic Tower Section 3	117'6"	0'	0.000	0.030	0.000	0.000	0.072
CCISeismic Tower Section 4	112'6"	0'	0.000	0.025	0.000	0.000	0.058
CCISeismic Tower Section 5	107'6"	0'	0.000	0.025	0.000	0.000	0.055
CCISeismic Tower Section 6	102'6"	0'	0.000	0.032	0.000	0.000	0.066
CCISeismic Tower Section 7	97'6"	0'	0.000	0.039	0.000	0.000	0.075
CCISeismic Tower Section 8	92'6"	0'	0.000	0.034	0.000	0.000	0.063
CCISeismic Tower Section 9	87'6"	0'	0.000	0.034	0.000	0.000	0.059
CCISeismic Tower Section 10	82'6"	0'	0.000	0.041	0.000	0.000	0.066
CCISeismic Tower Section 11	77'6"	0'	0.000	0.040	0.000	0.000	0.059
CCISeismic Tower Section 12	72'6"	0'	0.000	0.044	0.000	0.000	0.060
CCISeismic Tower Section 13	67'6"	0'	0.000	0.045	0.000	0.000	0.057
CCISeismic Tower Section 14	62'6"	0'	0.000	0.046	0.000	0.000	0.053
CCISeismic Tower Section 15	50'	0'	0.000	0.278	0.000	0.000	0.247
CCISeismic Tower Section 16	30'	0'	0.000	0.208	0.000	0.000	0.101
CCISeismic Tower Section 17	10'	0'	0.000	0.233	0.000	0.000	0.031
CCISeismic (2) misc Side Lighting	150'	0'	0.000	0.001	0.000	0.000	0.004
CCISeismic ericsson AIR 32 B2a/B66Aa w/ Mount Pipe	148'	0'	0.000	0.020	0.000	0.000	0.065
CCISeismic ericsson AIR 32 B2a/B66Aa w/ Mount Pipe	148'	0'	0.000	0.020	0.000	0.000	0.065
CCISeismic ericsson AIR 32 B2a/B66Aa w/ Mount Pipe	148'	0'	0.000	0.020	0.000	0.000	0.065
CCISeismic commscope ETW190VS12UB	148'	0'	0.000	0.001	0.000	0.000	0.004
CCISeismic commscope ETW190VS12UB	148'	0'	0.000	0.001	0.000	0.000	0.004
CCISeismic commscope ETW190VS12UB	148'	0'	0.000	0.001	0.000	0.000	0.004
CCISeismic tower mounts Sector	148'	0'	0.000	0.209	0.000	0.000	0.664

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Description	Elevation	Offset From Centroid	Azimuth Angle	E _v	E _{hx}	E _{hz}	E _h
	ft	ft	°	K	K	K	K
Mount [SM 602-3]							
CCISeismic ericsson AIR6449	148'	0'	0.000	0.018	0.000	0.000	0.056
B41_T-MOBILE w/ Mount Pipe							
CCISeismic ericsson AIR6449	148'	0'	0.000	0.018	0.000	0.000	0.056
B41_T-MOBILE w/ Mount Pipe							
CCISeismic ericsson AIR6449	148'	0'	0.000	0.018	0.000	0.000	0.056
B41_T-MOBILE w/ Mount Pipe							
CCISeismic rfs celwave	148'	0'	0.000	0.025	0.000	0.000	0.080
APXVAARR24_43-U-NA20 w/							
Mount Pipe							
CCISeismic rfs celwave	148'	0'	0.000	0.025	0.000	0.000	0.080
APXVAARR24_43-U-NA20 w/							
Mount Pipe							
CCISeismic rfs celwave	148'	0'	0.000	0.025	0.000	0.000	0.080
APXVAARR24_43-U-NA20 w/							
Mount Pipe							
CCISeismic ericsson RADIO	148'	0'	0.000	0.009	0.000	0.000	0.030
4449 B71 B85A_T-MOBILE							
CCISeismic ericsson RADIO	148'	0'	0.000	0.009	0.000	0.000	0.030
4449 B71 B85A_T-MOBILE							
CCISeismic ericsson RADIO	148'	0'	0.000	0.009	0.000	0.000	0.030
4449 B71 B85A_T-MOBILE							
CCISeismic ericsson RRUS	148'	0'	0.000	0.007	0.000	0.000	0.022
4415 B25_CCIV2							
CCISeismic ericsson RRUS	148'	0'	0.000	0.007	0.000	0.000	0.022
4415 B25_CCIV2							
CCISeismic ericsson RRUS	148'	0'	0.000	0.007	0.000	0.000	0.022
4415 B25_CCIV2							
CCISeismic microdata telecom	148'	0'	0.000	0.001	0.000	0.000	0.003
MI-54131							
CCISeismic microdata telecom	148'	0'	0.000	0.001	0.000	0.000	0.003
MI-54131							
CCISeismic microdata telecom	148'	0'	0.000	0.001	0.000	0.000	0.003
MI-54131							
CCISeismic miscl Safety Line	145'	0'	0.000	0.000	0.000	0.000	0.001
3/8 From 0 to 150 (140ft to150ft)							
CCISeismic miscl Safety Line	130'	0'	0.000	0.001	0.000	0.000	0.002
3/8 From 0 to 150 (120ft to140ft)							
CCISeismic miscl Safety Line	117'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (115ft to120ft)							
CCISeismic miscl Safety Line	112'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (110ft to115ft)							
CCISeismic miscl Safety Line	107'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (105ft to110ft)							
CCISeismic miscl Safety Line	102'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (100ft to105ft)							
CCISeismic miscl Safety Line	97'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (95ft to100ft)							
CCISeismic miscl Safety Line	92'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (90ft to95ft)							
CCISeismic miscl Safety Line	87'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (85ft to90ft)							
CCISeismic miscl Safety Line	82'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (80ft to85ft)							
CCISeismic miscl Safety Line	77'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (75ft to80ft)							
CCISeismic miscl Safety Line	72'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (70ft to75ft)							
CCISeismic miscl Safety Line	67'6"	0'	0.000	0.000	0.000	0.000	0.000
3/8 From 0 to 150 (65ft to70ft)							

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Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
CCISeismic misc Safety Line 3/8 From 0 to 150 (60ft to 65ft)	62'6"	0'	0.000	0.000	0.000	0.000	0.000
CCISeismic misc Safety Line 3/8 From 0 to 150 (40ft to 60ft)	50'	0'	0.000	0.001	0.000	0.000	0.001
CCISeismic misc Safety Line 3/8 From 0 to 150 (20ft to 40ft)	30'	0'	0.000	0.001	0.000	0.000	0.000
CCISeismic misc Safety Line 3/8 From 0 to 150 (0ft to 20ft)	10'	0'	0.000	0.001	0.000	0.000	0.000
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (140ft to 150ft)	145'	0'	0.000	0.011	0.000	0.000	0.035
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (120ft to 140ft)	130'	0'	0.000	0.023	0.000	0.000	0.062
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (115ft to 120ft)	117'6"	0'	0.000	0.006	0.000	0.000	0.014
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (110ft to 115ft)	112'6"	0'	0.000	0.006	0.000	0.000	0.013
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (105ft to 110ft)	107'6"	0'	0.000	0.006	0.000	0.000	0.012
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (100ft to 105ft)	102'6"	0'	0.000	0.006	0.000	0.000	0.012
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (95ft to 100ft)	97'6"	0'	0.000	0.006	0.000	0.000	0.011
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (90ft to 95ft)	92'6"	0'	0.000	0.006	0.000	0.000	0.010
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (85ft to 90ft)	87'6"	0'	0.000	0.006	0.000	0.000	0.010
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (80ft to 85ft)	82'6"	0'	0.000	0.006	0.000	0.000	0.009
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (75ft to 80ft)	77'6"	0'	0.000	0.006	0.000	0.000	0.008
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (70ft to 75ft)	72'6"	0'	0.000	0.006	0.000	0.000	0.008
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (65ft to 70ft)	67'6"	0'	0.000	0.006	0.000	0.000	0.007
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (60ft to 65ft)	62'6"	0'	0.000	0.006	0.000	0.000	0.007
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (40ft to 60ft)	50'	0'	0.000	0.023	0.000	0.000	0.020
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (20ft to 40ft)	30'	0'	0.000	0.023	0.000	0.000	0.011
CCISeismic misc Feedline Ladder (Af) From 0 to 150 (0ft to 20ft)	10'	0'	0.000	0.023	0.000	0.000	0.003
CCISeismic (10) andrew	145'	0'	0.000	0.011	0.000	0.000	0.035

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Description	Elevation	Offset From Centroid	Azimuth Angle	E _v	E _{hx}	E _{hz}	E _h
	ft	ft	°	K	K	K	K
LDF7-50A(1-5/8) From 0 to 150 (140ft to150ft)							
CCISeismic (10) andrew	130'	0'	0.000	0.022	0.000	0.000	0.061
LDF7-50A(1-5/8) From 0 to 150 (120ft to140ft)							
CCISeismic (10) andrew	117'6"	0'	0.000	0.006	0.000	0.000	0.013
LDF7-50A(1-5/8) From 0 to 150 (115ft to120ft)							
CCISeismic (10) andrew	112'6"	0'	0.000	0.006	0.000	0.000	0.013
LDF7-50A(1-5/8) From 0 to 150 (110ft to115ft)							
CCISeismic (10) andrew	107'6"	0'	0.000	0.006	0.000	0.000	0.012
LDF7-50A(1-5/8) From 0 to 150 (105ft to110ft)							
CCISeismic (10) andrew	102'6"	0'	0.000	0.006	0.000	0.000	0.011
LDF7-50A(1-5/8) From 0 to 150 (100ft to105ft)							
CCISeismic (10) andrew	97'6"	0'	0.000	0.006	0.000	0.000	0.011
LDF7-50A(1-5/8) From 0 to 150 (95ft to100ft)							
CCISeismic (10) andrew	92'6"	0'	0.000	0.006	0.000	0.000	0.010
LDF7-50A(1-5/8) From 0 to 150 (90ft to95ft)							
CCISeismic (10) andrew	87'6"	0'	0.000	0.006	0.000	0.000	0.010
LDF7-50A(1-5/8) From 0 to 150 (85ft to90ft)							
CCISeismic (10) andrew	82'6"	0'	0.000	0.006	0.000	0.000	0.009
LDF7-50A(1-5/8) From 0 to 150 (80ft to85ft)							
CCISeismic (10) andrew	77'6"	0'	0.000	0.006	0.000	0.000	0.008
LDF7-50A(1-5/8) From 0 to 150 (75ft to80ft)							
CCISeismic (10) andrew	72'6"	0'	0.000	0.006	0.000	0.000	0.008
LDF7-50A(1-5/8) From 0 to 150 (70ft to75ft)							
CCISeismic (10) andrew	67'6"	0'	0.000	0.006	0.000	0.000	0.007
LDF7-50A(1-5/8) From 0 to 150 (65ft to70ft)							
CCISeismic (10) andrew	62'6"	0'	0.000	0.006	0.000	0.000	0.006
LDF7-50A(1-5/8) From 0 to 150 (60ft to65ft)							
CCISeismic (10) andrew	50'	0'	0.000	0.022	0.000	0.000	0.020
LDF7-50A(1-5/8) From 0 to 150 (40ft to60ft)							
CCISeismic (10) andrew	30'	0'	0.000	0.022	0.000	0.000	0.011
LDF7-50A(1-5/8) From 0 to 150 (20ft to40ft)							
CCISeismic (10) andrew	10'	0'	0.000	0.022	0.000	0.000	0.003
LDF7-50A(1-5/8) From 0 to 150 (0ft to20ft)							
CCISeismic (2) andrew	144'	0'	0.000	0.002	0.000	0.000	0.005
LDF7-50A(1-5/8) From 8 to 148 (140ft to148ft)							
CCISeismic (2) andrew	130'	0'	0.000	0.004	0.000	0.000	0.012
LDF7-50A(1-5/8) From 8 to 148 (120ft to140ft)							
CCISeismic (2) andrew	117'6"	0'	0.000	0.001	0.000	0.000	0.003
LDF7-50A(1-5/8) From 8 to 148 (115ft to120ft)							
CCISeismic (2) andrew	112'6"	0'	0.000	0.001	0.000	0.000	0.003

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Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
LDF7-50A(1-5/8) From 8 to 148 (110ft to115ft) CCISeismic (2) andrew	107'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (105ft to110ft) CCISeismic (2) andrew	102'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (100ft to105ft) CCISeismic (2) andrew	97'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (95ft to100ft) CCISeismic (2) andrew	92'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (90ft to95ft) CCISeismic (2) andrew	87'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (85ft to90ft) CCISeismic (2) andrew	82'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (80ft to85ft) CCISeismic (2) andrew	77'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (75ft to80ft) CCISeismic (2) andrew	72'6"	0'	0.000	0.001	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (70ft to75ft) CCISeismic (2) andrew	67'6"	0'	0.000	0.001	0.000	0.000	0.001
LDF7-50A(1-5/8) From 8 to 148 (65ft to70ft) CCISeismic (2) andrew	62'6"	0'	0.000	0.001	0.000	0.000	0.001
LDF7-50A(1-5/8) From 8 to 148 (60ft to65ft) CCISeismic (2) andrew	50'	0'	0.000	0.004	0.000	0.000	0.004
LDF7-50A(1-5/8) From 8 to 148 (40ft to60ft) CCISeismic (2) andrew	30'	0'	0.000	0.004	0.000	0.000	0.002
LDF7-50A(1-5/8) From 8 to 148 (20ft to40ft) CCISeismic (2) andrew	14'	0'	0.000	0.003	0.000	0.000	0.001
LDF7-50A(1-5/8) From 8 to 148 (8ft to20ft) CCISeismic (2) ericsson HCS	144'	0'	0.000	0.002	0.000	0.000	0.005
6X12 6AWG(1-3/8) From 8 to 148 (140ft to148ft) CCISeismic (2) ericsson HCS	130'	0'	0.000	0.004	0.000	0.000	0.012
6X12 6AWG(1-3/8) From 8 to 148 (120ft to140ft) CCISeismic (2) ericsson HCS	117'6"	0'	0.000	0.001	0.000	0.000	0.003
6X12 6AWG(1-3/8) From 8 to 148 (115ft to120ft) CCISeismic (2) ericsson HCS	112'6"	0'	0.000	0.001	0.000	0.000	0.003
6X12 6AWG(1-3/8) From 8 to 148 (110ft to115ft) CCISeismic (2) ericsson HCS	107'6"	0'	0.000	0.001	0.000	0.000	0.002
6X12 6AWG(1-3/8) From 8 to 148 (105ft to110ft) CCISeismic (2) ericsson HCS	102'6"	0'	0.000	0.001	0.000	0.000	0.002
6X12 6AWG(1-3/8) From 8 to 148 (100ft to105ft) CCISeismic (2) ericsson HCS	97'6"	0'	0.000	0.001	0.000	0.000	0.002

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	ft	ft	°	K	K	K	K
6X12 6AWG(1-3/8) From 8 to 148 (95ft to100ft)							
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (90ft to95ft)	92'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (85ft to90ft)	87'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (80ft to85ft)	82'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (75ft to80ft)	77'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (70ft to75ft)	72'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (65ft to70ft)	67'6"	0'	0.000	0.001	0.000	0.000	0.001
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (60ft to65ft)	62'6"	0'	0.000	0.001	0.000	0.000	0.001
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (40ft to60ft)	50'	0'	0.000	0.004	0.000	0.000	0.004
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (20ft to40ft)	30'	0'	0.000	0.004	0.000	0.000	0.002
CCISeismic (2) ericsson HCS 6X12 6AWG(1-3/8) From 8 to 148 (8ft to20ft)	14'	0'	0.000	0.003	0.000	0.000	0.001
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (140ft to148ft)	144'	0'	0.000	0.002	0.000	0.000	0.006
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (120ft to140ft)	130'	0'	0.000	0.005	0.000	0.000	0.013
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (115ft to120ft)	117'6"	0'	0.000	0.001	0.000	0.000	0.003
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (110ft to115ft)	112'6"	0'	0.000	0.001	0.000	0.000	0.003
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (105ft to110ft)	107'6"	0'	0.000	0.001	0.000	0.000	0.003
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (100ft to105ft)	102'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (95ft to100ft)	97'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (90ft to95ft)	92'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (85ft to90ft)	87'6"	0'	0.000	0.001	0.000	0.000	0.002
CCISeismic ericsson HCS 6X12 4AWG(1-5/8) From 8 to 148 (80ft to85ft)	82'6"	0'	0.000	0.001	0.000	0.000	0.002

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		Chinmaya

Description	Elevation	Offset From Centroid	Azimuth Angle	E _v	E _{hx}	E _{hz}	E _h
	ft	ft	°	K	K	K	K
4AWG(1-5/8) From 8 to 148 (80ft to85ft)							
CCISeismic ericsson HCS 6X12	77'6"	0'	0.000	0.001	0.000	0.000	0.002
4AWG(1-5/8) From 8 to 148 (75ft to80ft)							
CCISeismic ericsson HCS 6X12	72'6"	0'	0.000	0.001	0.000	0.000	0.002
4AWG(1-5/8) From 8 to 148 (70ft to75ft)							
CCISeismic ericsson HCS 6X12	67'6"	0'	0.000	0.001	0.000	0.000	0.001
4AWG(1-5/8) From 8 to 148 (65ft to70ft)							
CCISeismic ericsson HCS 6X12	62'6"	0'	0.000	0.001	0.000	0.000	0.001
4AWG(1-5/8) From 8 to 148 (60ft to65ft)							
CCISeismic ericsson HCS 6X12	50'	0'	0.000	0.005	0.000	0.000	0.004
4AWG(1-5/8) From 8 to 148 (40ft to60ft)							
CCISeismic ericsson HCS 6X12	30'	0'	0.000	0.005	0.000	0.000	0.002
4AWG(1-5/8) From 8 to 148 (20ft to40ft)							
CCISeismic ericsson HCS 6X12	14'	0'	0.000	0.003	0.000	0.000	0.001
4AWG(1-5/8) From 8 to 148 (8ft to20ft)							
CCISeismic *** From 8 to 148 (140ft to148ft)	144'	0'	0.000	0.003	0.000	0.000	0.008
CCISeismic *** From 8 to 148 (120ft to140ft)	130'	0'	0.000	0.007	0.000	0.000	0.018
CCISeismic *** From 8 to 148 (115ft to120ft)	117'6"	0'	0.000	0.002	0.000	0.000	0.004
CCISeismic *** From 8 to 148 (110ft to115ft)	112'6"	0'	0.000	0.002	0.000	0.000	0.004
CCISeismic *** From 8 to 148 (105ft to110ft)	107'6"	0'	0.000	0.002	0.000	0.000	0.004
CCISeismic *** From 8 to 148 (100ft to105ft)	102'6"	0'	0.000	0.002	0.000	0.000	0.003
CCISeismic *** From 8 to 148 (95ft to100ft)	97'6"	0'	0.000	0.002	0.000	0.000	0.003
CCISeismic *** From 8 to 148 (90ft to95ft)	92'6"	0'	0.000	0.002	0.000	0.000	0.003
CCISeismic *** From 8 to 148 (85ft to90ft)	87'6"	0'	0.000	0.002	0.000	0.000	0.003
CCISeismic *** From 8 to 148 (80ft to85ft)	82'6"	0'	0.000	0.002	0.000	0.000	0.003
CCISeismic *** From 8 to 148 (75ft to80ft)	77'6"	0'	0.000	0.002	0.000	0.000	0.002
CCISeismic *** From 8 to 148 (70ft to75ft)	72'6"	0'	0.000	0.002	0.000	0.000	0.002
CCISeismic *** From 8 to 148 (65ft to70ft)	67'6"	0'	0.000	0.002	0.000	0.000	0.002
CCISeismic *** From 8 to 148 (60ft to65ft)	62'6"	0'	0.000	0.002	0.000	0.000	0.002
CCISeismic *** From 8 to 148 (40ft to60ft)	50'	0'	0.000	0.007	0.000	0.000	0.006
CCISeismic *** From 8 to 148 (20ft to40ft)	30'	0'	0.000	0.007	0.000	0.000	0.003
CCISeismic *** From 8 to 148 (8ft to20ft)	14'	0'	0.000	0.004	0.000	0.000	0.001

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Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Lightning Rod 1" x 5' on 5' Pole	C	From Leg	0.000 0' 5'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.942 2.956 3.684 4.988	1.942 2.956 3.684 4.988	0.076 0.102 0.135 0.214
*									
(2) LPA-80063/6CF w/ Mount Pipe	A	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	9.831 10.400 10.933 12.026	10.215 11.384 12.269 14.086	0.052 0.145 0.246 0.476
(2) LPA-80063/6CF w/ Mount Pipe	B	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	9.831 10.400 10.933 12.026	10.215 11.384 12.269 14.086	0.052 0.145 0.246 0.476
(2) LPA-80063/6CF w/ Mount Pipe	C	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	9.831 10.400 10.933 12.026	10.215 11.384 12.269 14.086	0.052 0.145 0.246 0.476
(2) JAHH-65B-R3B w/ Mount Pipe	A	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	5.500 5.970 6.450 7.440	4.380 4.840 5.300 6.260	0.096 0.169 0.254 0.457
(2) JAHH-65B-R3B w/ Mount Pipe	B	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	5.500 5.970 6.450 7.440	4.380 4.840 5.300 6.260	0.096 0.169 0.254 0.457
(2) JAHH-65B-R3B w/ Mount Pipe	C	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	5.500 5.970 6.450 7.440	4.380 4.840 5.300 6.260	0.096 0.169 0.254 0.457
Sub6 Antenna - VZS01	A	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	4.700 4.988 5.284 5.897	1.844 2.067 2.297 2.777	0.087 0.116 0.150 0.228
Sub6 Antenna - VZS01	B	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	4.700 4.988 5.284 5.897	1.844 2.067 2.297 2.777	0.087 0.116 0.150 0.228
Sub6 Antenna - VZS01	C	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	4.700 4.988 5.284 5.897	1.844 2.067 2.297 2.777	0.087 0.116 0.150 0.228
CBC78T-DS-43-2X	A	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	0.368 0.446 0.531 0.723	0.512 0.605 0.705 0.927	0.021 0.027 0.035 0.057
CBC78T-DS-43-2X	B	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	0.368 0.446 0.531 0.723	0.512 0.605 0.705 0.927	0.021 0.027 0.035 0.057
CBC78T-DS-43-2X	C	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice	0.368 0.446 0.531	0.512 0.605 0.705	0.021 0.027 0.035

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
RFV01U-D2A	A	From Face	4.000 0' 0'	0.000	170'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	0.723 1.875 2.045 2.223 2.601	0.927 1.013 1.145 1.284 1.585	0.057 0.070 0.087 0.106 0.153
RFV01U-D2A	B	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.013 1.145 1.284 1.585	0.070 0.087 0.106 0.153
RFV01U-D2A	C	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.013 1.145 1.284 1.585	0.070 0.087 0.106 0.153
RFV01U-D1A	A	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175
RFV01U-D1A	B	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175
RFV01U-D1A	C	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175
RVZDC-6627-PF-48	A	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	3.792 4.044 4.303 4.844	2.514 2.727 2.947 3.417	0.032 0.063 0.099 0.181
Sector Mount [SM 510-3]	C	None		0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	39.970 56.450 72.590 104.060	39.970 56.450 72.590 104.060	2.396 3.077 3.960 6.296
8' x 2" Mount Pipe	A	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.900 2.728 3.401 4.396	1.900 2.728 3.401 4.396	0.029 0.044 0.063 0.119
8' x 2" Mount Pipe	B	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.900 2.728 3.401 4.396	1.900 2.728 3.401 4.396	0.029 0.044 0.063 0.119
8' x 2" Mount Pipe	C	From Face	4.000 0' 0'	0.000	170'	No Ice 1/2" Ice 1" Ice 2" Ice	1.900 2.728 3.401 4.396	1.900 2.728 3.401 4.396	0.029 0.044 0.063 0.119
*									
MX08FRO665-20 w/ Mount Pipe	A	From Leg	4.000 0' 0'	0.000	148'	No Ice 1/2" Ice 1" Ice 2" Ice	8.010 8.520 9.040 10.110	4.230 4.690 5.160 6.120	0.098 0.184 0.281 0.512
MX08FRO665-20 w/ Mount Pipe	B	From Leg	4.000 0' 0'	0.000	148'	No Ice 1/2" Ice 1" Ice 2" Ice	8.010 8.520 9.040 10.110	4.230 4.690 5.160 6.120	0.098 0.184 0.281 0.512
MX08FRO665-20 w/ Mount Pipe	C	From Leg	4.000 0' 0'	0.000	148'	No Ice 1/2" Ice 1" Ice	8.010 8.520 9.040	4.230 4.690 5.160	0.098 0.184 0.281

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
TA08025-B604	A	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	10.110 1.964 2.138 2.320 2.705	6.120 0.981 1.112 1.250 1.548	0.512 0.064 0.081 0.100 0.148
TA08025-B604	B	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	1.964 1.964 2.138 2.320 2.705	0.981 0.981 1.112 1.250 1.548	0.064 0.064 0.081 0.100 0.148
TA08025-B604	C	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.705 1.964 2.138 2.320 2.705	1.548 0.981 1.112 1.250 1.548	0.148 0.064 0.081 0.100 0.148
TA08025-B605	A	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.705 1.964 2.138 2.320 2.705	1.548 1.129 1.267 1.411 1.723	0.148 0.075 0.093 0.114 0.164
TA08025-B605	B	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	1.723 1.964 2.138 2.320 2.705	1.548 1.129 1.267 1.411 1.723	0.164 0.075 0.093 0.114 0.164
TA08025-B605	C	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.705 1.964 2.138 2.320 2.705	1.723 1.129 1.267 1.411 1.723	0.164 0.075 0.093 0.114 0.164
RDIDC-9181-PF-48	A	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.705 2.012 2.189 2.373 2.763	1.723 1.168 1.311 1.461 1.784	0.164 0.022 0.040 0.060 0.110
Commscope MTC3975083	C	None		0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.763 23.850 34.120 44.390 64.930	1.784 23.850 34.120 44.390 64.930	0.110 1.260 1.800 2.340 3.420
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	64.930 1.900 2.728 3.401 4.396	64.930 1.900 2.728 3.401 4.396	3.420 0.029 0.044 0.063 0.119
(2) 8' x 2" Mount Pipe	B	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	4.396 1.900 2.728 3.401 4.396	4.396 1.900 2.728 3.401 4.396	0.119 0.029 0.044 0.063 0.119
(2) 8' x 2" Mount Pipe	C	From Leg	4.000 0' 0'	0.000	148'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	4.396 1.900 2.728 3.401 4.396	4.396 1.900 2.728 3.401 4.396	0.119 0.029 0.044 0.063 0.119
*									
*									
(2) 7770.00	A	From Leg	4.000 0' 1'	0.000	135'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	4.396 5.508 5.867 6.233 6.986	4.396 2.928 3.273 3.625 4.352	0.119 0.035 0.068 0.105 0.195
(2) 7770.00	B	From Leg	4.000 0' 1'	0.000	135'	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	6.986 5.508 5.867 6.233 6.986	4.352 2.928 3.273 3.625 4.352	0.195 0.035 0.068 0.105 0.195
(2) 7770.00	C	From Leg	4.000 0'	0.000	135'	2" Ice No Ice 1/2" Ice	6.986 5.508 5.867	4.352 2.928 3.273	0.195 0.035 0.068

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			1'			1" Ice 6.233	3.625	0.105
						2" Ice 6.986	4.352	0.195
AM-X-CD-16-65-00T-RET w/ Mount Pipe	A	From Leg	4.000	0.000	135'	No Ice 4.630	3.270	0.074
			0'			1/2" Ice 5.060	3.690	0.133
			1'			1" Ice 5.510	4.120	0.203
AM-X-CD-16-65-00T-RET w/ Mount Pipe	B	From Leg	4.000	0.000	135'	2" Ice 6.430	5.000	0.376
			0'			No Ice 4.630	3.270	0.074
			0'			1/2" Ice 5.060	3.690	0.133
			1'			1" Ice 5.510	4.120	0.203
P65-16-XLH-RR w/ Mount Pipe	C	From Leg	4.000	0.000	135'	2" Ice 6.430	5.000	0.376
			0'			No Ice 5.660	4.010	0.076
			1'			1/2" Ice 6.210	4.530	0.135
						1" Ice 6.760	5.060	0.206
(2) LGP21401	A	From Leg	4.000	0.000	135'	2" Ice 7.900	6.150	0.380
			0'			No Ice 1.104	0.207	0.014
			0'			1/2" Ice 1.239	0.274	0.021
						1" Ice 1.381	0.348	0.030
(2) LGP21401	B	From Leg	4.000	0.000	135'	2" Ice 1.688	0.521	0.055
			0'			No Ice 1.104	0.207	0.014
			0'			1/2" Ice 1.239	0.274	0.021
						1" Ice 1.381	0.348	0.030
(2) LGP21401	C	From Leg	4.000	0.000	135'	2" Ice 1.688	0.521	0.055
			0'			No Ice 1.104	0.207	0.014
			0'			1/2" Ice 1.239	0.274	0.021
						1" Ice 1.381	0.348	0.030
(2) LGP21901	A	From Leg	4.000	0.000	135'	2" Ice 1.688	0.521	0.055
			0'			No Ice 0.231	0.158	0.006
			0'			1/2" Ice 0.294	0.213	0.008
						1" Ice 0.365	0.276	0.011
(2) LGP21901	B	From Leg	4.000	0.000	135'	2" Ice 0.528	0.423	0.022
			0'			No Ice 0.231	0.158	0.006
			0'			1/2" Ice 0.294	0.213	0.008
						1" Ice 0.365	0.276	0.011
(2) LGP21901	C	From Leg	4.000	0.000	135'	2" Ice 0.528	0.423	0.022
			0'			No Ice 0.231	0.158	0.006
			0'			1/2" Ice 0.294	0.213	0.008
						1" Ice 0.365	0.276	0.011
RRUS-11	A	From Leg	4.000	0.000	135'	2" Ice 0.528	0.423	0.022
			0'			No Ice 2.784	1.187	0.048
			0'			1/2" Ice 2.992	1.334	0.068
						1" Ice 3.207	1.490	0.092
RRUS-11	B	From Leg	4.000	0.000	135'	2" Ice 3.658	1.833	0.150
			0'			No Ice 2.784	1.187	0.048
			0'			1/2" Ice 2.992	1.334	0.068
						1" Ice 3.207	1.490	0.092
RRUS-11	C	From Leg	4.000	0.000	135'	2" Ice 3.658	1.833	0.150
			0'			No Ice 2.784	1.187	0.048
			0'			1/2" Ice 2.992	1.334	0.068
						1" Ice 3.207	1.490	0.092
DC6-48-60-18-8F	C	From Leg	4.000	0.000	135'	2" Ice 3.658	1.833	0.150
			0'			No Ice 1.212	1.212	0.033
			0'			1/2" Ice 1.892	1.892	0.055
						1" Ice 2.105	2.105	0.080
						2" Ice 2.570	2.570	0.138
Sector Mount [SM 402-3]	C	None		0.000	135'	No Ice 18.870	18.870	0.851
						1/2" Ice 26.470	26.470	1.210
						1" Ice 33.990	33.990	1.696

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	Crown Castle	Chinmaya

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
					2" Ice	48.840	48.840	3.044
*								

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service

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Comb. No.	Description
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service
51	1.2 Dead+1.0 Ev+1.0 Eh 0 deg
52	0.9 Dead-1.0 Ev+1.0 Eh 0 deg
53	1.2 Dead+1.0 Ev+1.0 Eh 30 deg
54	0.9 Dead-1.0 Ev+1.0 Eh 30 deg
55	1.2 Dead+1.0 Ev+1.0 Eh 60 deg
56	0.9 Dead-1.0 Ev+1.0 Eh 60 deg
57	1.2 Dead+1.0 Ev+1.0 Eh 90 deg
58	0.9 Dead-1.0 Ev+1.0 Eh 90 deg
59	1.2 Dead+1.0 Ev+1.0 Eh 120 deg
60	0.9 Dead-1.0 Ev+1.0 Eh 120 deg
61	1.2 Dead+1.0 Ev+1.0 Eh 150 deg
62	0.9 Dead-1.0 Ev+1.0 Eh 150 deg
63	1.2 Dead+1.0 Ev+1.0 Eh 180 deg
64	0.9 Dead-1.0 Ev+1.0 Eh 180 deg
65	1.2 Dead+1.0 Ev+1.0 Eh 210 deg
66	0.9 Dead-1.0 Ev+1.0 Eh 210 deg
67	1.2 Dead+1.0 Ev+1.0 Eh 240 deg
68	0.9 Dead-1.0 Ev+1.0 Eh 240 deg
69	1.2 Dead+1.0 Ev+1.0 Eh 270 deg
70	0.9 Dead-1.0 Ev+1.0 Eh 270 deg
71	1.2 Dead+1.0 Ev+1.0 Eh 300 deg
72	0.9 Dead-1.0 Ev+1.0 Eh 300 deg
73	1.2 Dead+1.0 Ev+1.0 Eh 330 deg
74	0.9 Dead-1.0 Ev+1.0 Eh 330 deg

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	170 - 160	Leg	Max Tension	15	4.308	-0.064	-0.016
			Max. Compression	10	-7.829	-0.034	-0.021
			Max. Mx	16	3.062	-0.083	-0.010
			Max. My	4	-2.003	-0.047	0.097
			Max. Vy	20	1.696	0.000	0.000
			Max. Vx	2	1.695	0.000	0.000
		Diagonal	Max Tension	12	2.529	0.000	0.000
			Max. Compression	12	-2.555	0.000	0.000
			Max. Mx	32	0.273	0.034	0.000
			Max. My	16	-2.316	0.008	0.001
			Max. Vy	32	-0.031	0.034	0.000
			Max. Vx	16	-0.000	0.012	0.001
		Top Girt	Max Tension	11	0.923	0.000	0.000
			Max. Compression	14	-0.958	0.000	0.000
			Max. Mx	26	-0.078	-0.122	0.000
			Max. Vy	26	-0.057	0.000	0.000
T2	160 - 140	Leg	Max Tension	15	20.266	-0.064	0.071
			Max. Compression	2	-27.030	0.048	-0.070
			Max. Mx	14	12.920	0.433	0.074
			Max. My	20	-3.358	-0.012	0.456
			Max. Vy	14	0.585	-0.340	0.074
			Max. Vx	4	0.597	-0.019	-0.330
		Diagonal	Max Tension	24	4.161	0.000	0.000

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T3	140 - 120	Top Girt	Max. Compression	24	-4.270	0.000	0.000
			Max. Mx	32	0.278	0.061	0.008
			Max. My	33	-0.925	0.051	0.009
			Max. Vy	32	0.047	0.055	0.008
			Max. Vx	33	-0.003	0.000	0.000
			Max Tension	3	0.157	0.000	0.000
			Max. Compression	14	-0.212	0.000	0.000
			Max. Mx	26	-0.077	-0.121	0.000
			Max. My	26	-0.077	0.000	0.004
			Max. Vy	26	0.056	0.000	0.000
			Max. Vx	26	0.002	0.000	0.000
			Max Tension	15	42.904	0.038	0.080
		Leg	Max. Compression	2	-53.841	0.229	-0.078
			Max. Mx	3	-34.714	0.494	-0.065
			Max. My	24	-4.488	-0.002	-0.567
			Max. Vy	22	0.599	-0.492	-0.018
			Max. Vx	4	0.588	-0.008	-0.377
			Max Tension	24	5.718	0.000	0.000
			Max. Compression	24	-5.678	0.000	0.000
			Max. Mx	32	0.558	0.088	0.011
			Max. My	34	0.976	0.084	0.012
			Max. Vy	28	0.056	0.084	-0.012
			Max. Vx	34	-0.003	0.000	0.000
			Max Tension	15	67.081	-0.153	0.057
T4	120 - 100	Leg	Max. Compression	2	-81.847	0.322	-0.125
			Max. Mx	3	-80.127	0.324	-0.125
			Max. My	4	-8.065	-0.011	-0.422
			Max. Vy	22	0.079	-0.296	-0.050
			Max. Vx	3	0.158	-0.174	-0.402
			Max Tension	24	6.708	0.000	0.000
			Max. Compression	24	-6.764	0.000	0.000
			Max. Mx	31	1.031	0.118	0.014
			Max. My	33	-1.303	0.105	0.016
			Max. Vy	29	0.074	0.116	-0.015
			Max. Vx	33	-0.004	0.000	0.000
			Max Tension	15	89.127	-0.321	0.156
		Diagonal	Max. Compression	2	-107.884	0.586	-0.177
			Max. Mx	2	-107.884	0.586	-0.177
			Max. My	4	-8.939	-0.042	-0.576
			Max. Vy	18	-0.121	0.558	0.029
			Max. Vx	2	0.194	-0.204	-0.552
			Max Tension	24	8.106	0.000	0.000
			Max. Compression	24	-8.197	0.000	0.000
			Max. Mx	29	1.155	0.187	0.025
			Max. My	27	0.952	0.184	-0.027
			Max. Vy	29	0.096	0.187	0.025
			Max. Vx	27	0.005	0.000	0.000
			T5	100 - 80	Leg	Max Tension	15
Max. Compression	2	-136.930				0.627	-0.133
Max. Mx	2	-136.930				0.627	-0.133
Max. My	4	-10.886				-0.057	-0.789
Max. Vy	18	-0.118				0.596	0.018
Max. Vx	2	0.201				-0.307	-0.740
Max Tension	24	9.176				0.000	0.000
Max. Compression	24	-9.274				0.000	0.000
Max. Mx	31	1.885				0.275	-0.034
Max. My	27	1.066				0.265	-0.038
Max. Vy	29	0.129				0.270	0.035
Max. Vx	27	0.007				0.000	0.000
Diagonal	Max Tension	15			136.579	-0.521	0.127
	Max. Compression	2			-165.948	0.683	-0.107
T6	80 - 60	Leg					
		Diagonal					
T7	60 - 40	Leg					
		Diagonal					

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T8	40 - 20	Diagonal	Max. Mx	33	5.787	-1.446	0.053
			Max. My	4	-14.384	0.019	-0.693
			Max. Vy	37	0.251	-1.442	-0.026
			Max. Vx	2	0.174	-0.319	-0.626
			Max Tension	24	9.639	0.000	0.000
			Max. Compression	24	-9.720	0.000	0.000
			Max. Mx	29	0.714	0.321	0.039
			Max. My	33	-1.885	0.285	0.046
			Max. Vy	29	0.140	0.308	0.043
			Max. Vx	33	-0.008	0.000	0.000
		Leg	Max Tension	15	159.763	-0.897	0.086
			Max. Compression	2	-195.059	1.357	-0.153
			Max. Mx	33	6.481	-4.075	0.049
			Max. My	4	-16.306	-0.102	-1.178
			Max. Vy	37	0.697	-4.039	-0.023
			Max. Vx	4	-0.216	-0.102	-1.178
			Max Tension	24	10.603	0.000	0.000
			Max. Compression	2	-10.877	0.000	0.000
			Max. Mx	29	0.336	0.386	0.042
			Max. My	33	2.598	0.326	0.048
T9	20 - 0	Leg	Max. Vy	29	0.147	0.386	0.042
			Max. Vx	33	-0.008	0.000	0.000
			Max Tension	15	182.601	-0.944	0.123
			Max. Compression	2	-224.423	0.000	0.000
			Max. Mx	27	-82.034	4.218	0.048
			Max. My	4	-19.113	-0.163	-2.069
			Max. Vy	37	-0.835	-4.039	-0.023
		Diagonal	Max. Vx	4	-0.363	-0.163	-2.069
			Max Tension	24	11.461	0.000	0.000
			Max. Compression	2	-12.035	0.000	0.000
			Max. Mx	28	-1.505	0.516	0.048
			Max. My	27	4.593	0.320	-0.059
			Max. Vy	28	0.169	0.516	0.048
			Max. Vx	27	0.009	0.000	0.000

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	210.458	23.362	-13.027
	Max. H _x	18	210.458	23.362	-13.027
	Max. H _z	5	-166.715	-18.792	10.932
	Min. Vert	7	-171.252	-19.380	10.772
	Min. H _x	7	-171.252	-19.380	10.772
	Min. H _z	18	210.458	23.362	-13.027
Leg B	Max. Vert	10	213.201	-22.603	-13.885
	Max. H _x	23	-166.039	18.534	11.481
	Max. H _z	25	-162.014	16.947	13.535
	Min. Vert	23	-166.039	18.534	11.481
	Min. H _x	10	213.201	-22.603	-13.885
	Min. H _z	12	197.462	-19.468	-15.045
Leg A	Max. Vert	2	231.822	1.952	29.245
	Max. H _x	20	18.312	3.735	1.649
	Max. H _z	2	231.822	1.952	29.245
	Min. Vert	15	-188.257	-1.866	-24.587
	Min. H _x	11	-82.861	-3.742	-11.192

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. H _z	15	-188.257	-1.866	-24.587

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturing Moment, M _x kip-ft	Overturing Moment, M _z kip-ft	Torque kip-ft
Dead Only	45.138	0.000	0.000	-2.622	-47.362	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	54.166	-0.014	-47.376	-4628.192	-54.414	82.398
0.9 Dead+1.0 Wind 0 deg - No Ice	40.624	-0.014	-47.376	-4627.405	-40.205	82.398
1.2 Dead+1.0 Wind 30 deg - No Ice	54.166	22.702	-39.333	-3868.685	-2287.486	79.705
0.9 Dead+1.0 Wind 30 deg - No Ice	40.624	22.702	-39.333	-3867.898	-2273.277	79.705
1.2 Dead+1.0 Wind 60 deg - No Ice	54.166	34.657	-20.001	-1983.288	-3489.445	16.347
0.9 Dead+1.0 Wind 60 deg - No Ice	40.624	34.657	-20.001	-1982.501	-3475.236	16.347
1.2 Dead+1.0 Wind 90 deg - No Ice	54.166	37.598	0.014	-0.725	-3786.941	-25.180
0.9 Dead+1.0 Wind 90 deg - No Ice	40.624	37.598	0.014	0.061	-3772.732	-25.180
1.2 Dead+1.0 Wind 120 deg - No Ice	54.166	36.887	21.304	2086.385	-3674.073	-30.143
0.9 Dead+1.0 Wind 120 deg - No Ice	40.624	36.887	21.304	2087.172	-3659.865	-30.143
1.2 Dead+1.0 Wind 150 deg - No Ice	54.166	22.468	38.901	3832.022	-2272.748	-60.622
0.9 Dead+1.0 Wind 150 deg - No Ice	40.624	22.468	38.901	3832.809	-2258.539	-60.622
1.2 Dead+1.0 Wind 180 deg - No Ice	54.166	0.014	44.230	4368.269	-59.256	-82.398
0.9 Dead+1.0 Wind 180 deg - No Ice	40.624	0.014	44.230	4369.055	-45.047	-82.398
1.2 Dead+1.0 Wind 210 deg - No Ice	54.166	-22.702	39.333	3862.392	2173.816	-79.705
0.9 Dead+1.0 Wind 210 deg - No Ice	40.624	-22.702	39.333	3863.178	2188.025	-79.705
1.2 Dead+1.0 Wind 240 deg - No Ice	54.166	-37.382	21.574	2103.810	3595.426	-16.347
0.9 Dead+1.0 Wind 240 deg - No Ice	40.624	-37.382	21.574	2104.597	3609.635	-16.347
1.2 Dead+1.0 Wind 270 deg - No Ice	54.166	-37.598	-0.014	-5.568	3673.271	25.180
0.9 Dead+1.0 Wind 270 deg - No Ice	40.624	-37.598	-0.014	-4.781	3687.480	25.180
1.2 Dead+1.0 Wind 300 deg - No Ice	54.166	-34.162	-19.731	-1965.863	3340.753	30.143
0.9 Dead+1.0 Wind 300 deg - No Ice	40.624	-34.162	-19.731	-1965.077	3354.962	30.143
1.2 Dead+1.0 Wind 330 deg - No Ice	54.166	-22.468	-38.901	-3838.315	2159.078	60.622
0.9 Dead+1.0 Wind 330 deg - No Ice	40.624	-22.468	-38.901	-3837.528	2173.287	60.622
1.2 Dead+1.0 Ice+1.0 Temp	121.983	0.000	0.000	5.307	-172.392	0.000

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Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	121.983	-0.002	-11.246	-1106.875	-172.001	22.177
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	121.983	5.269	-9.128	-903.521	-696.916	17.138
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	121.983	8.285	-4.782	-473.946	-1002.938	3.130
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	121.983	9.194	0.002	5.697	-1095.542	-6.386
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	121.983	8.573	4.951	498.449	-1026.214	-9.814
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	121.983	5.230	9.057	909.099	-694.459	-15.943
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	121.983	0.002	10.830	1084.798	-172.782	-22.177
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	121.983	-5.269	9.128	914.136	352.133	-17.138
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	121.983	-8.644	4.989	500.907	686.467	-3.130
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	121.983	-9.194	-0.002	4.917	750.759	6.386
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	121.983	-8.213	-4.743	-471.489	653.118	9.814
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	121.983	-5.230	-9.057	-898.485	349.676	15.943
Dead+Wind 0 deg - Service	45.138	-0.003	-10.855	-1050.617	-46.820	18.460
Dead+Wind 30 deg - Service	45.138	5.206	-9.020	-878.850	-553.002	17.863
Dead+Wind 60 deg - Service	45.138	7.972	-4.601	-452.090	-826.515	3.666
Dead+Wind 90 deg - Service	45.138	8.662	0.003	-2.079	-894.686	-5.637
Dead+Wind 120 deg - Service	45.138	8.472	4.893	471.374	-867.914	-6.742
Dead+Wind 150 deg - Service	45.138	5.154	8.924	866.796	-549.697	-13.574
Dead+Wind 180 deg - Service	45.138	0.003	10.150	988.502	-47.905	-18.460
Dead+Wind 210 deg - Service	45.138	-5.206	9.020	873.606	458.277	-17.863
Dead+Wind 240 deg - Service	45.138	-8.583	4.953	475.282	781.042	-3.666
Dead+Wind 270 deg - Service	45.138	-8.662	-0.003	-3.165	799.961	5.637
Dead+Wind 300 deg - Service	45.138	-7.861	-4.540	-448.183	723.937	6.742
Dead+Wind 330 deg - Service	45.138	-5.154	-8.924	-872.040	454.972	13.574
1.2 Dead+1.0 Ev+1.0 Eh 0 deg	56.416	0.000	-3.751	-436.711	-56.835	0.000
0.9 Dead-1.0 Ev+1.0 Eh 0 deg	38.374	0.000	-3.751	-435.924	-42.626	0.000
1.2 Dead+1.0 Ev+1.0 Eh 30 deg	56.416	1.875	-3.248	-378.624	-273.617	0.000
0.9 Dead-1.0 Ev+1.0 Eh 30 deg	38.374	1.875	-3.248	-377.838	-259.408	0.000
1.2 Dead+1.0 Ev+1.0 Eh 60 deg	56.416	3.248	-1.875	-219.929	-432.313	0.000
0.9 Dead-1.0 Ev+1.0 Eh 60 deg	38.374	3.248	-1.875	-219.142	-418.104	0.000
1.2 Dead+1.0 Ev+1.0 Eh 90 deg	56.416	3.751	0.000	-3.147	-490.399	0.000
0.9 Dead-1.0 Ev+1.0 Eh 90 deg	38.374	3.751	0.000	-2.360	-476.190	0.000
1.2 Dead+1.0 Ev+1.0 Eh 120 deg	56.416	3.248	1.875	213.636	-432.313	0.000
0.9 Dead-1.0 Ev+1.0 Eh 120 deg	38.374	3.248	1.875	214.422	-418.104	0.000
1.2 Dead+1.0 Ev+1.0 Eh 150 deg	56.416	1.875	3.248	372.331	-273.617	0.000
0.9 Dead-1.0 Ev+1.0 Eh 150 deg	38.374	1.875	3.248	373.118	-259.408	0.000
1.2 Dead+1.0 Ev+1.0 Eh 180 deg	56.416	0.000	3.751	430.418	-56.835	0.000
0.9 Dead-1.0 Ev+1.0 Eh 180 deg	38.374	0.000	3.751	431.204	-42.626	0.000
1.2 Dead+1.0 Ev+1.0 Eh 210 deg	56.416	-1.875	3.248	372.331	159.947	-0.000
0.9 Dead-1.0 Ev+1.0 Eh 210 deg	38.374	-1.875	3.248	373.118	174.156	-0.000
1.2 Dead+1.0 Ev+1.0 Eh 240	56.416	-3.248	1.875	213.636	318.643	-0.000

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Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
deg						
0.9 Dead-1.0 Ev+1.0 Eh 240	38.374	-3.248	1.875	214.422	332.852	-0.000
deg						
1.2 Dead+1.0 Ev+1.0 Eh 270	56.416	-3.751	0.000	-3.147	376.729	-0.000
deg						
0.9 Dead-1.0 Ev+1.0 Eh 270	38.374	-3.751	0.000	-2.360	390.938	-0.000
deg						
1.2 Dead+1.0 Ev+1.0 Eh 300	56.416	-3.248	-1.875	-219.929	318.643	-0.000
deg						
0.9 Dead-1.0 Ev+1.0 Eh 300	38.374	-3.248	-1.875	-219.142	332.852	-0.000
deg						
1.2 Dead+1.0 Ev+1.0 Eh 330	56.416	-1.875	-3.248	-378.624	159.947	-0.000
deg						
0.9 Dead-1.0 Ev+1.0 Eh 330	38.374	-1.875	-3.248	-377.838	174.156	-0.000
deg						

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-45.138	0.000	-0.000	45.138	-0.000	0.000%
2	-0.014	-54.166	-47.376	0.014	54.166	47.376	0.000%
3	-0.014	-40.624	-47.376	0.014	40.624	47.376	0.000%
4	22.702	-54.166	-39.333	-22.702	54.166	39.333	0.000%
5	22.702	-40.624	-39.333	-22.702	40.624	39.333	0.000%
6	34.657	-54.166	-20.001	-34.657	54.166	20.001	0.000%
7	34.657	-40.624	-20.001	-34.657	40.624	20.001	0.000%
8	37.598	-54.166	0.014	-37.598	54.166	-0.014	0.000%
9	37.598	-40.624	0.014	-37.598	40.624	-0.014	0.000%
10	36.887	-54.166	21.304	-36.887	54.166	-21.304	0.000%
11	36.887	-40.624	21.304	-36.887	40.624	-21.304	0.000%
12	22.468	-54.166	38.901	-22.468	54.166	-38.901	0.000%
13	22.468	-40.624	38.901	-22.468	40.624	-38.901	0.000%
14	0.014	-54.166	44.230	-0.014	54.166	-44.230	0.000%
15	0.014	-40.624	44.230	-0.014	40.624	-44.230	0.000%
16	-22.702	-54.166	39.333	22.702	54.166	-39.333	0.000%
17	-22.702	-40.624	39.333	22.702	40.624	-39.333	0.000%
18	-37.382	-54.166	21.574	37.382	54.166	-21.574	0.000%
19	-37.382	-40.624	21.574	37.382	40.624	-21.574	0.000%
20	-37.598	-54.166	-0.014	37.598	54.166	0.014	0.000%
21	-37.598	-40.624	-0.014	37.598	40.624	0.014	0.000%
22	-34.162	-54.166	-19.731	34.162	54.166	19.731	0.000%
23	-34.162	-40.624	-19.731	34.162	40.624	19.731	0.000%
24	-22.468	-54.166	-38.901	22.468	54.166	38.901	0.000%
25	-22.468	-40.624	-38.901	22.468	40.624	38.901	0.000%
26	0.000	-121.983	0.000	-0.000	121.983	-0.000	0.000%
27	-0.002	-121.983	-11.246	0.002	121.983	11.246	0.000%
28	5.269	-121.983	-9.128	-5.269	121.983	9.128	0.000%
29	8.285	-121.983	-4.782	-8.285	121.983	4.782	0.000%
30	9.194	-121.983	0.002	-9.194	121.983	-0.002	0.000%
31	8.573	-121.983	4.951	-8.573	121.983	-4.951	0.000%
32	5.230	-121.983	9.057	-5.230	121.983	-9.057	0.000%
33	0.002	-121.983	10.830	-0.002	121.983	-10.830	0.000%
34	-5.269	-121.983	9.128	5.269	121.983	-9.128	0.000%
35	-8.644	-121.983	4.989	8.644	121.983	-4.989	0.000%
36	-9.194	-121.983	-0.002	9.194	121.983	0.002	0.000%
37	-8.213	-121.983	-4.743	8.213	121.983	4.743	0.000%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
38	-5.230	-121.983	-9.057	5.230	121.983	9.057	0.000%
39	-0.003	-45.138	-10.855	0.003	45.138	10.855	0.000%
40	5.206	-45.138	-9.020	-5.206	45.138	9.020	0.000%
41	7.972	-45.138	-4.601	-7.972	45.138	4.601	0.000%
42	8.662	-45.138	0.003	-8.662	45.138	-0.003	0.000%
43	8.472	-45.138	4.893	-8.472	45.138	-4.893	0.000%
44	5.154	-45.138	8.924	-5.154	45.138	-8.924	0.000%
45	0.003	-45.138	10.150	-0.003	45.138	-10.150	0.000%
46	-5.206	-45.138	9.020	5.206	45.138	-9.020	0.000%
47	-8.583	-45.138	4.953	8.583	45.138	-4.953	0.000%
48	-8.662	-45.138	-0.003	8.662	45.138	0.003	0.000%
49	-7.861	-45.138	-4.540	7.861	45.138	4.540	0.000%
50	-5.154	-45.138	-8.924	5.154	45.138	8.924	0.000%
51	0.000	-56.416	-3.751	-0.000	56.416	3.751	0.000%
52	0.000	-38.374	-3.751	-0.000	38.374	3.751	0.000%
53	1.875	-56.416	-3.248	-1.875	56.416	3.248	0.000%
54	1.875	-38.374	-3.248	-1.875	38.374	3.248	0.000%
55	3.248	-56.416	-1.875	-3.248	56.416	1.875	0.000%
56	3.248	-38.374	-1.875	-3.248	38.374	1.875	0.000%
57	3.751	-56.416	0.000	-3.751	56.416	-0.000	0.000%
58	3.751	-38.374	0.000	-3.751	38.374	0.000	0.000%
59	3.248	-56.416	1.875	-3.248	56.416	-1.875	0.000%
60	3.248	-38.374	1.875	-3.248	38.374	-1.875	0.000%
61	1.875	-56.416	3.248	-1.875	56.416	-3.248	0.000%
62	1.875	-38.374	3.248	-1.875	38.374	-3.248	0.000%
63	0.000	-56.416	3.751	-0.000	56.416	-3.751	0.000%
64	0.000	-38.374	3.751	-0.000	38.374	-3.751	0.000%
65	-1.875	-56.416	3.248	1.875	56.416	-3.248	0.000%
66	-1.875	-38.374	3.248	1.875	38.374	-3.248	0.000%
67	-3.248	-56.416	1.875	3.248	56.416	-1.875	0.000%
68	-3.248	-38.374	1.875	3.248	38.374	-1.875	0.000%
69	-3.751	-56.416	0.000	3.751	56.416	-0.000	0.000%
70	-3.751	-38.374	0.000	3.751	38.374	0.000	0.000%
71	-3.248	-56.416	-1.875	3.248	56.416	1.875	0.000%
72	-3.248	-38.374	-1.875	3.248	38.374	1.875	0.000%
73	-1.875	-56.416	-3.248	1.875	56.416	3.248	0.000%
74	-1.875	-38.374	-3.248	1.875	38.374	3.248	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	170 - 160	2.210	39	0.114	0.026
T2	160 - 140	1.968	39	0.112	0.026
T3	140 - 120	1.513	39	0.100	0.023
T4	120 - 100	1.110	39	0.083	0.019
T5	100 - 80	0.773	39	0.068	0.014
T6	80 - 60	0.501	39	0.053	0.011
T7	60 - 40	0.294	39	0.038	0.008
T8	40 - 20	0.145	39	0.025	0.005
T9	20 - 0	0.045	39	0.013	0.003

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Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb.	in	°	°	ft
170'	Lightning Rod 1" x 5' on 5' Pole	39	2.210	0.114	0.026	241284
150'	CCISeismic (2) misc Side Lighting	39	1.735	0.107	0.025	98628
148'	MX08FRO665-20 w/ Mount Pipe	39	1.690	0.106	0.024	95156
145'	CCISeismic Tower Section 1	39	1.623	0.104	0.024	90382
144'	CCISeismic (2) andrew	39	1.600	0.103	0.024	88898
	LDF7-50A(1-5/8) From 8 to 148 (140ft to 148ft)					
135'	(2) 7770.00	39	1.407	0.096	0.022	78837
130'	CCISeismic Tower Section 2	39	1.304	0.092	0.021	74741
117'6"	CCISeismic Tower Section 3	39	1.064	0.081	0.018	68325
112'6"	CCISeismic Tower Section 4	39	0.976	0.077	0.017	69322
107'6"	CCISeismic Tower Section 5	39	0.891	0.073	0.016	70443
102'6"	CCISeismic Tower Section 6	39	0.811	0.069	0.015	71584
97'6"	CCISeismic Tower Section 7	39	0.735	0.066	0.014	72373
92'6"	CCISeismic Tower Section 8	39	0.663	0.062	0.013	72785
87'6"	CCISeismic Tower Section 9	39	0.595	0.059	0.012	73184
82'6"	CCISeismic Tower Section 10	39	0.532	0.055	0.011	73372
77'6"	CCISeismic Tower Section 11	39	0.472	0.052	0.011	74347
72'6"	CCISeismic Tower Section 12	39	0.416	0.048	0.010	76231
67'6"	CCISeismic Tower Section 13	39	0.365	0.044	0.009	78254
62'6"	CCISeismic Tower Section 14	39	0.317	0.040	0.009	80452
50'	CCISeismic Tower Section 15	39	0.213	0.031	0.007	94131
30'	CCISeismic Tower Section 16	39	0.088	0.019	0.004	84595
14'	CCISeismic (2) andrew	39	0.027	0.009	0.002	97411
	LDF7-50A(1-5/8) From 8 to 148 (8ft to 20ft)					
10'	CCISeismic Tower Section 17	39	0.018	0.007	0.001	136375

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load	Tilt	Twist
	ft	in	Comb.	°	°
T1	170 - 160	9.817	3	0.503	0.116
T2	160 - 140	8.739	3	0.494	0.114
T3	140 - 120	6.706	3	0.444	0.102
T4	120 - 100	4.913	2	0.371	0.083
T5	100 - 80	3.415	2	0.300	0.064
T6	80 - 60	2.212	2	0.236	0.049
T7	60 - 40	1.297	2	0.169	0.037
T8	40 - 20	0.636	2	0.111	0.024
T9	20 - 0	0.198	2	0.057	0.011

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb.	in	°	°	ft
170'	Lightning Rod 1" x 5' on 5' Pole	3	9.817	0.503	0.116	56299

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Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
150'	CCISeismic (2) miscel Side Lighting	3	7.697	0.474	0.110	23193
148'	MX08FRO665-20 w/ Mount Pipe	3	7.495	0.468	0.108	22404
145'	CCISeismic Tower Section 1	3	7.195	0.460	0.106	21317
144'	CCISeismic (2) andrew	3	7.096	0.457	0.105	20978
	LDF7-50A(1-5/8) From 8 to 148 (140ft to148ft)					
135'	(2) 7770.00	2	6.233	0.427	0.098	18528
130'	CCISeismic Tower Section 2	2	5.775	0.408	0.093	17471
117'6"	CCISeismic Tower Section 3	2	4.709	0.362	0.081	15676
112'6"	CCISeismic Tower Section 4	2	4.316	0.343	0.076	15838
107'6"	CCISeismic Tower Section 5	2	3.941	0.325	0.071	16026
102'6"	CCISeismic Tower Section 6	2	3.586	0.308	0.067	16215
97'6"	CCISeismic Tower Section 7	2	3.248	0.291	0.062	16332
92'6"	CCISeismic Tower Section 8	2	2.929	0.276	0.058	16373
87'6"	CCISeismic Tower Section 9	2	2.629	0.260	0.054	16411
82'6"	CCISeismic Tower Section 10	2	2.347	0.244	0.050	16458
77'6"	CCISeismic Tower Section 11	2	2.082	0.228	0.047	16690
72'6"	CCISeismic Tower Section 12	2	1.836	0.211	0.044	17126
67'6"	CCISeismic Tower Section 13	2	1.608	0.194	0.041	17593
62'6"	CCISeismic Tower Section 14	2	1.396	0.178	0.038	18101
50'	CCISeismic Tower Section 15	2	0.938	0.139	0.031	21196
30'	CCISeismic Tower Section 16	2	0.386	0.084	0.018	19108
14'	CCISeismic (2) andrew	2	0.120	0.040	0.008	22036
	LDF7-50A(1-5/8) From 8 to 148 (8ft to20ft)					
10'	CCISeismic Tower Section 17	2	0.080	0.029	0.005	30851

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	170	Leg	A325N	0.625	4	1.077	20.340	0.053	1.05	Bolt Tension
		Diagonal	A325N	0.625	1	2.529	8.135	0.311	1.05	Member Block Shear
		Top Girt	A325N	0.625	1	0.923	8.482	0.109	1.05	Member Bearing
T2	160	Leg	A325N	0.750	4	5.067	30.101	0.168	1.05	Bolt Tension
		Diagonal	A325N	0.750	1	4.161	12.615	0.330	1.05	Member Bearing
		Top Girt	A325N	0.625	1	0.469	8.482	0.055	1.05	Member Bearing
T3	140	Leg	A325N	0.875	4	10.726	41.556	0.258	1.05	Bolt Tension
		Diagonal	A325N	0.750	1	5.718	12.615	0.453	1.05	Member Bearing
T4	120	Leg	A325N	1.000	4	16.770	54.517	0.308	1.05	Bolt Tension
		Diagonal	A325N	0.750	1	6.708	13.485	0.497	1.05	Gusset Bearing
T5	100	Leg	A325N	1.000	6	14.855	54.517	0.272	1.05	Bolt Tension
		Diagonal	A325N	0.750	1	8.106	13.485	0.601	1.05	Gusset Bearing
T6	80	Leg	A325N	1.000	6	18.860	54.517	0.346	1.05	Bolt Tension
		Diagonal	A325N	0.750	1	9.176	13.485	0.680	1.05	Gusset Bearing
T7	60	Leg	A325N	1.000	8	17.072	54.517	0.313	1.05	Bolt Tension

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T8	40	Diagonal	A325N	0.750	1	9.639	13.485	0.715 ✓	1.05	Gusset Bearing
		Leg	A325N	1.000	8	19.970	54.517	0.366 ✓	1.05	Bolt Tension
T9	20	Diagonal	A325N	0.750	1	10.603	13.485	0.786 ✓	1.05	Gusset Bearing
		Diagonal	A490N	0.750	1	11.461	13.485	0.850 ✓	1.05	Gusset Bearing

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	ROHN 2.5 STD	10'	5'	63.3 K=1.00	1.704	-7.829	57.192	0.137 ¹ ✓
T2	160 - 140	ROHN 2.5 EH	20'13/32"	6'8-1/8"	86.7 K=1.00	2.254	-27.030	58.512	0.462 ¹ ✓
T3	140 - 120	ROHN 3 EH	20'7/16"	6'8-5/32"	70.5 K=1.00	3.016	-53.841	94.337	0.571 ¹ ✓
T4	120 - 100	ROHN 4 EH	20'13/32"	6'8-1/8"	54.3 K=1.00	4.407	-81.847	159.913	0.512 ¹ ✓
T5	100 - 80	ROHN 5 EH	20'7/16"	10'7/32"	65.4 K=1.00	6.112	-107.884	201.233	0.536 ¹ ✓
T6	80 - 60	ROHN 6 EHS	20'13/32"	10'7/32"	54.0 K=1.00	6.713	-136.930	244.063	0.561 ¹ ✓
T7	60 - 40	ROHN 6 EH	20'15/32"	10'7/32"	54.8 K=1.00	8.405	-165.948	303.714	0.546 ¹ ✓
T8	40 - 20	ROHN 8 EHS	20'13/32"	10'7/32"	41.2 K=1.00	9.719	-195.059	386.397	0.505 ¹ ✓
T9	20 - 0	ROHN 8 EHS	20'13/32"	10'7/32"	41.2 K=1.00	9.719	-224.423	386.397	0.581 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2x2x3/16	9'11-27/32"	4'8-3/4"	144.1 K=1.00	0.715	-2.555	9.859	0.259 ¹ ✓
T2	160 - 140	L2 1/2x2 1/2x1/4	12'3-23/32"	6'31/32"	148.6 K=1.00	1.190	-4.270	15.427	0.277 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T3	140 - 120	L2 1/2x2 1/2x1/4	14'1-1/8'	6'11-5/16"	169.7 K=1.00	1.190	-5.678	11.834	0.480 ¹ ✓
T4	120 - 100	L3x3x1/4	15'10-13/16"	7'9-17/32"	158.0 K=1.00	1.440	-6.764	16.515	0.410 ¹ ✓
T5	100 - 80	L3 1/2x3 1/2x1/4	19'1-27/32"	9'5-11/16"	163.8 K=1.00	1.690	-8.197	18.021	0.455 ¹ ✓
T6	80 - 60	L4x4x5/16	20'10-27/32"	10'3-7/16"	156.1 K=1.00	2.400	-9.274	28.206	0.329 ¹ ✓
T7	60 - 40	L4x4x5/16	22'9-11/32"	11'2-15/16"	170.6 K=1.00	2.400	-9.720	23.603	0.412 ¹ ✓
T8	40 - 20	L4x4x5/16	24'7-1/2"	12'11-1/16"	182.9 K=1.00	2.400	-10.877	20.532	0.530 ¹ ✓
T9	20 - 0	L4x4x3/8	26'5-9/16"	12'11-3/4"	197.6 K=1.00	2.860	-12.035	20.956	0.574 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2 1/2x2 1/2x3/16	8'7-3/4"	8'1-7/8"	197.7 K=1.00	0.902	-0.958	6.603	0.145 ¹ ✓
T2	160 - 140	L2 1/2x2 1/2x3/16	8'7-3/4"	8'1-7/8"	197.7 K=1.00	0.902	-0.469	6.603	0.071 ¹ ✓

¹ P_u / φP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	ROHN 2.5 STD	10'	5'	63.3	1.704	4.308	76.682	0.056 ¹ ✓
T2	160 - 140	ROHN 2.5 EH	20'13/32"	6'8-1/8"	86.7	2.254	20.266	101.409	0.200 ¹ ✓
T3	140 - 120	ROHN 3 EH	20'7/16"	6'8-5/32"	70.5	3.016	42.904	135.717	0.316 ¹ ✓
T4	120 - 100	ROHN 4 EH	20'13/32"	6'8-1/8"	54.3	4.407	67.081	198.335	0.338 ¹ ✓
T5	100 - 80	ROHN 5 EH	20'7/16"	10'7/32"	65.4	6.112	89.127	275.039	0.324 ¹ ✓

tnxTower B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
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	Project	Date
	Client	Designed by
	Crown Castle	Chinmaya

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T6	80 - 60	ROHN 6 EHS	20'13/32"	10'7/32"	54.0	6.713	113.158	302.097	0.375 ¹ ✓
T7	60 - 40	ROHN 6 EH	20'15/32"	10'7/32"	54.8	8.405	136.579	378.222	0.361 ¹ ✓
T8	40 - 20	ROHN 8 EHS	20'13/32"	10'7/32"	41.2	9.719	159.763	437.369	0.365 ¹ ✓
T9	20 - 0	ROHN 8 EHS	20'13/32"	10'7/32"	41.2	9.719	182.601	437.369	0.417 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2x2x3/16	9'11-27/32"	4'8-3/4"	94.4	0.431	2.529	18.739	0.135 ¹ ✓
T2	160 - 140	L2 1/2x2 1/2x1/4	12'3-23/32"	6'31/32"	97.0	0.728	4.161	31.687	0.131 ¹ ✓
T3	140 - 120	L2 1/2x2 1/2x1/4	14'1-1/8"	6'11-5/16"	110.4	0.728	5.718	31.687	0.180 ¹ ✓
T4	120 - 100	L3x3x1/4	15'10-13/16"	7'9-17/32"	102.3	0.916	6.708	44.652	0.150 ¹ ✓
T5	100 - 80	L3 1/2x3 1/2x1/4	19'1-27/32"	9'5-11/16"	105.8	1.103	8.106	53.793	0.151 ¹ ✓
T6	80 - 60	L4x4x5/16	20'10-27/32"	10'3-7/16"	100.9	1.595	9.176	77.752	0.118 ¹ ✓
T7	60 - 40	L4x4x5/16	22'9-11/32"	11'2-15/16"	110.1	1.595	9.639	77.752	0.124 ¹ ✓
T8	40 - 20	L4x4x5/16	24'7-1/2"	12'11/16"	118.0	1.595	10.603	77.752	0.136 ¹ ✓
T9	20 - 0	L4x4x3/8	26'5-9/16"	12'11-3/4"	127.9	1.899	11.461	92.572	0.124 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2 1/2x2 1/2x3/16	8'7-3/4"	8'1-7/8"	129.7	0.571	0.923	24.840	0.037 ¹ ✓
T2	160 - 140	L2 1/2x2 1/2x3/16	8'7-3/4"	8'1-7/8"	129.7	0.571	0.469	24.840	0.019 ¹ ✓

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	Project	Date
	Client	Designed by
	Crown Castle	Chinmaya

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
									✓

¹ P_u / φP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP _{allow} K	% Capacity	Pass Fail
T1	170 - 160	Leg	ROHN 2.5 STD	2	-7.829	60.052	13.0	Pass
T2	160 - 140	Leg	ROHN 2.5 EH	21	-27.030	61.437	44.0	Pass
T3	140 - 120	Leg	ROHN 3 EH	45	-53.841	99.054	54.4	Pass
T4	120 - 100	Leg	ROHN 4 EH	66	-81.847	167.909	48.7	Pass
T5	100 - 80	Leg	ROHN 5 EH	87	-107.884	211.295	51.1	Pass
T6	80 - 60	Leg	ROHN 6 EHS	102	-136.930	256.266	53.4	Pass
T7	60 - 40	Leg	ROHN 6 EH	117	-165.948	318.900	52.0	Pass
T8	40 - 20	Leg	ROHN 8 EHS	132	-195.059	405.717	48.1	Pass
T9	20 - 0	Leg	ROHN 8 EHS	147	-224.423	405.717	55.3	Pass
T1	170 - 160	Diagonal	L2x2x3/16	9	-2.555	10.352	24.7	Pass
T2	160 - 140	Diagonal	L2 1/2x2 1/2x1/4	28	-4.270	16.198	26.4	Pass
T3	140 - 120	Diagonal	L2 1/2x2 1/2x1/4	49	-5.678	12.425	45.7	Pass
T4	120 - 100	Diagonal	L3x3x1/4	70	-6.764	17.340	39.0	Pass
T5	100 - 80	Diagonal	L3 1/2x3 1/2x1/4	91	-8.197	18.922	43.3	Pass
T6	80 - 60	Diagonal	L4x4x5/16	106	-9.274	29.616	31.3	Pass
T7	60 - 40	Diagonal	L4x4x5/16	121	-9.720	24.783	39.2	Pass
T8	40 - 20	Diagonal	L4x4x5/16	136	-10.877	21.559	50.5	Pass
T9	20 - 0	Diagonal	L4x4x3/8	151	-12.035	22.004	54.7	Pass
T1	170 - 160	Top Girt	L2 1/2x2 1/2x3/16	4	-0.958	6.934	13.8	Pass
T2	160 - 140	Top Girt	L2 1/2x2 1/2x3/16	23	-0.469	6.934	6.8	Pass
Summary								
Leg (T9)							55.3	Pass
Diagonal (T9)							54.7	Pass
Top Girt (T1)							13.8	Pass
Bolt Checks							80.9	Pass
RATING =							80.9	Pass

APPENDIX B
BASE LEVEL DRAWING

(OTHER CONSIDERED EQUIPMENT)
(1) 1-1/2" TO 148 FT LEVEL

(OTHER CONSIDERED EQUIPMENT--IN 2" CONDUIT)
(1) 3/8" TO 135 FT LEVEL
(2) 7/16" TO 135 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(12) 1-1/4" TO 135 FT LEVEL

LEG A

LEG B

(PROPOSED EQUIPMENT CONFIGURATION)
(18) 1-5/8" TO 170 FT LEVEL

LEG C

BUSINESS UNIT: 807134

APPENDIX C
ADDITIONAL CALCULATIONS

Self Support Anchor Rod Capacity



Site Info	
BU #	807134
Site Name	NHV 031B 943108, CT
Order #	552653, Rev 0

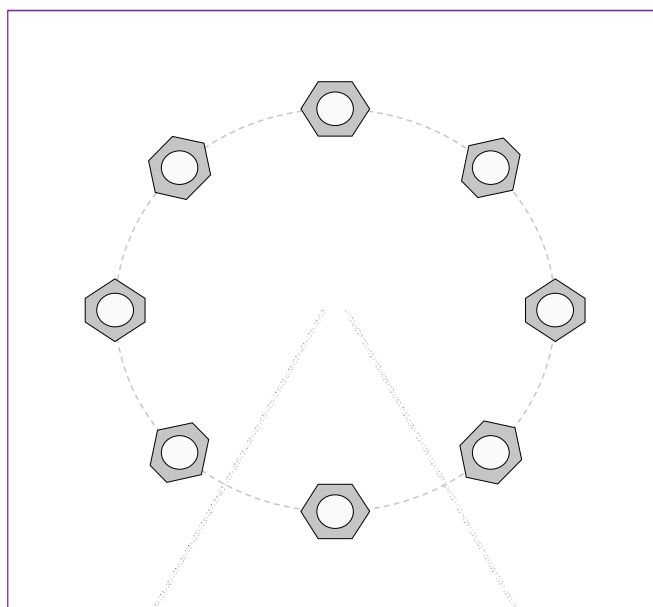
Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	Yes
l_{ar} (in)	0

Applied Loads		
	Comp.	Uplift
Axial Force (kips)	231.82	188.26
Shear Force (kips)	29.31	24.66

*TIA-222-H Section 15.5 Applied

Considered Eccentricity	
Leg Mod Eccentricity (in)	0.000
Anchor Rod N.A Shift (in)	0.000
Total Eccentricity (in)	0.000

*Anchor Rod Eccentricity Applied



Connection Properties

Analysis Results

Anchor Rod Data

(8) 1" ϕ bolts (A354-BC N; $F_y=109$ ksi, $F_u=125$ ksi)
 l_{ar} (in): 0

Anchor Rod Summary

(units of kips, kip-in)

$P_{u,t} = 23.53$	$\phi P_{n,t} = 56.81$	Stress Rating
$V_u = 3.08$	$\phi V_n = 36.82$	39.4%
$M_u = n/a$	$\phi M_n = n/a$	Pass

SST Unit Base Foundation



BU # : 807134
 Site Name: NHV 031B
 App. Number: 552653, Rev 0.

TIA-222 Revision: H

Top & Bot. Pad Rein. Different?:	☐
Tower Centroid Offset?:	☐
Block Foundation?:	☒
Rectangular Pad?:	☐

Superstructure Analysis Reactions		
Global Moment, M :	4629	ft-kips
Global Axial, P :	54	kips
Global Shear, V :	47	kips
Leg Compression, P_{comp} :	232	kips
Leg Comp. Shear, V_{u_comp} :	29	kips
Leg Uplift, P_{uplift} :	188	kips
Leg Uplift. Shear, V_{u_uplift} :	25	kips
Tower Height, H :	170	ft
Base Face Width, BW :	25	ft
BP Dist. Above Fdn, bp_{dist} :	4	in
Anchor Bolt Circle, BC :	14	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	327.01	47.00	13.7%	Pass
<i>Bearing Pressure (ksf)</i>	60.00	1.83	2.9%	Pass
<i>Overturning (kip*ft)</i>	11156.47	4832.67	43.3%	Pass
<i>Pad Flexure (kip*ft)</i>	4757.68	947.45	19.0%	Pass
<i>Pad Shear - 1-way (kips)</i>	1464.43	127.02	8.3%	Pass
<i>Pad Shear - Comp 2-way (ksi)</i>	0.164	0.029	16.7%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	2499.77	0.00	0.0%	Pass
<i>Pad Shear - Tension 2-way (ksi)</i>	0.164	0.023	13.5%	Pass
<i>Flexural 2-way (Tension) (kip*ft)</i>	2499.77	0.00	0.0%	Pass

*Rating per TIA-222-H Section 15.5

Soil Rating*:	43.3%
Structural Rating*:	19.0%

Pad Properties		
Depth, D :	3.50	ft
Pad Width, W₁ :	34.00	ft
Pad Thickness, T :	4.00	ft
Pad Rebar Size (Bottom dir. 2), sp₂ :	7	
Pad Rebar Quantity (Bottom dir. 2), mp₂ :	41	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, Fy :	60	ksi
Concrete Compressive Strength, F'c :	3	ksi
Dry Concrete Density, δc :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	170	pcf
Ultimate Gross Bearing, Qult :	80.000	ksf
Cohesion, Cu :		ksf
Friction Angle, φ :		degrees
SPT Blow Count, N_{blows} :		
Base Friction, μ :	0.65	
Neglected Depth, N :	3.3	ft
Foundation Bearing on Rock?	Yes	
Groundwater Depth, gw :	N/A	ft

<-- Toggle between Gross and Net

SST Unit Base Foundation



BU #: 807134
 Site Name: NHV 031B
 App. Number: 552653, Rev 0.

TIA-222 Revision: H

Top & Bot. Pad Rein. Different?:	☐
Tower Centroid Offset?:	☐
Block Foundation?:	☒
Rectangular Pad?:	☐

***Service Wind Reactions

Superstructure Analysis Reactions		
Global Moment, M :	1052	ft-kips
Global Axial, P :	45	kips
Global Shear, V :	11	kips
Leg Compression, P_{comp} :	64	kips
Leg Comp. Shear, V_{u_comp} :	8	kips
Leg Uplift, P_{uplift} :	31	kips
Leg Uplift. Shear, V_{u_uplift} :	5	kips
Tower Height, H :	170	ft
Base Face Width, BW :	25	ft
BP Dist. Above Fdn, bp_{dist} :	4	in
Anchor Bolt Circle, BC :	14	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	323.72	11.00	3.2%	Pass
<i>Bearing Pressure (ksf)</i>	60.00	1.00	1.6%	Pass
<i>Overtuning (kip*ft)</i>	11044.63	1099.67	10.0%	Pass
<i>Pad Flexure (kip*ft)</i>	4757.68	253.83	5.1%	Pass
<i>Pad Shear - 1-way (kips)</i>	1464.43	33.90	2.2%	Pass
<i>Pad Shear - Comp 2-way (ksi)</i>	0.164	0.008	4.6%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	2499.77	0.00	0.0%	Pass
<i>Pad Shear - Tension 2-way (ksi)</i>	0.164	0.004	2.2%	Pass
<i>Flexural 2-way (Tension) (kip*ft)</i>	2499.77	0.00	0.0%	Pass

*Rating per TIA-222-H Section 15.5

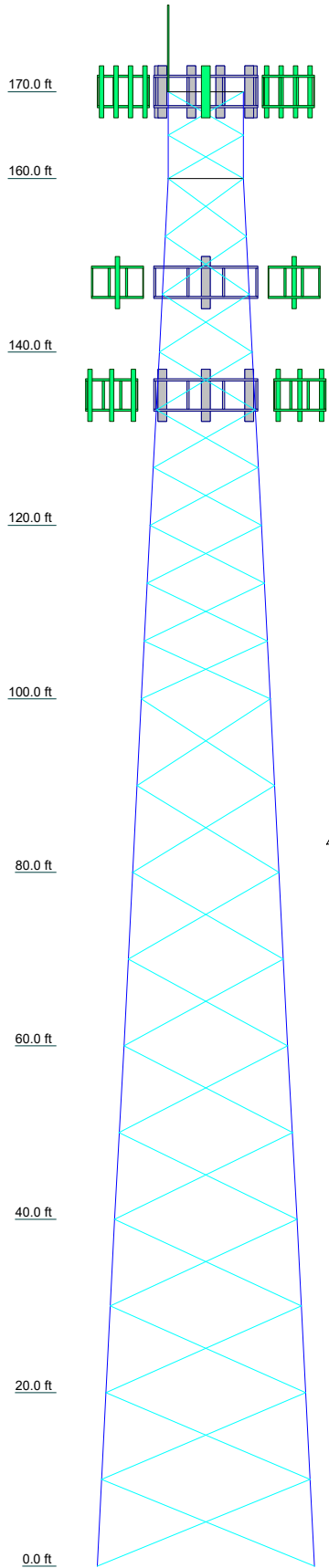
Pad Properties		
Depth, D :	3.50	ft
Pad Width, W₁ :	34.00	ft
Pad Thickness, T :	4.00	ft
Pad Rebar Size (Bottom dir. 2), Sp₂ :	7	
Pad Rebar Quantity (Bottom dir. 2), mp₂ :	41	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, Fy :	60	ksi
Concrete Compressive Strength, F'c :	3	ksi
Dry Concrete Density, δc :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	170	pcf
Ultimate Gross Bearing, Qult :	80.000	ksf
Cohesion, Cu :		ksf
Friction Angle, φ :		degrees
SPT Blow Count, N_{blows} :		
Base Friction, μ :	0.65	
Neglected Depth, N :	3.3	ft
Foundation Bearing on Rock?	Yes	
Groundwater Depth, gw :	N/A	ft

<-- Toggle between Gross and Net

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	
Legs		ROHN 2.5 EH	ROHN 3 EH	ROHN 4 EH	ROHN 5 EH	ROHN 6 EHS	ROHN 6 EH	ROHN 8 EHS		
Leg Grade										
Diagonals	L2x2x3/16									
Diagonal Grade										
Top Girts										
Face Width (ft)	8.64583									
# Panels @ (ft)	2 @ 5									
Weight (K)	0.6									



SYMBOL LIST			
MARK	SIZE	MARK	SIZE
A	ROHN 2.5 STD		

MATERIAL STRENGTH					
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed in accordance with the TIA-222-H Standard.
3. Deflections are based upon a 60 mph wind.
4. Tower Risk Category II.
5. Topographic Category 1 with Crest Height of 0'
6. TIA-222-H Annex S
7. TOWER RATING: 10.9%

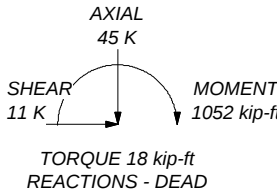
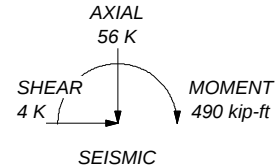
***Service Wind Reactions

ALL REACTIONS
ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 64 K
SHEAR: 8 K

UPLIFT: -31 K
SHEAR: 5 K



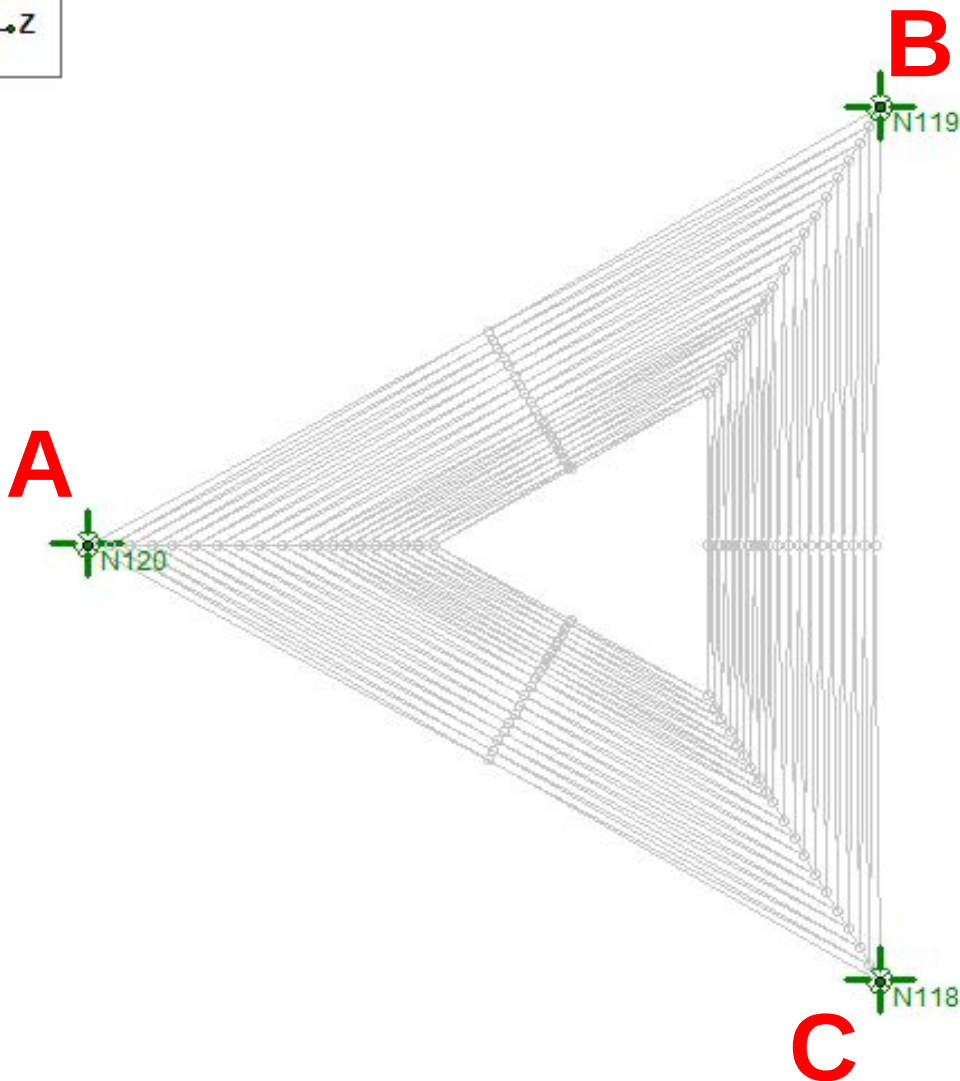
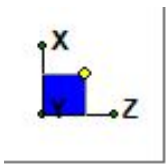


B+T Group
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Phone: (918) 587-4630
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Job:	150161.001.01 - NHV 031B 943108, CT (BU# 807134)		
Project:			
Client:	Crown Castle	Drawn by:	Chinmaya
Code:	TIA-222-H	Date:	04/29/21
Path:			Scale: NTS
			Dwg No. E-1

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N118	max	23.312	18	211.103	18	10.948	5	0	74	.005	16	0	74
2		min	-19.428	7	-171.719	7	-12.999	18	0	1	-.005	5	0	1
3	N119	max	18.575	23	213.857	10	13.592	25	0	74	.003	16	0	74
4		min	-22.556	10	-166.495	23	-14.991	12	0	1	-.003	5	0	1
5	N120	max	3.732	20	232.538	2	29.179	2	0	74	.005	17	0	74
6		min	-3.758	11	-188.766	15	-24.654	15	0	1	-.005	4	0	1
7	Totals:	max	37.598	21	121.982	35	47.376	3						
8		min	-37.598	8	38.376	52	-44.23	14						



CONCRETE BREAKOUT CHECK

BU#: 807134

Site Name: NHV 031B 943108, CT

Project Number: 552653, Rev 0.



LEG A

Inputs	
Anchor Rod diameter (db)	1 in
Bolt Circle of Anchor rods (B.C)	14 in
Anchor rod embedment (hef)	68 in
Number of Anchor rods	8
Uplift Reaction (LC-7)	188.766 Kips
Service Wind Moment (Demand pad flexure)	253.83 K-ft
Compressive Strength of Concrete (fc')	3000 Psi
Pad Width (B)	408 in
Pad thickness (D)	48 in

Foundation Breakout

(Per ACI 318-14)

Asumption Bolt template plate edge distance, $1.5 \times d_b = 1.5$ in

There are 2 edges, total edge distance is, $1.5 \times d_b \times 2 = 3$ in

ACI 318-14 Breakout-----

$S_1 = S_2 = \text{Bolt circle of anchor} + \text{total edge dist} = 17$ in

Anchor Pull out Strength

Nut distance across flats 1.625 in

Nut Bearing Area: $A_{brg} = 1.61$ in²

Number of Anchor rods 8

Tension Pullout Strength (N_p) $8 \times A_{brg} \times f'_c$
38.56 K

ACI 318-14 Section 17.4.3.4

Applied Tension load per Bolt:
(N_u) 23.59575

Anchor rod Pullout rating **58.28%**

Since, $H_{ef} > 25$ inch and Anchor rod pullout is passing, using ACI 318-14 Eq. 17.4.2.2 b as per commentary

Basic Concrete Breakout,

$$N_b = 16 \times \lambda \times \sqrt{f'_c} \times (h_{ef})^{5/3}$$

$K_c = 24$ (For cast in place) (Note: K_c is 17 for post installed anchors)

$\lambda = 1$ (Normal wt. conc)

$N_b = 992800.829$ lbs

$N_b = 992.80$ Kips

Anchor Factors,

$$N_{cbg} = \frac{A_{NC}}{A_{NCO}} \times \psi_{ec,N} \times \psi_{ed,N} \times \psi_{c,N} \times \psi_{cp,N} \times N_b$$

$$A_{NC} = (C_{a1} + S_1 + 1.5h_{ef}) \times (C_{a2} + S_2 + 1.5h_{ef}) \quad \text{--for 4 no of anchors}$$

$$C_{a1} < C_{a2} < 1.5h_{ef} \quad \text{-----} \quad \text{(limited by edge distance)}$$

$$S_1 = S_2 = 17$$

$$A_{NC} = 30475.3 \text{ sq.in} = 211.634 \text{ sqft} \quad \text{From CAD}$$

$$A_{NCO} = 9xh_{ef}^2$$

$$A_{NCO} = 41616 \text{ sq.in} = 289 \text{ sqft}$$

$$C_{a_Min} = 23.7949$$

$$\psi_{ec,N} = 1 \quad \text{-----}$$

$$\psi_{ed,N} = 0.77 \quad \text{-----} \quad \text{(For } C_a < 1.5h_{ef} \text{)}$$

$$\psi_{c,N} = 1 \quad \text{-----} \quad \text{(Conservative assume for cracked)}$$

$$\psi_{cp,N} = 1 \quad \text{-----} \quad \text{Cast in anchors}$$

$$N_{cbg} = 559.80 \text{ Kips}$$

$$\text{Strength Reduction, } \phi = 0.75 \quad \text{-----}$$

$$\phi N_{cbg} = 419.85 \text{ Kips} \quad \text{-----}$$

$$\underline{\underline{\mu_u \cdot M_{cr} \text{ --Uncracked Concrete Breakout}}} \quad \text{-----} \quad \text{ACI 318-14}$$

Flexural M_{cr} Considering Uncracked,

$$M_{cr} = \frac{f_r \times I_g}{Y_t}$$

$$f_r = 7.5 \times \lambda \times \sqrt{f_c'}$$

$$f_r = 410.79 \text{ Psi} = 0.411 \text{ Ksi}$$

$$I_g = \frac{B \times D^3}{12}$$

$$I_g = 3760128 \text{ in}^4$$

$$Y_t = 24 \text{ in}$$

$$M_{cr} = 64359.59 \text{ K-in} = 5363.30 \text{ K-ft}$$

Strength Reduction, $\phi=0.65$ ----- ACI 14 th

$$\phi M_{cr} = 3486.14 \text{ K-ft}$$

Service Wind Moment (Demand pad flexure)= 253.83 K-ft

$$3486.14 \text{ K-ft} > 253.83 \text{ K-ft} \text{ .Therefore its Uncracked.}$$

Uncracked Concrete -Cast in Place Anchors

$$N_{cbg} = \frac{A_{NC}}{A_{NCO}} \times \psi_{ec} \times N\psi_{ed} \times N\psi_c \times N\psi_{CN} \times N\psi_b$$

, $N\psi_{CN}=1.25$ for Cast in Anchors

$$N_{cbg} = 699.75 \text{ K}$$

Strength Reduction, $\phi=0.75$ ----- ACI 14th

$$\phi N_{cbg} = 524.81 \text{ Kips}$$

----- ACI 14th

Uplift (LC 7)= 188.766 K

Concrete Breakout = Uplift (LC 7)/(ϕN_{cbg}) = 0.359683

Concrete Breakout Rating = 34.26 % ----- (Rev H TIA)

Foundation is sufficient for concrete breakout

CONCRETE BREAKOUT CHECK

BU#: 807134

Site Name: NHV 031B 943108, CT

Project Number: 552653, Rev 0.



LEG B & C

Inputs	
Anchor Rod diameter (db)	1 in
Bolt Circle of Anchor rods (B.C)	14 in
Anchor rod embedment (hef)	68 in
Number of Anchor rods	8
Uplift Reaction (LC-7)	171.719 Kips
Service Wind Moment (Demand pad flexure)	253.83 K-ft
Compressive Strength of Concrete (fc')	3000 Psi
Pad Width (B)	408 in
Pad thickness (D)	48 in

Foundation Breakout

(Per ACI 318-14)

Asumption Bolt template plate edge distance, $1.5 \times d_b = 1.5$ in

There are 2 edges, total edge distance is, $1.5 \times d_b \times 2 = 3$ in

ACI 318-14 Breakout-----

$S_1 = S_2 = \text{Bolt circle of anchor} + \text{total edge dist} = 17$ in

Anchor Pull out Strength

Nut distance across flats 1.625 in

Nut Bearing Area: $A_{brg} = 1.61$ in²

Number of Anchor rods 8

Tension Pullout Strength (N_p) $8 \times A_{brg} \times f'_c$
38.56 K

ACI 318-14 Section 17.4.3.4

Applied Tension load per Bolt:
(N_u) 21.464875

Anchor rod Pullout rating **53.02%**

Since, $H_{ef} > 25$ inch and Anchor rod pullout is passing, using ACI 318-14 Eq. 17.4.2.2 b as per commentary

Basic Concrete Breakout,

$$N_b = 16 \times \lambda \times \sqrt{f'_c} \times (h_{ef})^{5/3}$$

$K_c = 24$ (For cast in place) (Note: K_c is 17 for post installed anchors)

$\lambda = 1$ (Normal wt. conc)

$N_b = 992800.829$ lbs

$N_b = 992.80$ Kips

Anchor Factors,

$$N_{cbg} = \frac{A_{NC}}{A_{NCO}} \times \psi_{ec,N} \times \psi_{ed,N} \times \psi_{c,N} \times \psi_{cp,N} \times N_b$$

$$A_{NC} = (C_{a1} + S_1 + 1.5h_{ef}) \times (C_{a2} + S_2 + 1.5h_{ef}) \quad \text{--for 4 no of anchors}$$

$$C_{a1} < C_{a2} < 1.5h_{ef} \quad \text{-----} \quad \text{(limited by edge distance)}$$

$$S_1 = S_2 = 17$$

$$A_{NC} = 35534.02 \text{ sq.in} = 246.764 \text{ sqft} \quad \text{From CAD}$$

$$A_{NCO} = 9 \times h_{ef}^2$$

$$A_{NCO} = 41616 \text{ sq.in} = 289 \text{ sqft}$$

$$C_{a_Min} = 47$$

$$\psi_{ec,N} = 1 \quad \text{-----}$$

$$\psi_{ed,N} = 0.84 \quad \text{-----} \quad \text{(For } C_a < 1.5h_{ef} \text{)}$$

$$\psi_{c,N} = 1 \quad \text{-----} \quad \text{(Conservative assume for cracked)}$$

$$\psi_{cp,N} = 1 \quad \text{-----} \quad \text{Cast in anchors}$$

$$N_{cbg} = 710.58 \text{ Kips}$$

$$\text{Strength Reduction, } \phi = 0.75 \quad \text{-----}$$

$$\phi N_{cbg} = 532.93 \text{ Kips} \quad \text{-----}$$

$$\underline{\underline{\mu_u \cdot M_{cr} \text{ --Uncracked Concrete Breakout}}} \quad \text{-----} \quad \text{ACI 318-14}$$

Flexural M_{cr} Considering Uncracked,

$$M_{cr} = \frac{f_r \times I_g}{Y_t}$$

$$f_r = 7.5 \times \lambda \times \sqrt{f_c'}$$

$$f_r = 410.79 \text{ Psi} = 0.411 \text{ Ksi}$$

$$I_g = \frac{B \times D^3}{12}$$

$$I_g = 3760128 \text{ in}^4$$

$$Y_t = 24 \text{ in}$$

$$M_{cr} = 64359.59 \text{ K-in} = 5363.30 \text{ K-ft}$$

Strength Reduction, $\phi=0.65$ ----- ACI 14 th

$$\phi M_{cr} = 3486.14 \text{ K-ft}$$

Service Wind Moment (Demand pad flexure)= 253.83 K-ft

$$3486.14 \text{ K-ft} > 253.83 \text{ K-ft} \text{ .Therefore its Uncracked.}$$

Uncracked Concrete -Cast in Place Anchors

$$N_{cbg} = \frac{A_{NC}}{A_{NCO}} \times \psi_{ec} \times N\psi_{ed} \times N\psi_c \times N\psi_{CN} \times N\psi_b$$

, $N\psi_{CN}=1.25$ for Cast in Anchors

$$N_{cbg} = 888.22 \text{ K}$$

Strength Reduction, $\phi=0.75$ ----- ACI 14th

$$\phi N_{cbg} = 666.17 \text{ Kips}$$

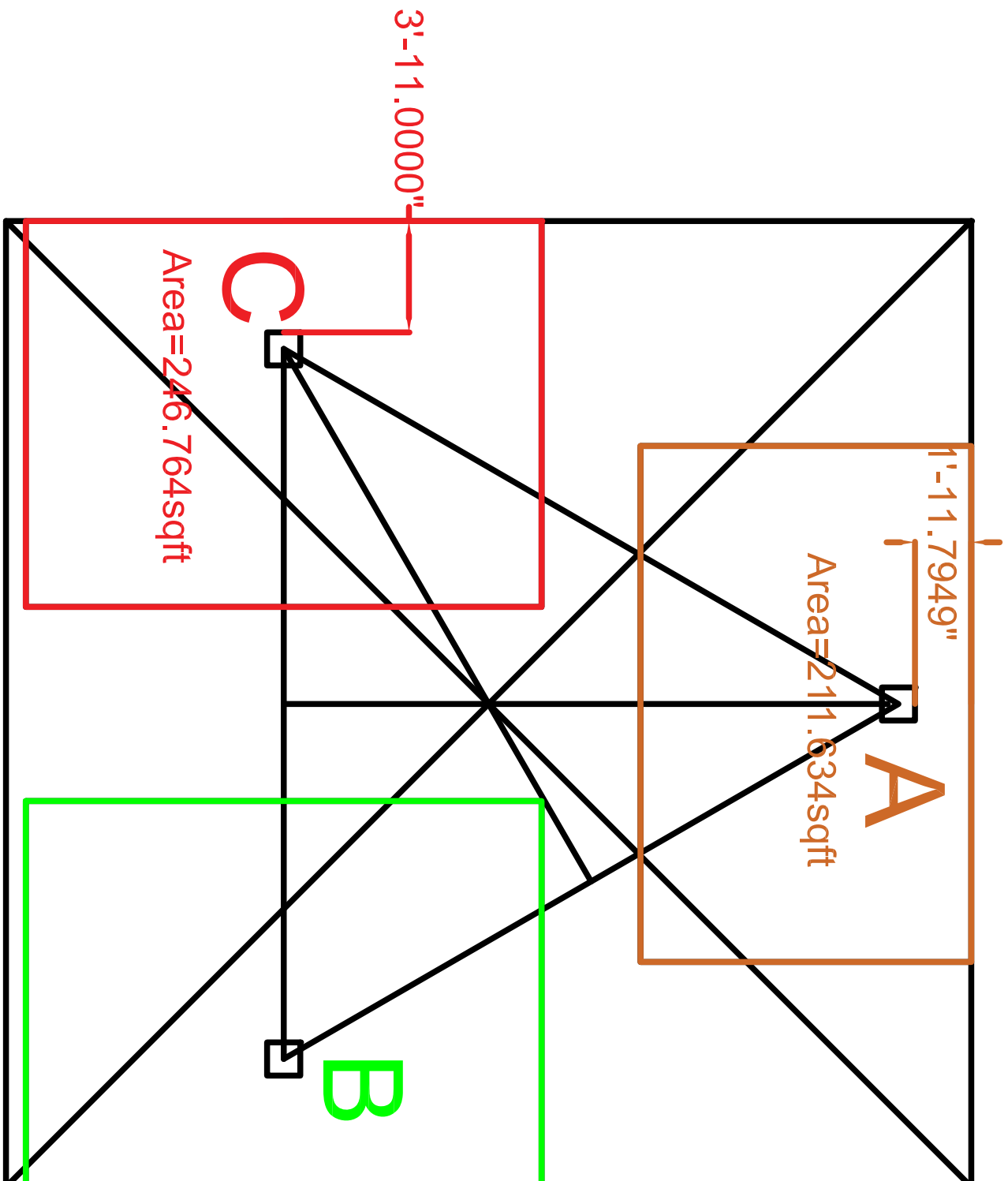
----- ACI 14th

Uplift (LC 7)= 171.719 K

Concrete Breakout = Uplift (LC 7)/(ϕN_{cbg}) = 0.257772

Concrete Breakout Rating = 24.55 % ----- (Rev H TIA)

Foundation is sufficient for concrete breakout

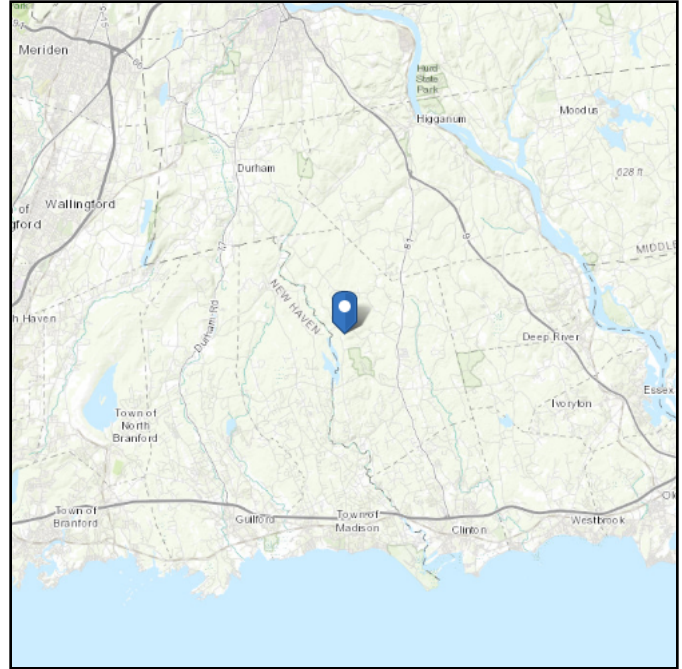


ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 381.75 ft (NAVD 88)
Latitude: 41.386092
Longitude: -72.603997

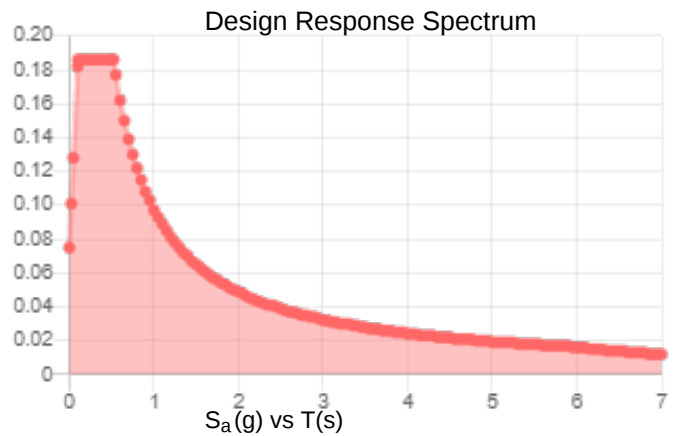
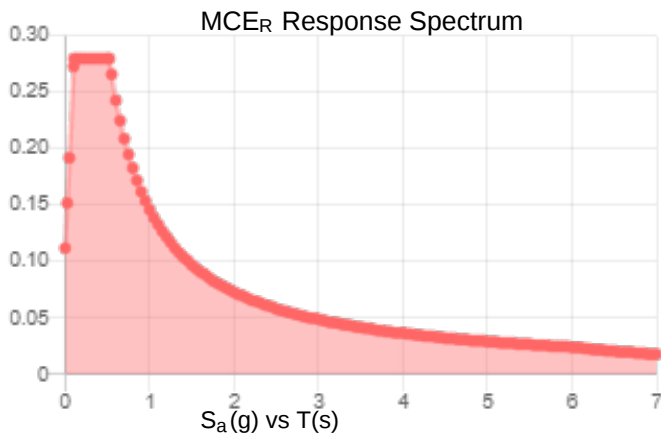


Site Soil Class: D - Stiff Soil

Results:

S_S :	0.175	S_{DS} :	0.186
S_1 :	0.061	S_{D1} :	0.097
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.089
S_{MS} :	0.28	PGA_M :	0.142
S_{M1} :	0.146	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Sat Apr 24 2021

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Results:

Ice Thickness: 0.75 in.
Concurrent Temperature: 15 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Sat Apr 24 2021

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Exhibit E

Mount Analysis



Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
(856) 797-0412
peter.albano@colliersengineering.com

Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10052217
Maser Consulting Connecticut Project #: 21777341A

April 22, 2021

Site Information

Site ID: 470988-VZW / KILLINGWORTH 2 CT
Site Name: KILLINGWORTH 2 CT
Carrier Name: Verizon Wireless
Address: Chestnut Hill Rd LOT 7
Killingworth, Connecticut 06419
Middlesex County
Latitude: 41.386139°
Longitude: -72.604056°

Structure Information

Tower Type: 170-Ft Self Support
Mount Type: 15.17-Ft Sector Frame

FUZE ID # 16271961

Analysis Results

Sector Frame: 93.8% Pass

*****Contractor PMI Requirements:**

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

Contractor - Please Review Specific Site PMI Requirements Upon Award

Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

Report Prepared By: Ella Khosravi



Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS Site ID: 324178, dated February 22, 2021
Mount Mapping Report	RKS Design & Engineering LLC., Site ID: CC: 807134, VZW: 470988, dated March 19, 2021

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 122 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: B Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.986
Seismic Parameters:	S_s : 0.212 S_1 : 0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, L_v : 250 lbs. Maintenance Live Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V17)

Final Loading Configuration:

The following equipment has been considered for the analysis of the mount:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
167.50	169.90	6	Amphenol Antel	LPA-80063-6CF	Retained
		6	Commscope	JAHH-65B-R3B	Added
		3	Samsung	MT6407-77A	
		3	Commscope	CBC78T-DS-43-2X	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RVZDC-6627-PF-48	

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by Maser Consulting Connecticut, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
- Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - HSS (Rectangular) ASTM 500 (Gr. B-46)
 - Pipe ASTM A53 (Gr. B-35)
 - Threaded Rod F1554 (Gr. 36)
 - Bolts ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
<i>Standoff Vertical</i>	<i>13.7%</i>	<i>Pass</i>
<i>Bar Plate</i>	<i>16.8%</i>	<i>Pass</i>
<i>Antenna Pipe</i>	<i>61.8%</i>	<i>Pass</i>
<i>Tie Back</i>	<i>25.2%</i>	<i>Pass</i>
<i>Face Horizontal</i>	<i>55.1%</i>	<i>Pass</i>
<i>Standoff Diagonal</i>	<i>9.3%</i>	<i>Pass</i>
<i>Standoff Face Vertical</i>	<i>82.1%</i>	<i>Pass</i>
<i>Standoff Horizontal</i>	<i>56.2%</i>	<i>Pass</i>
<i>Back Plate</i>	<i>93.8%</i>	<i>Pass</i>
<i>Connection Check</i>	<i>10.1%</i>	<i>Pass</i>
Structure Rating – (Controlling Utilization of all Components)		93.8%

Recommendation:

The existing mount is **SUFFICIENT** for the final loading configuration and do not require modifications.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. Contractor Required Post Installation Inspection (PMI) Report Deliverables
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter





Antenna Mount Mapping Form (PATENT PENDING)

FCC #
UNKNOWN

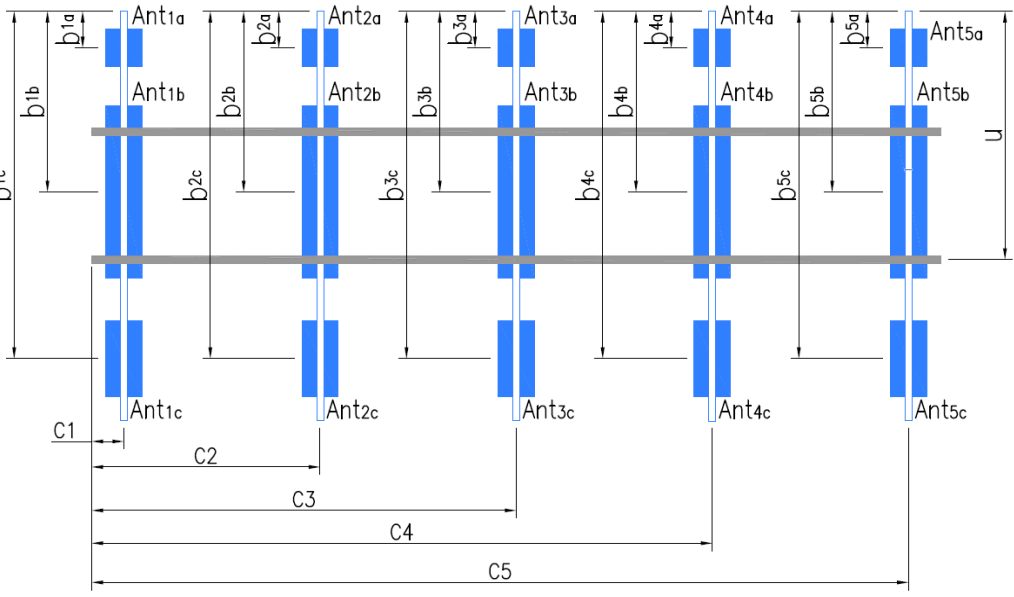
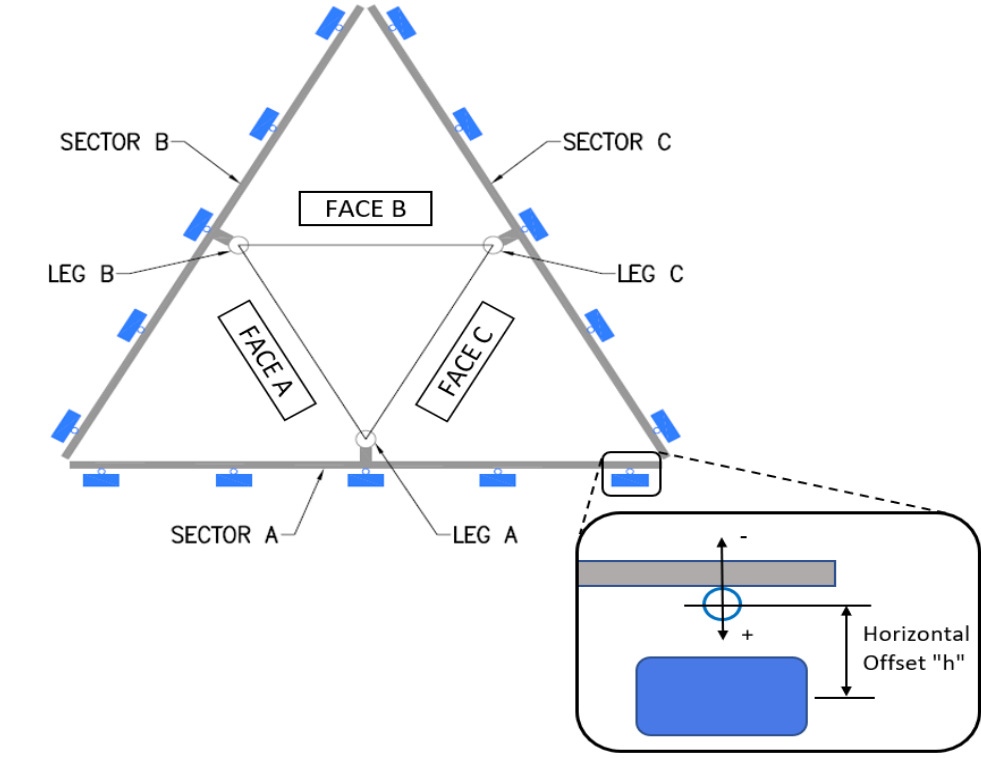
Tower Owner:	CROWN CASTLE	Mapping Date:	3/19/2021
Site Name:	CC: NHV 031B, VZW: Killingworth 2 Ct.	Tower Type:	Self Support
Site Number or ID:	CC: 807134, VZW: 470988	Tower Height (Ft.):	170
Mapping Contractor:	RKS Design & Engineering LLC.	Mount Elevation (Ft.):	167.5

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Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE 2.375"Ø X 0.21" X 96" Long	92.50	3.50	C1	PIPE 2.375"Ø X 0.21" X 96" Long	92.50	3.50
A2	PIPE 2.375"Ø X 0.18" X 84" Long	79.00	44.50	C2	PIPE 2.375"Ø X 0.18" X 84" Long	79.00	44.50
A3	PIPE 2.375"Ø X 0.21" X 96" Long	91.00	92.00	C3	PIPE 2.375"Ø X 0.21" X 96" Long	91.00	92.00
A4	PIPE 2.375"Ø X 0.15" X 125" Long	119.50	139.00	C4	PIPE 2.375"Ø X 0.15" X 125" Long	119.50	139.00
A5	PIPE 2.375"Ø X 0.21" X 96" Long	91.50	178.50	C5	PIPE 2.375"Ø X 0.21" X 96" Long	91.50	178.50
A6				C6			
B1	PIPE 2.375"Ø X 0.21" X 96" Long	92.50	3.50	D1			
B2	PIPE 2.375"Ø X 0.21" X 96" Long	92.50	44.50	D2			
B3	PIPE 2.375"Ø X 0.15" X 125" Long	119.50	92.00	D3			
B4	PIPE 2.375"Ø X 0.18" X 84" Long	79.00	139.00	D4			
B5	PIPE 2.375"Ø X 0.21" X 96" Long	91.50	178.50	D5			
B6				D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							21.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :							
Please enter additional information or comments below.							
Tower Face Width at Mount Elev. (ft.):			8.5	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):			2.875

	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b _{1a} , b _{2a} , b _{3a} , b _{1b} ..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant _{1a}										
Ant _{1b}	LPA 80063/6CF EDIN	15.20	13.10	71.10		168.496	59.55	14.55	15.00	12, 211
Ant _{1c}										
Ant _{2a}										
Ant _{2b}	LPA-171063-12CF-ED	7.90	8.00	73.90		169.254	36.95	9.50	15.00	12, 211
Ant _{2c}										
Ant _{3a}										
Ant _{3b}	BXA-70063/6CF E-DIN	11.20	5.20	71.00		169.125	50.50	11.60	15.00	12, 212,213
Ant _{3c}										
Ant _{4a}										
Ant _{4b}	LPA-171063-12CF-ED	7.90	8.00	73.90		169.088	79.45	10.00	15.00	12, 212,213
Ant _{4c}										
Ant _{5a}										
Ant _{5b}	LPA 80063/6CF EDIN	15.20	13.10	71.10		167.913	65.55	14.55	15.00	12, 214,215
Ant _{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										



Antenna Layout (Looking Out From Tower)

[illegible]

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1	COAX TOTAL (18): (18) FH 1 5/8	
2		
3		
4		
5		
6		
7		
8		

Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.) 2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness. 3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab. 4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type. 5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required. 6. Please measure and report the size and length of all existing antenna mounting pipes. 7. Please measure and report the antenna information for all sectors. 8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.



Antenna Mount Mapping Form (PATENT PENDING)

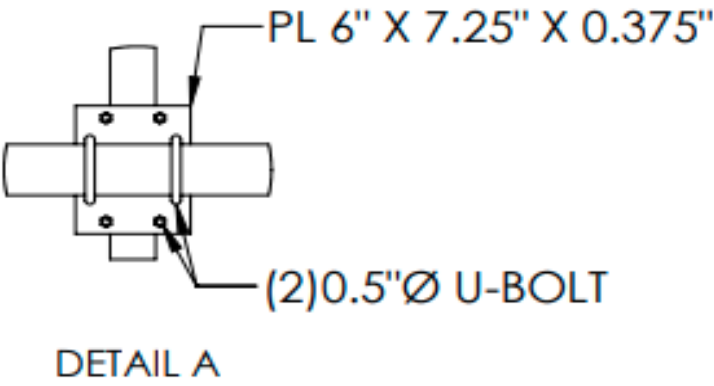
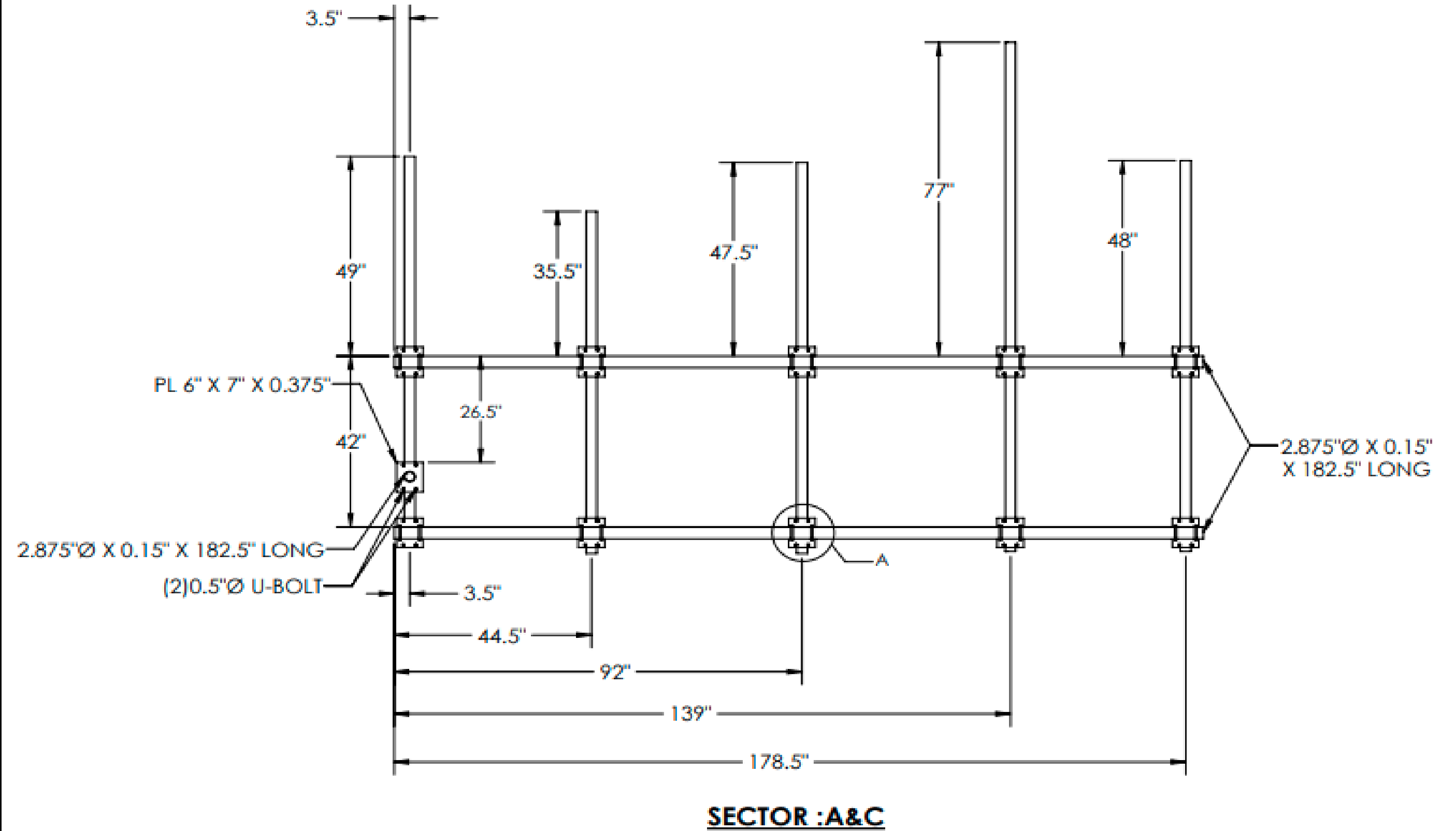
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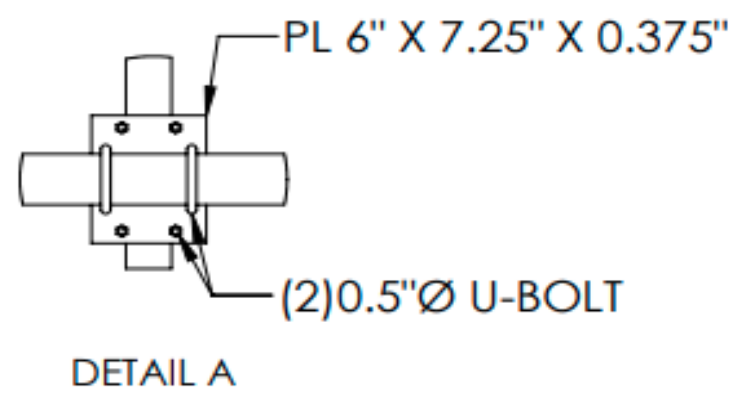
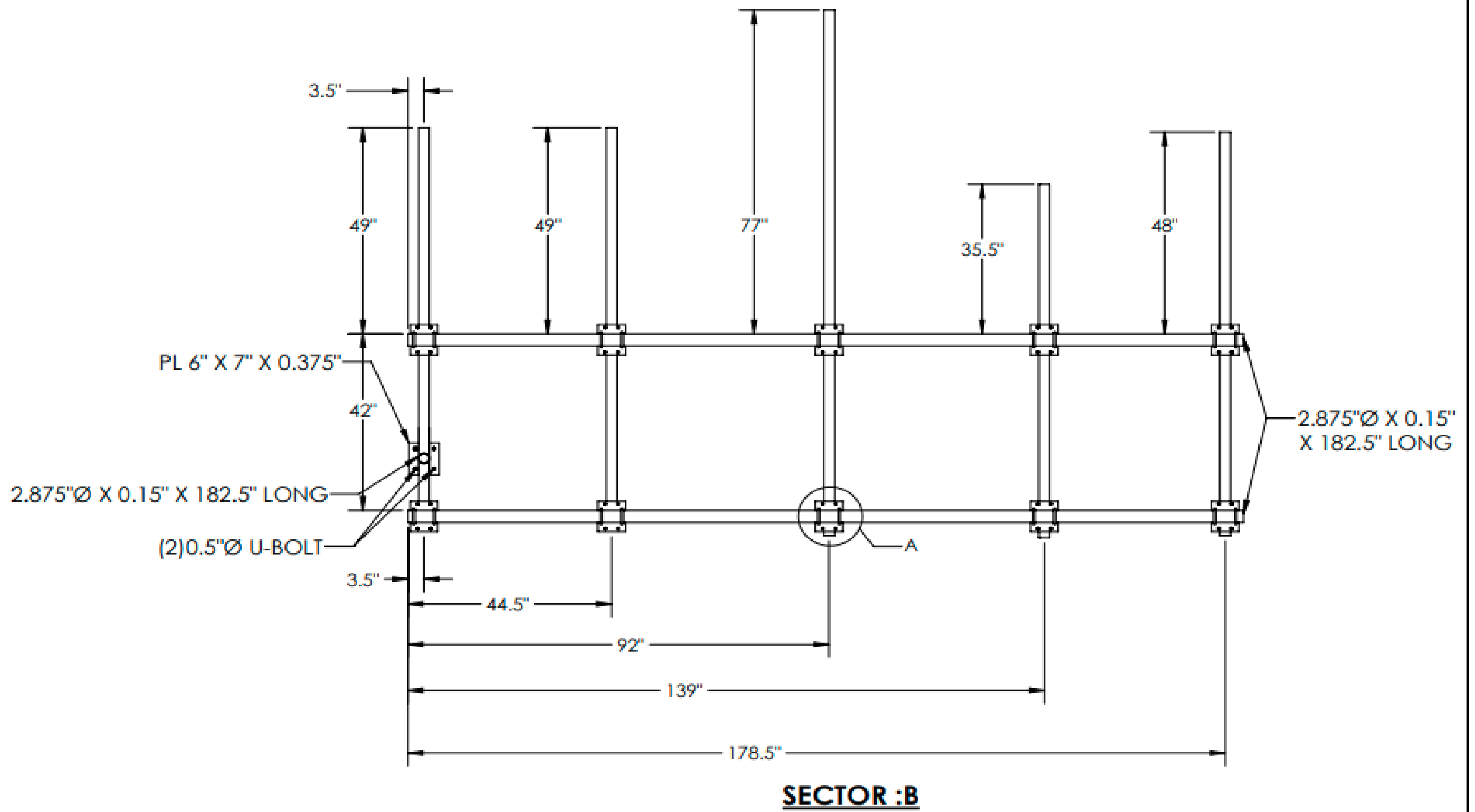
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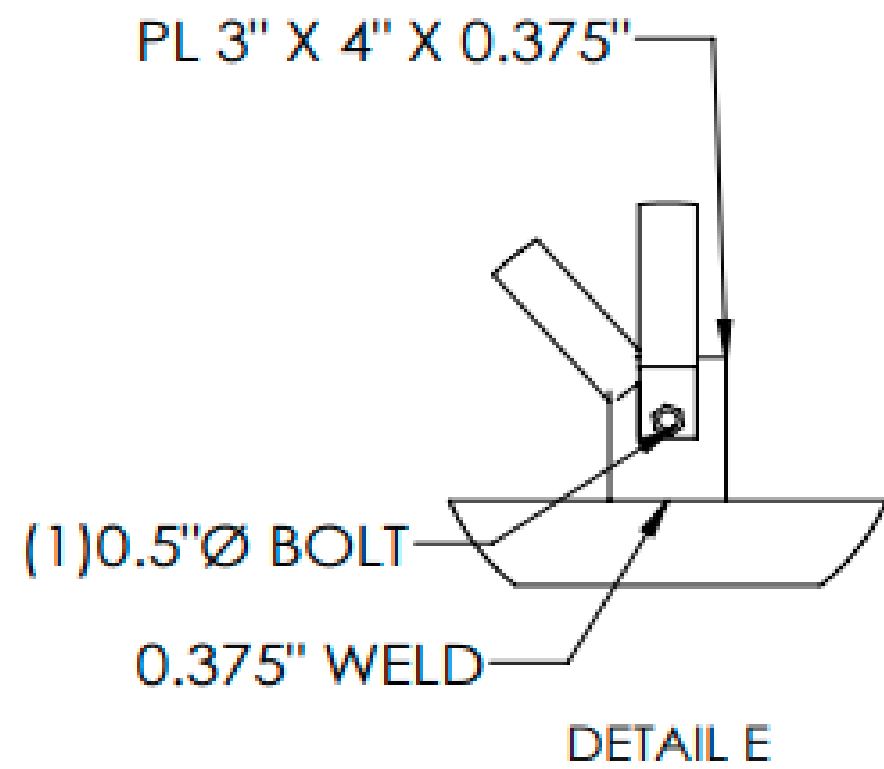
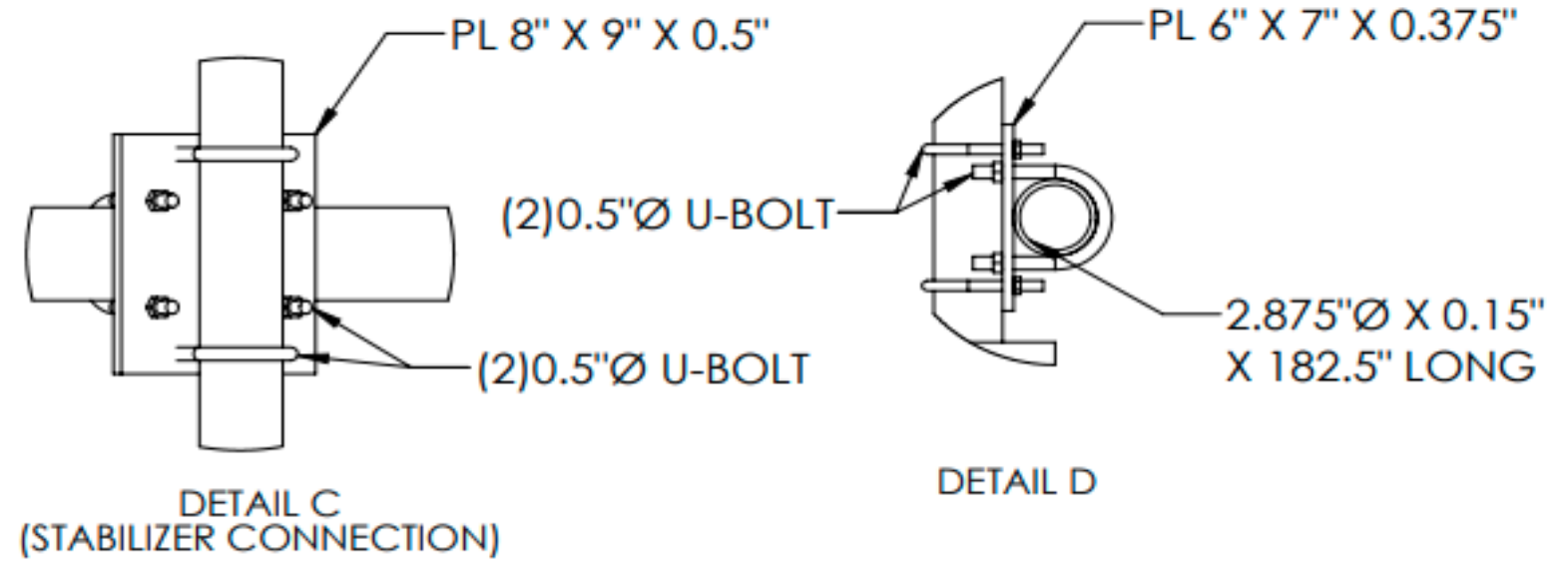
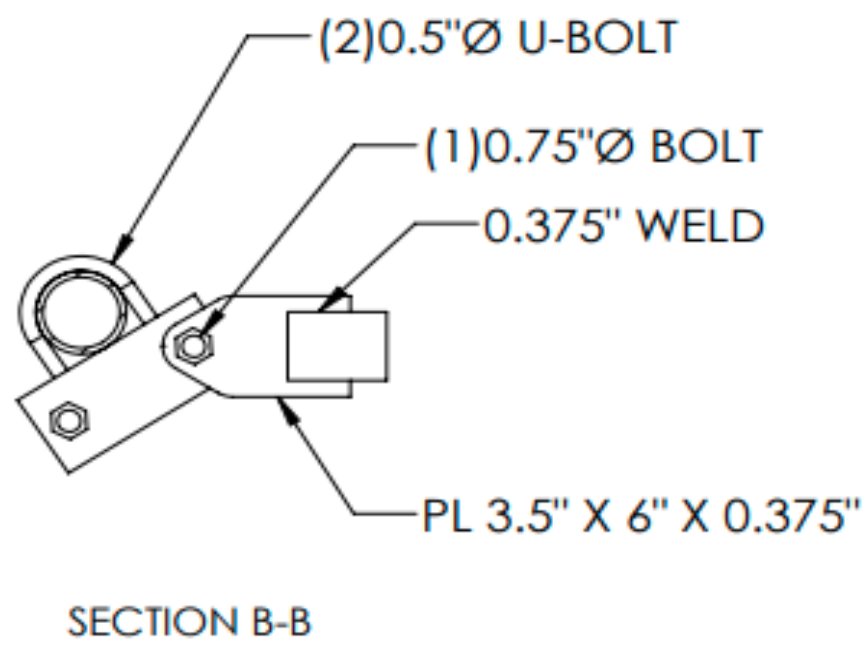
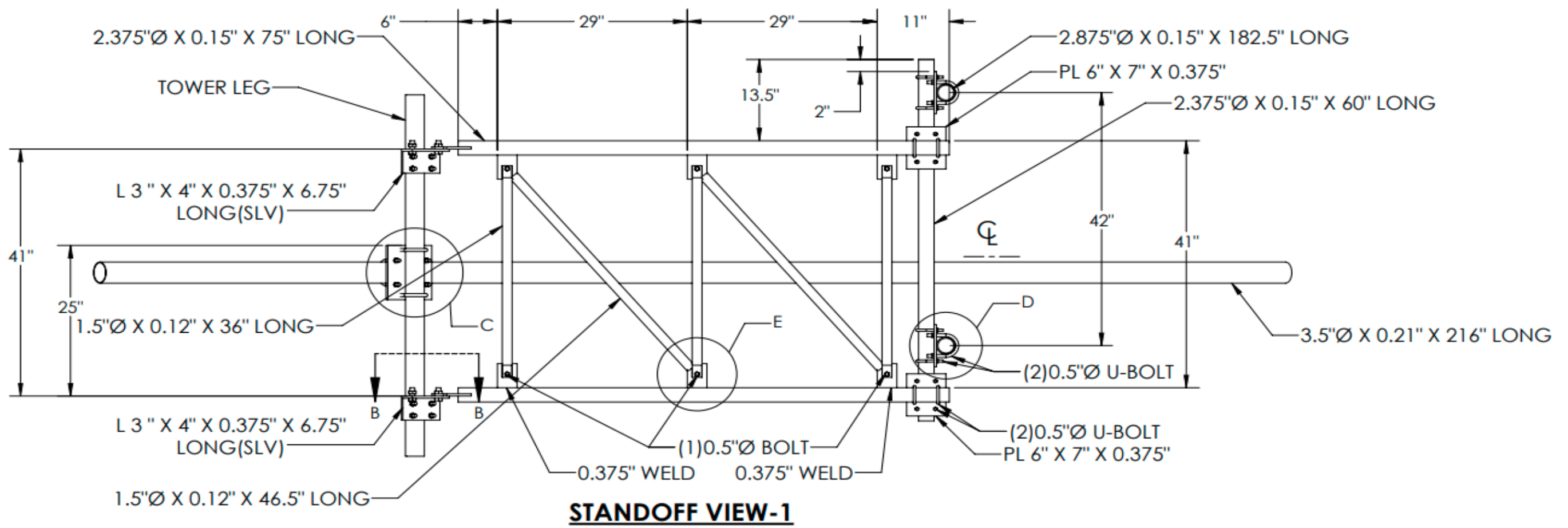
Tower Owner:	CROWN CASTLE	Mapping Date:	3/19/2021
Site Name:	CC: NHV 031B, VZW: Killingworth 2 Ct.	Tower Type:	Self Support
Site Number or ID:	CC: 807134, VZW: 470988	Tower Height (Ft.):	170
Mapping Contractor:	RKS Design & Engineering LLC.	Mount Elevation (Ft.):	167.5

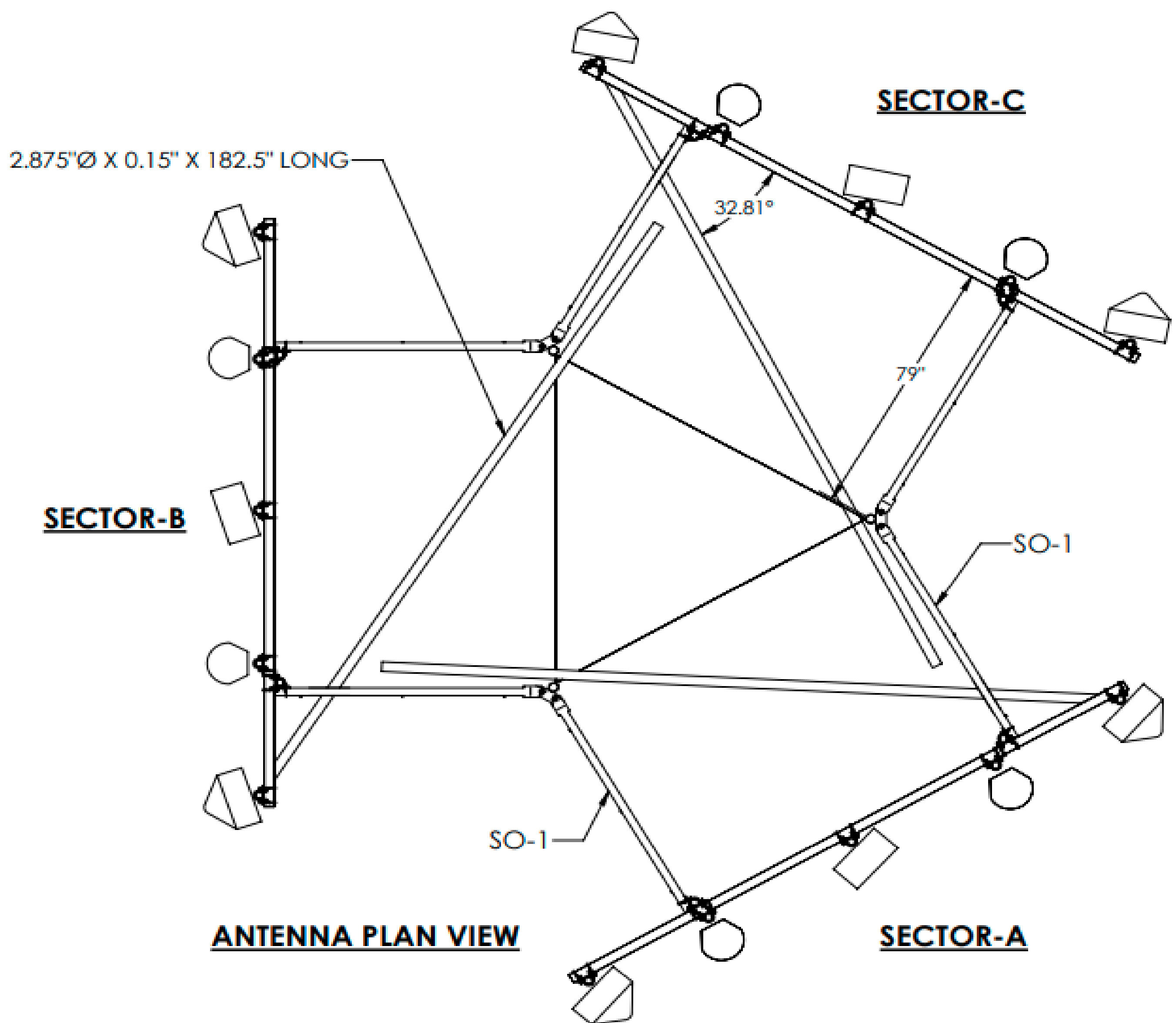
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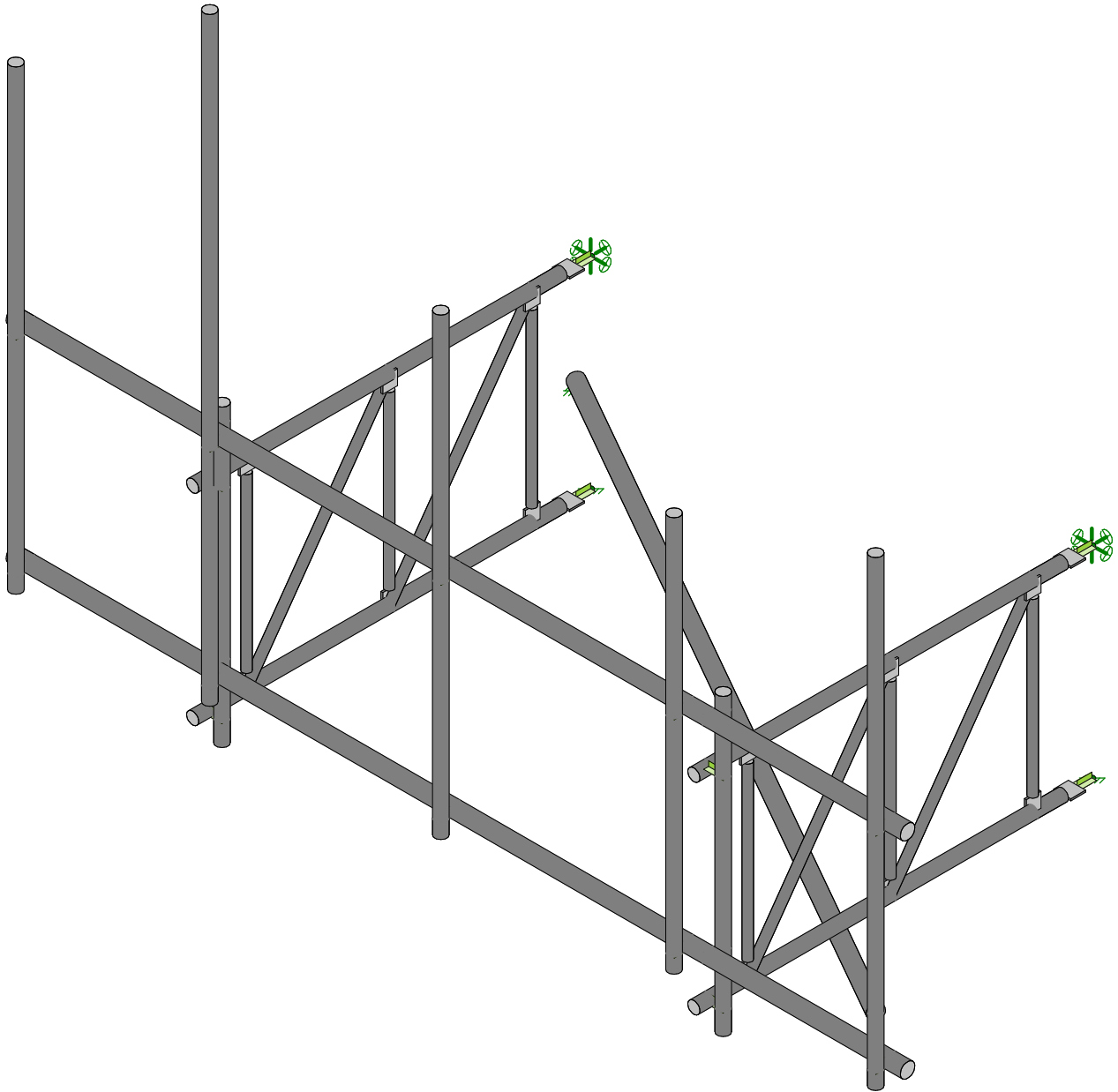
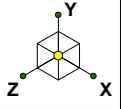
Please Insert Sketches of the Antenna Mount





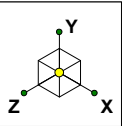




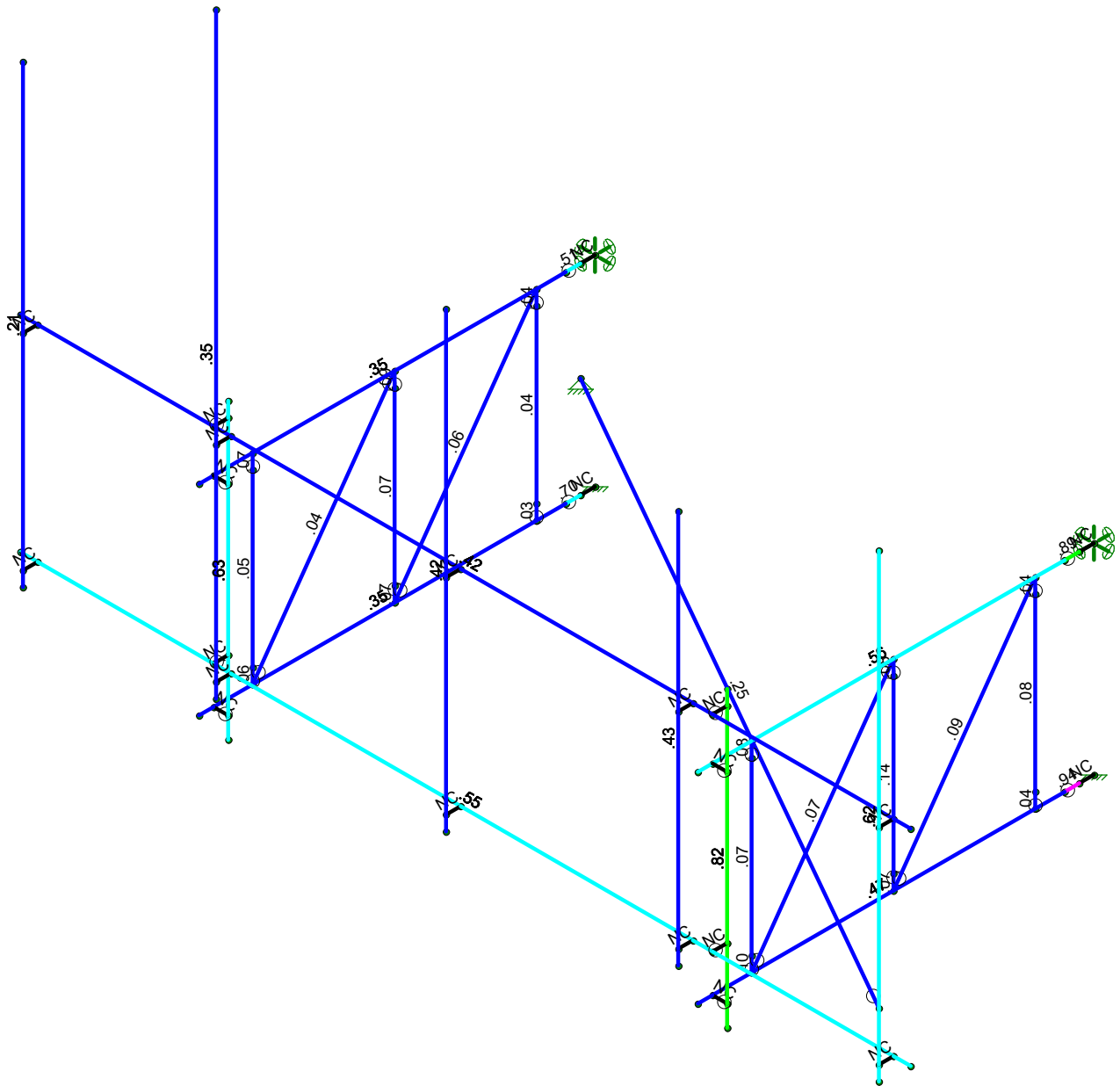


Envelope Only Solution

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Code Check (Env)	
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	.75-.90
	.50-.75
	0.-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

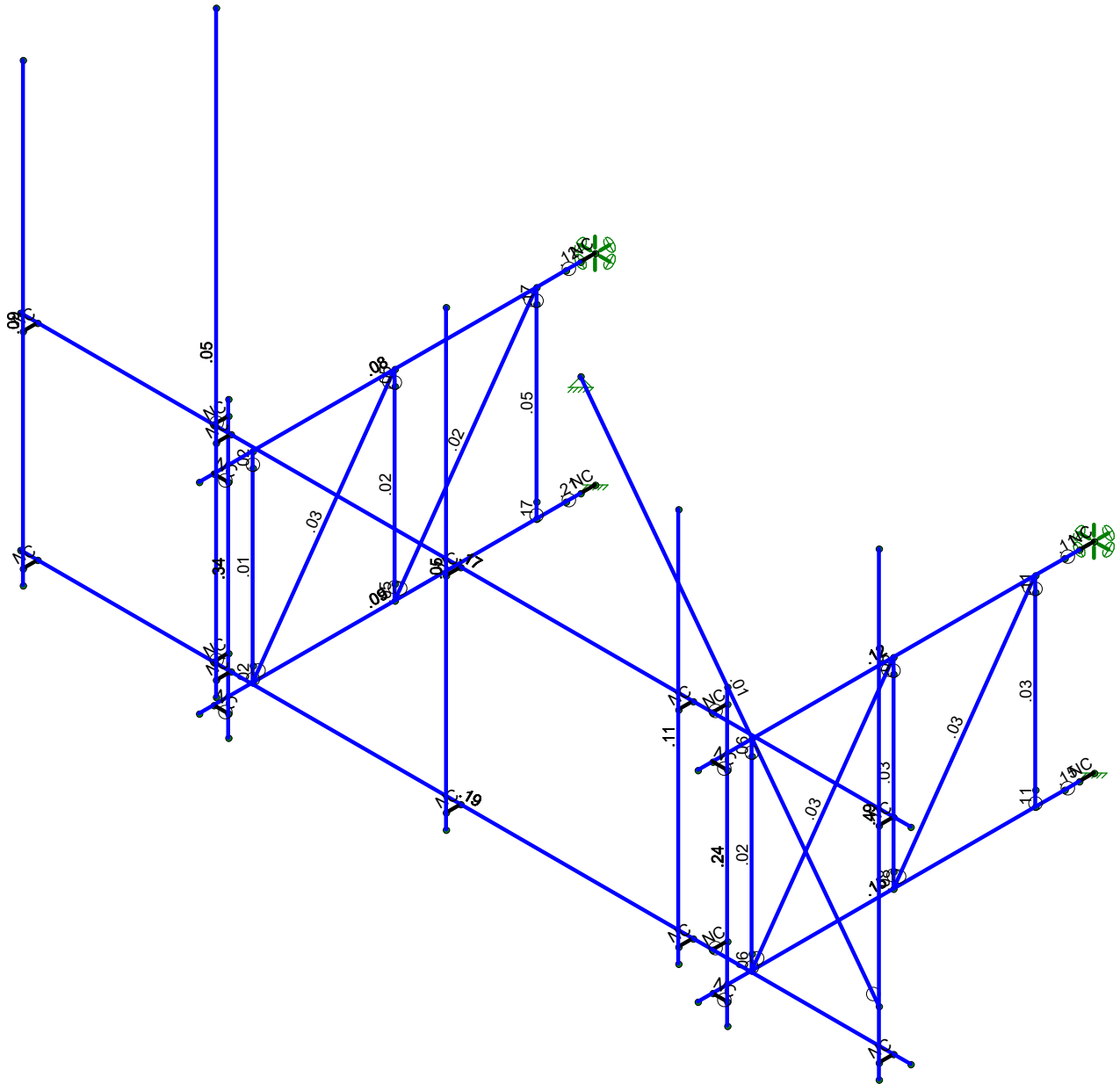
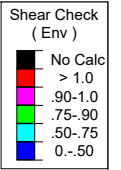
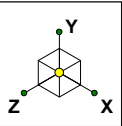
Maser Consulting

470988-VZW_MT_LOT_SectorA_H

SK - 2

Apr 22, 2021 at 10:47 AM

Final_228835-VZW_MT_LOT_A_H...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

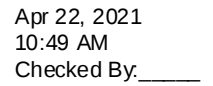
Maser Consulting

470988-VZW_MT_LOT_SectorA_H

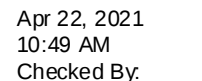
SK - 3

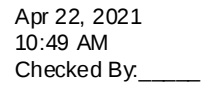
Apr 22, 2021 at 10:48 AM

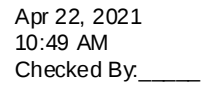
Final_228835-VZW_MT_LOT_A_H...



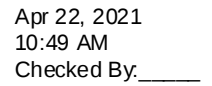
BLC Description		Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	Antenna D	None					39		
2	Antenna Di	None					39		
3	Antenna W o (0 Deg)	None					39		
4	Antenna W o (30 Deg)	None					39		
5	Antenna W o (60 Deg)	None					39		
6	Antenna W o (90 Deg)	None					39		
7	Antenna W o (120 Deg)	None					39		
8	Antenna W o (150 Deg)	None					39		
9	Antenna W o (180 Deg)	None					39		
10	Antenna W o (210 Deg)	None					39		
11	Antenna W o (240 Deg)	None					39		
12	Antenna W o (270 Deg)	None					39		
13	Antenna W o (300 Deg)	None					39		
14	Antenna W o (330 Deg)	None					39		
15	Antenna W i (0 Deg)	None					39		
16	Antenna W i (30 Deg)	None					39		
17	Antenna W i (60 Deg)	None					39		
18	Antenna W i (90 Deg)	None					39		
19	Antenna W i (120 Deg)	None					39		
20	Antenna W i (150 Deg)	None					39		
21	Antenna W i (180 Deg)	None					39		
22	Antenna W i (210 Deg)	None					39		
23	Antenna W i (240 Deg)	None					39		
24	Antenna W i (270 Deg)	None					39		
25	Antenna W i (300 Deg)	None					39		
26	Antenna W i (330 Deg)	None					39		
27	Antenna W m (0 Deg)	None					39		
28	Antenna W m (30 Deg)	None					39		
29	Antenna W m (60 Deg)	None					39		
30	Antenna W m (90 Deg)	None					39		
31	Antenna W m (120 De...	None					39		
32	Antenna W m (150 De...	None					39		
33	Antenna W m (180 De...	None					39		
34	Antenna W m (210 De...	None					39		
35	Antenna W m (240 De...	None					39		
36	Antenna W m (270 De...	None					39		
37	Antenna W m (300 De...	None					39		
38	Antenna W m (330 De...	None					39		
39	Structure D	None		-1					
40	Structure Di	None						40	
41	Structure Wo (0 Deg)	None						80	
42	Structure Wo (30 Deg)	None						80	
43	Structure Wo (60 Deg)	None						80	
44	Structure Wo (90 Deg)	None						80	
45	Structure Wo (120 D...	None						80	
46	Structure Wo (150 D...	None						80	
47	Structure Wo (180 D...	None						80	
48	Structure Wo (210 D...	None						80	
49	Structure Wo (240 D...	None						80	
50	Structure Wo (270 D...	None						80	
51	Structure Wo (300 D...	None						80	





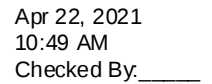


	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N67	51	0	3	0	
2	N68	-51	0	3	0	
3	N69	51	0	6	0	
4	N70	-51	0	6	0	
5	N71	51	0	81	0	
6	N72	-51	0	81	0	
7	N73	51	0	78	0	
8	N74	-51	0	78	0	
9	N75	51	41	78	0	
10	N76	-51	41	78	0	
11	N78	51	41	3	0	
12	N79	-51	41	3	0	
13	N80A	51	41	6	0	
14	N81	-51	41	6	0	
15	N82	51	41	81	0	
16	N83	-51	41	81	0	
17	N82A	54	55.7	78	0	
18	N83A	-48	55.7	78	0	
19	N84	54	-4.3	78	0	
20	N85	-48	-4.3	78	0	
21	N86	54	0	78	0	
22	N87	-48	0	78	0	
23	N88	54	41	78	0	
24	N89	-48	41	78	0	
25	N90	54	52.7	78	0	
26	N91	-48	52.7	78	0	
27	N92	54	10.7	78	0	
28	N93	-48	10.7	78	0	
29	N94	54	52.7	81	0	
30	N95	-48	52.7	81	0	
31	N96	54	10.7	81	0	
32	N97	-48	10.7	81	0	
33	N102	51	0	70	0	
34	N103	-51	0	70	0	
35	N104	51	41	70	0	
36	N105	-51	41	70	0	
37	N106	51	0	41	0	
38	N107	-51	0	41	0	
39	N108	51	41	41	0	
40	N109	-51	41	41	0	
41	N110	51	0	12	0	
42	N111	-51	0	12	0	
43	N112	51	41	12	0	
44	N113	-51	41	12	0	
45	N116	94.5	52.7	81	0	
46	N117	94.5	10.7	81	0	
47	N118	-87.5	52.7	81	0	
48	N119	-87.5	10.7	81	0	
49	N120	91	52.7	81	0	
50	N121	91	10.7	81	0	
51	N122	50	52.7	81	0	
52	N123	50	10.7	81	0	



	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
53	N124	2.5	52.7	81	0	
54	N125	2.5	10.7	81	0	
55	N126	-44.5	52.7	81	0	
56	N127	-44.5	10.7	81	0	
57	N128	-84	52.7	81	0	
58	N129	-84	10.7	81	0	
59	N130	91	52.7	84	0	
60	N131	91	10.7	84	0	
61	N132	50	52.7	84	0	
62	N133	50	10.7	84	0	
63	N134	2.5	52.7	84	0	
64	N135	2.5	10.7	84	0	
65	N136	-44.5	52.7	84	0	
66	N137	-44.5	10.7	84	0	
67	N138	-84	52.7	84	0	
68	N139	-84	10.7	84	0	
69	N140	-84	100.7	84	0	
70	N141	-44.5	129.7	84	0	
71	N142	2.5	100.2	84	0	
72	N143	50	88.2	84	0	
73	N144	91	101.7	84	0	
74	N145	91	20.7	84	0	
75	N146	-51	20.7	3	0	
76	N81A	51	0	0	0	
77	N82B	-51	0	0	0	
78	N83B	51	41	0	0	
79	N84A	-51	41	0	0	
80	N80	91	7.7	84	0	
81	N81B	50	7.7	84	0	
82	N82C	2.5	7.7	84	0	
83	N83C	-44.5	7.7	84	0	
84	N84B	-84	7.7	84	0	
85	N85A	-51	38	70	0	
86	N86A	-51	38	41	0	
87	N87A	-51	38	12	0	
88	N88A	-51	3	70	0	
89	N89A	-51	3	41	0	
90	N90A	-51	3	12	0	
91	N97A	51	38	70	0	
92	N98	51	38	41	0	
93	N99	51	38	12	0	
94	N100	51	3	70	0	
95	N101	51	3	41	0	
96	N102A	51	3	12	0	

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Horizo...	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Standoff F Verti...	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25



	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	lyy [in4]	lzz [in4]	J [in4]
4	Standoff Diagonal	PIPE_1.25	Beam	Pipe	A53 Gr. B	Typical	.625	.184	.184	.368
5	Standoff Vertical	PIPE_1.25	Beam	Pipe	A53 Gr. B	Typical	.625	.184	.184	.368
6	Face Horizontal	PIPE 2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
7	Tie Back	PIPE 2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
8	Standoff Bar	PL1/2X4	Beam	RECT	A36 Gr.36	Typical	2	.042	2.667	.154
9	Mount Angle	L4X3X6	Beam	Single Angle	A36 Gr.36	Typical	2.49	1.89	3.94	.123
10	Kickers	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011
11	Back Plate	PL3/8X3....	Beam	Single Angle	A36 Gr.36	Typical	1.125	.013	.844	.049
12	Bar Plate	PL3/8X3_...	Beam	Single Angle	A36 Gr.36	Typical	1.125	.013	.844	.049

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt	
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3

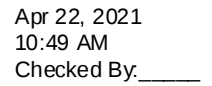
	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M47	N67	N69		90	Back Plate	Beam	Single Angle	A36 Gr.36	Typical
2	M48	N68	N70		90	Back Plate	Beam	Single Angle	A36 Gr.36	Typical
3	M49	N69	N71		90	Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
4	M50	N70	N72		90	Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
5	M51	N78	N80A		90	Back Plate	Beam	Single Angle	A36 Gr.36	Typical
6	M52	N79	N81		90	Back Plate	Beam	Single Angle	A36 Gr.36	Typical
7	M53	N80A	N82		90	Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
8	M54	N81	N83		90	Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
9	M55	N85	N83A		90	Standoff F Ver...	Beam	Pipe	A53 Gr. B	Typical
10	M56	N84	N82A		90	Standoff F Ver...	Beam	Pipe	A53 Gr. B	Typical
11	M57	N76	N89		90	RIGID	None	None	RIGID	Typical
12	M58	N74	N87		90	RIGID	None	None	RIGID	Typical
13	M59	N73	N86		90	RIGID	None	None	RIGID	Typical
14	M60	N75	N88		90	RIGID	None	None	RIGID	Typical
15	M61	N91	N95		90	RIGID	None	None	RIGID	Typical
16	M62	N90	N94		90	RIGID	None	None	RIGID	Typical
17	M63	N92	N96		90	RIGID	None	None	RIGID	Typical
18	M64	N93	N97		90	RIGID	None	None	RIGID	Typical
19	M73	N112	N106		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
20	M74	N108	N102		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
21	M75	N113	N107		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
22	M76	N109	N103		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
23	M75A	N116	N118		90	Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
24	M76A	N119	N117		90	Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
25	M77	N120	N130		90	RIGID	None	None	RIGID	Typical
26	M78	N121	N131		90	RIGID	None	None	RIGID	Typical
27	M79	N122	N132		90	RIGID	None	None	RIGID	Typical
28	M80	N123	N133		90	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
29	M81	N125	N135		90	RIGID	None	None	RIGID	Typical
30	M82	N124	N134		90	RIGID	None	None	RIGID	Typical
31	M83	N126	N136		90	RIGID	None	None	RIGID	Typical
32	M84	N127	N137		90	RIGID	None	None	RIGID	Typical
33	M85	N128	N138		90	RIGID	None	None	RIGID	Typical
34	M86	N129	N139		90	RIGID	None	None	RIGID	Typical
35	M92	N145	N146		90	Tie Back	Beam	Pipe	A53 Gr. B	Typical
36	M47A	N79	N84A		90	RIGID	None	None	RIGID	Typical
37	M48A	N68	N82B		90	RIGID	None	None	RIGID	Typical
38	M49A	N78	N83B		90	RIGID	None	None	RIGID	Typical
39	M50A	N67	N81A		90	RIGID	None	None	RIGID	Typical
40	MP5A	N140	N84B		90	Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
41	MP4A	N141	N83C		90	Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
42	MP3A	N82C	N142		90	Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
43	MP2A	N81B	N143		90	Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
44	MP1A	N80	N144		90	Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
45	M48C	N85A	N105		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
46	M49C	N103	N88A		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
47	M50C	N107	N89A		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
48	M51A	N109	N86A		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
49	M52A	N111	N90A		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
50	M53A	N87A	N113		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
51	M54A	N88A	N85A			Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
52	M55A	N89A	N86A			Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
53	M56A	N90A	N87A			Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
54	M54B	N97A	N104		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
55	M55B	N102	N100		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
56	M56B	N106	N101		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
57	M57A	N108	N98		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
58	M58A	N110	N102A		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
59	M59A	N99	N112		90	Bar Plate	Beam	Single Angle	A36 Gr.36	Typical
60	M60A	N100	N97A			Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
61	M61A	N101	N98			Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
62	M62A	N102A	N99			Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M47	OOOOXO					Yes				None
2	M48	OOOOXO					Yes				None
3	M49						Yes				None
4	M50						Yes				None
5	M51	OOOOXO					Yes	Default			None
6	M52	OOOOXO					Yes				None
7	M53						Yes				None
8	M54						Yes				None
9	M55						Yes				None
10	M56						Yes				None
11	M57	OOOOXO					Yes	** NA **			None
12	M58	OOOOXO					Yes	** NA **			None
13	M59	OOOOXO					Yes	** NA **			None



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Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	Y	-13.5	26.4
2	MP1A	My	-.008	26.4
3	MP1A	Mz	0	26.4
4	MP1A	Y	-13.5	72
5	MP1A	My	-.008	72
6	MP1A	Mz	0	72
7	MP5A	Y	-13.5	26.4
8	MP5A	My	-.008	26.4
9	MP5A	Mz	0	26.4
10	MP5A	Y	-13.5	72
11	MP5A	My	-.008	72
12	MP5A	Mz	0	72
13	MP2A	Y	-31.65	24
14	MP2A	My	-.018	24
15	MP2A	Mz	.022	24
16	MP2A	Y	-31.65	72
17	MP2A	My	-.018	72
18	MP2A	Mz	.022	72
19	MP2A	Y	-31.65	24
20	MP2A	My	-.018	24
21	MP2A	Mz	-.022	24
22	MP2A	Y	-31.65	72
23	MP2A	My	-.018	72
24	MP2A	Mz	-.022	72
25	MP4A	Y	-43.55	36
26	MP4A	My	-.025	36
27	MP4A	Mz	0	36
28	MP4A	Y	-43.55	54
29	MP4A	My	-.025	54
30	MP4A	Mz	0	54
31	MP2A	Y	-10.4	50.4
32	MP2A	My	.006	50.4
33	MP2A	Mz	0	50.4
34	MP2A	Y	-84.4	30
35	MP2A	My	.049	30
36	MP2A	Mz	0	30
37	MP1A	Y	-70.3	66
38	MP1A	My	.041	66
39	MP1A	Mz	0	66

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	Y	-91.414	26.4
2	MP1A	My	-.053	26.4
3	MP1A	Mz	0	26.4
4	MP1A	Y	-91.414	72
5	MP1A	My	-.053	72
6	MP1A	Mz	0	72
7	MP5A	Y	-91.414	26.4
8	MP5A	My	-.053	26.4

Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP5A	Mz	0	26.4
10	MP5A	Y	-91.414	72
11	MP5A	My	-.053	72
12	MP5A	Mz	0	72
13	MP2A	Y	-71.434	24
14	MP2A	My	-.042	24
15	MP2A	Mz	.051	24
16	MP2A	Y	-71.434	72
17	MP2A	My	-.042	72
18	MP2A	Mz	.051	72
19	MP2A	Y	-71.434	24
20	MP2A	My	-.042	24
21	MP2A	Mz	-.051	24
22	MP2A	Y	-71.434	72
23	MP2A	My	-.042	72
24	MP2A	Mz	-.051	72
25	MP4A	Y	-36.385	36
26	MP4A	My	-.021	36
27	MP4A	Mz	0	36
28	MP4A	Y	-36.385	54
29	MP4A	My	-.021	54
30	MP4A	Mz	0	54
31	MP2A	Y	-11.006	50.4
32	MP2A	My	.006	50.4
33	MP2A	Mz	0	50.4
34	MP2A	Y	-45.887	30
35	MP2A	My	.027	30
36	MP2A	Mz	0	30
37	MP1A	Y	-41.273	66
38	MP1A	My	.024	66
39	MP1A	Mz	0	66

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	0	26.4
2	MP1A	Z	-179.553	26.4
3	MP1A	Mx	0	26.4
4	MP1A	X	0	72
5	MP1A	Z	-179.553	72
6	MP1A	Mx	0	72
7	MP5A	X	0	26.4
8	MP5A	Z	-179.553	26.4
9	MP5A	Mx	0	26.4
10	MP5A	X	0	72
11	MP5A	Z	-179.553	72
12	MP5A	Mx	0	72
13	MP2A	X	0	24
14	MP2A	Z	-167.595	24
15	MP2A	Mx	-.119	24
16	MP2A	X	0	72
17	MP2A	Z	-167.595	72

Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
18	MP2A	Mx	-.119	72
19	MP2A	X	0	24
20	MP2A	Z	-167.595	24
21	MP2A	Mx	.119	24
22	MP2A	X	0	72
23	MP2A	Z	-167.595	72
24	MP2A	Mx	.119	72
25	MP4A	X	0	36
26	MP4A	Z	-86.465	36
27	MP4A	Mx	0	36
28	MP4A	X	0	54
29	MP4A	Z	-86.465	54
30	MP4A	Mx	0	54
31	MP2A	X	0	50.4
32	MP2A	Z	-13.614	50.4
33	MP2A	Mx	0	50.4
34	MP2A	X	0	30
35	MP2A	Z	-68.804	30
36	MP2A	Mx	0	30
37	MP1A	X	0	66
38	MP1A	Z	-68.804	66
39	MP1A	Mx	0	66

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	87.116	26.4
2	MP1A	Z	-150.89	26.4
3	MP1A	Mx	-.051	26.4
4	MP1A	X	87.116	72
5	MP1A	Z	-150.89	72
6	MP1A	Mx	-.051	72
7	MP5A	X	87.116	26.4
8	MP5A	Z	-150.89	26.4
9	MP5A	Mx	-.051	26.4
10	MP5A	X	87.116	72
11	MP5A	Z	-150.89	72
12	MP5A	Mx	-.051	72
13	MP2A	X	76.607	24
14	MP2A	Z	-132.688	24
15	MP2A	Mx	-.139	24
16	MP2A	X	76.607	72
17	MP2A	Z	-132.688	72
18	MP2A	Mx	-.139	72
19	MP2A	X	76.607	24
20	MP2A	Z	-132.688	24
21	MP2A	Mx	.049	24
22	MP2A	X	76.607	72
23	MP2A	Z	-132.688	72
24	MP2A	Mx	.049	72
25	MP4A	X	36.656	36
26	MP4A	Z	-63.49	36

Member Point Loads (BLC 4 : Antenna Wo (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
27	MP4A	Mx	-.021	36
28	MP4A	X	36.656	54
29	MP4A	Z	-63.49	54
30	MP4A	Mx	-.021	54
31	MP2A	X	6.283	50.4
32	MP2A	Z	-10.882	50.4
33	MP2A	Mx	.004	50.4
34	MP2A	X	31.551	30
35	MP2A	Z	-54.647	30
36	MP2A	Mx	.018	30
37	MP1A	X	30.458	66
38	MP1A	Z	-52.755	66
39	MP1A	Mx	.018	66

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	141.676	26.4
2	MP1A	Z	-81.797	26.4
3	MP1A	Mx	-.083	26.4
4	MP1A	X	141.676	72
5	MP1A	Z	-81.797	72
6	MP1A	Mx	-.083	72
7	MP5A	X	141.676	26.4
8	MP5A	Z	-81.797	26.4
9	MP5A	Mx	-.083	26.4
10	MP5A	X	141.676	72
11	MP5A	Z	-81.797	72
12	MP5A	Mx	-.083	72
13	MP2A	X	107.781	24
14	MP2A	Z	-62.227	24
15	MP2A	Mx	-.107	24
16	MP2A	X	107.781	72
17	MP2A	Z	-62.227	72
18	MP2A	Mx	-.107	72
19	MP2A	X	107.781	24
20	MP2A	Z	-62.227	24
21	MP2A	Mx	-.019	24
22	MP2A	X	107.781	72
23	MP2A	Z	-62.227	72
24	MP2A	Mx	-.019	72
25	MP4A	X	40.707	36
26	MP4A	Z	-23.502	36
27	MP4A	Mx	-.024	36
28	MP4A	X	40.707	54
29	MP4A	Z	-23.502	54
30	MP4A	Mx	-.024	54
31	MP2A	X	9.065	50.4
32	MP2A	Z	-5.234	50.4
33	MP2A	Mx	.005	50.4
34	MP2A	X	44.769	30
35	MP2A	Z	-25.848	30

Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
36	MP2A	Mx	.026	30
37	MP1A	X	39.093	66
38	MP1A	Z	-22.571	66
39	MP1A	Mx	.023	66

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	158.274	26.4
2	MP1A	Z	0	26.4
3	MP1A	Mx	-.092	26.4
4	MP1A	X	158.274	72
5	MP1A	Z	0	72
6	MP1A	Mx	-.092	72
7	MP5A	X	158.274	26.4
8	MP5A	Z	0	26.4
9	MP5A	Mx	-.092	26.4
10	MP5A	X	158.274	72
11	MP5A	Z	0	72
12	MP5A	Mx	-.092	72
13	MP2A	X	110.074	24
14	MP2A	Z	0	24
15	MP2A	Mx	-.064	24
16	MP2A	X	110.074	72
17	MP2A	Z	0	72
18	MP2A	Mx	-.064	72
19	MP2A	X	110.074	24
20	MP2A	Z	0	24
21	MP2A	Mx	-.064	24
22	MP2A	X	110.074	72
23	MP2A	Z	0	72
24	MP2A	Mx	-.064	72
25	MP4A	X	33.851	36
26	MP4A	Z	0	36
27	MP4A	Mx	-.02	36
28	MP4A	X	33.851	54
29	MP4A	Z	0	54
30	MP4A	Mx	-.02	54
31	MP2A	X	9.419	50.4
32	MP2A	Z	0	50.4
33	MP2A	Mx	.005	50.4
34	MP2A	X	45.992	30
35	MP2A	Z	0	30
36	MP2A	Mx	.027	30
37	MP1A	X	37.254	66
38	MP1A	Z	0	66
39	MP1A	Mx	.022	66

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	141.676	26.4
2	MP1A	Z	81.797	26.4

Member Point Loads (BLC 7 : Antenna Wo (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
3	MP1A	Mx	-.083	26.4
4	MP1A	X	141.676	72
5	MP1A	Z	81.797	72
6	MP1A	Mx	-.083	72
7	MP5A	X	141.676	26.4
8	MP5A	Z	81.797	26.4
9	MP5A	Mx	-.083	26.4
10	MP5A	X	141.676	72
11	MP5A	Z	81.797	72
12	MP5A	Mx	-.083	72
13	MP2A	X	107.781	24
14	MP2A	Z	62.227	24
15	MP2A	Mx	-.019	24
16	MP2A	X	107.781	72
17	MP2A	Z	62.227	72
18	MP2A	Mx	-.019	72
19	MP2A	X	107.781	24
20	MP2A	Z	62.227	24
21	MP2A	Mx	-.107	24
22	MP2A	X	107.781	72
23	MP2A	Z	62.227	72
24	MP2A	Mx	-.107	72
25	MP4A	X	40.707	36
26	MP4A	Z	23.502	36
27	MP4A	Mx	-.024	36
28	MP4A	X	40.707	54
29	MP4A	Z	23.502	54
30	MP4A	Mx	-.024	54
31	MP2A	X	9.065	50.4
32	MP2A	Z	5.234	50.4
33	MP2A	Mx	.005	50.4
34	MP2A	X	44.769	30
35	MP2A	Z	25.848	30
36	MP2A	Mx	.026	30
37	MP1A	X	39.093	66
38	MP1A	Z	22.571	66
39	MP1A	Mx	.023	66

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	87.116	26.4
2	MP1A	Z	150.89	26.4
3	MP1A	Mx	-.051	26.4
4	MP1A	X	87.116	72
5	MP1A	Z	150.89	72
6	MP1A	Mx	-.051	72
7	MP5A	X	87.116	26.4
8	MP5A	Z	150.89	26.4
9	MP5A	Mx	-.051	26.4
10	MP5A	X	87.116	72
11	MP5A	Z	150.89	72

Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
12	MP5A	Mx	-.051	72
13	MP2A	X	76.607	24
14	MP2A	Z	132.688	24
15	MP2A	Mx	.049	24
16	MP2A	X	76.607	72
17	MP2A	Z	132.688	72
18	MP2A	Mx	.049	72
19	MP2A	X	76.607	24
20	MP2A	Z	132.688	24
21	MP2A	Mx	-.139	24
22	MP2A	X	76.607	72
23	MP2A	Z	132.688	72
24	MP2A	Mx	-.139	72
25	MP4A	X	36.656	36
26	MP4A	Z	63.49	36
27	MP4A	Mx	-.021	36
28	MP4A	X	36.656	54
29	MP4A	Z	63.49	54
30	MP4A	Mx	-.021	54
31	MP2A	X	6.283	50.4
32	MP2A	Z	10.882	50.4
33	MP2A	Mx	.004	50.4
34	MP2A	X	31.551	30
35	MP2A	Z	54.647	30
36	MP2A	Mx	.018	30
37	MP1A	X	30.458	66
38	MP1A	Z	52.755	66
39	MP1A	Mx	.018	66

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	0	26.4
2	MP1A	Z	179.553	26.4
3	MP1A	Mx	0	26.4
4	MP1A	X	0	72
5	MP1A	Z	179.553	72
6	MP1A	Mx	0	72
7	MP5A	X	0	26.4
8	MP5A	Z	179.553	26.4
9	MP5A	Mx	0	26.4
10	MP5A	X	0	72
11	MP5A	Z	179.553	72
12	MP5A	Mx	0	72
13	MP2A	X	0	24
14	MP2A	Z	167.595	24
15	MP2A	Mx	.119	24
16	MP2A	X	0	72
17	MP2A	Z	167.595	72
18	MP2A	Mx	.119	72
19	MP2A	X	0	24
20	MP2A	Z	167.595	24

Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
21	MP2A	Mx	-.119	24
22	MP2A	X	0	72
23	MP2A	Z	167.595	72
24	MP2A	Mx	-.119	72
25	MP4A	X	0	36
26	MP4A	Z	86.465	36
27	MP4A	Mx	0	36
28	MP4A	X	0	54
29	MP4A	Z	86.465	54
30	MP4A	Mx	0	54
31	MP2A	X	0	50.4
32	MP2A	Z	13.614	50.4
33	MP2A	Mx	0	50.4
34	MP2A	X	0	30
35	MP2A	Z	68.804	30
36	MP2A	Mx	0	30
37	MP1A	X	0	66
38	MP1A	Z	68.804	66
39	MP1A	Mx	0	66

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

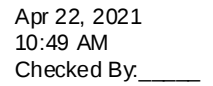
	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-87.116	26.4
2	MP1A	Z	150.89	26.4
3	MP1A	Mx	.051	26.4
4	MP1A	X	-87.116	72
5	MP1A	Z	150.89	72
6	MP1A	Mx	.051	72
7	MP5A	X	-87.116	26.4
8	MP5A	Z	150.89	26.4
9	MP5A	Mx	.051	26.4
10	MP5A	X	-87.116	72
11	MP5A	Z	150.89	72
12	MP5A	Mx	.051	72
13	MP2A	X	-76.607	24
14	MP2A	Z	132.688	24
15	MP2A	Mx	.139	24
16	MP2A	X	-76.607	72
17	MP2A	Z	132.688	72
18	MP2A	Mx	.139	72
19	MP2A	X	-76.607	24
20	MP2A	Z	132.688	24
21	MP2A	Mx	-.049	24
22	MP2A	X	-76.607	72
23	MP2A	Z	132.688	72
24	MP2A	Mx	-.049	72
25	MP4A	X	-36.656	36
26	MP4A	Z	63.49	36
27	MP4A	Mx	.021	36
28	MP4A	X	-36.656	54
29	MP4A	Z	63.49	54

Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
30	MP4A	Mx	.021	54
31	MP2A	X	-6.283	50.4
32	MP2A	Z	10.882	50.4
33	MP2A	Mx	-.004	50.4
34	MP2A	X	-31.551	30
35	MP2A	Z	54.647	30
36	MP2A	Mx	-.018	30
37	MP1A	X	-30.458	66
38	MP1A	Z	52.755	66
39	MP1A	Mx	-.018	66

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-141.676	26.4
2	MP1A	Z	81.797	26.4
3	MP1A	Mx	.083	26.4
4	MP1A	X	-141.676	72
5	MP1A	Z	81.797	72
6	MP1A	Mx	.083	72
7	MP5A	X	-141.676	26.4
8	MP5A	Z	81.797	26.4
9	MP5A	Mx	.083	26.4
10	MP5A	X	-141.676	72
11	MP5A	Z	81.797	72
12	MP5A	Mx	.083	72
13	MP2A	X	-107.781	24
14	MP2A	Z	62.227	24
15	MP2A	Mx	.107	24
16	MP2A	X	-107.781	72
17	MP2A	Z	62.227	72
18	MP2A	Mx	.107	72
19	MP2A	X	-107.781	24
20	MP2A	Z	62.227	24
21	MP2A	Mx	.019	24
22	MP2A	X	-107.781	72
23	MP2A	Z	62.227	72
24	MP2A	Mx	.019	72
25	MP4A	X	-40.707	36
26	MP4A	Z	23.502	36
27	MP4A	Mx	.024	36
28	MP4A	X	-40.707	54
29	MP4A	Z	23.502	54
30	MP4A	Mx	.024	54
31	MP2A	X	-9.065	50.4
32	MP2A	Z	5.234	50.4
33	MP2A	Mx	-.005	50.4
34	MP2A	X	-44.769	30
35	MP2A	Z	25.848	30
36	MP2A	Mx	-.026	30
37	MP1A	X	-39.093	66
38	MP1A	Z	22.571	66



	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
39	MP1A	Mx	-.023	66

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-158.274	26.4
2	MP1A	Z	0	26.4
3	MP1A	Mx	.092	26.4
4	MP1A	X	-158.274	72
5	MP1A	Z	0	72
6	MP1A	Mx	.092	72
7	MP5A	X	-158.274	26.4
8	MP5A	Z	0	26.4
9	MP5A	Mx	.092	26.4
10	MP5A	X	-158.274	72
11	MP5A	Z	0	72
12	MP5A	Mx	.092	72
13	MP2A	X	-110.074	24
14	MP2A	Z	0	24
15	MP2A	Mx	.064	24
16	MP2A	X	-110.074	72
17	MP2A	Z	0	72
18	MP2A	Mx	.064	72
19	MP2A	X	-110.074	24
20	MP2A	Z	0	24
21	MP2A	Mx	.064	24
22	MP2A	X	-110.074	72
23	MP2A	Z	0	72
24	MP2A	Mx	.064	72
25	MP4A	X	-33.851	36
26	MP4A	Z	0	36
27	MP4A	Mx	.02	36
28	MP4A	X	-33.851	54
29	MP4A	Z	0	54
30	MP4A	Mx	.02	54
31	MP2A	X	-9.419	50.4
32	MP2A	Z	0	50.4
33	MP2A	Mx	-.005	50.4
34	MP2A	X	-45.992	30
35	MP2A	Z	0	30
36	MP2A	Mx	-.027	30
37	MP1A	X	-37.254	66
38	MP1A	Z	0	66
39	MP1A	Mx	-.022	66

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-141.676	26.4
2	MP1A	Z	-81.797	26.4
3	MP1A	Mx	.083	26.4
4	MP1A	X	-141.676	72
5	MP1A	Z	-81.797	72

Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
6	MP1A	Mx	.083	72
7	MP5A	X	-141.676	26.4
8	MP5A	Z	-81.797	26.4
9	MP5A	Mx	.083	26.4
10	MP5A	X	-141.676	72
11	MP5A	Z	-81.797	72
12	MP5A	Mx	.083	72
13	MP2A	X	-107.781	24
14	MP2A	Z	-62.227	24
15	MP2A	Mx	.019	24
16	MP2A	X	-107.781	72
17	MP2A	Z	-62.227	72
18	MP2A	Mx	.019	72
19	MP2A	X	-107.781	24
20	MP2A	Z	-62.227	24
21	MP2A	Mx	.107	24
22	MP2A	X	-107.781	72
23	MP2A	Z	-62.227	72
24	MP2A	Mx	.107	72
25	MP4A	X	-40.707	36
26	MP4A	Z	-23.502	36
27	MP4A	Mx	.024	36
28	MP4A	X	-40.707	54
29	MP4A	Z	-23.502	54
30	MP4A	Mx	.024	54
31	MP2A	X	-9.065	50.4
32	MP2A	Z	-5.234	50.4
33	MP2A	Mx	-.005	50.4
34	MP2A	X	-44.769	30
35	MP2A	Z	-25.848	30
36	MP2A	Mx	-.026	30
37	MP1A	X	-39.093	66
38	MP1A	Z	-22.571	66
39	MP1A	Mx	-.023	66

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-87.116	26.4
2	MP1A	Z	-150.89	26.4
3	MP1A	Mx	.051	26.4
4	MP1A	X	-87.116	72
5	MP1A	Z	-150.89	72
6	MP1A	Mx	.051	72
7	MP5A	X	-87.116	26.4
8	MP5A	Z	-150.89	26.4
9	MP5A	Mx	.051	26.4
10	MP5A	X	-87.116	72
11	MP5A	Z	-150.89	72
12	MP5A	Mx	.051	72
13	MP2A	X	-76.607	24
14	MP2A	Z	-132.688	24

Member Point Loads (BLC 14 : Antenna Wo (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
15	MP2A	Mx	-.049	24
16	MP2A	X	-76.607	72
17	MP2A	Z	-132.688	72
18	MP2A	Mx	-.049	72
19	MP2A	X	-76.607	24
20	MP2A	Z	-132.688	24
21	MP2A	Mx	.139	24
22	MP2A	X	-76.607	72
23	MP2A	Z	-132.688	72
24	MP2A	Mx	.139	72
25	MP4A	X	-36.656	36
26	MP4A	Z	-63.49	36
27	MP4A	Mx	.021	36
28	MP4A	X	-36.656	54
29	MP4A	Z	-63.49	54
30	MP4A	Mx	.021	54
31	MP2A	X	-6.283	50.4
32	MP2A	Z	-10.882	50.4
33	MP2A	Mx	-.004	50.4
34	MP2A	X	-31.551	30
35	MP2A	Z	-54.647	30
36	MP2A	Mx	-.018	30
37	MP1A	X	-30.458	66
38	MP1A	Z	-52.755	66
39	MP1A	Mx	-.018	66

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	0	26.4
2	MP1A	Z	-32.866	26.4
3	MP1A	Mx	0	26.4
4	MP1A	X	0	72
5	MP1A	Z	-32.866	72
6	MP1A	Mx	0	72
7	MP5A	X	0	26.4
8	MP5A	Z	-32.866	26.4
9	MP5A	Mx	0	26.4
10	MP5A	X	0	72
11	MP5A	Z	-32.866	72
12	MP5A	Mx	0	72
13	MP2A	X	0	24
14	MP2A	Z	-30.902	24
15	MP2A	Mx	-.022	24
16	MP2A	X	0	72
17	MP2A	Z	-30.902	72
18	MP2A	Mx	-.022	72
19	MP2A	X	0	24
20	MP2A	Z	-30.902	24
21	MP2A	Mx	.022	24
22	MP2A	X	0	72
23	MP2A	Z	-30.902	72

Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
24	MP2A	Mx	.022	72
25	MP4A	X	0	36
26	MP4A	Z	-16.444	36
27	MP4A	Mx	0	36
28	MP4A	X	0	54
29	MP4A	Z	-16.444	54
30	MP4A	Mx	0	54
31	MP2A	X	0	50.4
32	MP2A	Z	-3.381	50.4
33	MP2A	Mx	0	50.4
34	MP2A	X	0	30
35	MP2A	Z	-13.874	30
36	MP2A	Mx	0	30
37	MP1A	X	0	66
38	MP1A	Z	-13.874	66
39	MP1A	Mx	0	66

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	15.983	26.4
2	MP1A	Z	-27.683	26.4
3	MP1A	Mx	-.009	26.4
4	MP1A	X	15.983	72
5	MP1A	Z	-27.683	72
6	MP1A	Mx	-.009	72
7	MP5A	X	15.983	26.4
8	MP5A	Z	-27.683	26.4
9	MP5A	Mx	-.009	26.4
10	MP5A	X	15.983	72
11	MP5A	Z	-27.683	72
12	MP5A	Mx	-.009	72
13	MP2A	X	14.225	24
14	MP2A	Z	-24.638	24
15	MP2A	Mx	-.026	24
16	MP2A	X	14.225	72
17	MP2A	Z	-24.638	72
18	MP2A	Mx	-.026	72
19	MP2A	X	14.225	24
20	MP2A	Z	-24.638	24
21	MP2A	Mx	.009	24
22	MP2A	X	14.225	72
23	MP2A	Z	-24.638	72
24	MP2A	Mx	.009	72
25	MP4A	X	7.044	36
26	MP4A	Z	-12.2	36
27	MP4A	Mx	-.004	36
28	MP4A	X	7.044	54
29	MP4A	Z	-12.2	54
30	MP4A	Mx	-.004	54
31	MP2A	X	1.585	50.4
32	MP2A	Z	-2.746	50.4

Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
33	MP2A	Mx	.000925	50.4
34	MP2A	X	6.41	30
35	MP2A	Z	-11.103	30
36	MP2A	Mx	.004	30
37	MP1A	X	6.21	66
38	MP1A	Z	-10.756	66
39	MP1A	Mx	.004	66

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

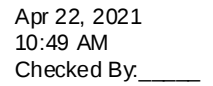
	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	26.123	26.4
2	MP1A	Z	-15.082	26.4
3	MP1A	Mx	-.015	26.4
4	MP1A	X	26.123	72
5	MP1A	Z	-15.082	72
6	MP1A	Mx	-.015	72
7	MP5A	X	26.123	26.4
8	MP5A	Z	-15.082	26.4
9	MP5A	Mx	-.015	26.4
10	MP5A	X	26.123	72
11	MP5A	Z	-15.082	72
12	MP5A	Mx	-.015	72
13	MP2A	X	20.392	24
14	MP2A	Z	-11.773	24
15	MP2A	Mx	-.02	24
16	MP2A	X	20.392	72
17	MP2A	Z	-11.773	72
18	MP2A	Mx	-.02	72
19	MP2A	X	20.392	24
20	MP2A	Z	-11.773	24
21	MP2A	Mx	-.004	24
22	MP2A	X	20.392	72
23	MP2A	Z	-11.773	72
24	MP2A	Mx	-.004	72
25	MP4A	X	8.117	36
26	MP4A	Z	-4.687	36
27	MP4A	Mx	-.005	36
28	MP4A	X	8.117	54
29	MP4A	Z	-4.687	54
30	MP4A	Mx	-.005	54
31	MP2A	X	2.382	50.4
32	MP2A	Z	-1.375	50.4
33	MP2A	Mx	.001	50.4
34	MP2A	X	9.277	30
35	MP2A	Z	-5.356	30
36	MP2A	Mx	.005	30
37	MP1A	X	8.237	66
38	MP1A	Z	-4.755	66
39	MP1A	Mx	.005	66

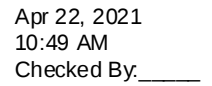
Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	29.263	26.4
2	MP1A	Z	0	26.4
3	MP1A	Mx	-.017	26.4
4	MP1A	X	29.263	72
5	MP1A	Z	0	72
6	MP1A	Mx	-.017	72
7	MP5A	X	29.263	26.4
8	MP5A	Z	0	26.4
9	MP5A	Mx	-.017	26.4
10	MP5A	X	29.263	72
11	MP5A	Z	0	72
12	MP5A	Mx	-.017	72
13	MP2A	X	21.095	24
14	MP2A	Z	0	24
15	MP2A	Mx	-.012	24
16	MP2A	X	21.095	72
17	MP2A	Z	0	72
18	MP2A	Mx	-.012	72
19	MP2A	X	21.095	24
20	MP2A	Z	0	24
21	MP2A	Mx	-.012	24
22	MP2A	X	21.095	72
23	MP2A	Z	0	72
24	MP2A	Mx	-.012	72
25	MP4A	X	7.016	36
26	MP4A	Z	0	36
27	MP4A	Mx	-.004	36
28	MP4A	X	7.016	54
29	MP4A	Z	0	54
30	MP4A	Mx	-.004	54
31	MP2A	X	2.54	50.4
32	MP2A	Z	0	50.4
33	MP2A	Mx	.001	50.4
34	MP2A	X	9.658	30
35	MP2A	Z	0	30
36	MP2A	Mx	.006	30
37	MP1A	X	8.056	66
38	MP1A	Z	0	66
39	MP1A	Mx	.005	66

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	26.123	26.4
2	MP1A	Z	15.082	26.4
3	MP1A	Mx	-.015	26.4
4	MP1A	X	26.123	72
5	MP1A	Z	15.082	72
6	MP1A	Mx	-.015	72
7	MP5A	X	26.123	26.4
8	MP5A	Z	15.082	26.4
9	MP5A	Mx	-.015	26.4



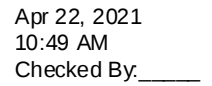


Member Point Loads (BLC 21 : Antenna Wi (180 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
28	MP4A	X	0	54
29	MP4A	Z	16.444	54
30	MP4A	Mx	0	54
31	MP2A	X	0	50.4
32	MP2A	Z	3.381	50.4
33	MP2A	Mx	0	50.4
34	MP2A	X	0	30
35	MP2A	Z	13.874	30
36	MP2A	Mx	0	30
37	MP1A	X	0	66
38	MP1A	Z	13.874	66
39	MP1A	Mx	0	66

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-15.983	26.4
2	MP1A	Z	27.683	26.4
3	MP1A	Mx	.009	26.4
4	MP1A	X	-15.983	72
5	MP1A	Z	27.683	72
6	MP1A	Mx	.009	72
7	MP5A	X	-15.983	26.4
8	MP5A	Z	27.683	26.4
9	MP5A	Mx	.009	26.4
10	MP5A	X	-15.983	72
11	MP5A	Z	27.683	72
12	MP5A	Mx	.009	72
13	MP2A	X	-14.225	24
14	MP2A	Z	24.638	24
15	MP2A	Mx	.026	24
16	MP2A	X	-14.225	72
17	MP2A	Z	24.638	72
18	MP2A	Mx	.026	72
19	MP2A	X	-14.225	24
20	MP2A	Z	24.638	24
21	MP2A	Mx	-.009	24
22	MP2A	X	-14.225	72
23	MP2A	Z	24.638	72
24	MP2A	Mx	-.009	72
25	MP4A	X	-7.044	36
26	MP4A	Z	12.2	36
27	MP4A	Mx	.004	36
28	MP4A	X	-7.044	54
29	MP4A	Z	12.2	54
30	MP4A	Mx	.004	54
31	MP2A	X	-1.585	50.4
32	MP2A	Z	2.746	50.4
33	MP2A	Mx	-.000925	50.4
34	MP2A	X	-6.41	30
35	MP2A	Z	11.103	30
36	MP2A	Mx	-.004	30



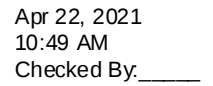
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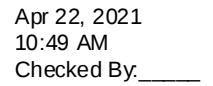
Member Point Loads (BLC 24 : Antenna Wi (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
4	MP1A	X	-29.263	72
5	MP1A	Z	0	72
6	MP1A	Mx	.017	72
7	MP5A	X	-29.263	26.4
8	MP5A	Z	0	26.4
9	MP5A	Mx	.017	26.4
10	MP5A	X	-29.263	72
11	MP5A	Z	0	72
12	MP5A	Mx	.017	72
13	MP2A	X	-21.095	24
14	MP2A	Z	0	24
15	MP2A	Mx	.012	24
16	MP2A	X	-21.095	72
17	MP2A	Z	0	72
18	MP2A	Mx	.012	72
19	MP2A	X	-21.095	24
20	MP2A	Z	0	24
21	MP2A	Mx	.012	24
22	MP2A	X	-21.095	72
23	MP2A	Z	0	72
24	MP2A	Mx	.012	72
25	MP4A	X	-7.016	36
26	MP4A	Z	0	36
27	MP4A	Mx	.004	36
28	MP4A	X	-7.016	54
29	MP4A	Z	0	54
30	MP4A	Mx	.004	54
31	MP2A	X	-2.54	50.4
32	MP2A	Z	0	50.4
33	MP2A	Mx	-.001	50.4
34	MP2A	X	-9.658	30
35	MP2A	Z	0	30
36	MP2A	Mx	-.006	30
37	MP1A	X	-8.056	66
38	MP1A	Z	0	66
39	MP1A	Mx	-.005	66

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-26.123	26.4
2	MP1A	Z	-15.082	26.4
3	MP1A	Mx	.015	26.4
4	MP1A	X	-26.123	72
5	MP1A	Z	-15.082	72
6	MP1A	Mx	.015	72
7	MP5A	X	-26.123	26.4
8	MP5A	Z	-15.082	26.4
9	MP5A	Mx	.015	26.4
10	MP5A	X	-26.123	72
11	MP5A	Z	-15.082	72
12	MP5A	Mx	.015	72





Member Point Loads (BLC 27 : Antenna Wm (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
31	MP2A	X	0	50.4
32	MP2A	Z	-823	50.4
33	MP2A	Mx	0	50.4
34	MP2A	X	0	30
35	MP2A	Z	-4.16	30
36	MP2A	Mx	0	30
37	MP1A	X	0	66
38	MP1A	Z	-4.16	66
39	MP1A	Mx	0	66

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	5.268	26.4
2	MP1A	Z	-9.124	26.4
3	MP1A	Mx	-.003	26.4
4	MP1A	X	5.268	72
5	MP1A	Z	-9.124	72
6	MP1A	Mx	-.003	72
7	MP5A	X	5.268	26.4
8	MP5A	Z	-9.124	26.4
9	MP5A	Mx	-.003	26.4
10	MP5A	X	5.268	72
11	MP5A	Z	-9.124	72
12	MP5A	Mx	-.003	72
13	MP2A	X	4.632	24
14	MP2A	Z	-8.023	24
15	MP2A	Mx	-.008	24
16	MP2A	X	4.632	72
17	MP2A	Z	-8.023	72
18	MP2A	Mx	-.008	72
19	MP2A	X	4.632	24
20	MP2A	Z	-8.023	24
21	MP2A	Mx	.003	24
22	MP2A	X	4.632	72
23	MP2A	Z	-8.023	72
24	MP2A	Mx	.003	72
25	MP4A	X	2.216	36
26	MP4A	Z	-3.839	36
27	MP4A	Mx	-.001	36
28	MP4A	X	2.216	54
29	MP4A	Z	-3.839	54
30	MP4A	Mx	-.001	54
31	MP2A	X	.38	50.4
32	MP2A	Z	-.658	50.4
33	MP2A	Mx	.000222	50.4
34	MP2A	X	1.908	30
35	MP2A	Z	-3.304	30
36	MP2A	Mx	.001	30
37	MP1A	X	1.842	66
38	MP1A	Z	-3.19	66
39	MP1A	Mx	.001	66

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	8.567	26.4
2	MP1A	Z	-4.946	26.4
3	MP1A	Mx	-.005	26.4
4	MP1A	X	8.567	72
5	MP1A	Z	-4.946	72
6	MP1A	Mx	-.005	72
7	MP5A	X	8.567	26.4
8	MP5A	Z	-4.946	26.4
9	MP5A	Mx	-.005	26.4
10	MP5A	X	8.567	72
11	MP5A	Z	-4.946	72
12	MP5A	Mx	-.005	72
13	MP2A	X	6.517	24
14	MP2A	Z	-3.763	24
15	MP2A	Mx	-.006	24
16	MP2A	X	6.517	72
17	MP2A	Z	-3.763	72
18	MP2A	Mx	-.006	72
19	MP2A	X	6.517	24
20	MP2A	Z	-3.763	24
21	MP2A	Mx	-.001	24
22	MP2A	X	6.517	72
23	MP2A	Z	-3.763	72
24	MP2A	Mx	-.001	72
25	MP4A	X	2.461	36
26	MP4A	Z	-1.421	36
27	MP4A	Mx	-.001	36
28	MP4A	X	2.461	54
29	MP4A	Z	-1.421	54
30	MP4A	Mx	-.001	54
31	MP2A	X	.548	50.4
32	MP2A	Z	-.316	50.4
33	MP2A	Mx	.00032	50.4
34	MP2A	X	2.707	30
35	MP2A	Z	-1.563	30
36	MP2A	Mx	.002	30
37	MP1A	X	2.364	66
38	MP1A	Z	-1.365	66
39	MP1A	Mx	.001	66

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	9.57	26.4
2	MP1A	Z	0	26.4
3	MP1A	Mx	-.006	26.4
4	MP1A	X	9.57	72
5	MP1A	Z	0	72
6	MP1A	Mx	-.006	72
7	MP5A	X	9.57	26.4
8	MP5A	Z	0	26.4
9	MP5A	Mx	-.006	26.4

Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
10	MP5A	X	9.57	72
11	MP5A	Z	0	72
12	MP5A	Mx	-.006	72
13	MP2A	X	6.656	24
14	MP2A	Z	0	24
15	MP2A	Mx	-.004	24
16	MP2A	X	6.656	72
17	MP2A	Z	0	72
18	MP2A	Mx	-.004	72
19	MP2A	X	6.656	24
20	MP2A	Z	0	24
21	MP2A	Mx	-.004	24
22	MP2A	X	6.656	72
23	MP2A	Z	0	72
24	MP2A	Mx	-.004	72
25	MP4A	X	2.047	36
26	MP4A	Z	0	36
27	MP4A	Mx	-.001	36
28	MP4A	X	2.047	54
29	MP4A	Z	0	54
30	MP4A	Mx	-.001	54
31	MP2A	X	.57	50.4
32	MP2A	Z	0	50.4
33	MP2A	Mx	.000332	50.4
34	MP2A	X	2.781	30
35	MP2A	Z	0	30
36	MP2A	Mx	.002	30
37	MP1A	X	2.253	66
38	MP1A	Z	0	66
39	MP1A	Mx	.001	66

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

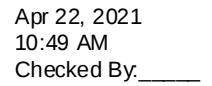
	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	8.567	26.4
2	MP1A	Z	4.946	26.4
3	MP1A	Mx	-.005	26.4
4	MP1A	X	8.567	72
5	MP1A	Z	4.946	72
6	MP1A	Mx	-.005	72
7	MP5A	X	8.567	26.4
8	MP5A	Z	4.946	26.4
9	MP5A	Mx	-.005	26.4
10	MP5A	X	8.567	72
11	MP5A	Z	4.946	72
12	MP5A	Mx	-.005	72
13	MP2A	X	6.517	24
14	MP2A	Z	3.763	24
15	MP2A	Mx	-.001	24
16	MP2A	X	6.517	72
17	MP2A	Z	3.763	72
18	MP2A	Mx	-.001	72

Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)

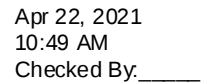
	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
19	MP2A	X	6.517	24
20	MP2A	Z	3.763	24
21	MP2A	Mx	-.006	24
22	MP2A	X	6.517	72
23	MP2A	Z	3.763	72
24	MP2A	Mx	-.006	72
25	MP4A	X	2.461	36
26	MP4A	Z	1.421	36
27	MP4A	Mx	-.001	36
28	MP4A	X	2.461	54
29	MP4A	Z	1.421	54
30	MP4A	Mx	-.001	54
31	MP2A	X	.548	50.4
32	MP2A	Z	.316	50.4
33	MP2A	Mx	.00032	50.4
34	MP2A	X	2.707	30
35	MP2A	Z	1.563	30
36	MP2A	Mx	.002	30
37	MP1A	X	2.364	66
38	MP1A	Z	1.365	66
39	MP1A	Mx	.001	66

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	5.268	26.4
2	MP1A	Z	9.124	26.4
3	MP1A	Mx	-.003	26.4
4	MP1A	X	5.268	72
5	MP1A	Z	9.124	72
6	MP1A	Mx	-.003	72
7	MP5A	X	5.268	26.4
8	MP5A	Z	9.124	26.4
9	MP5A	Mx	-.003	26.4
10	MP5A	X	5.268	72
11	MP5A	Z	9.124	72
12	MP5A	Mx	-.003	72
13	MP2A	X	4.632	24
14	MP2A	Z	8.023	24
15	MP2A	Mx	.003	24
16	MP2A	X	4.632	72
17	MP2A	Z	8.023	72
18	MP2A	Mx	.003	72
19	MP2A	X	4.632	24
20	MP2A	Z	8.023	24
21	MP2A	Mx	-.008	24
22	MP2A	X	4.632	72
23	MP2A	Z	8.023	72
24	MP2A	Mx	-.008	72
25	MP4A	X	2.216	36
26	MP4A	Z	3.839	36
27	MP4A	Mx	-.001	36



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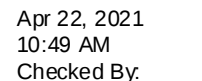
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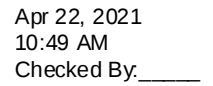
Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
4	MP1A	X	-8.567	72
5	MP1A	Z	4.946	72
6	MP1A	Mx	.005	72
7	MP5A	X	-8.567	26.4
8	MP5A	Z	4.946	26.4
9	MP5A	Mx	.005	26.4
10	MP5A	X	-8.567	72
11	MP5A	Z	4.946	72
12	MP5A	Mx	.005	72
13	MP2A	X	-6.517	24
14	MP2A	Z	3.763	24
15	MP2A	Mx	.006	24
16	MP2A	X	-6.517	72
17	MP2A	Z	3.763	72
18	MP2A	Mx	.006	72
19	MP2A	X	-6.517	24
20	MP2A	Z	3.763	24
21	MP2A	Mx	.001	24
22	MP2A	X	-6.517	72
23	MP2A	Z	3.763	72
24	MP2A	Mx	.001	72
25	MP4A	X	-2.461	36
26	MP4A	Z	1.421	36
27	MP4A	Mx	.001	36
28	MP4A	X	-2.461	54
29	MP4A	Z	1.421	54
30	MP4A	Mx	.001	54
31	MP2A	X	-.548	50.4
32	MP2A	Z	.316	50.4
33	MP2A	Mx	-.00032	50.4
34	MP2A	X	-2.707	30
35	MP2A	Z	1.563	30
36	MP2A	Mx	-.002	30
37	MP1A	X	-2.364	66
38	MP1A	Z	1.365	66
39	MP1A	Mx	-.001	66

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1A	X	-9.57	26.4
2	MP1A	Z	0	26.4
3	MP1A	Mx	.006	26.4
4	MP1A	X	-9.57	72
5	MP1A	Z	0	72
6	MP1A	Mx	.006	72
7	MP5A	X	-9.57	26.4
8	MP5A	Z	0	26.4
9	MP5A	Mx	.006	26.4
10	MP5A	X	-9.57	72
11	MP5A	Z	0	72
12	MP5A	Mx	.006	72





Member Point Loads (BLC 38 : Antenna Wm (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
31	MP2A	X	-.38	50.4
32	MP2A	Z	-.658	50.4
33	MP2A	Mx	-.000222	50.4
34	MP2A	X	-1.908	30
35	MP2A	Z	-3.304	30
36	MP2A	Mx	-.001	30
37	MP1A	X	-1.842	66
38	MP1A	Z	-3.19	66
39	MP1A	Mx	-.001	66

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M82	Y	-500	%76

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M82	Y	-500	%24

Member Point Loads (BLC 79 : Lv1)

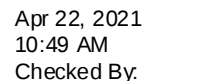
	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M82	Y	-250	0

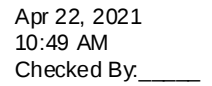
Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M82	Y	-250	%50

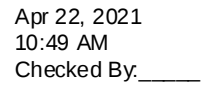
Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,F...]	Start Location[in,%]	End Location[in,%]
1	M47	Y	-7.484	-7.484	0	%100
2	M48	Y	-7.484	-7.484	0	%100
3	M49	Y	-5.104	-5.104	0	%100
4	M50	Y	-5.104	-5.104	0	%100
5	M51	Y	-7.484	-7.484	0	%100
6	M52	Y	-7.484	-7.484	0	%100
7	M53	Y	-5.104	-5.104	0	%100
8	M54	Y	-5.104	-5.104	0	%100
9	M55	Y	-5.104	-5.104	0	%100
10	M56	Y	-5.104	-5.104	0	%100
11	M73	Y	-4.077	-4.077	0	%100
12	M74	Y	-4.077	-4.077	0	%100
13	M75	Y	-4.077	-4.077	0	%100
14	M76	Y	-4.077	-4.077	0	%100
15	M75A	Y	-5.823	-5.823	0	%100
16	M76A	Y	-5.823	-5.823	0	%100
17	M92	Y	-5.823	-5.823	0	%100
18	MP5A	Y	-5.104	-5.104	0	%100
19	MP4A	Y	-5.104	-5.104	0	%100
20	MP3A	Y	-5.104	-5.104	0	%100





	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
29	M75A	X	0	0	0	%100
30	M75A	Z	-10.578	-10.578	0	%100
31	M76A	X	0	0	0	%100
32	M76A	Z	-10.578	-10.578	0	%100
33	M92	X	0	0	0	%100
34	M92	Z	-7.836	-7.836	0	%100
35	MP5A	X	0	0	0	%100
36	MP5A	Z	-8.738	-8.738	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	-8.738	-8.738	0	%100
39	MP3A	X	0	0	0	%100
40	MP3A	Z	-8.738	-8.738	0	%100
41	MP2A	X	0	0	0	%100
42	MP2A	Z	-8.738	-8.738	0	%100
43	MP1A	X	0	0	0	%100
44	MP1A	Z	-8.738	-8.738	0	%100
45	M48C	X	0	0	0	%100
46	M48C	Z	-1.84	-1.84	0	%100
47	M49C	X	0	0	0	%100
48	M49C	Z	-1.84	-1.84	0	%100
49	M50C	X	0	0	0	%100
50	M50C	Z	-1.84	-1.84	0	%100
51	M51A	X	0	0	0	%100
52	M51A	Z	-1.84	-1.84	0	%100
53	M52A	X	0	0	0	%100
54	M52A	Z	-1.84	-1.84	0	%100
55	M53A	X	0	0	0	%100
56	M53A	Z	-1.84	-1.84	0	%100
57	M54A	X	0	0	0	%100
58	M54A	Z	-5.665	-5.665	0	%100
59	M55A	X	0	0	0	%100
60	M55A	Z	-5.665	-5.665	0	%100
61	M56A	X	0	0	0	%100
62	M56A	Z	-5.665	-5.665	0	%100
63	M54B	X	0	0	0	%100
64	M54B	Z	-1.84	-1.84	0	%100
65	M55B	X	0	0	0	%100
66	M55B	Z	-1.84	-1.84	0	%100
67	M56B	X	0	0	0	%100
68	M56B	Z	-1.84	-1.84	0	%100
69	M57A	X	0	0	0	%100
70	M57A	Z	-1.84	-1.84	0	%100
71	M58A	X	0	0	0	%100
72	M58A	Z	-1.84	-1.84	0	%100
73	M59A	X	0	0	0	%100
74	M59A	Z	-1.84	-1.84	0	%100
75	M60A	X	0	0	0	%100
76	M60A	Z	-5.665	-5.665	0	%100
77	M61A	X	0	0	0	%100
78	M61A	Z	-5.665	-5.665	0	%100
79	M62A	X	0	0	0	%100
80	M62A	Z	-5.665	-5.665	0	%100



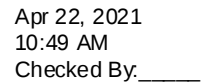
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Member Distributed Loads (BLC 42 : Structure Wo (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
53	M52A	X	2.768	2.768	0	%100
54	M52A	Z	-4.794	-4.794	0	%100
55	M53A	X	2.768	2.768	0	%100
56	M53A	Z	-4.794	-4.794	0	%100
57	M54A	X	2.832	2.832	0	%100
58	M54A	Z	-4.906	-4.906	0	%100
59	M55A	X	2.832	2.832	0	%100
60	M55A	Z	-4.906	-4.906	0	%100
61	M56A	X	2.832	2.832	0	%100
62	M56A	Z	-4.906	-4.906	0	%100
63	M54B	X	2.768	2.768	0	%100
64	M54B	Z	-4.794	-4.794	0	%100
65	M55B	X	2.768	2.768	0	%100
66	M55B	Z	-4.794	-4.794	0	%100
67	M56B	X	2.768	2.768	0	%100
68	M56B	Z	-4.794	-4.794	0	%100
69	M57A	X	2.768	2.768	0	%100
70	M57A	Z	-4.794	-4.794	0	%100
71	M58A	X	2.768	2.768	0	%100
72	M58A	Z	-4.794	-4.794	0	%100
73	M59A	X	2.768	2.768	0	%100
74	M59A	Z	-4.794	-4.794	0	%100
75	M60A	X	2.832	2.832	0	%100
76	M60A	Z	-4.906	-4.906	0	%100
77	M61A	X	2.832	2.832	0	%100
78	M61A	Z	-4.906	-4.906	0	%100
79	M62A	X	2.832	2.832	0	%100
80	M62A	Z	-4.906	-4.906	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	1.195	1.195	0	%100
2	M47	Z	-.69	-.69	0	%100
3	M48	X	1.195	1.195	0	%100
4	M48	Z	-.69	-.69	0	%100
5	M49	X	5.676	5.676	0	%100
6	M49	Z	-3.277	-3.277	0	%100
7	M50	X	5.676	5.676	0	%100
8	M50	Z	-3.277	-3.277	0	%100
9	M51	X	1.195	1.195	0	%100
10	M51	Z	-.69	-.69	0	%100
11	M52	X	1.195	1.195	0	%100
12	M52	Z	-.69	-.69	0	%100
13	M53	X	5.676	5.676	0	%100
14	M53	Z	-3.277	-3.277	0	%100
15	M54	X	5.676	5.676	0	%100
16	M54	Z	-3.277	-3.277	0	%100
17	M55	X	7.568	7.568	0	%100
18	M55	Z	-4.369	-4.369	0	%100
19	M56	X	7.568	7.568	0	%100
20	M56	Z	-4.369	-4.369	0	%100



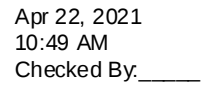
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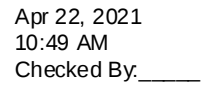
Member Distributed Loads (BLC 43 : Structure Wo (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
73	M59A	X	11.197	11.197	0	%100
74	M59A	Z	-6.464	-6.464	0	%100
75	M60A	X	4.906	4.906	0	%100
76	M60A	Z	-2.832	-2.832	0	%100
77	M61A	X	4.906	4.906	0	%100
78	M61A	Z	-2.832	-2.832	0	%100
79	M62A	X	4.906	4.906	0	%100
80	M62A	Z	-2.832	-2.832	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	1.84	1.84	0	%100
2	M47	Z	0	0	0	%100
3	M48	X	1.84	1.84	0	%100
4	M48	Z	0	0	0	%100
5	M49	X	8.738	8.738	0	%100
6	M49	Z	0	0	0	%100
7	M50	X	8.738	8.738	0	%100
8	M50	Z	0	0	0	%100
9	M51	X	1.84	1.84	0	%100
10	M51	Z	0	0	0	%100
11	M52	X	1.84	1.84	0	%100
12	M52	Z	0	0	0	%100
13	M53	X	8.738	8.738	0	%100
14	M53	Z	0	0	0	%100
15	M54	X	8.738	8.738	0	%100
16	M54	Z	0	0	0	%100
17	M55	X	8.738	8.738	0	%100
18	M55	Z	0	0	0	%100
19	M56	X	8.738	8.738	0	%100
20	M56	Z	0	0	0	%100
21	M73	X	6.108	6.108	0	%100
22	M73	Z	0	0	0	%100
23	M74	X	6.108	6.108	0	%100
24	M74	Z	0	0	0	%100
25	M75	X	6.108	6.108	0	%100
26	M75	Z	0	0	0	%100
27	M76	X	6.108	6.108	0	%100
28	M76	Z	0	0	0	%100
29	M75A	X	0	0	0	%100
30	M75A	Z	0	0	0	%100
31	M76A	X	0	0	0	%100
32	M76A	Z	0	0	0	%100
33	M92	X	2.742	2.742	0	%100
34	M92	Z	0	0	0	%100
35	MP5A	X	8.738	8.738	0	%100
36	MP5A	Z	0	0	0	%100
37	MP4A	X	8.738	8.738	0	%100
38	MP4A	Z	0	0	0	%100
39	MP3A	X	8.738	8.738	0	%100
40	MP3A	Z	0	0	0	%100





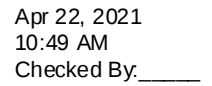
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Member Distributed Loads (BLC 45 : Structure Wo (120 Deg)) (Continued)

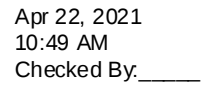
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
61	M56A	X	4.906	4.906	0	%100
62	M56A	Z	2.832	2.832	0	%100
63	M54B	X	11.197	11.197	0	%100
64	M54B	Z	6.464	6.464	0	%100
65	M55B	X	11.197	11.197	0	%100
66	M55B	Z	6.464	6.464	0	%100
67	M56B	X	11.197	11.197	0	%100
68	M56B	Z	6.464	6.464	0	%100
69	M57A	X	11.197	11.197	0	%100
70	M57A	Z	6.464	6.464	0	%100
71	M58A	X	11.197	11.197	0	%100
72	M58A	Z	6.464	6.464	0	%100
73	M59A	X	11.197	11.197	0	%100
74	M59A	Z	6.464	6.464	0	%100
75	M60A	X	4.906	4.906	0	%100
76	M60A	Z	2.832	2.832	0	%100
77	M61A	X	4.906	4.906	0	%100
78	M61A	Z	2.832	2.832	0	%100
79	M62A	X	4.906	4.906	0	%100
80	M62A	Z	2.832	2.832	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

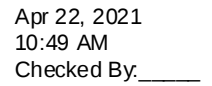
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	.23	.23	0	%100
2	M47	Z	.398	.398	0	%100
3	M48	X	.23	.23	0	%100
4	M48	Z	.398	.398	0	%100
5	M49	X	1.092	1.092	0	%100
6	M49	Z	1.892	1.892	0	%100
7	M50	X	1.092	1.092	0	%100
8	M50	Z	1.892	1.892	0	%100
9	M51	X	.23	.23	0	%100
10	M51	Z	.398	.398	0	%100
11	M52	X	.23	.23	0	%100
12	M52	Z	.398	.398	0	%100
13	M53	X	1.092	1.092	0	%100
14	M53	Z	1.892	1.892	0	%100
15	M54	X	1.092	1.092	0	%100
16	M54	Z	1.892	1.892	0	%100
17	M55	X	4.369	4.369	0	%100
18	M55	Z	7.568	7.568	0	%100
19	M56	X	4.369	4.369	0	%100
20	M56	Z	7.568	7.568	0	%100
21	M73	X	2.29	2.29	0	%100
22	M73	Z	3.967	3.967	0	%100
23	M74	X	2.29	2.29	0	%100
24	M74	Z	3.967	3.967	0	%100
25	M75	X	2.29	2.29	0	%100
26	M75	Z	3.967	3.967	0	%100
27	M76	X	2.29	2.29	0	%100
28	M76	Z	3.967	3.967	0	%100



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	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M47	X	0	0	0	%100
2	M47	Z	0	0	0	%100
3	M48	X	0	0	0	%100
4	M48	Z	0	0	0	%100
5	M49	X	0	0	0	%100
6	M49	Z	0	0	0	%100
7	M50	X	0	0	0	%100
8	M50	Z	0	0	0	%100
9	M51	X	0	0	0	%100
10	M51	Z	0	0	0	%100
11	M52	X	0	0	0	%100
12	M52	Z	0	0	0	%100
13	M53	X	0	0	0	%100
14	M53	Z	0	0	0	%100
15	M54	X	0	0	0	%100
16	M54	Z	0	0	0	%100
17	M55	X	0	0	0	%100
18	M55	Z	8.738	8.738	0	%100
19	M56	X	0	0	0	%100
20	M56	Z	8.738	8.738	0	%100
21	M73	X	0	0	0	%100
22	M73	Z	4.071	4.071	0	%100
23	M74	X	0	0	0	%100
24	M74	Z	4.071	4.071	0	%100
25	M75	X	0	0	0	%100
26	M75	Z	4.071	4.071	0	%100
27	M76	X	0	0	0	%100
28	M76	Z	4.071	4.071	0	%100
29	M75A	X	0	0	0	%100
30	M75A	Z	10.578	10.578	0	%100
31	M76A	X	0	0	0	%100
32	M76A	Z	10.578	10.578	0	%100
33	M92	X	0	0	0	%100
34	M92	Z	7.836	7.836	0	%100
35	MP5A	X	0	0	0	%100
36	MP5A	Z	8.738	8.738	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	8.738	8.738	0	%100
39	MP3A	X	0	0	0	%100
40	MP3A	Z	8.738	8.738	0	%100
41	MP2A	X	0	0	0	%100
42	MP2A	Z	8.738	8.738	0	%100
43	MP1A	X	0	0	0	%100
44	MP1A	Z	8.738	8.738	0	%100
45	M48C	X	0	0	0	%100
46	M48C	Z	1.84	1.84	0	%100
47	M49C	X	0	0	0	%100
48	M49C	Z	1.84	1.84	0	%100
49	M50C	X	0	0	0	%100
50	M50C	Z	1.84	1.84	0	%100
51	M51A	X	0	0	0	%100
52	M51A	Z	1.84	1.84	0	%100



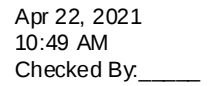
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
21	M73	X	-2.29	-2.29	0	%100
22	M73	Z	3.967	3.967	0	%100
23	M74	X	-2.29	-2.29	0	%100
24	M74	Z	3.967	3.967	0	%100
25	M75	X	-2.29	-2.29	0	%100
26	M75	Z	3.967	3.967	0	%100
27	M76	X	-2.29	-2.29	0	%100
28	M76	Z	3.967	3.967	0	%100
29	M75A	X	-3.967	-3.967	0	%100
30	M75A	Z	6.871	6.871	0	%100
31	M76A	X	-3.967	-3.967	0	%100
32	M76A	Z	6.871	6.871	0	%100
33	M92	X	-5.288	-5.288	0	%100
34	M92	Z	9.16	9.16	0	%100
35	MP5A	X	-4.369	-4.369	0	%100
36	MP5A	Z	7.568	7.568	0	%100
37	MP4A	X	-4.369	-4.369	0	%100
38	MP4A	Z	7.568	7.568	0	%100
39	MP3A	X	-4.369	-4.369	0	%100
40	MP3A	Z	7.568	7.568	0	%100
41	MP2A	X	-4.369	-4.369	0	%100
42	MP2A	Z	7.568	7.568	0	%100
43	MP1A	X	-4.369	-4.369	0	%100
44	MP1A	Z	7.568	7.568	0	%100
45	M48C	X	-2.768	-2.768	0	%100
46	M48C	Z	4.794	4.794	0	%100
47	M49C	X	-2.768	-2.768	0	%100
48	M49C	Z	4.794	4.794	0	%100
49	M50C	X	-2.768	-2.768	0	%100
50	M50C	Z	4.794	4.794	0	%100
51	M51A	X	-2.768	-2.768	0	%100
52	M51A	Z	4.794	4.794	0	%100
53	M52A	X	-2.768	-2.768	0	%100
54	M52A	Z	4.794	4.794	0	%100
55	M53A	X	-2.768	-2.768	0	%100
56	M53A	Z	4.794	4.794	0	%100
57	M54A	X	-2.832	-2.832	0	%100
58	M54A	Z	4.906	4.906	0	%100
59	M55A	X	-2.832	-2.832	0	%100
60	M55A	Z	4.906	4.906	0	%100
61	M56A	X	-2.832	-2.832	0	%100
62	M56A	Z	4.906	4.906	0	%100
63	M54B	X	-2.768	-2.768	0	%100
64	M54B	Z	4.794	4.794	0	%100
65	M55B	X	-2.768	-2.768	0	%100
66	M55B	Z	4.794	4.794	0	%100
67	M56B	X	-2.768	-2.768	0	%100
68	M56B	Z	4.794	4.794	0	%100
69	M57A	X	-2.768	-2.768	0	%100
70	M57A	Z	4.794	4.794	0	%100
71	M58A	X	-2.768	-2.768	0	%100
72	M58A	Z	4.794	4.794	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

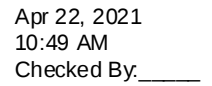
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
73	M59A	X	-2.768	-2.768	0	%100
74	M59A	Z	4.794	4.794	0	%100
75	M60A	X	-2.832	-2.832	0	%100
76	M60A	Z	4.906	4.906	0	%100
77	M61A	X	-2.832	-2.832	0	%100
78	M61A	Z	4.906	4.906	0	%100
79	M62A	X	-2.832	-2.832	0	%100
80	M62A	Z	4.906	4.906	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	-1.195	-1.195	0	%100
2	M47	Z	.69	.69	0	%100
3	M48	X	-1.195	-1.195	0	%100
4	M48	Z	.69	.69	0	%100
5	M49	X	-5.676	-5.676	0	%100
6	M49	Z	3.277	3.277	0	%100
7	M50	X	-5.676	-5.676	0	%100
8	M50	Z	3.277	3.277	0	%100
9	M51	X	-1.195	-1.195	0	%100
10	M51	Z	.69	.69	0	%100
11	M52	X	-1.195	-1.195	0	%100
12	M52	Z	.69	.69	0	%100
13	M53	X	-5.676	-5.676	0	%100
14	M53	Z	3.277	3.277	0	%100
15	M54	X	-5.676	-5.676	0	%100
16	M54	Z	3.277	3.277	0	%100
17	M55	X	-7.568	-7.568	0	%100
18	M55	Z	4.369	4.369	0	%100
19	M56	X	-7.568	-7.568	0	%100
20	M56	Z	4.369	4.369	0	%100
21	M73	X	-4.848	-4.848	0	%100
22	M73	Z	2.799	2.799	0	%100
23	M74	X	-4.848	-4.848	0	%100
24	M74	Z	2.799	2.799	0	%100
25	M75	X	-4.848	-4.848	0	%100
26	M75	Z	2.799	2.799	0	%100
27	M76	X	-4.848	-4.848	0	%100
28	M76	Z	2.799	2.799	0	%100
29	M75A	X	-2.29	-2.29	0	%100
30	M75A	Z	1.322	1.322	0	%100
31	M76A	X	-2.29	-2.29	0	%100
32	M76A	Z	1.322	1.322	0	%100
33	M92	X	-6.954	-6.954	0	%100
34	M92	Z	4.015	4.015	0	%100
35	MP5A	X	-7.568	-7.568	0	%100
36	MP5A	Z	4.369	4.369	0	%100
37	MP4A	X	-7.568	-7.568	0	%100
38	MP4A	Z	4.369	4.369	0	%100
39	MP3A	X	-7.568	-7.568	0	%100
40	MP3A	Z	4.369	4.369	0	%100



	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M47	X	-1.84	-1.84	0	%100
2	M47	Z	0	0	0	%100
3	M48	X	-1.84	-1.84	0	%100
4	M48	Z	0	0	0	%100
5	M49	X	-8.738	-8.738	0	%100
6	M49	Z	0	0	0	%100
7	M50	X	-8.738	-8.738	0	%100
8	M50	Z	0	0	0	%100



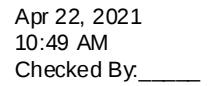
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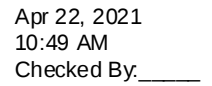
Member Distributed Loads (BLC 50 : Structure Wo (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
61	M56A	X	-5.665	-5.665	0	%100
62	M56A	Z	0	0	0	%100
63	M54B	X	-16.625	-16.625	0	%100
64	M54B	Z	0	0	0	%100
65	M55B	X	-16.625	-16.625	0	%100
66	M55B	Z	0	0	0	%100
67	M56B	X	-16.625	-16.625	0	%100
68	M56B	Z	0	0	0	%100
69	M57A	X	-16.625	-16.625	0	%100
70	M57A	Z	0	0	0	%100
71	M58A	X	-16.625	-16.625	0	%100
72	M58A	Z	0	0	0	%100
73	M59A	X	-16.625	-16.625	0	%100
74	M59A	Z	0	0	0	%100
75	M60A	X	-5.665	-5.665	0	%100
76	M60A	Z	0	0	0	%100
77	M61A	X	-5.665	-5.665	0	%100
78	M61A	Z	0	0	0	%100
79	M62A	X	-5.665	-5.665	0	%100
80	M62A	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	-1.195	-1.195	0	%100
2	M47	Z	-.69	-.69	0	%100
3	M48	X	-1.195	-1.195	0	%100
4	M48	Z	-.69	-.69	0	%100
5	M49	X	-5.676	-5.676	0	%100
6	M49	Z	-3.277	-3.277	0	%100
7	M50	X	-5.676	-5.676	0	%100
8	M50	Z	-3.277	-3.277	0	%100
9	M51	X	-1.195	-1.195	0	%100
10	M51	Z	-.69	-.69	0	%100
11	M52	X	-1.195	-1.195	0	%100
12	M52	Z	-.69	-.69	0	%100
13	M53	X	-5.676	-5.676	0	%100
14	M53	Z	-3.277	-3.277	0	%100
15	M54	X	-5.676	-5.676	0	%100
16	M54	Z	-3.277	-3.277	0	%100
17	M55	X	-7.568	-7.568	0	%100
18	M55	Z	-4.369	-4.369	0	%100
19	M56	X	-7.568	-7.568	0	%100
20	M56	Z	-4.369	-4.369	0	%100
21	M73	X	-4.848	-4.848	0	%100
22	M73	Z	-2.799	-2.799	0	%100
23	M74	X	-4.848	-4.848	0	%100
24	M74	Z	-2.799	-2.799	0	%100
25	M75	X	-4.848	-4.848	0	%100
26	M75	Z	-2.799	-2.799	0	%100
27	M76	X	-4.848	-4.848	0	%100
28	M76	Z	-2.799	-2.799	0	%100





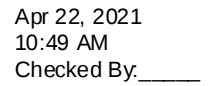
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Member Distributed Loads (BLC 52 : Structure Wo (330 Deg)) (Continued)

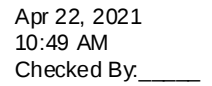
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
53	M52A	X	-2.768	-2.768	0	%100
54	M52A	Z	-4.794	-4.794	0	%100
55	M53A	X	-2.768	-2.768	0	%100
56	M53A	Z	-4.794	-4.794	0	%100
57	M54A	X	-2.832	-2.832	0	%100
58	M54A	Z	-4.906	-4.906	0	%100
59	M55A	X	-2.832	-2.832	0	%100
60	M55A	Z	-4.906	-4.906	0	%100
61	M56A	X	-2.832	-2.832	0	%100
62	M56A	Z	-4.906	-4.906	0	%100
63	M54B	X	-2.768	-2.768	0	%100
64	M54B	Z	-4.794	-4.794	0	%100
65	M55B	X	-2.768	-2.768	0	%100
66	M55B	Z	-4.794	-4.794	0	%100
67	M56B	X	-2.768	-2.768	0	%100
68	M56B	Z	-4.794	-4.794	0	%100
69	M57A	X	-2.768	-2.768	0	%100
70	M57A	Z	-4.794	-4.794	0	%100
71	M58A	X	-2.768	-2.768	0	%100
72	M58A	Z	-4.794	-4.794	0	%100
73	M59A	X	-2.768	-2.768	0	%100
74	M59A	Z	-4.794	-4.794	0	%100
75	M60A	X	-2.832	-2.832	0	%100
76	M60A	Z	-4.906	-4.906	0	%100
77	M61A	X	-2.832	-2.832	0	%100
78	M61A	Z	-4.906	-4.906	0	%100
79	M62A	X	-2.832	-2.832	0	%100
80	M62A	Z	-4.906	-4.906	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	0	0	0	%100
2	M47	Z	0	0	0	%100
3	M48	X	0	0	0	%100
4	M48	Z	0	0	0	%100
5	M49	X	0	0	0	%100
6	M49	Z	0	0	0	%100
7	M50	X	0	0	0	%100
8	M50	Z	0	0	0	%100
9	M51	X	0	0	0	%100
10	M51	Z	0	0	0	%100
11	M52	X	0	0	0	%100
12	M52	Z	0	0	0	%100
13	M53	X	0	0	0	%100
14	M53	Z	0	0	0	%100
15	M54	X	0	0	0	%100
16	M54	Z	0	0	0	%100
17	M55	X	0	0	0	%100
18	M55	Z	-2.922	-2.922	0	%100
19	M56	X	0	0	0	%100
20	M56	Z	-2.922	-2.922	0	%100



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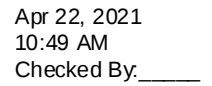


Member Distributed Loads (BLC 54 : Structure Wi (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
41	MP2A	X	1.461	1.461	0	%100
42	MP2A	Z	-2.53	-2.53	0	%100
43	MP1A	X	1.461	1.461	0	%100
44	MP1A	Z	-2.53	-2.53	0	%100
45	M48C	X	.889	.889	0	%100
46	M48C	Z	-1.54	-1.54	0	%100
47	M49C	X	.889	.889	0	%100
48	M49C	Z	-1.54	-1.54	0	%100
49	M50C	X	.889	.889	0	%100
50	M50C	Z	-1.54	-1.54	0	%100
51	M51A	X	.889	.889	0	%100
52	M51A	Z	-1.54	-1.54	0	%100
53	M52A	X	.889	.889	0	%100
54	M52A	Z	-1.54	-1.54	0	%100
55	M53A	X	.889	.889	0	%100
56	M53A	Z	-1.54	-1.54	0	%100
57	M54A	X	1.066	1.066	0	%100
58	M54A	Z	-1.847	-1.847	0	%100
59	M55A	X	1.066	1.066	0	%100
60	M55A	Z	-1.847	-1.847	0	%100
61	M56A	X	1.066	1.066	0	%100
62	M56A	Z	-1.847	-1.847	0	%100
63	M54B	X	.889	.889	0	%100
64	M54B	Z	-1.54	-1.54	0	%100
65	M55B	X	.889	.889	0	%100
66	M55B	Z	-1.54	-1.54	0	%100
67	M56B	X	.889	.889	0	%100
68	M56B	Z	-1.54	-1.54	0	%100
69	M57A	X	.889	.889	0	%100
70	M57A	Z	-1.54	-1.54	0	%100
71	M58A	X	.889	.889	0	%100
72	M58A	Z	-1.54	-1.54	0	%100
73	M59A	X	.889	.889	0	%100
74	M59A	Z	-1.54	-1.54	0	%100
75	M60A	X	1.066	1.066	0	%100
76	M60A	Z	-1.847	-1.847	0	%100
77	M61A	X	1.066	1.066	0	%100
78	M61A	Z	-1.847	-1.847	0	%100
79	M62A	X	1.066	1.066	0	%100
80	M62A	Z	-1.847	-1.847	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	.752	.752	0	%100
2	M47	Z	-.434	-.434	0	%100
3	M48	X	.752	.752	0	%100
4	M48	Z	-.434	-.434	0	%100
5	M49	X	1.898	1.898	0	%100
6	M49	Z	-1.096	-1.096	0	%100
7	M50	X	1.898	1.898	0	%100
8	M50	Z	-1.096	-1.096	0	%100

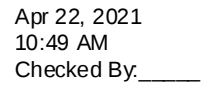


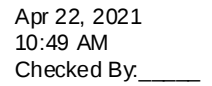
Member Distributed Loads (BLC 55 : Structure Wi (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
61	M56A	X	1.847	1.847	0	%100
62	M56A	Z	-1.066	-1.066	0	%100
63	M54B	X	2.615	2.615	0	%100
64	M54B	Z	-1.51	-1.51	0	%100
65	M55B	X	2.615	2.615	0	%100
66	M55B	Z	-1.51	-1.51	0	%100
67	M56B	X	2.615	2.615	0	%100
68	M56B	Z	-1.51	-1.51	0	%100
69	M57A	X	2.615	2.615	0	%100
70	M57A	Z	-1.51	-1.51	0	%100
71	M58A	X	2.615	2.615	0	%100
72	M58A	Z	-1.51	-1.51	0	%100
73	M59A	X	2.615	2.615	0	%100
74	M59A	Z	-1.51	-1.51	0	%100
75	M60A	X	1.847	1.847	0	%100
76	M60A	Z	-1.066	-1.066	0	%100
77	M61A	X	1.847	1.847	0	%100
78	M61A	Z	-1.066	-1.066	0	%100
79	M62A	X	1.847	1.847	0	%100
80	M62A	Z	-1.066	-1.066	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	1.159	1.159	0	%100
2	M47	Z	0	0	0	%100
3	M48	X	1.159	1.159	0	%100
4	M48	Z	0	0	0	%100
5	M49	X	2.922	2.922	0	%100
6	M49	Z	0	0	0	%100
7	M50	X	2.922	2.922	0	%100
8	M50	Z	0	0	0	%100
9	M51	X	1.159	1.159	0	%100
10	M51	Z	0	0	0	%100
11	M52	X	1.159	1.159	0	%100
12	M52	Z	0	0	0	%100
13	M53	X	2.922	2.922	0	%100
14	M53	Z	0	0	0	%100
15	M54	X	2.922	2.922	0	%100
16	M54	Z	0	0	0	%100
17	M55	X	2.922	2.922	0	%100
18	M55	Z	0	0	0	%100
19	M56	X	2.922	2.922	0	%100
20	M56	Z	0	0	0	%100
21	M73	X	2.381	2.381	0	%100
22	M73	Z	0	0	0	%100
23	M74	X	2.381	2.381	0	%100
24	M74	Z	0	0	0	%100
25	M75	X	2.381	2.381	0	%100
26	M75	Z	0	0	0	%100
27	M76	X	2.381	2.381	0	%100
28	M76	Z	0	0	0	%100



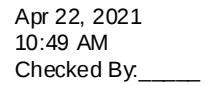


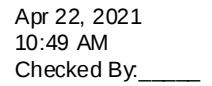
Member Distributed Loads (BLC 57 : Structure Wi (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
53	M52A	X	2.615	2.615	0	%100
54	M52A	Z	1.51	1.51	0	%100
55	M53A	X	2.615	2.615	0	%100
56	M53A	Z	1.51	1.51	0	%100
57	M54A	X	1.847	1.847	0	%100
58	M54A	Z	1.066	1.066	0	%100
59	M55A	X	1.847	1.847	0	%100
60	M55A	Z	1.066	1.066	0	%100
61	M56A	X	1.847	1.847	0	%100
62	M56A	Z	1.066	1.066	0	%100
63	M54B	X	2.615	2.615	0	%100
64	M54B	Z	1.51	1.51	0	%100
65	M55B	X	2.615	2.615	0	%100
66	M55B	Z	1.51	1.51	0	%100
67	M56B	X	2.615	2.615	0	%100
68	M56B	Z	1.51	1.51	0	%100
69	M57A	X	2.615	2.615	0	%100
70	M57A	Z	1.51	1.51	0	%100
71	M58A	X	2.615	2.615	0	%100
72	M58A	Z	1.51	1.51	0	%100
73	M59A	X	2.615	2.615	0	%100
74	M59A	Z	1.51	1.51	0	%100
75	M60A	X	1.847	1.847	0	%100
76	M60A	Z	1.066	1.066	0	%100
77	M61A	X	1.847	1.847	0	%100
78	M61A	Z	1.066	1.066	0	%100
79	M62A	X	1.847	1.847	0	%100
80	M62A	Z	1.066	1.066	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	.145	.145	0	%100
2	M47	Z	.251	.251	0	%100
3	M48	X	.145	.145	0	%100
4	M48	Z	.251	.251	0	%100
5	M49	X	.365	.365	0	%100
6	M49	Z	.633	.633	0	%100
7	M50	X	.365	.365	0	%100
8	M50	Z	.633	.633	0	%100
9	M51	X	.145	.145	0	%100
10	M51	Z	.251	.251	0	%100
11	M52	X	.145	.145	0	%100
12	M52	Z	.251	.251	0	%100
13	M53	X	.365	.365	0	%100
14	M53	Z	.633	.633	0	%100
15	M54	X	.365	.365	0	%100
16	M54	Z	.633	.633	0	%100
17	M55	X	1.461	1.461	0	%100
18	M55	Z	2.53	2.53	0	%100
19	M56	X	1.461	1.461	0	%100
20	M56	Z	2.53	2.53	0	%100





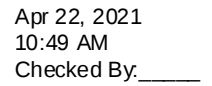
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Member Distributed Loads (BLC 59 : Structure Wi (180 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
41	MP2A	X	0	0	0	%100
42	MP2A	Z	2.922	2.922	0	%100
43	MP1A	X	0	0	0	%100
44	MP1A	Z	2.922	2.922	0	%100
45	M48C	X	0	0	0	%100
46	M48C	Z	1.157	1.157	0	%100
47	M49C	X	0	0	0	%100
48	M49C	Z	1.157	1.157	0	%100
49	M50C	X	0	0	0	%100
50	M50C	Z	1.157	1.157	0	%100
51	M51A	X	0	0	0	%100
52	M51A	Z	1.157	1.157	0	%100
53	M52A	X	0	0	0	%100
54	M52A	Z	1.157	1.157	0	%100
55	M53A	X	0	0	0	%100
56	M53A	Z	1.157	1.157	0	%100
57	M54A	X	0	0	0	%100
58	M54A	Z	2.133	2.133	0	%100
59	M55A	X	0	0	0	%100
60	M55A	Z	2.133	2.133	0	%100
61	M56A	X	0	0	0	%100
62	M56A	Z	2.133	2.133	0	%100
63	M54B	X	0	0	0	%100
64	M54B	Z	1.157	1.157	0	%100
65	M55B	X	0	0	0	%100
66	M55B	Z	1.157	1.157	0	%100
67	M56B	X	0	0	0	%100
68	M56B	Z	1.157	1.157	0	%100
69	M57A	X	0	0	0	%100
70	M57A	Z	1.157	1.157	0	%100
71	M58A	X	0	0	0	%100
72	M58A	Z	1.157	1.157	0	%100
73	M59A	X	0	0	0	%100
74	M59A	Z	1.157	1.157	0	%100
75	M60A	X	0	0	0	%100
76	M60A	Z	2.133	2.133	0	%100
77	M61A	X	0	0	0	%100
78	M61A	Z	2.133	2.133	0	%100
79	M62A	X	0	0	0	%100
80	M62A	Z	2.133	2.133	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	-.145	-.145	0	%100
2	M47	Z	.251	.251	0	%100
3	M48	X	-.145	-.145	0	%100
4	M48	Z	.251	.251	0	%100
5	M49	X	-.365	-.365	0	%100
6	M49	Z	.633	.633	0	%100
7	M50	X	-.365	-.365	0	%100
8	M50	Z	.633	.633	0	%100

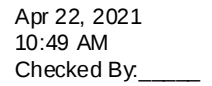


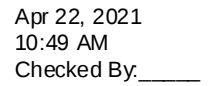
Member Distributed Loads (BLC 60 : Structure Wi (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
61	M56A	X	-1.066	-1.066	0	%100
62	M56A	Z	1.847	1.847	0	%100
63	M54B	X	-.889	-.889	0	%100
64	M54B	Z	1.54	1.54	0	%100
65	M55B	X	-.889	-.889	0	%100
66	M55B	Z	1.54	1.54	0	%100
67	M56B	X	-.889	-.889	0	%100
68	M56B	Z	1.54	1.54	0	%100
69	M57A	X	-.889	-.889	0	%100
70	M57A	Z	1.54	1.54	0	%100
71	M58A	X	-.889	-.889	0	%100
72	M58A	Z	1.54	1.54	0	%100
73	M59A	X	-.889	-.889	0	%100
74	M59A	Z	1.54	1.54	0	%100
75	M60A	X	-1.066	-1.066	0	%100
76	M60A	Z	1.847	1.847	0	%100
77	M61A	X	-1.066	-1.066	0	%100
78	M61A	Z	1.847	1.847	0	%100
79	M62A	X	-1.066	-1.066	0	%100
80	M62A	Z	1.847	1.847	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	-.752	-.752	0	%100
2	M47	Z	.434	.434	0	%100
3	M48	X	-.752	-.752	0	%100
4	M48	Z	.434	.434	0	%100
5	M49	X	-1.898	-1.898	0	%100
6	M49	Z	1.096	1.096	0	%100
7	M50	X	-1.898	-1.898	0	%100
8	M50	Z	1.096	1.096	0	%100
9	M51	X	-.752	-.752	0	%100
10	M51	Z	.434	.434	0	%100
11	M52	X	-.752	-.752	0	%100
12	M52	Z	.434	.434	0	%100
13	M53	X	-1.898	-1.898	0	%100
14	M53	Z	1.096	1.096	0	%100
15	M54	X	-1.898	-1.898	0	%100
16	M54	Z	1.096	1.096	0	%100
17	M55	X	-2.53	-2.53	0	%100
18	M55	Z	1.461	1.461	0	%100
19	M56	X	-2.53	-2.53	0	%100
20	M56	Z	1.461	1.461	0	%100
21	M73	X	-1.89	-1.89	0	%100
22	M73	Z	1.091	1.091	0	%100
23	M74	X	-1.89	-1.89	0	%100
24	M74	Z	1.091	1.091	0	%100
25	M75	X	-1.89	-1.89	0	%100
26	M75	Z	1.091	1.091	0	%100
27	M76	X	-1.89	-1.89	0	%100
28	M76	Z	1.091	1.091	0	%100





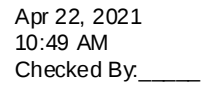
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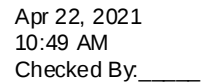
Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
53	M52A	X	-3.641	-3.641	0	%100
54	M52A	Z	0	0	0	%100
55	M53A	X	-3.641	-3.641	0	%100
56	M53A	Z	0	0	0	%100
57	M54A	X	-2.133	-2.133	0	%100
58	M54A	Z	0	0	0	%100
59	M55A	X	-2.133	-2.133	0	%100
60	M55A	Z	0	0	0	%100
61	M56A	X	-2.133	-2.133	0	%100
62	M56A	Z	0	0	0	%100
63	M54B	X	-3.641	-3.641	0	%100
64	M54B	Z	0	0	0	%100
65	M55B	X	-3.641	-3.641	0	%100
66	M55B	Z	0	0	0	%100
67	M56B	X	-3.641	-3.641	0	%100
68	M56B	Z	0	0	0	%100
69	M57A	X	-3.641	-3.641	0	%100
70	M57A	Z	0	0	0	%100
71	M58A	X	-3.641	-3.641	0	%100
72	M58A	Z	0	0	0	%100
73	M59A	X	-3.641	-3.641	0	%100
74	M59A	Z	0	0	0	%100
75	M60A	X	-2.133	-2.133	0	%100
76	M60A	Z	0	0	0	%100
77	M61A	X	-2.133	-2.133	0	%100
78	M61A	Z	0	0	0	%100
79	M62A	X	-2.133	-2.133	0	%100
80	M62A	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	-.752	-.752	0	%100
2	M47	Z	-.434	-.434	0	%100
3	M48	X	-.752	-.752	0	%100
4	M48	Z	-.434	-.434	0	%100
5	M49	X	-1.898	-1.898	0	%100
6	M49	Z	-1.096	-1.096	0	%100
7	M50	X	-1.898	-1.898	0	%100
8	M50	Z	-1.096	-1.096	0	%100
9	M51	X	-.752	-.752	0	%100
10	M51	Z	-.434	-.434	0	%100
11	M52	X	-.752	-.752	0	%100
12	M52	Z	-.434	-.434	0	%100
13	M53	X	-1.898	-1.898	0	%100
14	M53	Z	-1.096	-1.096	0	%100
15	M54	X	-1.898	-1.898	0	%100
16	M54	Z	-1.096	-1.096	0	%100
17	M55	X	-2.53	-2.53	0	%100
18	M55	Z	-1.461	-1.461	0	%100
19	M56	X	-2.53	-2.53	0	%100
20	M56	Z	-1.461	-1.461	0	%100





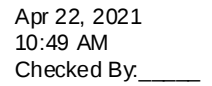
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Member Distributed Loads (BLC 64 : Structure Wi (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
41	MP2A	X	-1.461	-1.461	0	%100
42	MP2A	Z	-2.53	-2.53	0	%100
43	MP1A	X	-1.461	-1.461	0	%100
44	MP1A	Z	-2.53	-2.53	0	%100
45	M48C	X	-.889	-.889	0	%100
46	M48C	Z	-1.54	-1.54	0	%100
47	M49C	X	-.889	-.889	0	%100
48	M49C	Z	-1.54	-1.54	0	%100
49	M50C	X	-.889	-.889	0	%100
50	M50C	Z	-1.54	-1.54	0	%100
51	M51A	X	-.889	-.889	0	%100
52	M51A	Z	-1.54	-1.54	0	%100
53	M52A	X	-.889	-.889	0	%100
54	M52A	Z	-1.54	-1.54	0	%100
55	M53A	X	-.889	-.889	0	%100
56	M53A	Z	-1.54	-1.54	0	%100
57	M54A	X	-1.066	-1.066	0	%100
58	M54A	Z	-1.847	-1.847	0	%100
59	M55A	X	-1.066	-1.066	0	%100
60	M55A	Z	-1.847	-1.847	0	%100
61	M56A	X	-1.066	-1.066	0	%100
62	M56A	Z	-1.847	-1.847	0	%100
63	M54B	X	-.889	-.889	0	%100
64	M54B	Z	-1.54	-1.54	0	%100
65	M55B	X	-.889	-.889	0	%100
66	M55B	Z	-1.54	-1.54	0	%100
67	M56B	X	-.889	-.889	0	%100
68	M56B	Z	-1.54	-1.54	0	%100
69	M57A	X	-.889	-.889	0	%100
70	M57A	Z	-1.54	-1.54	0	%100
71	M58A	X	-.889	-.889	0	%100
72	M58A	Z	-1.54	-1.54	0	%100
73	M59A	X	-.889	-.889	0	%100
74	M59A	Z	-1.54	-1.54	0	%100
75	M60A	X	-1.066	-1.066	0	%100
76	M60A	Z	-1.847	-1.847	0	%100
77	M61A	X	-1.066	-1.066	0	%100
78	M61A	Z	-1.847	-1.847	0	%100
79	M62A	X	-1.066	-1.066	0	%100
80	M62A	Z	-1.847	-1.847	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	0	0	0	%100
2	M47	Z	0	0	0	%100
3	M48	X	0	0	0	%100
4	M48	Z	0	0	0	%100
5	M49	X	0	0	0	%100
6	M49	Z	0	0	0	%100
7	M50	X	0	0	0	%100
8	M50	Z	0	0	0	%100



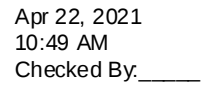
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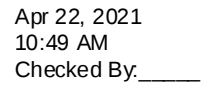
Member Distributed Loads (BLC 65 : Structure Wm (0 Deg)) (Continued)

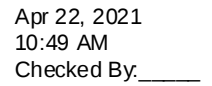
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
61	M56A	X	0	0	0	%100
62	M56A	Z	-.343	-.343	0	%100
63	M54B	X	0	0	0	%100
64	M54B	Z	-.111	-.111	0	%100
65	M55B	X	0	0	0	%100
66	M55B	Z	-.111	-.111	0	%100
67	M56B	X	0	0	0	%100
68	M56B	Z	-.111	-.111	0	%100
69	M57A	X	0	0	0	%100
70	M57A	Z	-.111	-.111	0	%100
71	M58A	X	0	0	0	%100
72	M58A	Z	-.111	-.111	0	%100
73	M59A	X	0	0	0	%100
74	M59A	Z	-.111	-.111	0	%100
75	M60A	X	0	0	0	%100
76	M60A	Z	-.343	-.343	0	%100
77	M61A	X	0	0	0	%100
78	M61A	Z	-.343	-.343	0	%100
79	M62A	X	0	0	0	%100
80	M62A	Z	-.343	-.343	0	%100

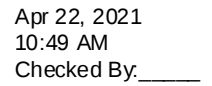
Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	.014	.014	0	%100
2	M47	Z	-.024	-.024	0	%100
3	M48	X	.014	.014	0	%100
4	M48	Z	-.024	-.024	0	%100
5	M49	X	.066	.066	0	%100
6	M49	Z	-.114	-.114	0	%100
7	M50	X	.066	.066	0	%100
8	M50	Z	-.114	-.114	0	%100
9	M51	X	.014	.014	0	%100
10	M51	Z	-.024	-.024	0	%100
11	M52	X	.014	.014	0	%100
12	M52	Z	-.024	-.024	0	%100
13	M53	X	.066	.066	0	%100
14	M53	Z	-.114	-.114	0	%100
15	M54	X	.066	.066	0	%100
16	M54	Z	-.114	-.114	0	%100
17	M55	X	.264	.264	0	%100
18	M55	Z	-.458	-.458	0	%100
19	M56	X	.264	.264	0	%100
20	M56	Z	-.458	-.458	0	%100
21	M73	X	.138	.138	0	%100
22	M73	Z	-.24	-.24	0	%100
23	M74	X	.138	.138	0	%100
24	M74	Z	-.24	-.24	0	%100
25	M75	X	.138	.138	0	%100
26	M75	Z	-.24	-.24	0	%100
27	M76	X	.138	.138	0	%100
28	M76	Z	-.24	-.24	0	%100





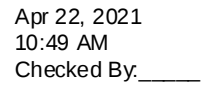


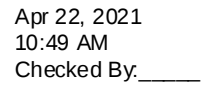


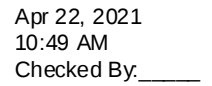
RISA-3D Version 17.0.4 [\\.\...\..\Final 228835-VZW MT LOT A H 4-21-Phoer37]

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
9	M51	X	.014	.014	0	%100
10	M51	Z	.024	.024	0	%100
11	M52	X	.014	.014	0	%100
12	M52	Z	.024	.024	0	%100
13	M53	X	.066	.066	0	%100
14	M53	Z	.114	.114	0	%100
15	M54	X	.066	.066	0	%100
16	M54	Z	.114	.114	0	%100
17	M55	X	.264	.264	0	%100
18	M55	Z	.458	.458	0	%100
19	M56	X	.264	.264	0	%100
20	M56	Z	.458	.458	0	%100
21	M73	X	.138	.138	0	%100
22	M73	Z	.24	.24	0	%100
23	M74	X	.138	.138	0	%100
24	M74	Z	.24	.24	0	%100
25	M75	X	.138	.138	0	%100
26	M75	Z	.24	.24	0	%100
27	M76	X	.138	.138	0	%100
28	M76	Z	.24	.24	0	%100
29	M75A	X	.24	.24	0	%100
30	M75A	Z	.415	.415	0	%100
31	M76A	X	.24	.24	0	%100
32	M76A	Z	.415	.415	0	%100
33	M92	X	.077	.077	0	%100
34	M92	Z	.133	.133	0	%100
35	MP5A	X	.264	.264	0	%100
36	MP5A	Z	.458	.458	0	%100
37	MP4A	X	.264	.264	0	%100
38	MP4A	Z	.458	.458	0	%100
39	MP3A	X	.264	.264	0	%100
40	MP3A	Z	.458	.458	0	%100
41	MP2A	X	.264	.264	0	%100
42	MP2A	Z	.458	.458	0	%100
43	MP1A	X	.264	.264	0	%100
44	MP1A	Z	.458	.458	0	%100
45	M48C	X	.167	.167	0	%100
46	M48C	Z	.29	.29	0	%100
47	M49C	X	.167	.167	0	%100
48	M49C	Z	.29	.29	0	%100
49	M50C	X	.167	.167	0	%100
50	M50C	Z	.29	.29	0	%100
51	M51A	X	.167	.167	0	%100
52	M51A	Z	.29	.29	0	%100
53	M52A	X	.167	.167	0	%100
54	M52A	Z	.29	.29	0	%100
55	M53A	X	.167	.167	0	%100
56	M53A	Z	.29	.29	0	%100
57	M54A	X	.171	.171	0	%100
58	M54A	Z	.297	.297	0	%100
59	M55A	X	.171	.171	0	%100
60	M55A	Z	.297	.297	0	%100







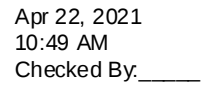
RISA-3D Version 17.0.4 [\\...\Final 228835-VZW MT LOT A H 4-21-2019] Page 3d

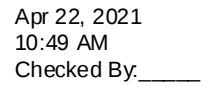
Member Distributed Loads (BLC 72 : Structure Wm (210 Deg)) (Continued)

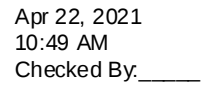
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
53	M52A	X	-.167	-.167	0	%100
54	M52A	Z	.29	.29	0	%100
55	M53A	X	-.167	-.167	0	%100
56	M53A	Z	.29	.29	0	%100
57	M54A	X	-.171	-.171	0	%100
58	M54A	Z	.297	.297	0	%100
59	M55A	X	-.171	-.171	0	%100
60	M55A	Z	.297	.297	0	%100
61	M56A	X	-.171	-.171	0	%100
62	M56A	Z	.297	.297	0	%100
63	M54B	X	-.167	-.167	0	%100
64	M54B	Z	.29	.29	0	%100
65	M55B	X	-.167	-.167	0	%100
66	M55B	Z	.29	.29	0	%100
67	M56B	X	-.167	-.167	0	%100
68	M56B	Z	.29	.29	0	%100
69	M57A	X	-.167	-.167	0	%100
70	M57A	Z	.29	.29	0	%100
71	M58A	X	-.167	-.167	0	%100
72	M58A	Z	.29	.29	0	%100
73	M59A	X	-.167	-.167	0	%100
74	M59A	Z	.29	.29	0	%100
75	M60A	X	-.171	-.171	0	%100
76	M60A	Z	.297	.297	0	%100
77	M61A	X	-.171	-.171	0	%100
78	M61A	Z	.297	.297	0	%100
79	M62A	X	-.171	-.171	0	%100
80	M62A	Z	.297	.297	0	%100

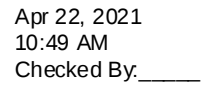
Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	-.072	-.072	0	%100
2	M47	Z	.042	.042	0	%100
3	M48	X	-.072	-.072	0	%100
4	M48	Z	.042	.042	0	%100
5	M49	X	-.343	-.343	0	%100
6	M49	Z	.198	.198	0	%100
7	M50	X	-.343	-.343	0	%100
8	M50	Z	.198	.198	0	%100
9	M51	X	-.072	-.072	0	%100
10	M51	Z	.042	.042	0	%100
11	M52	X	-.072	-.072	0	%100
12	M52	Z	.042	.042	0	%100
13	M53	X	-.343	-.343	0	%100
14	M53	Z	.198	.198	0	%100
15	M54	X	-.343	-.343	0	%100
16	M54	Z	.198	.198	0	%100
17	M55	X	-.458	-.458	0	%100
18	M55	Z	.264	.264	0	%100
19	M56	X	-.458	-.458	0	%100
20	M56	Z	.264	.264	0	%100







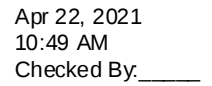


Member Distributed Loads (BLC 75 : Structure Wm (300 Deg)) (Continued)

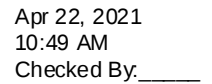
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
61	M56A	X	-.297	-.297	0	%100
62	M56A	Z	-.171	-.171	0	%100
63	M54B	X	-.677	-.677	0	%100
64	M54B	Z	-.391	-.391	0	%100
65	M55B	X	-.677	-.677	0	%100
66	M55B	Z	-.391	-.391	0	%100
67	M56B	X	-.677	-.677	0	%100
68	M56B	Z	-.391	-.391	0	%100
69	M57A	X	-.677	-.677	0	%100
70	M57A	Z	-.391	-.391	0	%100
71	M58A	X	-.677	-.677	0	%100
72	M58A	Z	-.391	-.391	0	%100
73	M59A	X	-.677	-.677	0	%100
74	M59A	Z	-.391	-.391	0	%100
75	M60A	X	-.297	-.297	0	%100
76	M60A	Z	-.171	-.171	0	%100
77	M61A	X	-.297	-.297	0	%100
78	M61A	Z	-.171	-.171	0	%100
79	M62A	X	-.297	-.297	0	%100
80	M62A	Z	-.171	-.171	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M47	X	-.014	-.014	0	%100
2	M47	Z	-.024	-.024	0	%100
3	M48	X	-.014	-.014	0	%100
4	M48	Z	-.024	-.024	0	%100
5	M49	X	-.066	-.066	0	%100
6	M49	Z	-.114	-.114	0	%100
7	M50	X	-.066	-.066	0	%100
8	M50	Z	-.114	-.114	0	%100
9	M51	X	-.014	-.014	0	%100
10	M51	Z	-.024	-.024	0	%100
11	M52	X	-.014	-.014	0	%100
12	M52	Z	-.024	-.024	0	%100
13	M53	X	-.066	-.066	0	%100
14	M53	Z	-.114	-.114	0	%100
15	M54	X	-.066	-.066	0	%100
16	M54	Z	-.114	-.114	0	%100
17	M55	X	-.264	-.264	0	%100
18	M55	Z	-.458	-.458	0	%100
19	M56	X	-.264	-.264	0	%100
20	M56	Z	-.458	-.458	0	%100
21	M73	X	-.138	-.138	0	%100
22	M73	Z	-.24	-.24	0	%100
23	M74	X	-.138	-.138	0	%100
24	M74	Z	-.24	-.24	0	%100
25	M75	X	-.138	-.138	0	%100
26	M75	Z	-.24	-.24	0	%100
27	M76	X	-.138	-.138	0	%100
28	M76	Z	-.24	-.24	0	%100



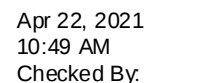
RISA-3D Version 17.0.4 [\\...\Final 228835-VZW MT LOT A H 4-21-Phaser36]



Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksi]
No Data to Print ...						

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N146	max	1879.451	10	85.754	16	1109.913	10	0	51	0	51	0	51
2		min	-1912.318	4	44.371	8	-1106.797	4	0	1	0	1	0	1
3	N81A	max	49.03	2	908.86	16	3659.898	16	-.029	10	.122	22	.038	5
4		min	-12.895	8	114.216	10	-289.557	11	-.227	16	-.023	1	-.028	11
5	N82B	max	183.018	9	527.349	22	1926.941	21	.02	4	.605	9	.048	3
6		min	-192.104	3	-81.797	4	-549.337	3	-.132	22	-.597	3	-.039	9
7	N83B	max	51.985	1	1020.681	16	598.197	1	-.028	10	0	51	.028	4
8		min	-55.361	7	113.121	10	-3686.638	19	-.255	16	0	1	-.022	10
9	N84A	max	102.59	9	568.806	22	924.492	2	.02	4	0	51	.027	3
10		min	-99.223	4	-78.009	4	-2276.784	8	-.142	22	0	1	-.022	9
11	Totals:	max	2181.052	10	2858.622	14	2751.587	1						
12		min	-2181.049	4	1227.163	8	-2751.593	7						

	Member	Shape	Code Check	Loc[in]	LC	Shea...	Loc[in]	Dir	LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
1	M47	PL3/8X3...	.938	3	17	.154	3	y	5	34985...	.36450	.284	2.034	1..	H1-1b
2	M48	PL3/8X3...	.696	3	9	.208	0	y	3	34985...	.36450	.284	2.012	1..	H1-1b
3	M49	PIPE_2.0	.468	6.25	16	.147	64.063		6	20114...	.32130	1.872	1.872	2..	H1-1b
4	M50	PIPE_2.0	.347	71.875	8	.088	64.063		8	20114...	.32130	1.872	1.872	2..	H1-1b
5	M51	PL3/8X3...	.895	3	16	.114	0	y	4	34985...	.36450	.284	2.083	1..	H1-1b
6	M52	PL3/8X3...	.513	3	22	.117	0	y	3	34985...	.36450	.284	2.083	1..	H1-1b
7	M53	PIPE_2.0	.562	71.875	1	.120	64.063		1	20114...	.32130	1.872	1.872	1..	H1-1b
8	M54	PIPE_2.0	.349	71.875	1	.081	64.063		12	20114...	.32130	1.872	1.872	1..	H1-1b
9	M55	PIPE_2.0	.631	45.625	7	.337	45.625		7	23808...	.32130	1.872	1.872	2..	H3-6
10	M56	PIPE_2.0	.821	45.625	7	.237	4.375		3	23808...	.32130	1.872	1.872	2..	H1-1b
11	M73	PIPE_1.25	.093	25.11	15	.027	0		6	12699...	.19687.5	.801	.801	1..	H1-1b
12	M74	PIPE_1.25	.070	25.11	15	.028	50.22		9	12699...	.19687.5	.801	.801	1..	H1-1b
13	M75	PIPE_1.25	.058	25.11	23	.023	0		4	12699...	.19687.5	.801	.801	1..	H1-1b
14	M76	PIPE_1.25	.045	25.11	10	.031	0		3	12699...	.19687.5	.801	.801	1..	H1-1b
15	M75A	PIPE_2.5	.415	39.813	8	.172	41.708		6	9889.2...	.50715	3.596	3.596	2..	H1-1b
16	M76A	PIPE_2.5	.551	142....	3	.193	140.292		6	9889.2...	.50715	3.596	3.596	2..	H1-1b
17	M92	PIPE_2.5	.252	0	9	.009	0		2	12257...	.50715	3.596	3.596	2..	H1-1b
18	MP5A	PIPE_2.0	.206	47.469	7	.093	89.125		6	15637...	.32130	1.872	1.872	1..	H1-1b
19	MP4A	PIPE_2.0	.346	76.25	7	.047	76.25		8	9516.73	.32130	1.872	1.872	2..	H1-1b
20	MP3A	PIPE_2.0	.423	3.854	4	.053	3.854		4	15758...	.32130	1.872	1.872	4..	H1-1b
21	MP2A	PIPE_2.0	.426	45.281	7	.113	3.354		5	18731...	.32130	1.872	1.872	1..	H1-1b
22	MP1A	PIPE_2.0	.618	12.729	4	.489	12.729		3	15395...	.32130	1.872	1.872	3..	H3-6
23	M48C	PL3/8X3...	.072	2.813	5	.023	3	y	8	34985...	.36450	.284	2.279	1..	H1-1b
24	M49C	PL3/8X3...	.057	0	5	.023	0	y	8	34985...	.36450	.284	2.279	1..	H1-1b
25	M50C	PL3/8X3...	.068	0	9	.047	0	y	6	34985...	.36450	.284	2.279	1..	H1-1b
26	M51A	PL3/8X3...	.087	0	3	.047	0	y	6	34985...	.36450	.284	2.279	1..	H1-1b
27	M52A	PL3/8X3...	.026	0	8	.168	0	y	3	34985...	.36450	.284	2.279	1..	H1-1b
28	M53A	PL3/8X3...	.037	0	9	.168	3	y	3	34985...	.36450	.284	2.279	1..	H1-1b
29	M54A	PIPE_1.25	.047	0	12	.009	0		9	15911...	.19687.5	.801	.801	1..	H1-1b*

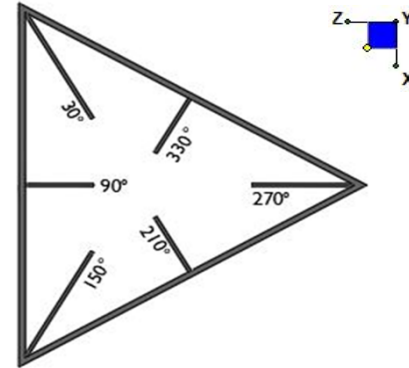




I. Mount-to-Tower Connection Check

RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N84A	90
N82B	90
N83B	90
N81A	90



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:

Bolt Quantity per Reaction:

d_x (in) (Delta X of typ. bolt config. sketch):

d_y (in) (Delta Y of typ. bolt config. sketch):

Bolt Type:

Bolt Diameter (in):

Required Tensile Strength (kips):

Required Shear Strength (kips):

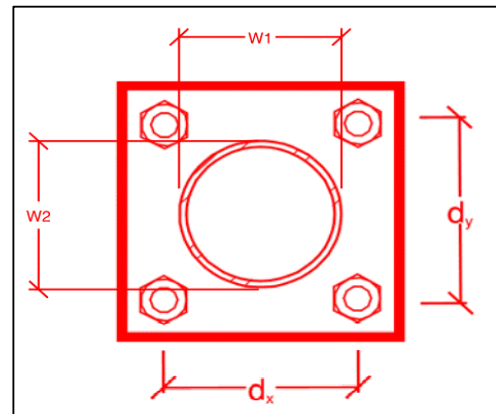
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

yes
4
4
2
U-Bolt
0.5
6.6
1.1
16.3
9.8
10.1%*
2.8%



*Note: Tension reduction not required if tension or shear capacity < 30%

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – **Passing Mount Analysis**

Purpose – to provide Maser Consulting the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to <https://pmi.vzsmart.com> as depicted on the drawings

Photo Requirements:

- Base and “During Installation Photos”
 - Base pictures include
 - Photo of Gate Signs showing the tower owner, site name, and number
 - Photo of carrier shelter showing the carrier site name and number if available
 - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
 - “During Installation Photos if provided - must be placed only in this folder
- Photos taken at ground level
 - Overall tower structure before and after installation of the equipment modifications
 - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- Photos taken at Mount Elevation
 - Photos showing each individual sector before and also after installation of equipment.
 - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis

- | |
|--|
| |
|--|

Schedule A – Photo & Document File Structure

-  VzW Site Number / Name
 -  Base & “During Installation” Photos
 -  Pre-Installation Photos
 -  Alpha
 -  Beta
 -  Gamma
 -  Ground Level
 -  Tape Drop
 -  Post-Installation Photos
 -  Alpha
 -  Beta
 -  Gamma
 -  Ground Level
 -  Tape Drop
 -  Photos of climbing facility and safety climb – If Present
-  Certifications – Submission of this document including certifications
-  Specific Required Additional Photos

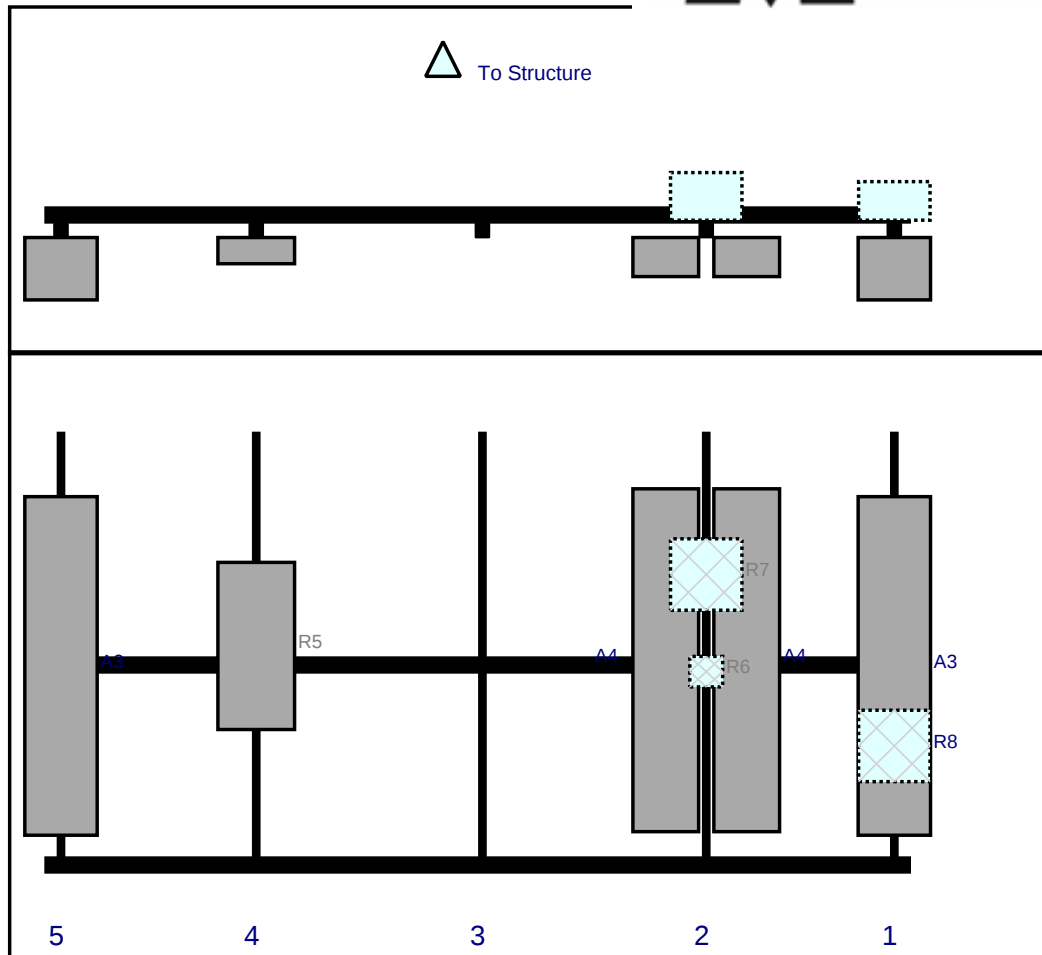
Sector: A

Structure Type: Self Support

Mount Elev: 167.50



Plan View

Front View
Looking at Structure

Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80063-6CF-EDIN-8	71.1	15.2	178.5	1	a	Front	49.2	0	Retained	03/19/2021
R8	B5/B13 RRH-BR04C	15	15	178.5	1	a	Behind	66	0	Added	
A4	JAHH-65B-R3B	72	13.8	139	2	a	Front	48	8.5	Added	
A4	JAHH-65B-R3B	72	13.8	139	2	b	Front	48	-8.5	Added	
R6	CBC78T-DS-43	6.4	6.9	139	2	a	Behind	50.4	0	Added	
R7	B2/B66A RRH-BR049	15	15	139	2	a	Behind	30	0	Added	
R5	MT6407-77A	35.1	16.1	44.5	4	a	Front	45	0	Added	
A3	LPA-80063-6CF-EDIN-8	71.1	15.2	3.5	5	a	Front	49.2	0	Retained	03/19/2021

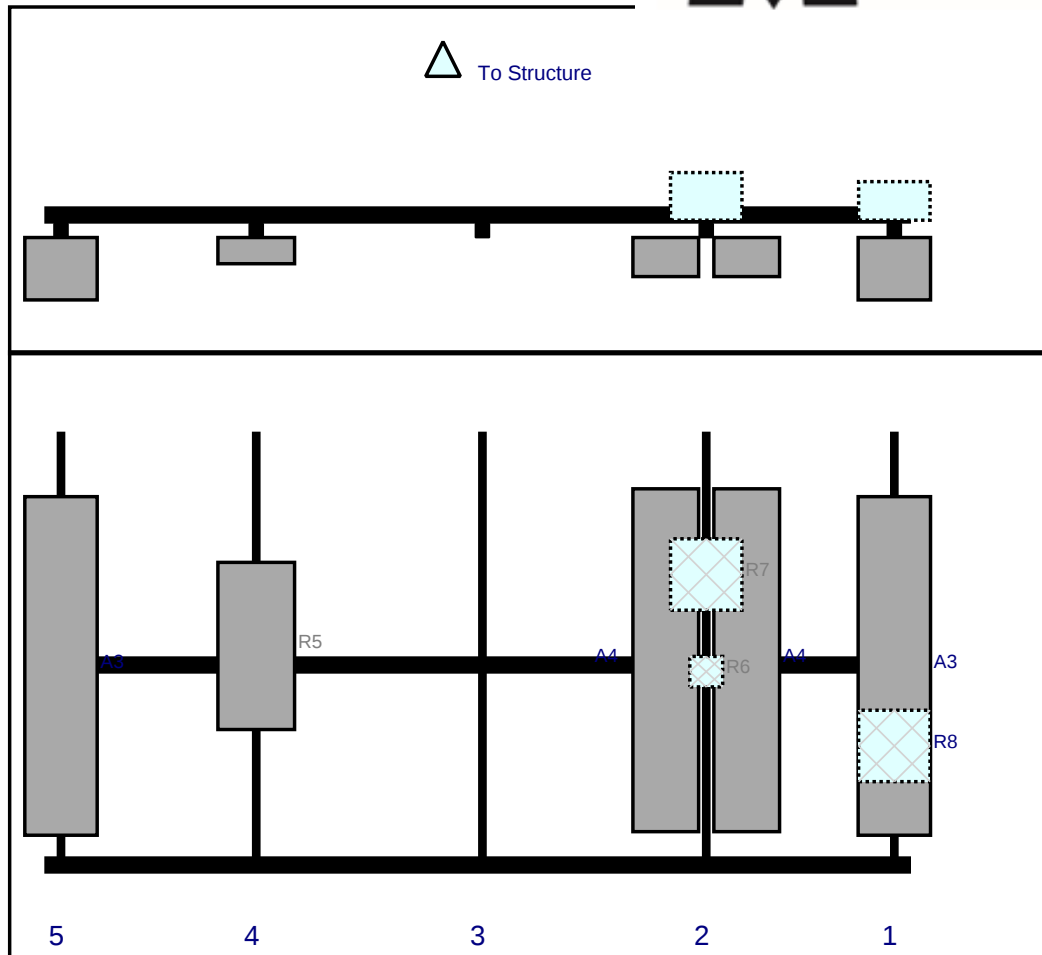
Sector: **B**

Structure Type: Self Support

Mount Elev: 167.50



Plan View

Front View
Looking at Structure

Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80063-6CF-EDIN-8	71.1	15.2	178.5	1	a	Front	49.2	0	Retained	03/19/2021
R8	B5/B13 RRH-BR04C	15	15	178.5	1	a	Behind	66	0	Added	
A4	JAHH-65B-R3B	72	13.8	139	2	a	Front	48	8.5	Added	
A4	JAHH-65B-R3B	72	13.8	139	2	b	Front	48	-8.5	Added	
R6	CBC78T-DS-43	6.4	6.9	139	2	a	Behind	50.4	0	Added	
R7	B2/B66A RRH-BR049	15	15	139	2	a	Behind	30	0	Added	
R5	MT6407-77A	35.1	16.1	44.5	4	a	Front	45	0	Added	
A3	LPA-80063-6CF-EDIN-8	71.1	15.2	3.5	5	a	Front	49.2	0	Retained	03/19/2021

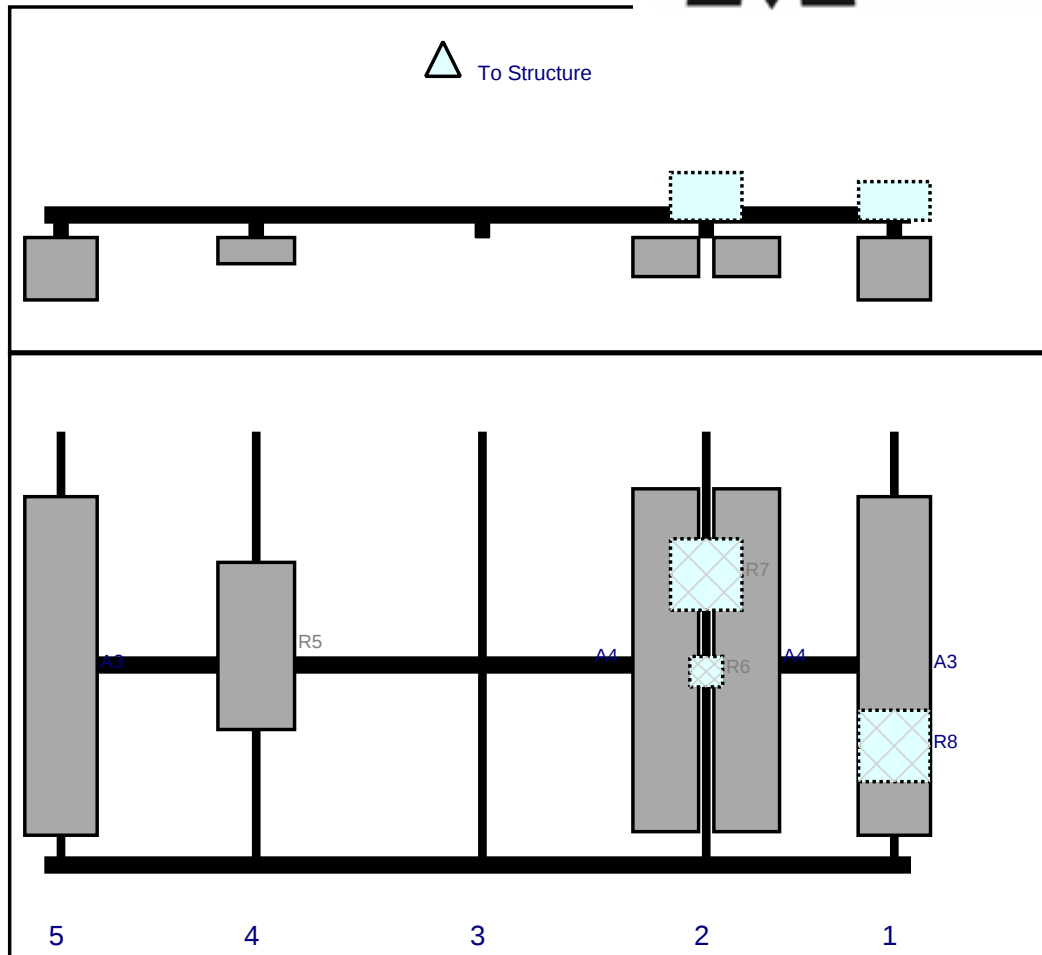
Sector: C

Structure Type: Self Support

Mount Elev: 167.50



Plan View

Front View
Looking at Structure

Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80063-6CF-EDIN-8	71.1	15.2	178.5	1	a	Front	49.2	0	Retained	03/19/2021
R8	B5/B13 RRH-BR04C	15	15	178.5	1	a	Behind	66	0	Added	
A4	JAHH-65B-R3B	72	13.8	139	2	a	Front	48	8.5	Added	
A4	JAHH-65B-R3B	72	13.8	139	2	b	Front	48	-8.5	Added	
R6	CBC78T-DS-43	6.4	6.9	139	2	a	Behind	50.4	0	Added	
R7	B2/B66A RRH-BR049	15	15	139	2	a	Behind	30	0	Added	
R5	MT6407-77A	35.1	16.1	44.5	4	a	Front	45	0	Added	
A3	LPA-80063-6CF-EDIN-8	71.1	15.2	3.5	5	a	Front	49.2	0	Retained	03/19/2021



Maser Consulting

Subject

TIA-222-H Usage

Site Information

Site ID: 470988-VZW / KILLINGWORTH 2 CT
Site Name: KILLINGWORTH 2 CT
Carrier Name: Verizon wireless
Address: Chestnut Hill Rd LOT 7
Killingworth, Connecticut 06419
Middlesex County

Latitude: 41.672883°
Longitude: -72.838186°

Structure Information

Tower Type: 170-Ft Self Support
Mount Type: 15.17-Ft Sector Frame

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2021 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. The TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this tower site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Petros Tsoukalas'.

Petros Tsoukalas, PE
Geographic Discipline Leader

Exhibit F

Power Density/RF Emissions Report

Site Name: **KILLINGWORTH 2 CT**
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density
	(MHz)		(watts)	(watts)	(feet)	(mW/cm ²)
VZW 700	751	4	634	2534	170	0.0032
VZW CDMA	874.8	2	497	993	170	0.0012
VZW Cellular	874	4	725	2902	170	0.0036
VZW PCS	1975	4	1525	6100	170	0.0076
VZW AWS	2120	4	1493	5973	170	0.0074
VZW CBAND	3730.08	4	6531	26125	170	0.0325

Total Percentage of Maximum Permissible Exposure

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI

**Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council

MHz = Megahertz

mW/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used.

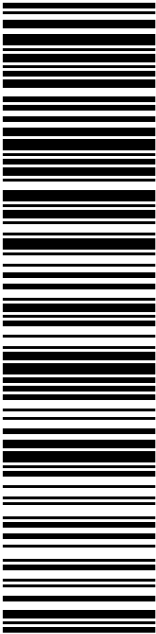
Maximum Permissible Exposure*	Fraction of MPE
(mW/cm ²)	(%)
0.5007	0.63%
0.5832	0.21%
0.5827	0.62%
1.0000	0.76%
1.0000	0.74%
1.0000	3.25%
	6.21%

/IEEE C95.1-1992

Il's November 10, 2015 Memorandum for Exempt Modification filing:

Exhibit G

Recipient Mailings

 Click-N-Ship®	
P	usps.com US POSTAGE MD Flat Rate Box 08/02/2021 Mailed from 01566
US POSTAGE PAID Click-N-Ship®	
PRIORITY MAIL 2-DAY™	
DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	Expected Delivery Date: 08/05/21 Re#: CR-807134 0004
C006	
SHIP TO: LISA MATTHEWS CT SITING COUNCIL 10 FRANKLIN SQ NEW BRITAIN CT 06051-2655	
USPS TRACKING #	
	
9405 5036 9930 0460 4167 61	
Electronic Rate Approved #038555749	



Cut on dotted line.

Instructions

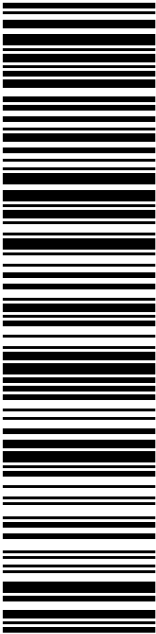
- Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
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- Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # : 9405 5036 9930 0460 4167 61	
Trans. #: 539688496 Print Date: 07/30/2021 Ship Date: 08/02/2021 Expected Delivery Date: 08/05/2021	Priority Mail® Postage: \$15.50 Total: \$15.50
From: DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: LISA MATTHEWS CT SITING COUNCIL 10 FRANKLIN SQ NEW BRITAIN CT 06051-2655	
Re#: CR-807134	
* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.	



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 Click-N-Ship®	
P	usps.com US POSTAGE Flat Rate Env \$7.95 9405 5036 9930 0460 4167 78 0079 5000 0010 1581 08/02/2021 Mailed from 01566
PRIORITY MAIL 1-DAY™	
DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	Expected Delivery Date: 08/03/21 Re#: CR-807134 0006
SHIP TO: SARAH SNELL 1800 W PARK DR WESTBOROUGH MA 01581-3926	C006
USPS TRACKING #  9405 5036 9930 0460 4167 78	
Electronic Rate Approved #038555749	



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USPS TRACKING # : 9405 5036 9930 0460 4167 78	
Trans. #: 539688496 Print Date: 07/30/2021 Ship Date: 08/02/2021 Expected Delivery Date: 08/03/2021	Priority Mail® Postage: \$7.95 Total: \$7.95
From: DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: SARAH SNELL 1800 W PARK DR WESTBOROUGH MA 01581-3926	
Re#: CR-807134	
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Tracking Number: 9405503699300460416778

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Status

 **Delivered, In/At Mailbox**

August 5, 2021 at 12:08 pm
WESTBOROUGH, MA 01581

Your item was delivered in or at the mailbox at 12:08 pm on August 5, 2021 in WESTBOROUGH, MA 01581.

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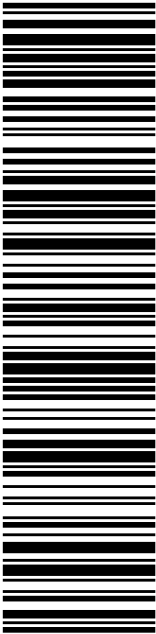
USPS Tracking Plus™



Product Information



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USPS.com 9405 5036 9930 0460 4167 85 0155 0000 0010 6419 US POSTAGE MD Flat Rate Box		08/02/2021 Mailed from 01566
U.S. POSTAGE PAID Click-N-Ship®		
PRIORITY MAIL 2-DAY™		
DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359		Expected Delivery Date: 08/05/21 Re#: CR-807134 0004
R005		
SHIP TO: CATHERINE IINO FIRST SELECTWOMAN 323 ROUTE 81 KILLINGWORTH CT 06419-1218		
USPS TRACKING #		
		
9405 5036 9930 0460 4167 85		
Electronic Rate Approved #038555749		



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USPS TRACKING # : 9405 5036 9930 0460 4167 85	
Trans. #: 539688496 Print Date: 07/30/2021 Ship Date: 08/02/2021 Expected Delivery Date: 08/05/2021	Priority Mail® Postage: \$15.50 Total: \$15.50
From: DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: CATHERINE IINO FIRST SELECTWOMAN 323 ROUTE 81 KILLINGWORTH CT 06419-1218	
Re#: CR-807134	
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Tracking Number: 9405503699300460416785

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Status

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August 6, 2021 at 10:54 am
KILLINGWORTH, CT 06419

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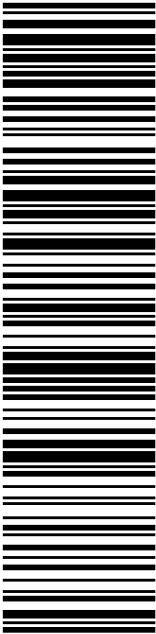
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Product Information



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 Click-N-Ship®	
P	usps.com US POSTAGE MD Flat Rate Box 08/02/2021 Mailed from 01566
PRIORITY MAIL 2-DAY™	
DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	Expected Delivery Date: 08/05/21 Re#: CR-807134 0004
SHIP TO: CATHIE S JEFFERSON ZONING ENFORCEMENT OFFICER 323 ROUTE 81 KILLINGWORTH CT 06419-1218	
USPS TRACKING #  9405 5036 9930 0460 4168 08	
Electronic Rate Approved #038555749	



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USPS TRACKING # : 9405 5036 9930 0460 4168 08	
Trans. #: 539688496 Print Date: 07/30/2021 Ship Date: 08/02/2021 Expected Delivery Date: 08/05/2021	Priority Mail® Postage: \$15.50 Total: \$15.50
From: DEB CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: CATHIE S JEFFERSON ZONING ENFORCEMENT OFFICER 323 ROUTE 81 KILLINGWORTH CT 06419-1218	
Re#: CR-807134	
* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.	



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Tracking Number: 9405503699300460416808

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KILLINGWORTH, CT 06419

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