

August 31, 2022

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

**Regarding: Notice of Exempt Modification – AT&T Site CT1145 / FA# 10035097**  
**Address: 99 Cedarwood Lane, Newington, CT 06111**

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains a wireless telecommunications facility on an existing +/- 190’ Guyed Tower at the above-referenced address, latitude 41.6947700, longitude -72.7089711. Said Guyed Tower is operated by TIGR Acquisitions III, LLC.

AT&T desires to modify its existing telecommunications facility by swapping ten (10) antennas, swapping nine (9) Remote Radio Units (RRUS), swapping two (2) surge arrestors and accompanying feedlines, and swapping mounts, as more particularly detailed and described on the enclosed Construction Drawings prepared by Hudson Design Group, last revised August 26, 2022. The centerline height of the existing antennas is and will remain at 120 feet. This modification may include B2, B5, B17, B14, B29, B30, B66, & n77 hardware that is 4G(LTE) and/or 5G NR capable through remote software configuration and either or both services may be turned off at various times.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the following individuals: The Honorable Beth DelBuono, Mayor of the Town of Newington, as elected official, Erick Hinckley, Zoning Enforcement Officer, Renata Bertotti, Town Planner of the Town of Newington, Callahan Acres, LLC, as property owner, and TIGR Acquisitions III, LLC., as tower operator.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require an 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 modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*
5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated December 13, 2021, and prepared by Hudson Design Group, enclosed herewith.*

For the foregoing reasons, AT&T 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,

*Evan Renwick*

Evan Renwick  
Site Acquisition Specialist  
Centerline Communications, LLC  
750 West Center Street, Suite 301  
West Bridgewater, MA 02379  
erenwick@clinellc.com

Enclosures: Exhibit 1 – Construction Drawings  
Exhibit 2 – Property Card and GIS  
Exhibit 3 – Structural Analysis  
Exhibit 4 – Mount Analysis  
Exhibit 5 – RF Emissions Analysis Report Evaluation  
Exhibit 6 – Original Tower Approval  
Exhibit 7 – Notice Delivery Confirmations

cc: The Honorable Beth DelBuono, Mayor, Town of Newington, as elected official  
Erick Hinckley, Zoning Enforcement Officer, Town of Newington  
Renata Bertotti, Town Planner of the Town of Newington  
Callahan Acres, LLC, as property owner  
TIGR Acquisitions III, LLC, as tower operator

# EXHIBIT 1

**PROJECT INFORMATION**

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING GUYED TOWER:

- PROPOSED AT&T LTE ANTENNAS (AIR6449 B77D) @ POS. 3 (TYP. 1 PER SECTOR, TOTAL OF 3)(STACKED).
- PROPOSED AT&T LTE ANTENNAS (AIR6419 B77G) @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3)(STACKED).
- PROPOSED AT&T LTE ANTENNAS (MS-MBA-3.2-H4-L4) @ POS. 4 (TOTAL OF 1 FOR BETA SECTOR).
- PROPOSED AT&T RRUS 4415 B25 (PCS) (TYP. OF 1 PER ALPHA & GAMMA SECTORS, TOTAL OF 2).
- PROPOSED AT&T RRUS 4449 B5/B12 (700) (TYP. OF 1 PER ALPHA & GAMMA SECTORS, TOTAL OF 2).
- PROPOSED AT&T RRUS 4449 B5/B12 (700) (BETA SECTOR, TOTAL OF 2).
- PROPOSED AT&T RRUS 8843 B2/B66A (1900/AWS) (BETA SECTOR, TOTAL OF 3).
- PROPOSED AT&T SURGE ARRESTOR (DC9-48-60-24-8C-EV) (TOTAL OF 2) (TO REPLACE EXISTING DC6 SURGE ARRESTOR).
- PROPOSED AT&T (2) 6AWG6 DC TRUNKS & (2) 24 PAIR FIBER.
- ADD (7) Y CABLES.
- PROPOSED AT&T DIPLEXERS (DBC0051F3V51-2) (TOTAL OF 6 FOR BETA SECTOR).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- ADD 1x6675, 6648 + XCEDE/IDLe CABLE
- INSTALL (1) NEW DC12 TO EXISTING RACK
- INSTALL (4) NEW -48V RECTIFIERS TO EXISTING -48V ID POWERPLANT; (14) -48V RECTIFIERS TOTAL

ITEMS TO BE REMOVED:

- EXISTING AT&T UMTS ANTENNA: 7770 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T (OPA-65R-LCUU-H6) ANTENNA(TYP. OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING AT&T (800-10965) ANTENNA (TOTAL OF 1 FOR BETA SECTOR).
- EXISTING AT&T (QS66512-2) ANTENNA (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS-32 B2 (1900) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS-32 B66A (AWS) (TOTAL OF 1 FOR BETA SECTOR).
- EXISTING AT&T RRUS-11 B12 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T TMA (LGP21401) (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T TRIPLEXERS (TPX-070821) (TYP. OF 4 PER SECTOR, TOTAL OF 12).

ITEMS TO REMAIN:

- (2) ANTENNAS, (11) RRU'S, (1) SURGE ARRESTOR, (6) 8AWG6 DC TRUNKS AND (1) 18 PAIR FIBER TRUNK.

SITE ADDRESS: 99 CEDARWOOD LANE  
NEWINGTON, CT 06111

LATITUDE: 41.69477° N, 41°-41'-41.17" N  
LONGITUDE: 72.708971° W, 72°-42'-32.30" W  
TYPE OF SITE: GUYED TOWER / INDOOR EQUIPMENT  
STRUCTURE HEIGHT: 170'-0"±  
RAD CENTER: 120'-0"±  
CURRENT USE: TELECOMMUNICATIONS FACILITY  
PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CTL01145

SITE NAME: NEWINGTON

FA CODE: 10035097

PACE ID: MRCTB053525, MRCTB057116, MRCTB057967, MRCTB057733, MRCTB052249, MRCTB050872, MRCTB050867, MRCTB051297

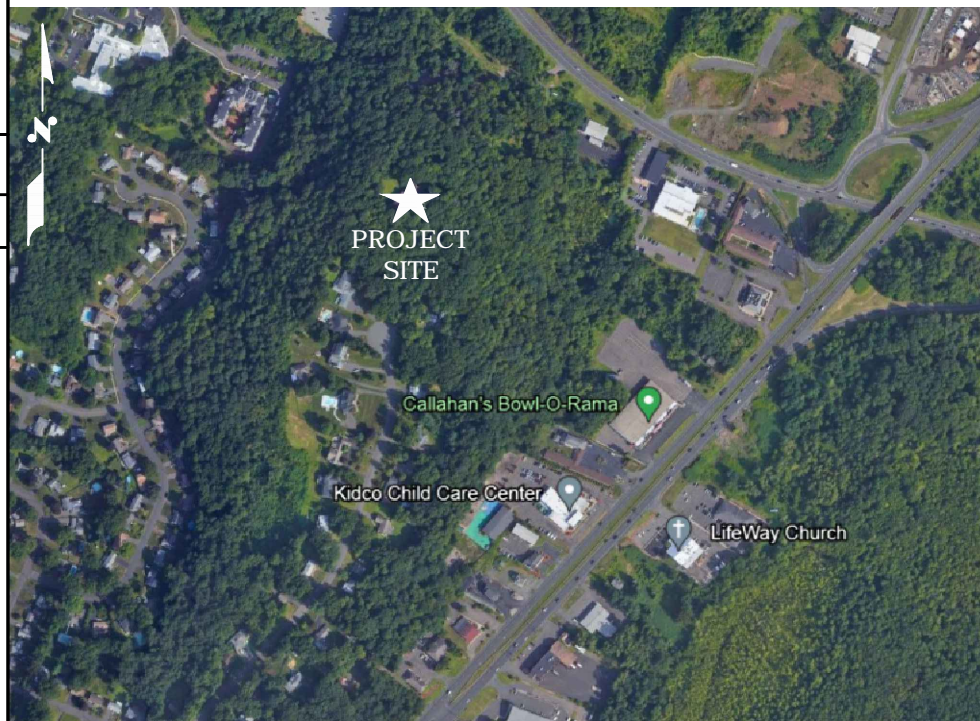
PROJECT: 5G NR RADIO, 5G NR 1SR CBAND, 5G NR SOFTWARE UPGRADE, 5G NR ACTIVATION, BBU ADD, CELL SITE RF MODIFICATIONS, 2022 UPGRADE

ISSUED FOR PERMITTING

**VICINITY MAP**

**DIRECTIONS TO SITE:**

TURN LEFT ONTO CAPITOL BLVD.TURN LEFT ONTO WEST STREET.TURN RIGHT ON TO CT-3N.TURN LEFT ON TO CT-160W.TURN RIGHT ON TO HAYES RD.CONTINUE ON TO HIGHLAND ST. CONTINUE STRAIGHT ON TO THOMBUSH RD. TURN LEFT ON TO PROSPECT ST.USE THE MIDDLE LANE TO TURN LEFT ON TO BERLIN TURNPIKE. TURN RIGHT AT THE 1ST CROSS STREET ON TO E ROBBINS AVE.TURN RIGHT ON TO GOODALE DR.TURN RIGHT ON TO CEDARWOOD LANE.



**GENERAL NOTES**

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

**DRAWING INDEX**

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	B
GN-1	GENERAL NOTES	B
A-1	ROOFTOP & EQUIPMENT PLANS	B
A-2	EXISTING ANTENNA PLAN	B
A-3	PROPOSED ANTENNA PLAN	B
A-4	ELEVATION	B
A-5	DETAILS	B
G-1	GROUNDING DETAILS	B
RF-1	RF PLUMBING DIAGRAM	B

**72 HOURS**



CALL TOLL FREE 1-800-922-4455  
OR CALL 811

**UNDERGROUND SERVICE ALERT**

 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586	 750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379	SITE NUMBER: CTL01145 SITE NAME: NEWINGTON  99 CEDARWOOD LANE NEWINGTON, CT 06111 HARTFORD COUNTY	 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067	B 08/26/22 ISSUED FOR PERMITTING		AT&T TITLE SHEET 5G NR RADIO, 5G NR 1SR CBAND, 5G NR SOFTWARE UPGRADE, 5G NR ACTIVATION, BBU ADD, CELL SITE RF MODIFICATIONS, 2022 UPGRADE
				A 02/23/22 ISSUED FOR REVIEW		



**GROUNDING NOTES**

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. 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.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. 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.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS AND #2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

**GENERAL NOTES**

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTOR – CENTERLINE  
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)  
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR 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 CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR 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.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR 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.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. **APPLICABLE BUILDING CODES:**  
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

**BUILDING CODE: IBC 2015 WITH 2018 CT STATE BUILDING CODE AMENDMENTS  
 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70-2017)**

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

**AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;**

**AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;**

**TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL**

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS					
AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	CL	CENTER LINE	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFER		

45 BEECHWOOD DRIVE  
NORTH ANDOVER, MA 01845  
TEL: (978) 557-5553  
FAX: (978) 336-5586

750 WEST CENTER STREET, SUITE #301  
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL01145  
SITE NAME: NEWINGTON

99 CEDARWOOD LANE  
NEWINGTON, CT 06111  
HARTFORD COUNTY

500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06067

B	08/26/22	ISSUED FOR PERMITTING	MR	AT	DPS
A	02/23/22	ISSUED FOR REVIEW	BY	CHK	APP'D
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: MR		

STATE OF CONNECTICUT  
DANIEL MAMM  
PROFESSIONAL ENGINEER  
No. 24178

AT&T

GENERAL NOTES  
5G NR RADIO, 5G NR 1SR CBAND, 5G NR SOFTWARE UPGRADE, 5G NR ACTIVATION, BBU ADD, CELL SITE RF MODIFICATIONS, 2022 UPGRADE

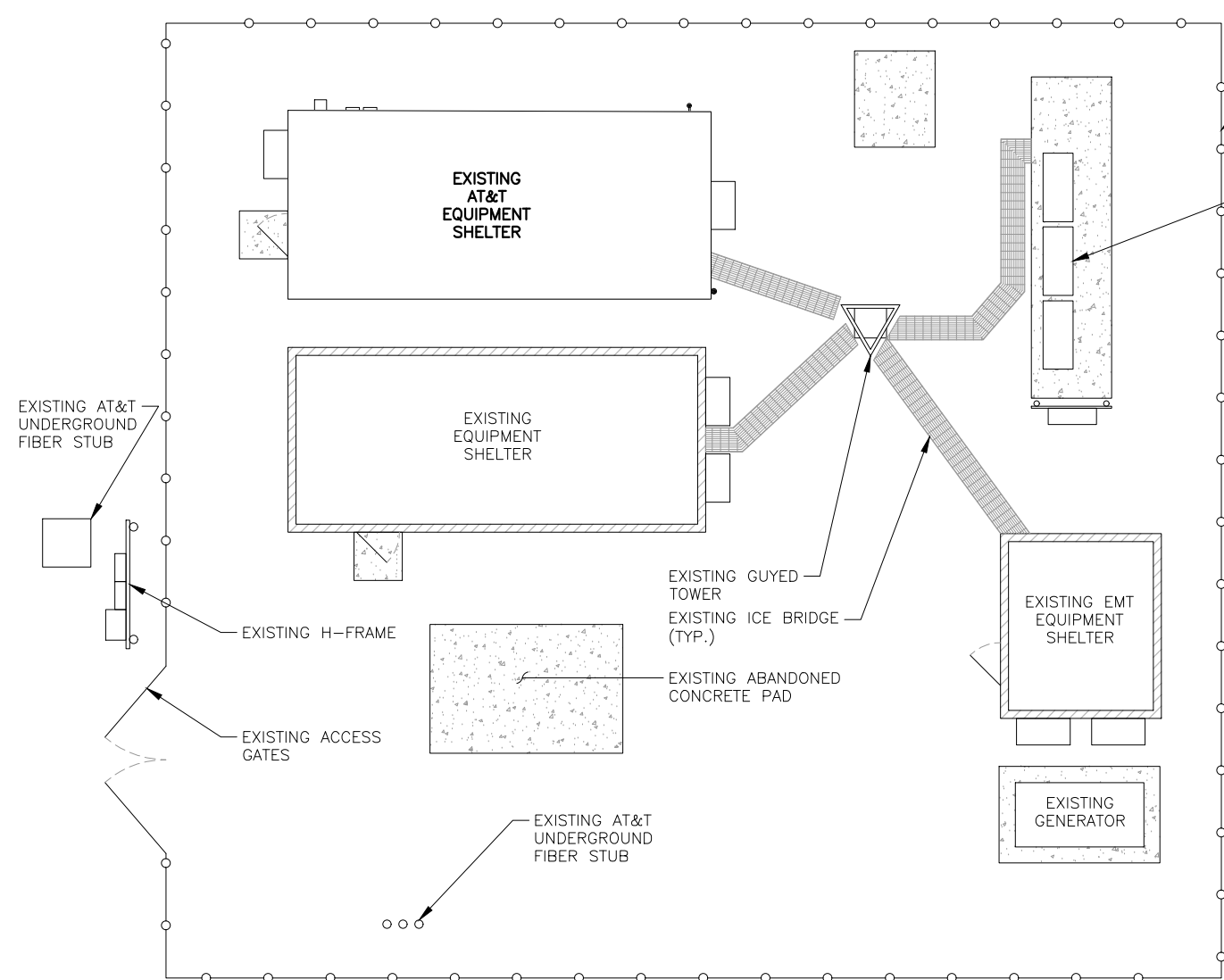
SITE NUMBER	DRAWING NUMBER	REV
CTL01145	GN-1	B

**NOTE:**  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

**NOTE:**  
HDG RECOMMENDS THE EXISTING ANTENNA MOUNT BE MAPPED IN ITS ENTIRETY & A MOUNT STRUCTURAL ANALYSIS PERFORMED PRIOR TO THE ANTENNA INSTALLATION.

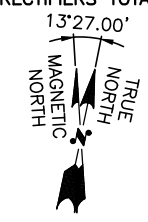
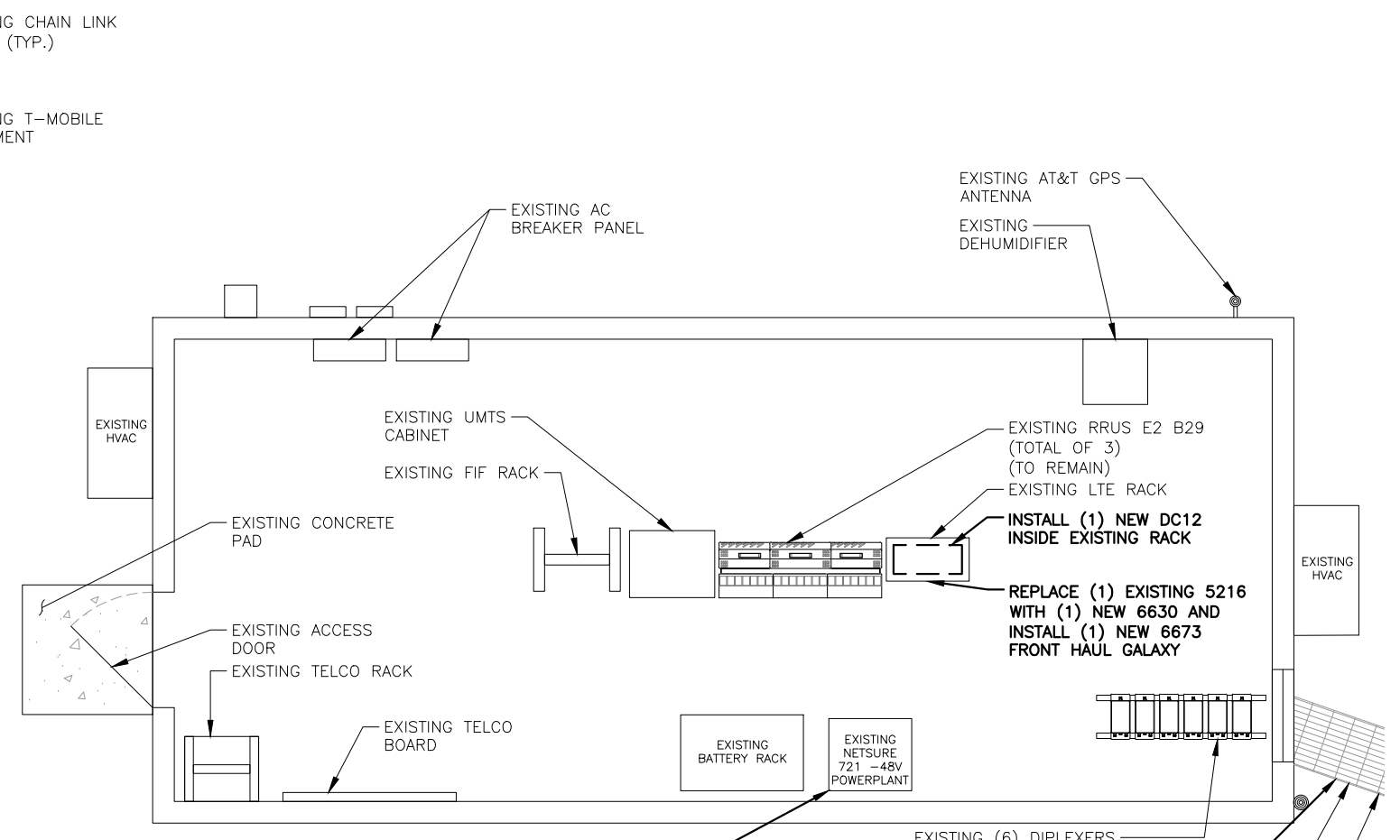
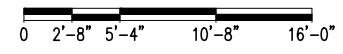
**NOTE:**  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

1  
A-4



**ROOF PLAN**  
22x34 SCALE: 3/16"=1'-0"  
11x17 SCALE: 3/32"=1'-0"

1  
A-1



INSTALL (4) NEW -48V RECTIFIERS INSIDE EXISTING -48V ID POWERPLANT; (14) -48V RECTIFIERS TOTAL

EXISTING (6) DIPLEXERS (782 10250) (TO BE REMOVED)  
PROPOSED (2) 6AWG6 DC TRUNKS & (2) 24 PAIR FIBER (TO FOLLOW EXISTING COAX ROUTE)

EXISTING CABLE BRIDGE  
EXISTING ICE BRIDGE WITH (6) 1-5/8" COAX CABLE, (6) 8AWG6 DC POWER CABLES & (1) 18 PAIR FIBER RUNS

**EQUIPMENT PLAN**  
22x34 SCALE: 1/2"=1'-0"  
11x17 SCALE: 1/4"=1'-0"



**HDG HUDSON Design Group LLC**  
45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845  
TEL: (978) 557-5553 FAX: (978) 336-5586

**CENTERLINE COMMUNICATIONS**  
750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL01145  
SITE NAME: NEWINGTON  
**99 CEDARWOOD LANE NEWINGTON, CT 06111 HARTFORD COUNTY**

**at&t**  
500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	08/26/22	ISSUED FOR PERMITTING	MR	AT	DPS
A	02/23/22	ISSUED FOR REVIEW	MR	AT	DPS

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR

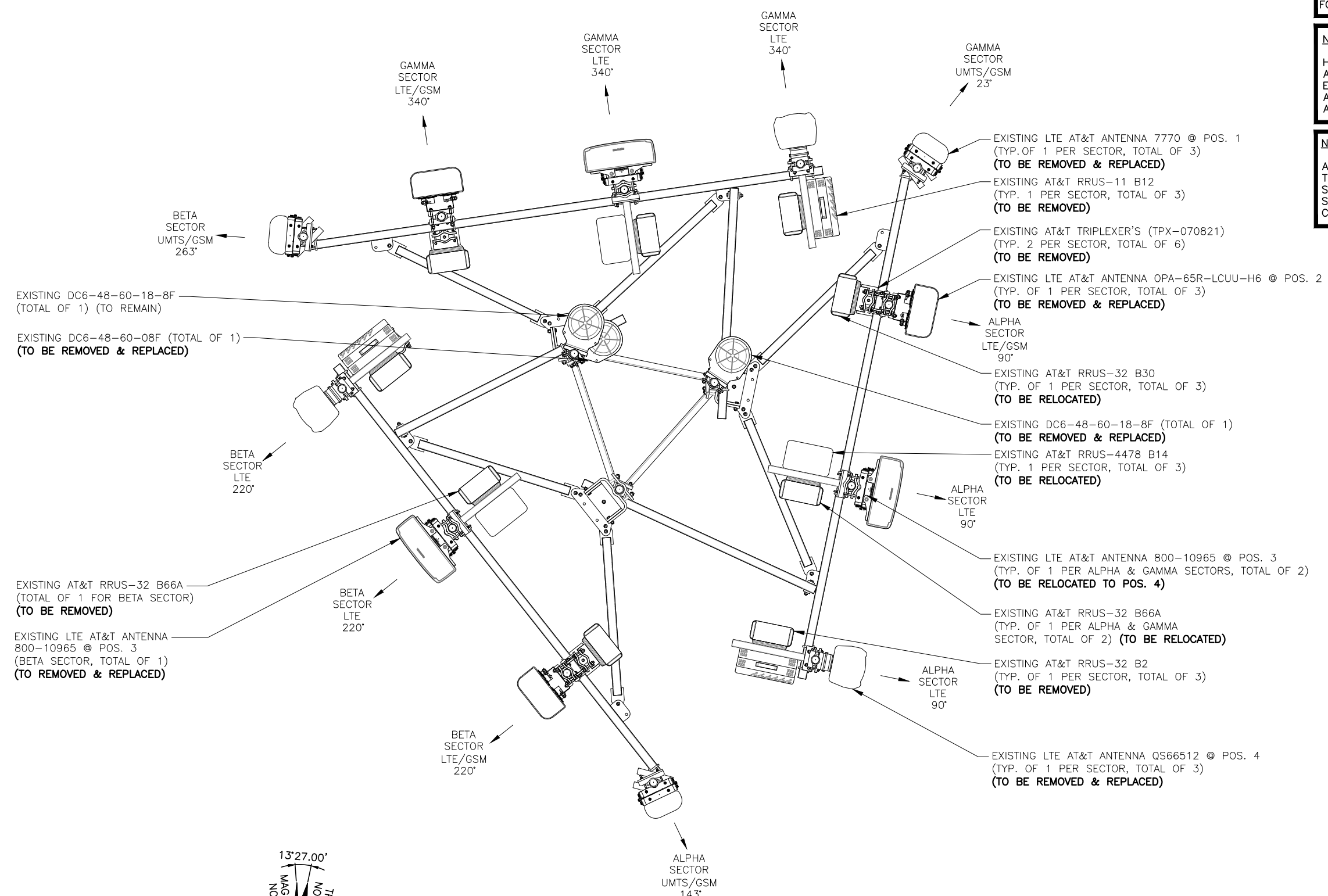
STATE OF CONNECTICUT  
**DANIEL P. FRAMM**  
PROFESSIONAL ENGINEER  
No. 24178

**AT&T**  
ROOFTOP & EQUIPMENT PLANS  
5G NR RADIO, 5G NR 1SR CBAND, 5G NR SOFTWARE UPGRADE, 5G NR ACTIVATION, BRU ADD, CELL SITE RF MODIFICATIONS, 2022 UPGRADE  
SITE NUMBER: CTL01145 DRAWING NUMBER: A-1

**NOTE:**  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

**NOTE:**  
HDG RECOMMENDS THE EXISTING ANTENNA MOUNT BE MAPPED IN ITS ENTIRETY & A MOUNT STRUCTURAL ANALYSIS PERFORMED PRIOR TO THE ANTENNA INSTALLATION.

**NOTE:**  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



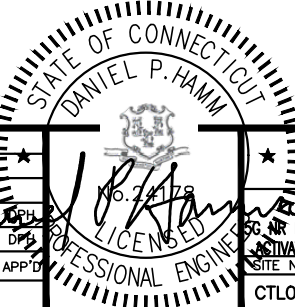
**EXISTING ANTENNA PLAN**  
22x34 SCALE: 3/4"=1'-0"  
11x17 SCALE: 3/8"=1'-0"

1  
A-2

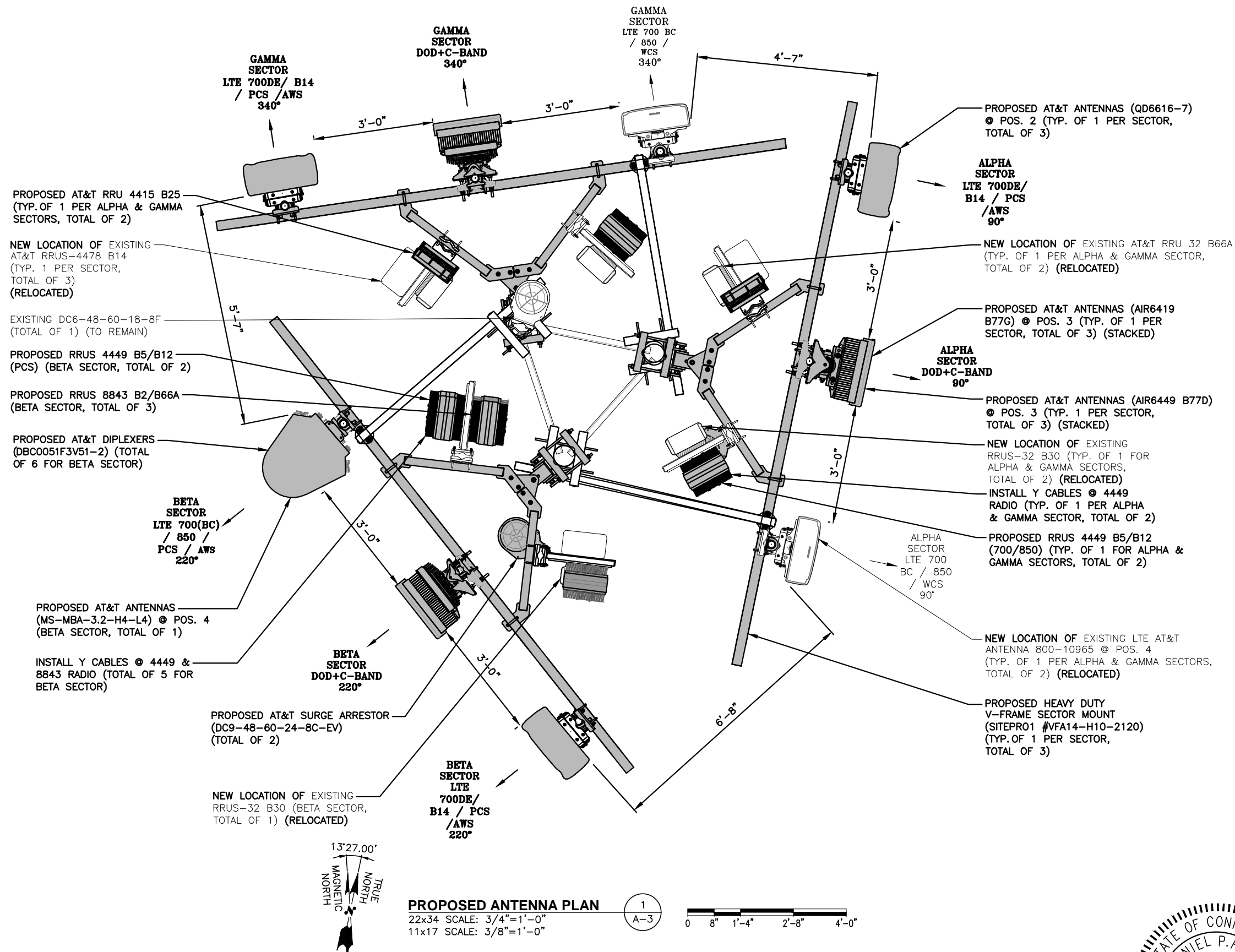


NO.	DATE	REVISIONS	BY	CHK	APP'D
B	08/26/22	ISSUED FOR PERMITTING	MR	AT	DPS
A	02/23/22	ISSUED FOR REVIEW	MR	AT	DPS

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR







NOTE:  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:  
HDG RECOMMENDS THE EXISTING ANTENNA MOUNT BE MAPPED IN ITS ENTIRETY & A MOUNT STRUCTURAL ANALYSIS PERFORMED PRIOR TO THE ANTENNA INSTALLATION.

NOTE:  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	08/26/22	ISSUED FOR PERMITTING	MR	AT	DPS
A	02/23/22	ISSUED FOR REVIEW	MR	AT	DPS

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR

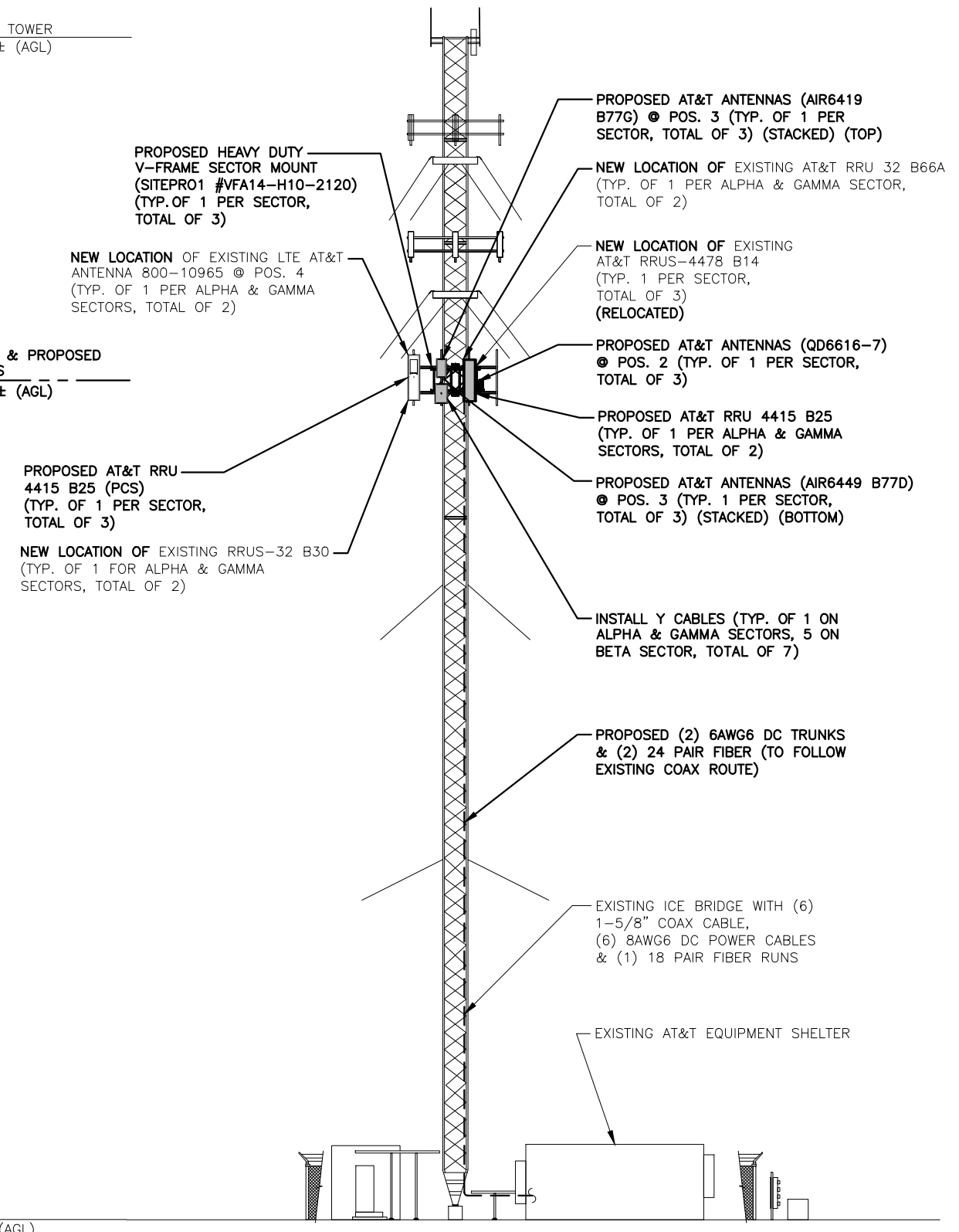




TOP OF GUYED TOWER  
ELEV. 170'-0"± (AGL)

CL OF EXISTING & PROPOSED  
AT&T ANTENNAS  
ELEV. 120'-0"± (AGL)

GROUND LEVEL  
ELEV. 0'-0"± (AGL)



NOTE:  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

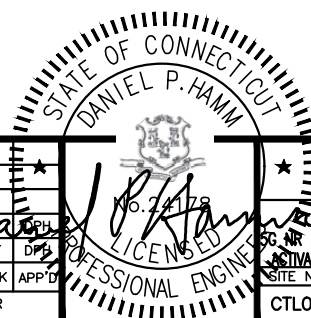
NOTE:  
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NOTE:  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

**ELEVATION**  
22x34 SCALE: 1/8"=1'-0"  
11x17 SCALE: 1/16"=1'-0"

1  
A-4

0 4'-0" 8'-0" 16'-0" 24'-0"



**HDG** HUDSON Design Group LLC  
45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845  
TEL: (978) 557-5553 FAX: (978) 336-5586

**CENTERLINE** COMMUNICATIONS  
750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL01145  
SITE NAME: NEWINGTON  
99 CEDARWOOD LANE NEWINGTON, CT 06111 HARTFORD COUNTY

**at&t**  
500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	08/26/22	ISSUED FOR PERMITTING	MR	AT	DPS
A	02/23/22	ISSUED FOR REVIEW	MR	AT	DPS

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR

AT&T  
ELEVATION  
5G NR RADIO, 5G NR 1SR CBAND, 5G NR SOFTWARE UPGRADE, 5G NR ACTIVATION, RRU ADD, CELL SITE RF MODIFICATIONS, 2022 UPGRADE  
SITE NUMBER: CTL01145 DRAWING NUMBER: A-4 REV: B

**ANTENNA SCHEDULE**

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA $\phi$ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	-	-	-	-	-	-	-	-	-	-	-
A2	PROPOSED	LTE 700 BC/850/PCS	QD6616-7	72.0"X20.7X7.7"	120'±	90°	-	(P)(1) 4415 B25 (PCS) (P)(1) 4478 B14 (700) (E)(1) RRUS 32 B66A (AWS) (E)(1) RRUS E2 B29(ON GROUND)	-	(2)1-5/8 COAX (E)(2) DC POWER & (1) FIBER	(E) (1) RAYCAP DC9-48-60-18-8F
A3	PROPOSED	DUAL AIR	AIR 6419 B77G AIR 6449 B77D	31.1"X16.1X7.3" 30.4"X15.9"X8.1"	120'±	90°	-	-	-	-	-
A4	EXISTING	LTE 700 BC/850/PCS	800-10965	59x20x6.9	120'±	90°	-	(P)(1) 4449 B5/B12 (850/700) (E)(1) RRUS 32 B30 (WCS)	14.9X13.2X10.4	(P)(1) Y CABLE	-
B1	-	-	-	-	-	-	-	-	-	-	-
B2	PROPOSED	LTE 700 BC/850/PCS	QD6616-7	72.0"X20.7X7.7"	120'±	220°	-	(P)(1) 4478 B14 (E)(1) RRUS 32 B30 (WCS) (E)(1) RRUS E2 B29(ON GROUND)	-	(2)1-5/8 COAX (E)(2) DC POWER (P)(1) #6AWG6 DC TRUNK & (P)(1) 24 PAIR FIBER (APPROX. LENGTH=150'±)	(P)(1) RAYCAP DC9-48-60-24-8C-EV
B3	PROPOSED	DUAL AIR	AIR 6419 B77G AIR 6449 B77D	31.1"X16.1X7.3" 30.4"X15.9"X8.1"	120'±	220°	-	-	-	-	-
B4	PROPOSED	LTE 700 BC/850/PCS	MS-MBA-3.2-H4-L4	72"x24"x25"	120'±	220°	(P)(6) DBC0051F3V51-2	(P)(2) 4449 B5/B12 (850/700) (P)(3) 8843 B2/B66A (PCS)	14.9X13.2X10.4	(P)(5) Y CABLE	-
C1	-	-	-	-	-	-	-	-	-	-	-
C2	PROPOSED	LTE 700 BC/850/PCS	QD6616-7	72.0"X20.7X7.7"	120'±	340°	-	(P)(1) 4415 B25 (PCS) (P)(1) 4478 B14 (700) (E)(1) RRUS 32 B66A (AWS) (E)(1) RRUS E2 B29(ON GROUND)	-	(2)1-5/8 COAX (E)(2) DC POWER (P)(1) #6AWG6 DC TRUNK & (P)(1) 24 PAIR FIBER (APPROX. LENGTH=150'±)	(P)(1) RAYCAP DC9-48-60-24-8C-EV
C3	PROPOSED	DUAL AIR	AIR 6419 B77G AIR 6449 B77D	31.1"X16.1X7.3" 30.4"X15.9"X8.1"	120'±	340°	-	-	-	-	-
C4	EXISTING	LTE 700 BC/850/PCS	800-10965	59x20x6.9	120'±	340°	-	(P)(1) 4449 B5/B12 (850/700) (E)(1) RRUS 32 B30 (WCS)	14.9X13.2X10.4	(P)(1) Y CABLE	-

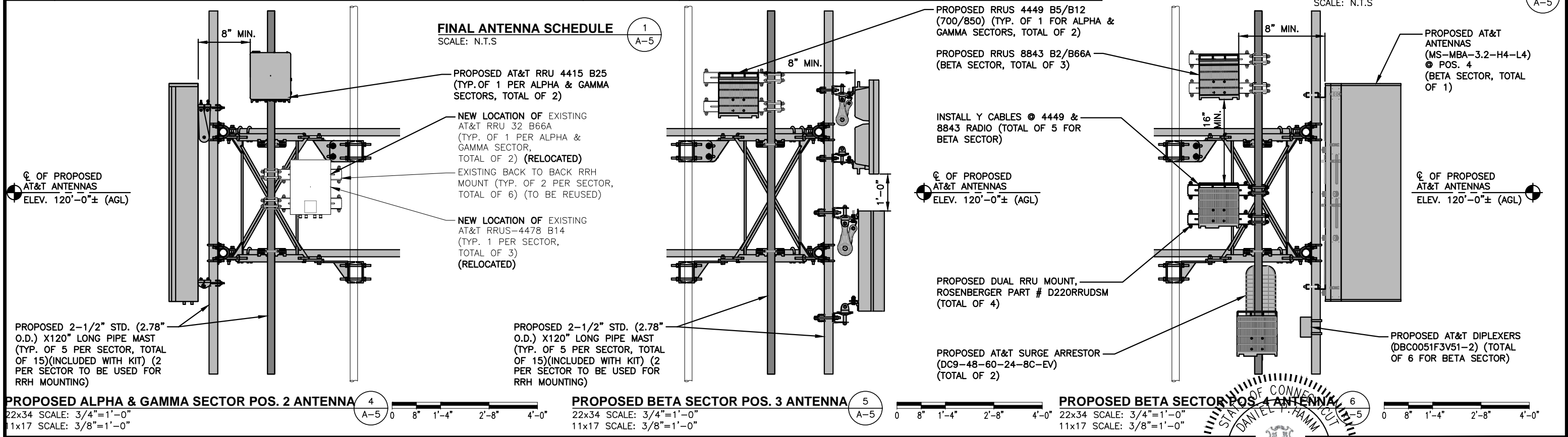
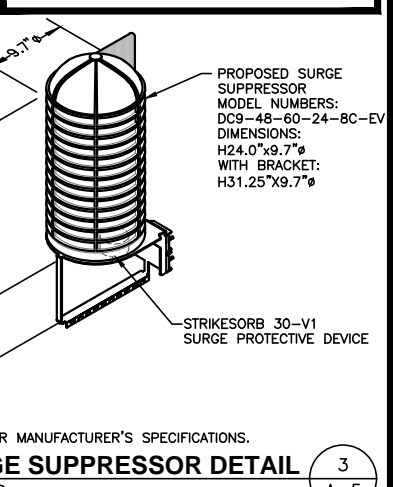
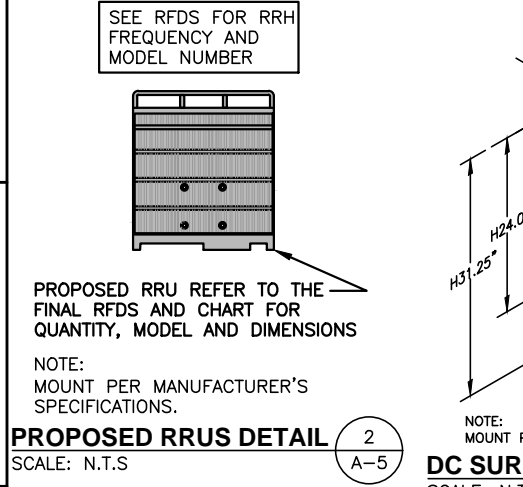
**RRU CHART**

QUANTITY	MODEL	L	W	D
3(E)	RRUS-32 B30 (WCS)	27.2"	12.1"	7.0"
2(E)	RRUS-32 B66A (AWS)	27.2"	12.1"	7.0"
3(E)	RRUS 4478 B14 (700)	18.1"	13.4"	8.3"
3(P)	RRUS-4449 B5/B12 (700)	17.9"	13.9"	9.4"
2(P)	RRUS-4415 B25 (1900)	16.5"	13.4"	5.9"
3(P)	RRUS-8843 (1900)	17.5"	14.4"	6.9"

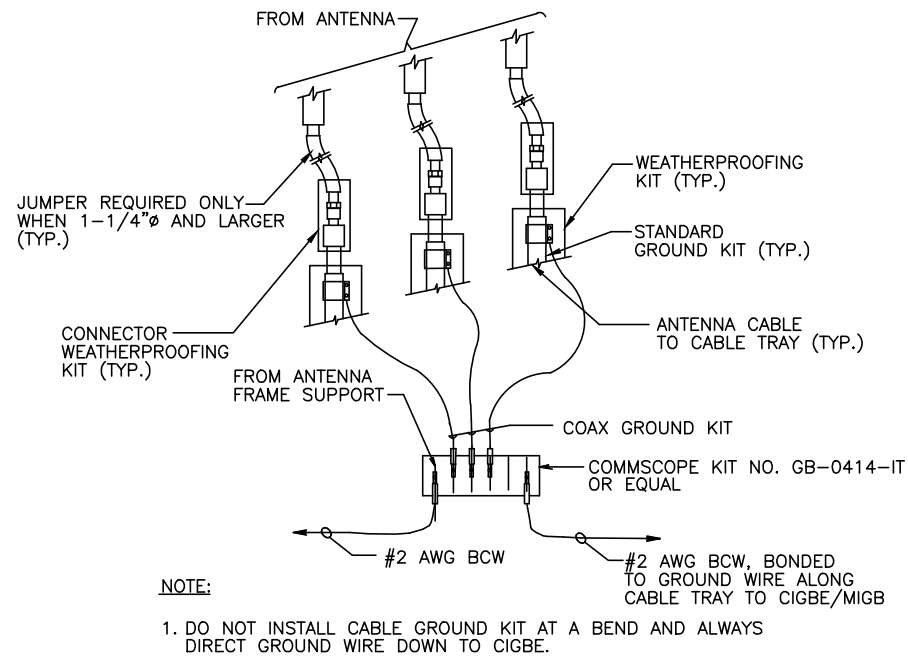
NOTE:  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:  
HDG RECOMMENDS THE EXISTING ANTENNA MOUNT BE MAPPED IN ITS ENTIRETY & A MOUNT STRUCTURAL ANALYSIS PERFORMED PRIOR TO THE ANTENNA INSTALLATION.

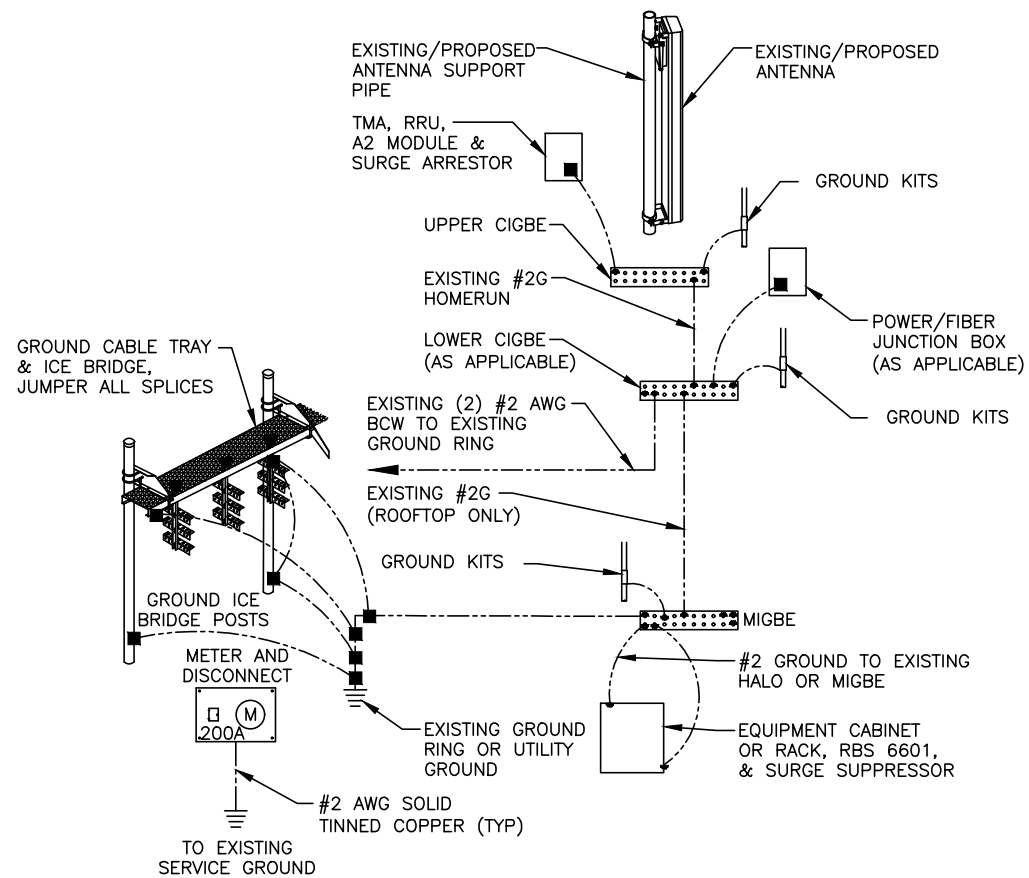
NOTE:  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



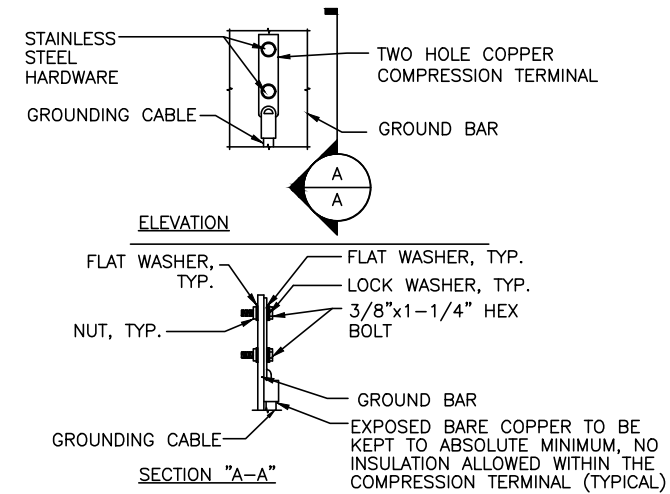
<p>45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586</p>	<p>750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379</p>	<p>SITE NUMBER: CTL01145 SITE NAME: NEWINGTON</p> <p>99 CEDARWOOD LANE NEWINGTON, CT 06111 HARTFORD COUNTY</p>	<p>500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067</p>	<p>08/26/22 ISSUED FOR PERMITTING</p>	<p>02/23/22 ISSUED FOR REVIEW</p>	<p>SCALE: AS SHOWN</p>	<p>DESIGNED BY: AT</p>	<p>DRAWN BY: MR</p>		<p>AT&amp;T</p>	<p>DETAILS 5G NR RADIO, 5G NR 1SR CBAND, 5G NR SOFTWARE UPGRADE, 5G NR ACTIVATION, RRU ADD, CELL SITE RF MODIFICATIONS, 2022 UPGRADE</p>	<p>CTL01145</p>	<p>A-5</p>	<p>B</p>
				<p>NO. DATE REVISIONS</p>										



**GROUND WIRE TO GROUND BAR CONNECTION DETAIL** 1  
SCALE: N.T.S. G-1



**GROUNDING RISER DIAGRAM** 2  
SCALE: N.T.S. G-1



- NOTES:
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
  - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
  - CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

**TYPICAL GROUND BAR CONNECTION DETAIL** 3  
SCALE: N.T.S. G-1

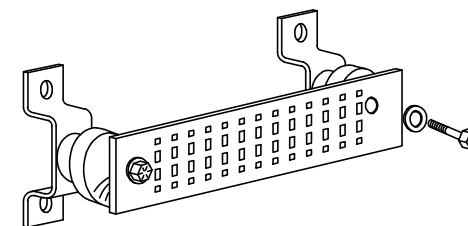
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

**SECTION "P" - SURGE PRODUCERS**

- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

**SECTION "A" - SURGE ABSORBERS**

- INTERIOR GROUND RING (#2 AWG)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
- BUILDING STEEL (IF AVAILABLE) (#2 AWG)

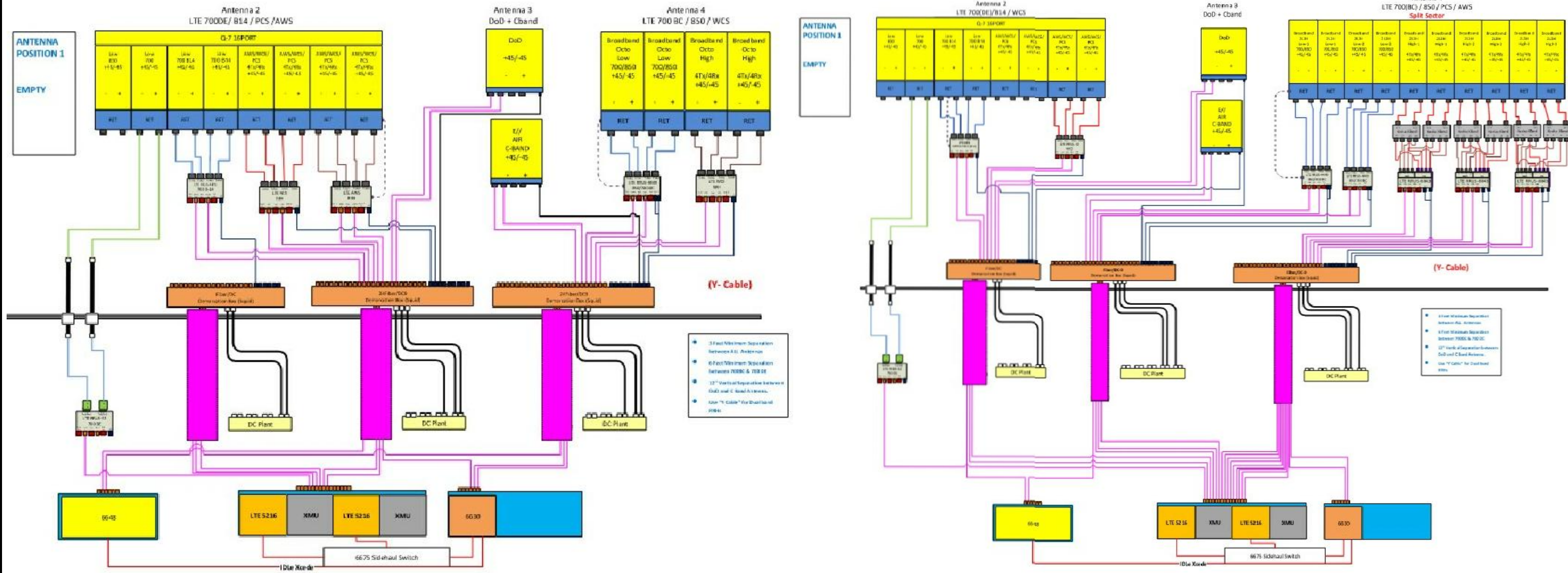


**GROUND BAR - DETAIL (AS REQUIRED)**  
SCALE: N.T.S.



# ALPHA & GAMMA SECTORS

# BETA SECTOR



RF PLUMBING DIAGRAM 1 RF-1  
SCALE: N.T.S

NOTE:  
1. CONTRACTOR TO CONFIRM ALL PARTS.  
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

B	08/26/22	ISSUED FOR PERMITTING	KW	AT	DPH
A	02/23/22	ISSUED FOR REVIEW	MR	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: MR		

AT&T

RF PLUMBING DIAGRAM	
5G NR RADIO, 5G NR 1SR CBAND, 5G NR SOFTWARE UPGRADE, 5G NR ACTIVATION, BRU ADD, CELL SITE RF MODIFICATIONS, 2022 UPGRADE	
SITE NUMBER	DRAWING NUMBER
CTL01145	RF-1
	B



# EXHIBIT 2

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 2020.

## Town of Newington

# ASSESSOR'S OFFICE



Information on the Property Records for the Municipality of Newington was last updated on 12/14/2021.



### Parcel Information

Location:	99 CEDARWOOD LN	Property Use:	Residential	Primary Use:	Residential
Unique ID:	C1000010	Map Block Lot:	17/480/000	Acres:	2.81
490 Acres:	0.00	Zone:	R-20	Volume / Page:	2117/0550
Developers Map / Lot:	N/E 2139 AKA 5	Census:			

### Value Information

	Appraised Value	Assessed Value
Land	145,960	102,180
Buildings	435,750	305,020
Detached Outbuildings	0	0

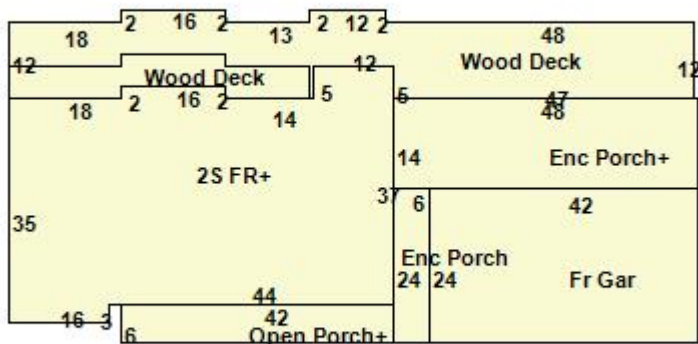
	Appraised Value	Assessed Value
Total	581,710	407,200

## Owner's Information

### Owner's Data

CALLAHAN QUALIFIED PERSONAL RESIDENC THE  
 CIOFFARI PAUL TRUSTEE  
 433 SOUTH MAIN ST STE 200  
 WEST HARTFORD, CT 06110

## Building 1



Building Use:	Single Family	Style:	Colonial	Living Area:	4,120
Stories:	2.00	Construction:	Wood Frame	Year Built:	1990
Total Rooms:	9	Bedrooms:	4	Full Baths:	3
Half Baths:	0	Fireplaces:	0	Heating:	Hot Water
Fuel:	Propane Gas	Cooling Percent:	100	Basement Area:	2,060
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	Asphalt
Siding:	Alum/Vinyl Siding	Units:			

### Special Features

Fireplace	1
Laundry Sink	1

### Attached Components

Type:	Year Built:	Area:
Wood Deck	1990	235
Wood Deck	1990	1,248
Frame Garage	1990	1,008
Enclosed Porch	1990	672
Enclosed Porch	1990	144
Open Porch	1990	252

### Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
CALLAHAN QUALIFIED PERSONAL RESIDENC THE	2117	0550	04/01/2013		\$0

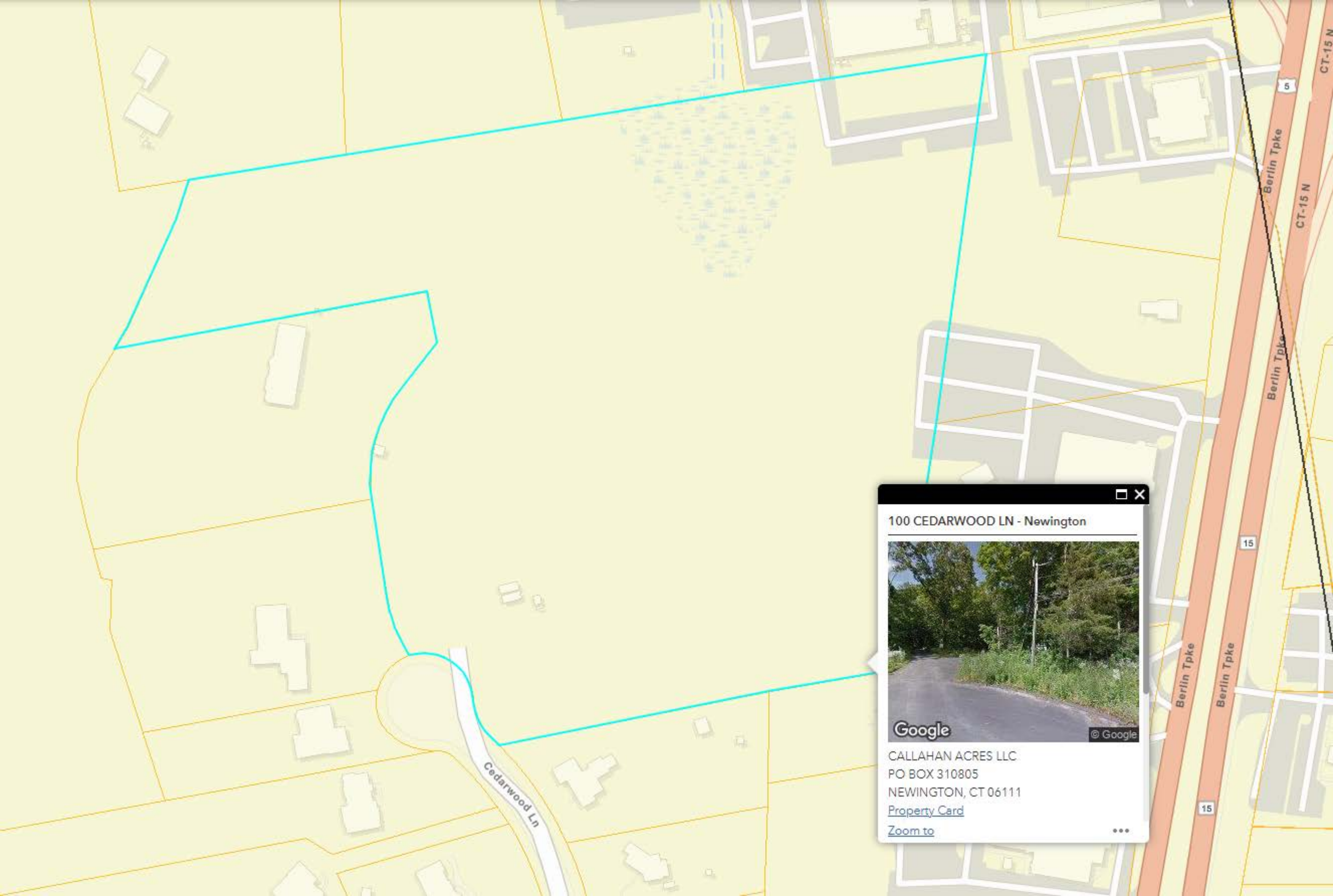


Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
CALLAHAN FREDERICK H III	0737	0309	01/02/1990		\$0
CALLAHAN FREDERICK H JR	0245	0222	01/10/1974		\$0


## Building Permits

Permit Number	Permit Type	Date Opened	Reason
E-20-107	Electrical	04/01/2020	INSTALL 100 AMP SERVICE AND TRANSFER SWITCH OFF PRE-EXISTING METER
P-20-56	Fire Sprinkler	03/26/2020	GAS LINE FROM GENERATOR TO TANK FOR SERVICE OF CELL TOWER FOR POLICE DEPARTMENT
B-20-125	Comm Renovations	03/06/2020	This workshell include three new guy wire foundations, replacement of some guy wires, various steel
B-19-181	Other	04/18/2019	AT&T will be Adding (3) new antennas, adding (3) B14 4478 Radios, and adding (3) RRUS-32 B66 radios
M-18-343	Furnace	11/20/2018	Installation propane gas lines and propane boiler. Bosch Greenstar 151 KBR42-3.
E-18-417	Electrical	11/19/2018	INSTALLATION OF DIESEL DC GENERATOR FOR T-MOBILE
B-18-354	Comm Renovations	06/22/2018	REPAIR, MODIFY AND REPLACE EQUIPMENT AT EXISTING SPRINT WIRELESS INSTALLATION ON THE AFOREMENTIONED
TB-14-597		09/15/2014	Structural Modification Tower to include Plumb & Tension
B-14-541		09/05/2014	INSTALL 3 RADIO HEADS
B-13-78	Remodel	03/07/2013	REPLACE ONE RADIO CABINET
76601		11/25/2008	3 ANTENNAS & 6 CABLES ON TOWER

Information Published With Permission From The Assessor



100 CEDARWOOD LN - Newington



Google © Google

CALLAHAN ACRES LLC  
PO BOX 310805  
NEWINGTON, CT 06111

[Property Card](#)

[Zoom to](#) ...

# EXHIBIT 3

# STRUCTURAL ANALYSIS REPORT

For

**CT1145**

**NEWINGTON**

99 Cedarwood Lane  
Newington, CT 06111

## Antennas Mounted to the Tower



Prepared for:



Dated: December 13, 2021

Prepared by:



45 Beechwood Drive  
North Andover, MA 01845  
(P) 978.557.5553 (F) 978.336.5586  
[www.hudsondesigngroupllc.com](http://www.hudsondesigngroupllc.com)







**HUDSON**  
Design Group LLC

#### **SCOPE OF WORK:**

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the 170' guyed tower supporting the proposed AT&T antennas located at elevation 120' above the ground level.

This report represents this office's findings, conclusions and recommendations pertaining to the support of AT&T's existing and proposed antennas listed below.

Record drawings of the existing tower were not available for our use. The previous structural analysis report prepared by AECOM, dated January 11, 2019, was available and obtained for our use. Tower mapping report prepared by ProVertic LLC, dated October 25, 2021, was provided to this office.

#### **CONCLUSION SUMMARY:**

Based on our evaluation, we have determined that the existing tower and foundation **are in conformance** with the ANSI/TIA-222-H Standard for the loading considered under the criteria listed in this report. The tower structure is rated at **90.3%** - (Leg at Tower Section T2 from EL.140' to EL.155' Controlling).



**APPURTENANCES CONFIGURATION:**

Tenant	Appurtenances	Elev.	Mount
	(1) 6' Omni	169'	Side Mount Standoff
	(2) 4' Omni	169'	Side Mount Standoff
	(1) Box	169'	Tower Leg
	(1) SC2 Dish	166'	Side Mount Standoff
	(3) APXVAALL24_43-U-NA20 Antennas	163'	Sector Mount
	(3) AIR3246 Antennas	163'	Sector Mount
	(3) AIR6488 Antennas	163'	Sector Mount
	(3) RRU 4449	163'	Sector Mount
	(3) RADIO 4415	163'	Sector Mount
	(6) TMA	163'	Sector Mount
<b>AT&amp;T</b>	(2) 800 10965 Antennas	120'	Sector Mount
<b>AT&amp;T</b>	(3) 4478 B14	120'	Sector Mount
<b>AT&amp;T</b>	(2) RADIO 4415	120'	Sector Mount
<b>AT&amp;T</b>	(2) RRUS-32 B66A	120'	Sector Mount
<b>AT&amp;T</b>	(3) RRUS-32 B30	120'	Sector Mount
<b>AT&amp;T</b>	<b>(1) MS-MBA-3.2-H4-L4 Antenna</b>	120'	Sector Mount
<b>AT&amp;T</b>	<b>(3) QD8616-7 Antennas</b>	120'	Sector Mount
<b>AT&amp;T</b>	<b>(3) AIR6449 B77D &amp; AIR6419 B77G Antennas</b>	120'	Sector Mount
<b>AT&amp;T</b>	<b>(3) RRUS E2</b>	120'	Sector Mount
<b>AT&amp;T</b>	<b>(4) 4449 B5/B12</b>	120'	Sector Mount
<b>AT&amp;T</b>	<b>(3) RRU 8843 B2/B66A</b>	120'	Sector Mount
<b>AT&amp;T</b>	<b>(3) DC9-48-60-24-PC16-EV</b>	120'	Sector Mount
<b>AT&amp;T</b>	<b>(1) DC6-48-60-0-8C</b>	120'	Sector Mount

\*Proposed AT&T Appurtenances shown in Bold.

**ANALYSIS RESULTS SUMMARY:**

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
<b>Legs</b>	<b>90.3 %</b>	140 – 155	PASS	<b>Controlling</b>
<b>Diagonals</b>	42.9 %	140 – 155	PASS	
<b>Horizontal</b>	2.4 %	0 – 5	PASS	
<b>Secondary Horizontal</b>	13.6 %	120 – 140	PASS	
<b>Top Girt</b>	9.2 %	45 – 60	PASS	
<b>Bottom Girt</b>	80.5 %	5 – 20	PASS	
<b>Guy</b>	52.5 %	47.5	PASS	
<b>Top Guy Pull-Off</b>	14.8 %	152.4	PASS	
<b>Torque Arm</b>	49.0 %	132.50	PASS	



**DESIGN CRITERIA:**

1. EIA/TIA-222-H Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures
2. 2018 Connecticut State Building Code

City/Town: Newington  
County: Hartford  
Basic Wind Speed: 125 mph  
Risk Category: II  
Exposure Category: B  
Topographic Category: 1  
Ice Thickness: 1.5 inch

**ASSUMPTIONS:**

1. The tower and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
2. The appurtenances configuration is as stated in this report. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
3. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.
4. All prior structural modification, if any, are assumed to be as per the data supplied (if available), and installed properly.

**SUPPORT RECOMMENDATIONS:**

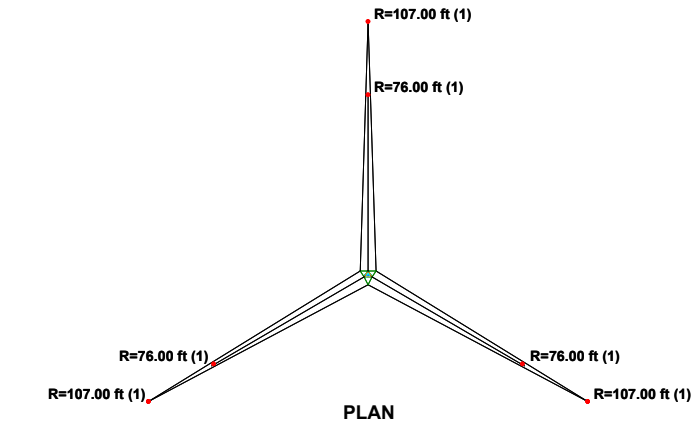
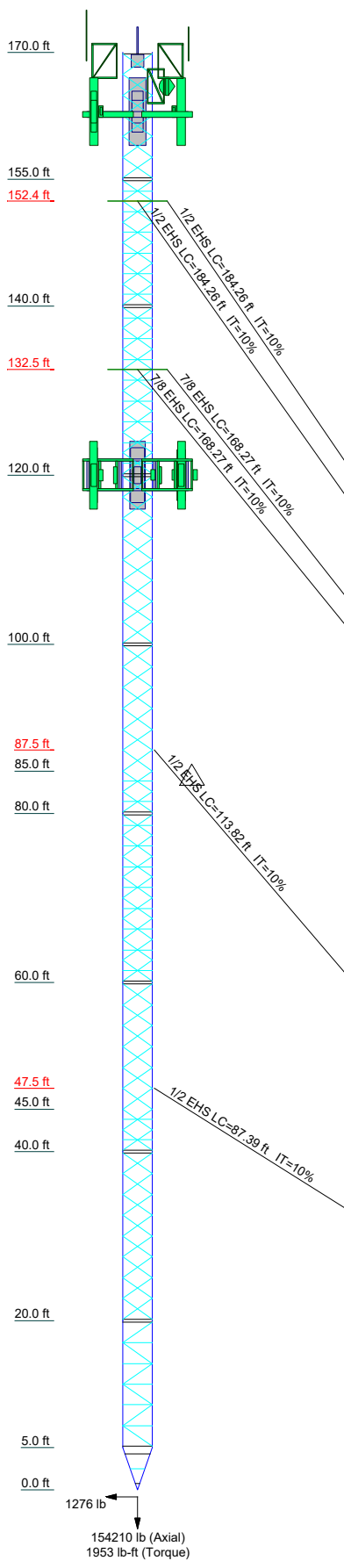
HDG recommends that the proposed antennas, RRHs and surge arrestors be mounted on the existing sector mount supported by the tower.



**HUDSON**  
Design Group LLC

## CALCULATIONS

Section	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	ROHN 2.5 STD	C	ROHN 2.5 STD	B	ROHN 2.5 STD	B	A572-50	ROHN 2.5 STD	B	A	ROHN 2 STD	
Leg Grade	N.A.											
Diagonals	N.A.											
Diagonal Grade	N.A.											
Top Girts	D											
Bottom Girts	D											
Horizontal	D											
Sec. Horizontals												
Top Guy Pull-Offs												
# Panels @ (ft)	G	6 @ 2.44444	8 @ 2.45833	F	6 @ 2.47222	8 @ 2.45833	F	6 @ 2.47222	487.7	1576.7	957.7	12 @ 2.44444
Weight (lb)	7048.5	232.7	270.3	270.3	752.5	201.0	201.0	417.9	487.7	1576.7	957.7	3301.9



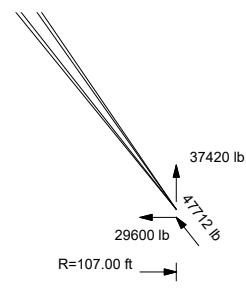
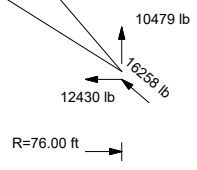
**DESIGNED APPURTENANCE LOADING**

TYPE	ELEVATION	TYPE	ELEVATION
Pirod 5' Side Mount Standoff (1)	169	Sabre 12' V-Boom	120
Omni 2"x6"	169	800 10965 w/ Mount Pipe	120
Pirod 5' Side Mount Standoff (1)	169	800 10965 w/ Mount Pipe	120
Omni 2"x4"	169	4478 B14	120
Pirod 5' Side Mount Standoff (1)	169	RADIO 4415	120
Omni 2"x4"	169	RRUS-32 B66A	120
Box 18"x18"x6"	169	RRUS-32 B30	120
1' Side Mount Standoff	166	4478 B14	120
SC2-W100AB	166	RRUS-32 B30	120
PIROD 12' T-Frame	163	4478 B14	120
PIROD 12' T-Frame	163	RADIO 4415	120
APXVAALL24_43-U-NA20 w/mount pipe	163	RRUS-32 B66A	120
APXVAALL24_43-U-NA20 w/mount pipe	163	RRUS-32 B30	120
APXVAALL24_43-U-NA20 w/mount pipe	163	MS-MBA-3.2-H4-L4 w/Mount Pipe (ATI - Proposed)	120
AIR3246 B66 w/mount pipe	163	QD8616-7 w/mount pipe	120
AIR3246 B66 w/mount pipe	163	QD8616-7 w/mount pipe	120
AIR3246 B66 w/mount pipe	163	QD8616-7 w/mount pipe	120
AIR6488 B41 w/mount pipe	163	AIR6449 B77D w/mount pipe	120
AIR6488 B41 w/mount pipe	163	AIR6449 B77D w/mount pipe	120
AIR6488 B41 w/mount pipe	163	AIR6449 B77D w/mount pipe	120
AIR6488 B41 w/mount pipe	163	AIR6419 B77G w/mount pipe	120
RRU 4449	163	AIR6419 B77G w/mount pipe	120
RRU 4449	163	AIR6419 B77G w/mount pipe	120
RRU 4449	163	RRUS E2	120
RADIO 4415	163	RRUS E2	120
RADIO 4415	163	RRUS E2	120
RADIO 4415	163	4449 B5/B12	120
KRY 112 144/1	163	(2) 4449 B5/B12	120
KRY 112 144/1	163	(3) RRU 8843 B2/B66A	120
KRY 112 144/1	163	4449 B5/B12	120
KRY 112 489/2	163	DC9-48-60-24-PC16-EV	120
KRY 112 489/2	163	DC9-48-60-24-PC16-EV	120
KRY 112 489/2	163	DC9-48-60-24-PC16-EV	120
PIROD 12' T-Frame (T - Mobile)	163	DC6-48-60-0-8C	120
Sabre 12' V-Boom	120	Sabre 12' V-Boom (ATI - Existing)	120

**SYMBOL LIST**

MARK	SIZE	MARK	SIZE
A	ROHN 2 STD mod. (CT1145)	E	SR 1 1/2
B	ROHN 2 STD mod 1. (CT1145)	F	2 @ 2.41667
C	ROHN 2.5 STD mod 1(CT1145)	G	3 @ 1.75
D	14x3/16		

1276 lb  
154210 lb (Axial)  
1953 lb-ft (Torque)



ALL REACTIONS ARE FACTORED

<b>Hudson Design Group LLC</b>			Job: <b>CT 1145 Newington, CT</b>		
45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586			Project: <b>170 ft Guyed Tower</b>		
Client: AT&T	Code: TIA-222-H	Path: C:\Users\CT_1145CT_1145	Drawn by: kw	Date: 12/13/21	App'd:
			Scale: NTS	Dwg No. E-1	

<b>tnxTower</b>  <b>Hudson Design Group LLC</b> 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	<b>Job</b> CT 1145 Newington, CT	<b>Page</b> 1 of 16
	<b>Project</b> 170 ft Guyed Tower	<b>Date</b> 09:22:56 12/13/21
	<b>Client</b> AT&T	<b>Designed by</b> kw

## Tower Input Data

The main tower is a 3x guyed tower with an overall height of 170.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 3.46 ft at the top and tapered at the base.

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

The following design criteria apply:

Tower is located in Hartford County, Connecticut.

Tower base elevation above sea level: 346.00 ft.

Basic wind speed of 125 mph.

Risk Category II.

Exposure Category B.

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

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.5000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

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

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Safety factor used in guy design is 1.

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

## Tower Section Geometry

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Assembly Database</i>	<i>Description</i>	<i>Section Width</i>	<i>Number of Sections</i>	<i>Section Length</i>
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	170.00-155.00			3.46	1	15.00
T2	155.00-140.00			3.46	1	15.00
T3	140.00-120.00			3.46	1	20.00
T4	120.00-100.00			3.46	1	20.00
T5	100.00-85.00			3.46	1	15.00
T6	85.00-80.00			3.46	1	5.00
T7	80.00-60.00			3.46	1	20.00
T8	60.00-45.00			3.46	1	15.00
T9	45.00-40.00			3.46	1	5.00
T10	40.00-20.00			3.46	1	20.00
T11	20.00-5.00			3.46	1	15.00
T12	5.00-0.00			3.46	1	5.00

## Tower Section Geometry (cont'd)



<b>tnxTower</b>  <b>Hudson Design Group LLC</b> 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	<b>Job</b>	CT 1145 Newington, CT	<b>Page</b>	2 of 16
	<b>Project</b>	170 ft Guyed Tower	<b>Date</b>	09:22:56 12/13/21
	<b>Client</b>	AT&T	<b>Designed by</b>	kw

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	170.00-155.00	2.44	X Brace	No	No	2.0000	2.0000
T2	155.00-140.00	2.44	X Brace	No	Yes	2.0000	2.0000
T3	140.00-120.00	2.46	X Brace	No	Yes	2.0000	2.0000
T4	120.00-100.00	2.46	X Brace	No	No	2.0000	2.0000
T5	100.00-85.00	2.47	X Brace	No	No	2.0000	0.0000
T6	85.00-80.00	2.42	X Brace	No	Yes	0.0000	2.0000
T7	80.00-60.00	2.46	X Brace	No	Yes	2.0000	2.0000
T8	60.00-45.00	2.47	X Brace	No	No	2.0000	0.0000
T9	45.00-40.00	2.42	X Brace	No	Yes	0.0000	2.0000
T10	40.00-20.00	2.46	X Brace	No	No	2.0000	2.0000
T11	20.00-5.00	2.44	K Brace Right	No	Yes	2.0000	2.0000
T12	5.00-0.00	1.75	X Brace	No	Yes	9.0000	9.0000

### Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 170.00-155.00	Pipe	ROHN 2 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T2 155.00-140.00	Pipe	ROHN 2 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T3 140.00-120.00	Pipe	ROHN 2 STD mod. (CT1145)	A572-50 (50 ksi)	Equal Angle	L1 1/2x1 1/2x1/4	A36 (36 ksi)
T4 120.00-100.00	Pipe	ROHN 2 STD mod 1. (CT1145)	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T5 100.00-85.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T6 85.00-80.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T7 80.00-60.00	Pipe	ROHN 2 STD mod 1. (CT1145)	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T8 60.00-45.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T9 45.00-40.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T10 40.00-20.00	Pipe	ROHN 2.5 STD mod 1(CT1145)	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T11 20.00-5.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T12 5.00-0.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)

### Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 170.00-155.00	Pipe	P1.5x.0625	A53-B-35 (35 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T2 155.00-140.00	Pipe	P1.5x.0625	A53-B-35 (35 ksi)	Pipe	P1.5x.0625	A53-B-35 (35 ksi)
T3 140.00-120.00	Equal Angle	L1 1/2x1 1/2x1/4	A36	Equal Angle	L1 1/2x1 1/2x1/4	A36

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	<b>Client</b>	AT&T	<b>Designed by</b>	kw

<i>Tower Elevation</i> <i>ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T4 120.00-100.00	Pipe	P1.5x.0625	(36 ksi) A53-B-35	Pipe	P1.5x.0625	(36 ksi) A53-B-35
T5 100.00-85.00	Pipe	P1.5x.0625	(35 ksi) A53-B-35	Pipe		(35 ksi) A53-B-35
T6 85.00-80.00	Pipe		(35 ksi) A53-B-35	Pipe	P1.5x.0625	(35 ksi) A53-B-35
T7 80.00-60.00	Pipe	P1.5x.0625	(35 ksi) A53-B-35	Pipe	P1.5x.0625	(35 ksi) A53-B-35
T8 60.00-45.00	Pipe	P1.5x.0625	(35 ksi) A53-B-35	Pipe		(35 ksi) A53-B-35
T9 45.00-40.00	Pipe		(35 ksi) A53-B-35	Pipe	P1.5x.0625	(35 ksi) A53-B-35
T10 40.00-20.00	Pipe	P1.5x.0625	(35 ksi) A53-B-35	Pipe	P1.5x.0625	(35 ksi) A53-B-35
T11 20.00-5.00	Pipe	P1.5x.0625	(35 ksi) A53-B-35	Pipe	P1.5x.0625	(35 ksi) A53-B-35
T12 5.00-0.00	Flat Bar	14x3/16	A36 (36 ksi)	Flat Bar	14x3/16	A36 (36 ksi)

### Tower Section Geometry (cont'd)

<i>Tower Elevation</i> <i>ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T11 20.00-5.00	None	Solid Round		A572-50 (50 ksi)	Solid Round	1 1/2	A36 (36 ksi)
T12 5.00-0.00	None	Solid Round		A572-50 (50 ksi)	Flat Bar	14x3/16	A36 (36 ksi)

### Tower Section Geometry (cont'd)

<i>Tower Elevation</i> <i>ft</i>	<i>Secondary Horizontal Type</i>	<i>Secondary Horizontal Size</i>	<i>Secondary Horizontal Grade</i>	<i>Inner Bracing Type</i>	<i>Inner Bracing Size</i>	<i>Inner Bracing Grade</i>
T2 155.00-140.00	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T3 140.00-120.00	Equal Angle	L1 1/2x1 1/2x1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T6 85.00-80.00	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T7 80.00-60.00	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T9 45.00-40.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)

### Guy Data

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Guy Elevation	Guy Grade	Guy Size	Initial Tension	%	Guy Modulus	Guy Weight	$L_u$	Anchor Radius	Anchor Azimuth Adj.	Anchor Elevation	End Fitting Efficiency
ft			lb		ksi	plf	ft	ft	°	ft	%
152.389	EHS	A 1/2	2690.00	10%	21000	0.517	184.10	107.00	0.0000	1.00	100%
		B 1/2	2690.00	10%	21000	0.517	184.10	107.00	0.0000	1.00	100%
		C 1/2	2690.00	10%	21000	0.517	184.10	107.00	0.0000	1.00	100%
132.458	EHS	A 7/8	7970.00	10%	19000	1.581	168.12	107.00	0.0000	1.00	100%
		B 7/8	7970.00	10%	19000	1.581	168.12	107.00	0.0000	1.00	100%
		C 7/8	7970.00	10%	19000	1.581	168.12	107.00	0.0000	1.00	100%
87.4722	EHS	A 1/2	2690.00	10%	21000	0.517	113.72	76.00	0.0000	1.00	100%
		B 1/2	2690.00	10%	21000	0.517	113.72	76.00	0.0000	1.00	100%
		C 1/2	2690.00	10%	21000	0.517	113.72	76.00	0.0000	1.00	100%
47.4722	EHS	A 1/2	2690.00	10%	21000	0.517	87.31	76.00	0.0000	1.00	100%
		B 1/2	2690.00	10%	21000	0.517	87.31	76.00	0.0000	1.00	100%
		C 1/2	2690.00	10%	21000	0.517	87.31	76.00	0.0000	1.00	100%

### Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement	Face Offset	Lateral Offset	#	# Per Row	Clear Spacing	Width or Diameter	Perimeter	Weight
					ft	in	(Frac FW)			in	in	in	plf
1/2	C	No	No	Ar (CaAa)	32.00 - 6.00	0.0000	0.35	1	1	0.0000	0.5800		0.25
1 1/2 Fiber Cable	C	No	No	Ar (CaAa)	163.00 - 6.00	0.0000	-0.2	2	2	0.0000	1.7000		1.04
1 5/8	C	No	No	Ar (CaAa)	163.00 - 6.00	0.0000	-0.3	2	2	0.0000	1.9800		1.04
1 5/8	B	No	No	Ar (CaAa)	163.00 - 6.00	0.0000	-0.2	4	4	0.0000	1.9800		1.04
1 5/8	A	No	No	Ar (CaAa)	163.00 - 6.00	0.0000	-0.3	1	1	0.0000	1.9800		1.04
*****													
1/4	A	No	No	Ar (CaAa)	166.00 - 6.00	0.0000	-0.2	1	1	0.0000	0.4000		0.25
1/2	C	No	No	Ar (CaAa)	169.00 - 6.00	0.0000	0.2	1	1	0.0000	0.5800		0.25
1 5/8	C	No	No	Af (CaAa)	169.00 - 6.00	0.0000	0.25	1	1	0.0000	1.9800		1.04
7/8	C	No	No	Ar (CaAa)	169.00 - 6.00	0.0000	0.3	1	1	0.0000	1.1100		0.54
*****													
7/8 (AT&T)	B	No	No	Ar (CaAa)	120.00 - 6.00	0.0000	0	12	6	0.0000	1.1100		0.54
FB-L98B-002	B	No	No	Ar (CaAa)	120.00 - 6.00	0.0000	0.4	3	3	0.0000	0.4000		0.25
WR-VG122S T-BRDA	B	No	No	Ar (CaAa)	120.00 - 6.00	0.0000	0.45	6	3	0.4000	0.4000		0.25
WR-VG122S T-BRDA	B	No	No	Ar (CaAa)	120.00 - 6.00	0.0000	0.3	5	3	0.4000	0.4000		0.25

### Discrete Tower Loads

<p><b>tnxTower</b></p> <p><b>Hudson Design Group LLC</b>  45 Beechwood Drive  North Andover, MA 01845  Phone: (P) 978.557.5553  FAX: (F) 978.336.5586</p>	<b>Job</b>	CT 1145 Newington, CT	<b>Page</b>	5 of 16
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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight lb
Pirod 5' Side Mount Standoff (1)	C	From Leg	2.50 0.00 0.00	0.0000	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.85 5.52 7.19 10.53	3.85 5.52 7.19 10.53	60.00 110.00 160.00 260.00
Omni 2"x6'	C	From Leg	5.00 0.00 3.00	0.0000	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.20 1.80 2.17 2.93	1.20 1.80 2.17 2.93	25.00 34.39 47.81 87.31
Pirod 5' Side Mount Standoff (1)	A	From Leg	2.50 0.00 0.00	0.0000	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.85 5.52 7.19 10.53	3.85 5.52 7.19 10.53	60.00 110.00 160.00 260.00
Omni 2"x4'	A	From Leg	5.00 0.00 2.00	0.0000	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.79 1.03 1.28 1.81	0.79 1.03 1.28 1.81	15.00 21.34 30.48 57.76
Pirod 5' Side Mount Standoff (1)	B	From Leg	2.50 0.00 0.00	0.0000	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.85 5.52 7.19 10.53	3.85 5.52 7.19 10.53	60.00 110.00 160.00 260.00
Omni 2"x4'	B	From Leg	5.00 0.00 2.00	0.0000	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.79 1.03 1.28 1.81	0.79 1.03 1.28 1.81	15.00 21.34 30.48 57.76
Box 18'x18"x6"	A	From Leg	0.00 0.00 0.00	0.0000	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.70 2.90 3.11 3.56	0.92 1.05 1.19 1.49	20.00 38.89 60.70 113.85
1' Side Mount Standoff	B	From Leg	0.50 0.00 0.00	0.0000	166.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.00 1.50 2.00 3.00	1.00 1.50 2.00 3.00	30.00 50.00 70.00 110.00
*****									
PIROD 12' T-Frame (T - Mobile)	A	From Leg	2.00 0.00 0.00	0.0000	163.00	No Ice 1/2" Ice 1" Ice 2" Ice	12.20 17.60 23.00 33.80	12.20 17.60 23.00 33.80	360.00 490.00 620.00 880.00
PIROD 12' T-Frame	B	From Leg	2.00 0.00 0.00	0.0000	163.00	No Ice 1/2" Ice 1" Ice 2" Ice	12.20 17.60 23.00 33.80	12.20 17.60 23.00 33.80	360.00 490.00 620.00 880.00
PIROD 12' T-Frame	C	From Leg	2.00 0.00 0.00	0.0000	163.00	No Ice 1/2" Ice 1" Ice 2" Ice	12.20 17.60 23.00 33.80	12.20 17.60 23.00 33.80	360.00 490.00 620.00 880.00
APXVAALL24_43-U-NA20 w/mount pipe	A	From Leg	4.00 0.00 0.00	0.0000	163.00	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 20.89 21.55 22.88	11.19 12.62 13.71 15.95	174.32 311.78 460.89 791.65
APXVAALL24_43-U-NA20 w/mount pipe	B	From Leg	4.00 0.00 0.00	0.0000	163.00	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 20.89 21.55 22.88	11.19 12.62 13.71 15.95	174.32 311.78 460.89 791.65
APXVAALL24_43-U-NA20 w/mount pipe	C	From Leg	4.00 0.00 0.00	0.0000	163.00	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 20.89 21.55 22.88	11.19 12.62 13.71 15.95	174.32 311.78 460.89 791.65



<b>tnxTower</b>  <b>Hudson Design Group LLC</b> 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	<b>Job</b>	CT 1145 Newington, CT	<b>Page</b>	7 of 16
	<b>Project</b>	170 ft Guyed Tower	<b>Date</b>	09:22:56 12/13/21
	<b>Client</b>	AT&T	<b>Designed by</b>	kw

Description	Face or Leg	Offset Type	Offsets:			Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight	
			Horz	Lateral	Vert					Azimuth Adjustment
			ft	ft	ft	°				
			0.00				1/2" Ice	0.43	0.23	18.18
			0.00				1" Ice	0.51	0.30	22.58
							2" Ice	0.70	0.46	35.87
KRY 112 489/2	A	From Leg	3.00	0.0000	163.00		No Ice	0.56	0.36	15.40
			0.00				1/2" Ice	0.66	0.44	20.45
			0.00				1" Ice	0.76	0.54	27.05
							2" Ice	1.00	0.75	45.71
KRY 112 489/2	B	From Leg	3.00	0.0000	163.00		No Ice	0.56	0.36	15.40
			0.00				1/2" Ice	0.66	0.44	20.45
			0.00				1" Ice	0.76	0.54	27.05
							2" Ice	1.00	0.75	45.71
KRY 112 489/2	C	From Leg	3.00	0.0000	163.00		No Ice	0.56	0.36	15.40
			0.00				1/2" Ice	0.66	0.44	20.45
			0.00				1" Ice	0.76	0.54	27.05
							2" Ice	1.00	0.75	45.71
*****										
Sabre 12' V-Boom (AT&T - Existing)	A	From Leg	2.00	0.0000	120.00		No Ice	15.40	14.00	558.00
			0.00				1/2" Ice	21.30	20.81	741.00
			0.00				1" Ice	27.20	27.62	924.00
							2" Ice	39.00	41.24	1290.00
Sabre 12' V-Boom	B	From Leg	2.00	0.0000	120.00		No Ice	15.40	14.00	558.00
			0.00				1/2" Ice	21.30	20.81	741.00
			0.00				1" Ice	27.20	27.62	924.00
							2" Ice	39.00	41.24	1290.00
Sabre 12' V-Boom	C	From Leg	2.00	0.0000	120.00		No Ice	15.40	14.00	558.00
			0.00				1/2" Ice	21.30	20.81	741.00
			0.00				1" Ice	27.20	27.62	924.00
							2" Ice	39.00	41.24	1290.00
800 10965 w/ Mount Pipe	A	From Leg	4.00	0.0000	120.00		No Ice	13.92	7.50	134.55
			0.00				1/2" Ice	14.50	8.71	229.58
			0.00				1" Ice	15.07	9.65	333.52
							2" Ice	16.22	11.54	571.80
800 10965 w/ Mount Pipe	C	From Leg	4.00	0.0000	120.00		No Ice	13.92	7.50	134.55
			0.00				1/2" Ice	14.50	8.71	229.58
			0.00				1" Ice	15.07	9.65	333.52
							2" Ice	16.22	11.54	571.80
4478 B14	A	From Leg	3.00	0.0000	120.00		No Ice	2.02	1.25	59.40
			0.00				1/2" Ice	2.20	1.40	77.06
			0.00				1" Ice	2.39	1.56	97.48
							2" Ice	2.78	1.90	147.44
RADIO 4415	A	From Leg	3.00	0.0000	120.00		No Ice	1.84	0.82	46.00
			0.00				1/2" Ice	2.01	0.94	60.07
			0.00				1" Ice	2.19	1.07	76.66
							2" Ice	2.57	1.37	118.17
RRUS-32 B66A	A	From Leg	3.00	0.0000	120.00		No Ice	2.72	1.67	60.00
			0.00				1/2" Ice	2.94	1.86	81.00
			0.00				1" Ice	3.17	2.05	105.19
							2" Ice	3.65	2.46	163.91
RRUS-32 B30	A	From Leg	3.00	0.0000	120.00		No Ice	2.72	1.67	53.00
			0.00				1/2" Ice	2.94	1.86	74.00
			0.00				1" Ice	3.17	2.05	98.19
							2" Ice	3.65	2.46	156.91
4478 B14	B	From Leg	3.00	0.0000	120.00		No Ice	2.02	1.25	59.40
			0.00				1/2" Ice	2.20	1.40	77.06
			0.00				1" Ice	2.39	1.56	97.48
							2" Ice	2.78	1.90	147.44
RRUS-32 B30	B	From Leg	3.00	0.0000	120.00		No Ice	2.72	1.67	53.00



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	<b>Project</b>		170 ft Guyed Tower		<b>Date</b>		09:22:56 12/13/21	
	<b>Client</b>		AT&T		<b>Designed by</b>		kw	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Lateral					
			0.00			1/2" Ice	2.94	1.86	74.00
			0.00			1" Ice	3.17	2.05	98.19
						2" Ice	3.65	2.46	156.91
4478 B14	C	From Leg	3.00	0.0000	120.00	No Ice	2.02	1.25	59.40
			0.00			1/2" Ice	2.20	1.40	77.06
			0.00			1" Ice	2.39	1.56	97.48
						2" Ice	2.78	1.90	147.44
RADIO 4415	C	From Leg	3.00	0.0000	120.00	No Ice	1.84	0.82	46.00
			0.00			1/2" Ice	2.01	0.94	60.07
			0.00			1" Ice	2.19	1.07	76.66
						2" Ice	2.57	1.37	118.17
RRUS-32 B66A	C	From Leg	3.00	0.0000	120.00	No Ice	2.72	1.67	60.00
			0.00			1/2" Ice	2.94	1.86	81.00
			0.00			1" Ice	3.17	2.05	105.19
						2" Ice	3.65	2.46	163.91
RRUS-32 B30	C	From Leg	3.00	0.0000	120.00	No Ice	2.72	1.67	53.00
			0.00			1/2" Ice	2.94	1.86	74.00
			0.00			1" Ice	3.17	2.05	98.19
						2" Ice	3.65	2.46	156.91
*****									
MS-MBA-3.2-H4-L4 w/Mount Pipe (AT&T - Proposed)	B	From Leg	4.00	0.0000	120.00	No Ice	14.90	17.42	155.55
			0.00			1/2" Ice	15.53	18.67	314.92
			0.00			1" Ice	16.11	19.64	484.27
						2" Ice	17.31	21.61	856.54
QD8616-7 w/mount pipe	A	From Leg	4.00	0.0000	120.00	No Ice	19.10	12.19	202.11
			0.00			1/2" Ice	19.84	13.72	339.37
			0.00			1" Ice	20.57	15.08	488.53
						2" Ice	22.01	17.44	819.75
QD8616-7 w/mount pipe	B	From Leg	4.00	0.0000	120.00	No Ice	19.10	12.19	202.11
			0.00			1/2" Ice	19.84	13.72	339.37
			0.00			1" Ice	20.57	15.08	488.53
						2" Ice	22.01	17.44	819.75
QD8616-7 w/mount pipe	C	From Leg	4.00	0.0000	120.00	No Ice	19.10	12.19	202.11
			0.00			1/2" Ice	19.84	13.72	339.37
			0.00			1" Ice	20.57	15.08	488.53
						2" Ice	22.01	17.44	819.75
AIR6449 B77D w/mount pipe	A	From Leg	4.00	0.0000	120.00	No Ice	4.35	3.01	117.60
			0.00			1/2" Ice	4.70	3.47	157.89
			0.00			1" Ice	5.06	3.94	203.17
						2" Ice	5.81	4.93	311.27
AIR6449 B77D w/mount pipe	B	From Leg	4.00	0.0000	120.00	No Ice	4.35	3.01	117.60
			0.00			1/2" Ice	4.70	3.47	157.89
			0.00			1" Ice	5.06	3.94	203.17
						2" Ice	5.81	4.93	311.27
AIR6449 B77D w/mount pipe	C	From Leg	4.00	0.0000	120.00	No Ice	4.35	3.01	117.60
			0.00			1/2" Ice	4.70	3.47	157.89
			0.00			1" Ice	5.06	3.94	203.17
						2" Ice	5.81	4.93	311.27
AIR6419 B77G w/mount pipe	A	From Leg	4.00	0.0000	120.00	No Ice	4.48	2.88	109.60
			0.00			1/2" Ice	4.83	3.34	149.47
			0.00			1" Ice	5.19	3.81	194.34
						2" Ice	5.95	4.80	301.62
AIR6419 B77G w/mount pipe	B	From Leg	4.00	0.0000	120.00	No Ice	4.48	2.88	109.60
			0.00			1/2" Ice	4.83	3.34	149.47
			0.00			1" Ice	5.19	3.81	194.34
						2" Ice	5.95	4.80	301.62
AIR6419 B77G w/mount pipe	C	From Leg	4.00	0.0000	120.00	No Ice	4.48	2.88	109.60

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	<b>Project</b>	170 ft Guyed Tower		<b>Date</b>	09:22:56 12/13/21
	<b>Client</b>	AT&T		<b>Designed by</b>	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	lb
			0.00			1/2" Ice	4.83	3.34	149.47
			0.00			1" Ice	5.19	3.81	194.34
						2" Ice	5.95	4.80	301.62
RRUS E2	A	From Leg	3.00	0.0000	120.00	No Ice	3.15	1.29	60.00
			0.00			1/2" Ice	3.36	1.44	83.22
			0.00			1" Ice	3.59	1.60	109.64
						2" Ice	4.07	1.95	172.88
RRUS E2	B	From Leg	3.00	0.0000	120.00	No Ice	3.15	1.29	60.00
			0.00			1/2" Ice	3.36	1.44	83.22
			0.00			1" Ice	3.59	1.60	109.64
						2" Ice	4.07	1.95	172.88
RRUS E2	C	From Leg	3.00	0.0000	120.00	No Ice	3.15	1.29	60.00
			0.00			1/2" Ice	3.36	1.44	83.22
			0.00			1" Ice	3.59	1.60	109.64
						2" Ice	4.07	1.95	172.88
4449 B5/B12	A	From Leg	3.00	0.0000	120.00	No Ice	1.97	1.55	71.00
			0.00			1/2" Ice	2.15	1.71	90.52
			0.00			1" Ice	2.33	1.88	112.92
						2" Ice	2.72	2.24	167.15
(2) 4449 B5/B12	B	From Leg	3.00	0.0000	120.00	No Ice	1.97	1.55	71.00
			0.00			1/2" Ice	2.15	1.71	90.52
			0.00			1" Ice	2.33	1.88	112.92
						2" Ice	2.72	2.24	167.15
(3) RRU 8843 B2/B66A	B	From Leg	3.00	0.0000	120.00	No Ice	1.65	1.16	70.60
			0.00			1/2" Ice	1.81	1.30	86.76
			0.00			1" Ice	1.98	1.45	105.55
						2" Ice	2.34	1.76	151.78
4449 B5/B12	C	From Leg	3.00	0.0000	120.00	No Ice	1.97	1.55	71.00
			0.00			1/2" Ice	2.15	1.71	90.52
			0.00			1" Ice	2.33	1.88	112.92
						2" Ice	2.72	2.24	167.15
DC9-48-60-24-PC16-EV	A	From Leg	1.00	0.0000	120.00	No Ice	0.81	0.81	33.00
			0.00			1/2" Ice	1.30	1.30	48.38
			0.00			1" Ice	1.48	1.48	66.11
						2" Ice	1.86	1.86	109.29
DC9-48-60-24-PC16-EV	B	From Leg	1.00	0.0000	120.00	No Ice	0.81	0.81	33.00
			0.00			1/2" Ice	1.30	1.30	48.38
			0.00			1" Ice	1.48	1.48	66.11
						2" Ice	1.86	1.86	109.29
DC9-48-60-24-PC16-EV	C	From Leg	1.00	0.0000	120.00	No Ice	0.81	0.81	33.00
			0.00			1/2" Ice	1.30	1.30	48.38
			0.00			1" Ice	1.48	1.48	66.11
						2" Ice	1.86	1.86	109.29
DC6-48-60-0-8C	B	From Leg	1.00	0.0000	120.00	No Ice	0.79	0.79	20.00
			0.00			1/2" Ice	1.27	1.27	35.12
			0.00			1" Ice	1.45	1.45	52.57
						2" Ice	1.83	1.83	95.09

\*\*\*\*\*

**Dishes**

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	<b>Project</b>	170 ft Guyed Tower	<b>Date</b>	09:22:56 12/13/21
	<b>Client</b>	AT&T	<b>Designed by</b>	kw

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				Horz Lateral ft	Vert ft							
SC2-W100AB	B	Paraboloid w/Radome	From Leg	1.00	0.0000	°	°	ft	ft	No Ice	3.80	22.00
				0.00						1/2" Ice	4.10	40.00
				0.00						1" Ice	4.40	58.00
										2" Ice	6.00	94.00

## Load Combinations

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

## Maximum Reactions

<p style="text-align: center;"><b><i>tnxTower</i></b></p> <p style="text-align: center;"><b>Hudson Design Group LLC</b>  45 Beechwood Drive  North Andover, MA 01845  Phone: (P) 978.557.5553  FAX: (F) 978.336.5586</p>	<b>Job</b>	CT 1145 Newington, CT	<b>Page</b>	11 of 16
	<b>Project</b>	170 ft Guyed Tower	<b>Date</b>	09:22:56 12/13/21
	<b>Client</b>	AT&T	<b>Designed by</b>	kw

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb	
Mast	Max. Vert	15	154209.51	38.06	324.41	
	Max. H <sub>x</sub>	11	98434.66	1192.73	-16.70	
	Max. H <sub>z</sub>	3	100160.06	-609.90	1101.08	
	Max. M <sub>x</sub>	1	0.00	10.61	-0.70	
	Max. M <sub>z</sub>	1	0.00	10.61	-0.70	
	Max. Torsion	9	1953.19	656.32	-1091.50	
	Min. Vert	1	80989.10	10.61	-0.70	
	Min. H <sub>x</sub>	5	98431.26	-1165.42	-16.42	
	Min. H <sub>z</sub>	9	100140.98	656.32	-1091.50	
	Min. M <sub>x</sub>	1	0.00	10.61	-0.70	
	Min. M <sub>z</sub>	1	0.00	10.61	-0.70	
	Min. Torsion	3	-1788.85	-609.90	1101.08	
	Guy C @ 107 ft Elev 1 ft Azimuth 240 deg	Max. Vert	10	-1740.46	-923.34	533.95
		Max. H <sub>x</sub>	10	-1740.46	-923.34	533.95
	Max. H <sub>z</sub>	4	-37420.34	-25641.37	14787.88	
	Min. Vert	4	-37420.34	-25641.37	14787.88	
	Min. H <sub>x</sub>	4	-37420.34	-25641.37	14787.88	
	Min. H <sub>z</sub>	10	-1740.46	-923.34	533.95	
Guy B @ 107 ft Elev 1 ft Azimuth 120 deg	Max. Vert	6	-1889.07	1023.06	590.87	
	Max. H <sub>x</sub>	12	-36619.05	25073.32	14474.40	
	Max. H <sub>z</sub>	12	-36619.05	25073.32	14474.40	
	Min. Vert	12	-36619.05	25073.32	14474.40	
	Min. H <sub>x</sub>	6	-1889.07	1023.06	590.87	
	Min. H <sub>z</sub>	6	-1889.07	1023.06	590.87	
Guy A @ 107 ft Elev 1 ft Azimuth 0 deg	Max. Vert	2	-1813.33	0.98	-1123.65	
	Max. H <sub>x</sub>	11	-19879.47	673.63	-15575.39	
	Max. H <sub>z</sub>	2	-1813.33	0.98	-1123.65	
	Min. Vert	8	-37028.46	-14.19	-29274.58	
	Min. H <sub>x</sub>	5	-19895.67	-673.34	-15587.47	
	Min. H <sub>z</sub>	8	-37028.46	-14.19	-29274.58	
Guy C @ 76 ft Elev 1 ft Azimuth 240 deg	Max. Vert	10	-140.22	-107.25	61.95	
	Max. H <sub>x</sub>	10	-140.22	-107.25	61.95	
	Max. H <sub>z</sub>	3	-10478.99	-10728.18	6278.03	
	Min. Vert	3	-10478.99	-10728.18	6278.03	
	Min. H <sub>x</sub>	3	-10478.99	-10728.18	6278.03	
	Min. H <sub>z</sub>	10	-140.22	-107.25	61.95	
Guy B @ 76 ft Elev 1 ft Azimuth 120 deg	Max. Vert	6	-178.43	141.39	81.64	
	Max. H <sub>x</sub>	11	-9861.34	10143.04	5775.62	
	Max. H <sub>z</sub>	11	-9861.34	10143.04	5775.62	
	Min. Vert	11	-9861.34	10143.04	5775.62	
	Min. H <sub>x</sub>	6	-178.43	141.39	81.64	
	Min. H <sub>z</sub>	6	-178.43	141.39	81.64	
Guy A @ 76 ft Elev 1 ft Azimuth 0 deg	Max. Vert	2	-164.52	0.03	-148.97	
	Max. H <sub>x</sub>	11	-4818.20	128.62	-5732.99	
	Max. H <sub>z</sub>	2	-164.52	0.03	-148.97	
	Min. Vert	9	-10473.28	72.98	-12424.07	
	Min. H <sub>x</sub>	5	-4806.86	-128.39	-5719.09	
	Min. H <sub>z</sub>	9	-10473.28	72.98	-12424.07	

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>Hudson Design Group LLC</b> 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	<p style="text-align: center;"><b>Job</b></p> <p style="text-align: center;">CT 1145 Newington, CT</p>	<p style="text-align: center;"><b>Page</b></p> <p style="text-align: center;">12 of 16</p>
	<p style="text-align: center;"><b>Project</b></p> <p style="text-align: center;">170 ft Guyed Tower</p>	<p style="text-align: center;"><b>Date</b></p> <p style="text-align: center;">09:22:56 12/13/21</p>
	<p style="text-align: center;"><b>Client</b></p> <p style="text-align: center;">AT&amp;T</p>	<p style="text-align: center;"><b>Designed by</b></p> <p style="text-align: center;">kw</p>

## Tower Mast Reaction Summary

Load Combination	Vertical	Shear <sub>x</sub>	Shear <sub>z</sub>	Overturing Moment, M <sub>x</sub>	Overturing Moment, M <sub>z</sub>	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead Only	80989.10	-10.61	0.70	0.00	0.00	-66.15
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	100359.34	-8.58	-1088.96	0.00	0.00	1159.81
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	100160.06	609.90	-1101.08	0.00	0.00	1788.85
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	93912.16	1051.83	-612.59	0.00	0.00	1003.60
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	98431.26	1165.42	16.42	0.00	0.00	-89.77
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	98745.52	884.04	519.28	0.00	0.00	-97.63
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	95871.74	465.95	829.63	0.00	0.00	-275.81
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	93194.53	-11.03	1057.59	0.00	0.00	-1321.47
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	100140.98	-656.32	1091.50	0.00	0.00	-1953.19
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	103343.58	-1106.21	636.85	0.00	0.00	-1153.45
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	98434.66	-1192.73	16.70	0.00	0.00	-71.73
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	92851.10	-878.13	-497.99	0.00	0.00	-56.77
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	95892.80	-492.01	-828.92	0.00	0.00	119.23
1.2 Dead+1.0 Ice+1.0 Temp+Guy	152643.08	-38.40	-14.81	0.00	0.00	-126.82
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	154209.51	-38.06	-324.41	0.00	0.00	152.68
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	154005.07	112.44	-279.44	0.00	0.00	319.93
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	153838.18	223.83	-164.80	0.00	0.00	233.02
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	153984.43	266.77	-11.26	0.00	0.00	89.34
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	154188.10	230.16	140.58	0.00	0.00	32.41
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	153984.09	116.60	247.85	0.00	0.00	-111.06
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	153834.39	-37.78	287.37	0.00	0.00	-409.59
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	153997.27	-192.89	248.65	0.00	0.00	-575.47
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	154199.89	-307.18	141.13	0.00	0.00	-486.88
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	153987.45	-343.18	-11.31	0.00	0.00	-344.95
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	153829.43	-299.34	-164.67	0.00	0.00	-289.88
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy	153995.03	-188.23	-279.12	0.00	0.00	-145.13
Dead+Wind 0 deg - Service+Guy	81162.85	-10.70	-262.57	0.00	0.00	210.79
Dead+Wind 30 deg - Service+Guy	81156.76	140.11	-261.81	0.00	0.00	351.64
Dead+Wind 60 deg - Service+Guy	81151.73	246.73	-147.81	0.00	0.00	173.08
Dead+Wind 90 deg - Service+Guy	81155.01	270.80	1.35	0.00	0.00	-67.89

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	<b>Project</b>	170 ft Guyed Tower		<b>Date</b>	09:22:56 12/13/21
	<b>Client</b>	AT&T		<b>Designed by</b>	kw

Load Combination	Vertical lb	Shear <sub>x</sub> lb	Shear <sub>z</sub> lb	Overturning Moment, M <sub>x</sub> lb-ft	Overturning Moment, M <sub>z</sub> lb-ft	Torque lb-ft
Service+Guy						
Dead+Wind 120 deg -	81162.69	204.85	125.08	0.00	0.00	-71.91
Service+Guy						
Dead+Wind 150 deg -	81153.00	105.88	201.45	0.00	0.00	-114.40
Service+Guy						
Dead+Wind 180 deg -	81149.83	-10.52	256.70	0.00	0.00	-343.14
Service+Guy						
Dead+Wind 210 deg -	81158.05	-162.57	262.57	0.00	0.00	-484.05
Service+Guy						
Dead+Wind 240 deg -	81166.32	-274.69	153.18	0.00	0.00	-305.56
Service+Guy						
Dead+Wind 270 deg -	81155.33	-292.16	1.38	0.00	0.00	-64.55
Service+Guy						
Dead+Wind 300 deg -	81147.75	-219.90	-120.05	0.00	0.00	-60.43
Service+Guy						
Dead+Wind 330 deg -	81153.17	-126.35	-200.57	0.00	0.00	-17.91
Service+Guy						

## Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-20576.49	0.00	0.05	20574.26	0.05	0.011%
2	-13.87	-24314.00	-33321.50	13.87	24313.95	33320.13	0.003%
3	17758.85	-24196.42	-30792.13	-17758.86	24196.37	30790.94	0.003%
4	30317.28	-24078.83	-17508.23	-30316.38	24078.79	17506.51	0.005%
5	34088.32	-24196.42	2.84	-34086.75	24196.36	-1.91	0.004%
6	27990.80	-24314.00	16160.50	-27988.88	24313.92	-16159.39	0.005%
7	15816.43	-24196.42	27389.17	-15814.95	24196.37	-27388.37	0.004%
8	-3.93	-24078.83	33006.82	3.46	24078.81	-33005.84	0.003%
9	-17787.35	-24196.42	30775.68	17786.31	24196.37	-30775.10	0.003%
10	-30598.71	-24314.00	17650.15	30596.93	24313.91	-17649.13	0.005%
11	-34122.77	-24196.42	-3.18	34121.19	24196.35	4.11	0.004%
12	-27764.49	-24078.83	-16029.84	27762.34	24078.77	16028.47	0.006%
13	-15833.94	-24196.42	-27418.84	15833.99	24196.37	27417.13	0.004%
14	0.00	-83208.72	0.00	-0.39	83208.72	-0.64	0.001%
15	-3.28	-83320.43	-12033.06	3.28	83320.41	12030.68	0.003%
16	6010.73	-83208.72	-10418.68	-6010.79	83208.71	10417.09	0.002%
17	10410.89	-83097.01	-6011.81	-10407.90	83096.97	6009.43	0.005%
18	12013.41	-83208.72	0.67	-12010.66	83208.69	0.67	0.004%
19	10405.14	-83320.44	6007.41	-10403.36	83320.41	-6006.39	0.002%
20	6005.78	-83208.72	10400.98	-6003.16	83208.69	-10399.30	0.004%
21	-0.93	-83097.01	12018.60	0.61	83096.97	-12014.93	0.004%
22	-6017.48	-83208.72	10414.79	6014.52	83208.69	-10412.99	0.004%
23	-10425.53	-83320.43	6015.39	10423.57	83320.41	-6014.28	0.003%
24	-12021.56	-83208.72	-0.75	12018.55	83208.69	2.27	0.004%
25	-10403.55	-83097.01	-6006.49	10400.27	83096.97	6004.32	0.005%
26	-6009.93	-83208.72	-10408.00	6009.96	83208.71	10406.43	0.002%
27	-3.20	-20603.58	-7682.82	3.15	20603.57	7679.73	0.014%
28	4094.41	-20576.49	-7099.31	-4093.88	20576.49	7098.14	0.006%
29	6989.90	-20549.40	-4036.67	-6986.96	20549.39	4034.87	0.016%
30	7859.49	-20576.49	0.66	-7856.28	20576.48	-0.62	0.015%
31	6453.88	-20603.58	3726.15	-6451.53	20603.58	-3724.80	0.012%
32	3646.88	-20576.49	6315.27	-3645.72	20576.48	-6313.12	0.011%
33	-0.91	-20549.40	7610.32	0.84	20549.39	-7607.43	0.013%
34	-4100.98	-20576.49	7095.52	4100.23	20576.49	-7094.48	0.006%

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	<b>Client</b>	AT&T	<b>Designed by</b>	kw

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
35	-7054.74	-20603.58	4069.37	7053.51	20603.58	-4068.68	0.006%
36	-7867.43	-20576.49	-0.73	7864.11	20576.48	0.80	0.015%
37	-6401.74	-20549.40	-3696.05	6399.32	20549.39	3694.64	0.013%
38	-3650.91	-20576.49	-6322.10	3649.58	20576.48	6319.93	0.012%

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	170 - 155	1.450	33	0.1385	0.0345
T2	155 - 140	1.014	33	0.1198	0.0329
T3	140 - 120	0.749	29	0.0466	0.0373
T4	120 - 100	0.780	28	0.0248	0.0552
T5	100 - 85	0.804	28	0.0173	0.0968
T6	85 - 80	0.741	28	0.0228	0.1182
T7	80 - 60	0.718	28	0.0254	0.1239
T8	60 - 45	0.562	28	0.0450	0.1373
T9	45 - 40	0.418	35	0.0387	0.1389
T10	40 - 20	0.382	34	0.0372	0.1382
T11	20 - 5	0.222	34	0.0443	0.1239
T12	5 - 0	0.059	34	0.0542	0.0828

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
169.00	PiROD 5' Side Mount Standoff (1)	33	1.419	0.1383	0.0343	53363
166.00	SC2-W100AB	33	1.328	0.1375	0.0337	53363
163.00	PiROD 12' T-Frame	33	1.238	0.1357	0.0333	38117
152.39	Guy	33	0.949	0.1094	0.0332	14757
132.46	Guy	28	0.727	0.0214	0.0414	14571
120.00	Sabre 12' V-Boom	28	0.780	0.0248	0.0552	46068
87.47	Guy	28	0.753	0.0218	0.1152	184476
47.47	Guy	35	0.438	0.0401	0.1391	37313

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	170 - 155	8.338	2	0.7092	0.2212
T2	155 - 140	6.220	10	0.6289	0.2145
T3	140 - 120	5.010	10	0.2843	0.2216
T4	120 - 100	5.226	10	0.1389	0.2898
T5	100 - 85	5.563	10	0.0835	0.4471
T6	85 - 80	5.400	10	0.1103	0.5228
T7	80 - 60	5.303	10	0.1242	0.5420
T8	60 - 45	4.426	10	0.2831	0.5793



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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T9	45 - 40	3.446	10	0.3024	0.5713
T10	40 - 20	3.140	10	0.3093	0.5641
T11	20 - 5	1.753	10	0.3677	0.4996
T12	5 - 0	0.456	10	0.4241	0.3215

### Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
169.00	Pirod 5' Side Mount Standoff (1)	2	8.188	0.7087	0.2206	12740
166.00	SC2-W100AB	2	7.742	0.7060	0.2188	12740
163.00	PIROD 12' T-Frame	2	7.301	0.6986	0.2172	9100
152.39	Guy	10	5.935	0.5832	0.2143	3320
132.46	Guy	10	4.920	0.1293	0.2357	2766
120.00	Sabre 12' V-Boom	10	5.226	0.1389	0.2898	16313
87.47	Guy	10	5.441	0.1065	0.5126	20609
47.47	Guy	10	3.605	0.2999	0.5737	8923

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$\phi P_{allow}$ lb	% Capacity	Pass Fail
T1	170 - 155	Leg	ROHN 2 STD	1	-20554.10	48331.10	42.5	Pass
T2	155 - 140	Leg	ROHN 2 STD	46	-43520.90	48207.10	90.3	Pass
T3	140 - 120	Leg	ROHN 2 STD mod. (CT1145)	109	-55748.10	69842.20	79.8	Pass
T4	120 - 100	Leg	ROHN 2 STD mod 1. (CT1145)	191	-40556.90	56041.90	72.4	Pass
T5	100 - 85	Leg	ROHN 2.5 STD	248	-44470.40	70956.10	62.7	Pass
T6	85 - 80	Leg	ROHN 2.5 STD	290	-44899.90	72362.10	62.0	Pass
T7	80 - 60	Leg	ROHN 2 STD mod 1. (CT1145)	314	-45513.20	58596.60	77.7	Pass
T8	60 - 45	Leg	ROHN 2.5 STD	396	-49375.00	71377.10	69.2	Pass
T9	45 - 40	Leg	ROHN 2.5 STD	438	-48863.20	70415.20	69.4	Pass
T10	40 - 20	Leg	ROHN 2.5 STD mod 1(CT1145)	461	-52020.90	103524.00	50.2	Pass
T11	20 - 5	Leg	ROHN 2.5 STD	518	-51967.60	70343.00	73.9	Pass
T12	5 - 0	Leg	ROHN 2.5 STD	560	-56009.70	70383.40	79.6	Pass
T1	170 - 155	Diagonal	P1.5x.0625	10	-2958.86	7937.11	37.3	Pass
T2	155 - 140	Diagonal	P1.5x.0625	100	-3404.50	7937.11	42.9	Pass
T3	140 - 120	Diagonal	L1 1/2x1 1/2x1/4	154	-6127.44	18219.80	33.6	Pass
T4	120 - 100	Diagonal	P1.5x.0625	243	-1517.72	7934.85	19.1	Pass
T5	100 - 85	Diagonal	P1.5x.0625	264	1991.01	8890.95	22.4	Pass
T6	85 - 80	Diagonal	P1.5x.0625	304	-1162.96	7966.66	14.6	Pass
T7	80 - 60	Diagonal	P1.5x.0625	326	-1609.89	7934.85	20.3	Pass
T8	60 - 45	Diagonal	P1.5x.0625	411	2281.84	8890.95	25.7	Pass
T9	45 - 40	Diagonal	P1.5x.0625	455	-1646.59	7966.66	20.7	Pass
T10	40 - 20	Diagonal	P1.5x.0625	515	-1139.68	7962.39	14.3	Pass
T11	20 - 5	Diagonal	P1.5x.0625	532	-2031.73	5712.32	35.6	Pass
T11	20 - 5	Horizontal	1 1/2	541	960.43	57255.50	1.7	Pass
T12	5 - 0	Horizontal	14x3/16	569	-82.32	5438.71	2.4	Pass
T2	155 - 140	Secondary Horizontal	1	106	-788.49	13530.20	5.8	Pass
T3	140 - 120	Secondary Horizontal	L1 1/2x1 1/2x1/4	170	-2226.37	16405.30	13.6	Pass
T6	85 - 80	Secondary Horizontal	1	301	983.78	25446.90	3.9	Pass
T7	80 - 60	Secondary Horizontal	L2 1/2x2 1/2x3/16	337	1087.97	29224.80	3.7	Pass
T9	45 - 40	Secondary Horizontal	1 1/2	450	1074.54	57255.50	1.9	Pass

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	<b>Client</b>	AT&T	<b>Designed by</b>	kw

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$\phi P_{allow}$ lb	% Capacity	Pass Fail
T1	170 - 155	Top Girt	P1.5x.0625	5	-37.24	6568.91	0.6	Pass
T2	155 - 140	Top Girt	P1.5x.0625	49	147.03	8890.95	1.7	Pass
T3	140 - 120	Top Girt	L1 1/2x1 1/2x1/4	113	-724.65	11909.60	6.1	Pass
T4	120 - 100	Top Girt	P1.5x.0625	194	688.68	8890.95	7.7	Pass
T5	100 - 85	Top Girt	P1.5x.0625	250	506.32	8890.95	5.7	Pass
T7	80 - 60	Top Girt	P1.5x.0625	316	499.15	8890.95	5.6	Pass
T8	60 - 45	Top Girt	P1.5x.0625	397	816.84	8890.95	9.2	Pass
T10	40 - 20	Top Girt	P1.5x.0625	464	645.52	8890.95	7.3	Pass
T11	20 - 5	Top Girt	P1.5x.0625	521	351.77	8890.95	4.0	Pass
T12	5 - 0	Top Girt	14x3/16	562	4680.45	85050.00	5.5	Pass
T1	170 - 155	Bottom Girt	P1.5x.0625	8	-603.02	6568.91	9.2	Pass
T2	155 - 140	Bottom Girt	P1.5x.0625	54	241.47	8890.95	2.7	Pass
T3	140 - 120	Bottom Girt	L1 1/2x1 1/2x1/4	116	-1104.99	11909.60	9.3	Pass
T4	120 - 100	Bottom Girt	P1.5x.0625	198	413.79	8890.95	4.7	Pass
T6	85 - 80	Bottom Girt	P1.5x.0625	294	459.51	8890.95	5.2	Pass
T7	80 - 60	Bottom Girt	P1.5x.0625	321	310.23	8890.95	3.5	Pass
T9	45 - 40	Bottom Girt	P1.5x.0625	441	236.84	8890.95	2.7	Pass
T10	40 - 20	Bottom Girt	P1.5x.0625	467	564.22	8890.95	6.3	Pass
T11	20 - 5	Bottom Girt	P1.5x.0625	523	7153.48	8890.95	80.5	Pass
T12	5 - 0	Bottom Girt	14x3/16	565	-1241.60	69522.50	11.8	Pass
T2	155 - 140	Guy A@152.389	1/2	582	6952.94	16140.00	43.1	Pass
T3	140 - 120	Guy A@132.458	7/8	594	17259.50	47820.00	36.1	Pass
T5	100 - 85	Guy A@87.4722	1/2	600	8025.86	16140.00	49.7	Pass
T8	60 - 45	Guy A@47.4722	1/2	603	8474.39	16140.00	52.5	Pass
T2	155 - 140	Guy B@152.389	1/2	578	6860.20	16140.00	42.5	Pass
T3	140 - 120	Guy B@132.458	7/8	590	16819.10	47820.00	35.2	Pass
T5	100 - 85	Guy B@87.4722	1/2	599	7615.82	16140.00	47.2	Pass
T8	60 - 45	Guy B@47.4722	1/2	602	7904.15	16140.00	49.0	Pass
T2	155 - 140	Guy C@152.389	1/2	572	6903.40	16140.00	42.8	Pass
T3	140 - 120	Guy C@132.458	7/8	587	17558.80	47820.00	36.7	Pass
T5	100 - 85	Guy C@87.4722	1/2	598	8031.85	16140.00	49.8	Pass
T8	60 - 45	Guy C@47.4722	1/2	601	8476.62	16140.00	52.5	Pass
T2	155 - 140	Top Guy Pull-Off@152.389	L2x2x3/16	576	-2622.72	17760.40	14.8	Pass
T2	155 - 140	Torque Arm Top@152.389	C12x20.7	585	-1082.26	171991.00	29.7	Pass
T3	140 - 120	Torque Arm Top@132.458	C12x20.7 mod (CT1145)	593	-3748.01	203689.00	49.0	Pass
						Summary		
						Leg (T2)	90.3	Pass
						Diagonal (T2)	42.9	Pass
						Horizontal (T12)	2.4	Pass
						Secondary Horizontal (T3)	13.6	Pass
						Top Girt (T8)	9.2	Pass
						Bottom Girt (T11)	80.5	Pass
						Guy A (T8)	52.5	Pass
						Guy B (T8)	49.0	Pass
						Guy C (T8)	52.5	Pass
						Top Guy Pull-Off (T2)	14.8	Pass
						Torque Arm Top (T3)	49.0	Pass
						<b>RATING =</b>	<b>90.3</b>	<b>Pass</b>

SITE NUMBER: CT1145  
SITE NAME: NEWINGTON

12/13/2021

Design Code : ANSI/TIA - 222 - H

#### Tower Mast Reactions

Axial Load  $P := 154.2 \cdot \text{kip}$   
Shear  $H := 1.3 \cdot \text{kip}$   
Moment  $M := 0 \cdot \text{ft} \cdot \text{kip}$

#### Foundation Information

Depth of Pad  $D := 4.5 \cdot \text{ft}$   
Width of Pad  $W := 9.5 \cdot \text{ft}$   
Length of Pad  $L := 9.5 \cdot \text{ft}$   
Thickness of Pad  $T := 2.75 \cdot \text{ft}$   
Pier Diameter  $P_{\text{dia}} := 2.0 \cdot \text{ft}$   
Pier Width  $P_{\text{width}} := 0.0 \cdot \text{ft}$   
Pier Extend above Grade  $E := 0.5 \cdot \text{ft}$

#### Material Property

Rebar Tensile  $F_y := 60 \cdot \text{ksi}$   
Concrete Strength  $f'_c := 3000 \cdot \text{psi}$   
Unit Weight of Concrete  $r_{\text{conc}} := 150 \cdot \text{pcf}$   
Concrete Clear Cover  $C_{\text{cov}} := 3 \cdot \text{in}$

#### Soil Property

Unit Weight of Soil  $r_{\text{soil}} := 120 \cdot \text{pcf}$   
Unit Weight of Water  $r_{\text{water}} := 62.4 \cdot \text{pcf}$   
Friction Angle  $\phi := 30^\circ$   
Ultimate Bearing  $B_{\text{ult}} := 8.0 \cdot \text{ksf}$   
Base Friction  $\mu := 0.45$   
Ground Water Below Grade  $G_{\text{water}} := 4.5 \cdot \text{ft}$   
Shear  $\phi_s := 0.6$   
Bearing  $\phi_s := 0.6$

$$\text{FS\_Sliding} := \frac{\text{Shear}_{\phi_s} \cdot \mu \cdot (P + 1.2 \cdot \text{Total\_Weight})}{H} \quad \text{FS\_Sliding} = 46.1$$

$$\text{Rating\_Sliding} = 2.2\%$$

$$\text{FS\_Bearing} := \frac{\text{Bearing}_{\phi_s} \cdot B_{\text{ult}}}{\text{Bearing\_Pressure}} \quad \text{FS\_Bearing} = 1.92$$

$$\text{Rating\_Bearing} = 52.2\%$$

SITE NUMBER: CT1145  
SITE NAME: NEWINGTON

12/13/2021

### Inner Guy Anchor C

Design Code : ANSI/TIA - 222 - H

#### Inner Guy Anchor Reactions

Shear  $F_{\text{SHEAR}} := 12.4 \cdot \text{kip}$   
Uplift Load  $F_{\text{UPLIFT}} := 10.5 \cdot \text{kip}$

Tower Height  $T_{\text{ht}} := 170.0 \cdot \text{ft}$   
Guy Anchor Radius  $R := 76.0 \cdot \text{ft}$

#### Guy Anchor

Depth of Anchor Block  $D_{\text{AB}} := 6.0 \cdot \text{ft}$   
Width of Anchor Block  $W_{\text{AB}} := 4.0 \cdot \text{ft}$   
Length of Anchor Block  $L_{\text{AB}} := 10.0 \cdot \text{ft}$   
Thickness of Anchor Block  $T_{\text{AB}} := 2.0 \cdot \text{ft}$

#### Material Property

Rebar Tensile  $F_y := 60 \cdot \text{ksi}$   
Concrete Strength  $f'_c := 3000 \cdot \text{psi}$   
Unit Weight of Concrete  $r_{\text{conc}} := 150 \cdot \text{pcf}$   
Concrete Clear Cover  $C_{\text{cov}} := 3 \cdot \text{in}$

#### Soil Property

Unit Weight of Soil  $r_{\text{soil}} := 130 \cdot \text{pcf}$   
 $r_{\text{submerged}} := 68 \cdot \text{pcf}$   
Internal Angle of Friction  $\phi := 30^\circ$   
Ultimate Bearing  $B_{\text{ult}} := 8.0 \cdot \text{ksf}$   
Base Friction  $\mu := 0.45$   
Ground Water Below Grade  $G_{\text{water}} := 6 \cdot \text{ft}$   
Shear\_  $\phi_s := 0.75$   
Uplift\_  $\phi_s := 0.75$   
Dead\_Load\_  $\phi_s := 0.9$

SITE NUMBER: CT1145  
SITE NAME: NEWINGTON

12/13/2021

Inner Guy Anchor C

$$\begin{aligned} \text{Total\_Weight} &:= \text{Dead\_Load\_}\phi_s \cdot (\text{Weight\_of\_Anchor} + \text{Weight\_of\_Soil}) \\ \text{Total\_Weight} &= 47.8 \text{ kip} \end{aligned}$$

$$\begin{aligned} \text{Uplift\_Resistance} &:= \text{Uplift\_}\phi_s \cdot \text{Total\_Weight} \\ \text{Uplift\_Resistance} &= 35.8 \text{ kip} \end{aligned}$$

$$\text{FS\_Uplift} := \frac{\text{Uplift\_Resistance}}{F_{\text{UPLIFT}}} \qquad \text{FS\_Uplift} = 3.41$$

$$\text{Rating\_Uplift} = 29.3\%$$

Passive Soil Force

$$\begin{aligned} F_{\text{PASSIVE}} &:= \frac{(P_{\text{TOP}} + P_{\text{BOTTOM}})}{2} \cdot L_{\text{AB}} \cdot T_{\text{AB}} \\ F_{\text{PASSIVE}} &= 39 \text{ kip} \end{aligned}$$

$$\text{FS\_Shear} := \frac{\text{Shear\_}\phi_s \cdot F_{\text{PASSIVE}}}{F_{\text{SHEAR}}} \qquad \text{FS\_Shear} = 2.4$$

$$\text{Rating\_Shear} = 42.4\%$$

SITE NUMBER: CT1145  
SITE NAME: NEWINGTON

12/13/2021

### Outer Guy Anchor C

Design Code : ANSI/TIA - 222 - H

#### Outer Guy Anchor Reactions

Shear  $F_{\text{SHEAR}} := 29.6 \cdot \text{kip}$   
Uplift Load  $F_{\text{UPLIFT}} := 37.4 \cdot \text{kip}$

Tower Height  $T_{\text{ht}} := 170.0 \cdot \text{ft}$   
Guy Anchor Radius  $R := 107.0 \cdot \text{ft}$

#### Guy Anchor

Depth of Anchor Block  $D_{\text{AB}} := 8.83 \cdot \text{ft}$   
Width of Anchor Block  $W_{\text{AB}} := 4.0 \cdot \text{ft}$   
Length of Anchor Block  $L_{\text{AB}} := 12.0 \cdot \text{ft}$   
Thickness of Anchor Block  $T_{\text{AB}} := 1.83 \cdot \text{ft}$

#### Material Property

Rebar Tensile  $F_y := 60 \cdot \text{ksi}$   
Concrete Strength  $f'_c := 3000 \cdot \text{psi}$   
Unit Weight of Concrete  $r_{\text{conc}} := 150 \cdot \text{pcf}$   
Concrete Clear Cover  $C_{\text{cov}} := 3 \cdot \text{in}$

#### Soil Property

Unit Weight of Soil  $r_{\text{soil}} := 130 \cdot \text{pcf}$   
 $r_{\text{submerged}} := 68 \cdot \text{pcf}$   
Internal Angle of Friction  $\phi := 30^\circ$   
Ultimate Bearing  $B_{\text{ult}} := 8.0 \cdot \text{ksf}$   
Base Friction  $\mu := 0.45$   
Ground Water Below Grade  $G_{\text{water}} := 8.83 \cdot \text{ft}$   
Shear  $\phi_s := 0.75$   
Uplift  $\phi_s := 0.75$   
Dead\_Load  $\phi_s := 0.9$



SITE NUMBER: CT1145  
SITE NAME: NEWINGTON

12/13/2021

Outer Guy Anchor C

$$\text{Total\_Weight} := \text{Dead\_Load\_}\phi_s \cdot (\text{Weight\_of\_Anchor} + \text{Weight\_of\_Soil})$$

Total\_Weight = 120.7 kip

$$\text{Uplift\_Resistance} := \text{Uplift\_}\phi_s \cdot \text{Total\_Weight}$$

Uplift\_Resistance = 90.5 kip

$$\text{FS\_Uplift} := \frac{\text{Uplift\_Resistance}}{F_{\text{UPLIFT}}}$$

FS\_Uplift = 2.42

Rating\_Uplift = 41.3%

Passive Soil Force

$$F_{\text{PASSIVE}} := \frac{(P_{\text{TOP}} + P_{\text{BOTTOM}})}{2} \cdot L_{\text{AB}} \cdot T_{\text{AB}}$$

F\_PASSIVE = 67.8 kip

$$\text{FS\_Shear} := \frac{\text{Shear\_}\phi_s \cdot F_{\text{PASSIVE}}}{F_{\text{SHEAR}}}$$

FS\_Shear = 1.7

Rating\_Shear = 58.2%

# EXHIBIT 4

August 26, 2022

Jennifer Iliades  
Centerline Communications  
750 W Center Street, Suite 301  
West Bridgewater, MA 02379



Tower Engineering Professionals  
326 Tryon Road  
Raleigh, NC 27603  
(919) 661-6351  
[DS@tepgroup.net](mailto:DS@tepgroup.net)

**Subject: Appurtenance Replacement Mount Analysis**

**Carrier Designation:** AT&T Mobility Reconfiguration  
**Site Name:** Newington  
**FA Location Code:** 10035097

**Engineering Firm Designation:** TEP Project Number: 315788.736891

**Site Data:** 99 Cedarwood Lane, Newington, Hartford County, CT 06111  
Latitude 41° 41' 41.17", Longitude -72° 42' 32.30"  
170± Foot - Guyed Tower  
120.0 Foot Mount Height - Sector

Dear Jennifer Iliades,

Tower Engineering Professionals is pleased to submit this "Appurtenance Replacement Mount Analysis" to determine the structural integrity of the antenna mount on the above mentioned tower.

The purpose of the analysis is to determine acceptability of the proposed mount's stress level and to provide a recommendation for the replacement mount's make and model. Based on our analysis we have determined the stress level for the mount structure, under the following load case, to be:

LC1: Existing + Proposed + Reserved Loading  
Note: See Table 2 for the existing, proposed, and reserved loading

**Sufficient Capacity**

Mount Capacity
43.1%

The analysis has been performed in accordance with the ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures, Antennas, and Small Wind Turbine Support Structures, the 2018 Connecticut State Building Code, and the AT&T Mount Technical Guidance – Revision 16.

All equipment proposed in this report shall be installed in accordance with the appurtenances listed in Table 2 for the determined available structural capacity to be effective.

We at Tower Engineering Professionals appreciate the opportunity of providing our continuing professional services to you and Centerline Communications. If you have any questions or need further assistance on this or any other projects please give us a call.

Structural analysis prepared by: Sean Arsenault, C.W.I. / DEN

Respectfully submitted by:

Aaron T. Rucker, P.E.



Electronic Copy

08/26/2022

**ANALYSIS CRITERIA**

**Table 1 - Mount Analysis Parameters**

Ultimate Wind Speed (MPH)	Ice Thickness (in)	Ice Wind Speed (MPH)	Exposure Category	Risk Category	Topographic Procedure	K <sub>zt</sub>	Seismic Design Category
118	1.50	50	B	II	Method 1	1.0	B

**Table 2 - Existing, Proposed, and Reserved Antenna Loading Configuration**

Existing/Proposed/Reserved	Mount Level (ft)	Ant CL (ft)	Qty	Antenna Model	Mount Type	Owner/Tenant
Proposed	120.0	120.0	3	Quintel QD6616-7	(3) Site Pro 1 VFA14-H10-2120 Sector Mounts	AT&T
			3	Ericsson AIR 6419 B77G		
			3	Ericsson AIR 6449 B77D		
			1	Matsing MS-MBA-3.2-H4-L4		
			3	Ericsson RRUS-4449 B5/B12		
			2	Ericsson RRUS-4415 B25		
			3	Ericsson RRUS-8843		
			2	Raycap DC9-48-60-24-8C-EV		
Existing	120.0	120.0	2	Kathrein 800-10965	(3) Sector Mounts	AT&T
			3	Ericsson RRUS-32-B30		
			2	Ericsson RRUS-32 B66A		
			3	Ericsson RRUS 4478 B14		
			6	Kaelus DBC0051F3V51-2		
			1	Raycap DC6-48-60-18-8F		
To Be Removed	120.0	120.0	3	Powerwave 7770	(3) Sector Mounts	AT&T
			3	CCI OPA-65R-LCUU-H6		
			3	Quintel 66512-2		
			1	Kathrein 800-10965		
			6	Powerwave LGP21401		
			2	Raycap DC6-48-60-18-8F		
			2	Ericsson RRUS-32 B2		
			3	Ericsson RRUS-11 B5		
			3	Ericsson RRUS-11 B12		

## ANALYSIS RESULTS

**Table 3 - Mount Component Stresses vs. Capacity**

Notes	Component	% Capacity	Pass / Fail
-	Face Horizontal	26.4	Pass
-	Support Horizontal	38.8	Pass
-	Support Bracing	43.1	Pass
-	Stabilizer Arm	4.5	Pass
-	Mount Pipe	31.9	Pass
-	Connection Bolts	31.1	Pass

<b>Structure Rating (max from all components) =</b>	<b>43.1%</b>
---	--------------

**Table 4 - TARP Mount Specification**

RAD Center	Number of Loaded Mount Pipes / Sector	Allowable EPA per Pipe <sup>1</sup> (ft <sup>2</sup> )	Allowable Weight per Pipe <sup>1</sup> (lbf)
<b>120.0</b>	<b>3</b>	<b>12.2</b>	<b>158.3</b>

Notes:

- 1) This allowable value is an average of the loaded mount pipes per sector

**Table 5 - Documents Provided**

Document	Remarks	Source
Mount Assembly Drawings	Site Pro 1, dated 12/14/2017 VFA14-H10-2120	TEP
Preliminary Construction Drawings	Centerline Communications, dated 08/17/2022	TEP
RFDS	RFDS ID: 4371192	AT&T
Correspondence	Correspondence from AT&T in reference to the existing and proposed loading	AT&T

## RECOMMENDATIONS

- 1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
- 2) The mount and its connection have sufficient capacity to carry the proposed loading configuration. In order for the results of this analysis to be valid, the mount modifications listed below must be completed:
  - a) Replace existing mounts with (3) Site Pro 1 VFA14-H10-2120

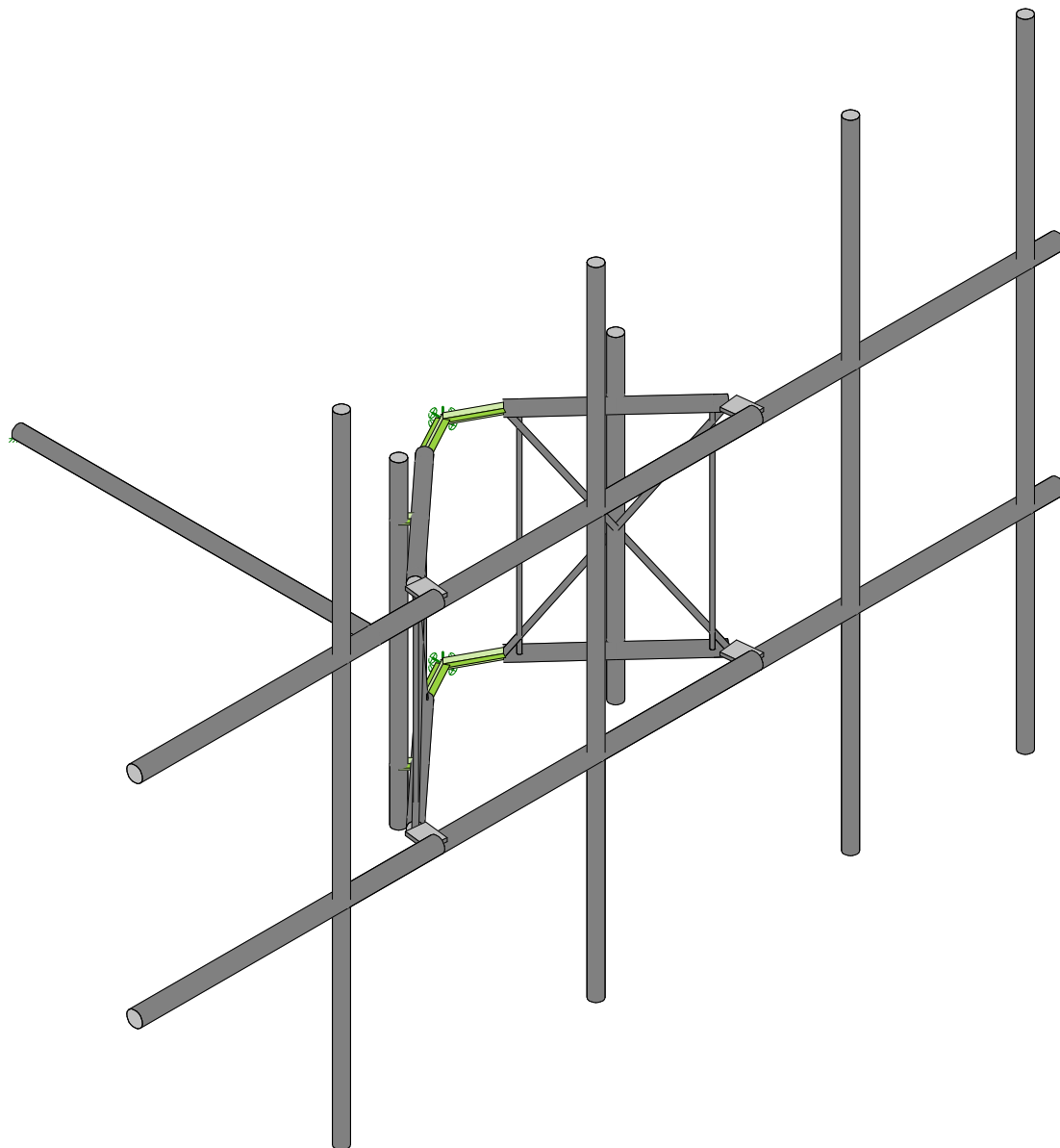
## **ANALYSIS ASSUMPTIONS**

- 1) The mount was built in accordance with the manufacturer's specifications.
- 2) The mount has been maintained in accordance with the manufacturer's specification.
- 3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 2. All mount components have been assumed to be in sufficient condition to carry their full design capacity for this analysis. Refer to the issued mapping for any structural and/or maintenance issues found during our site visit.
- 4) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.
- 5) All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15th Edition. See RISA 3-D output for confirmation on grades used in this analysis.

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the mount.



**APPENDIX A**  
**RISA-3D OUTPUT**



Envelope Only Solution

Tower Engineering Profes...

SMA

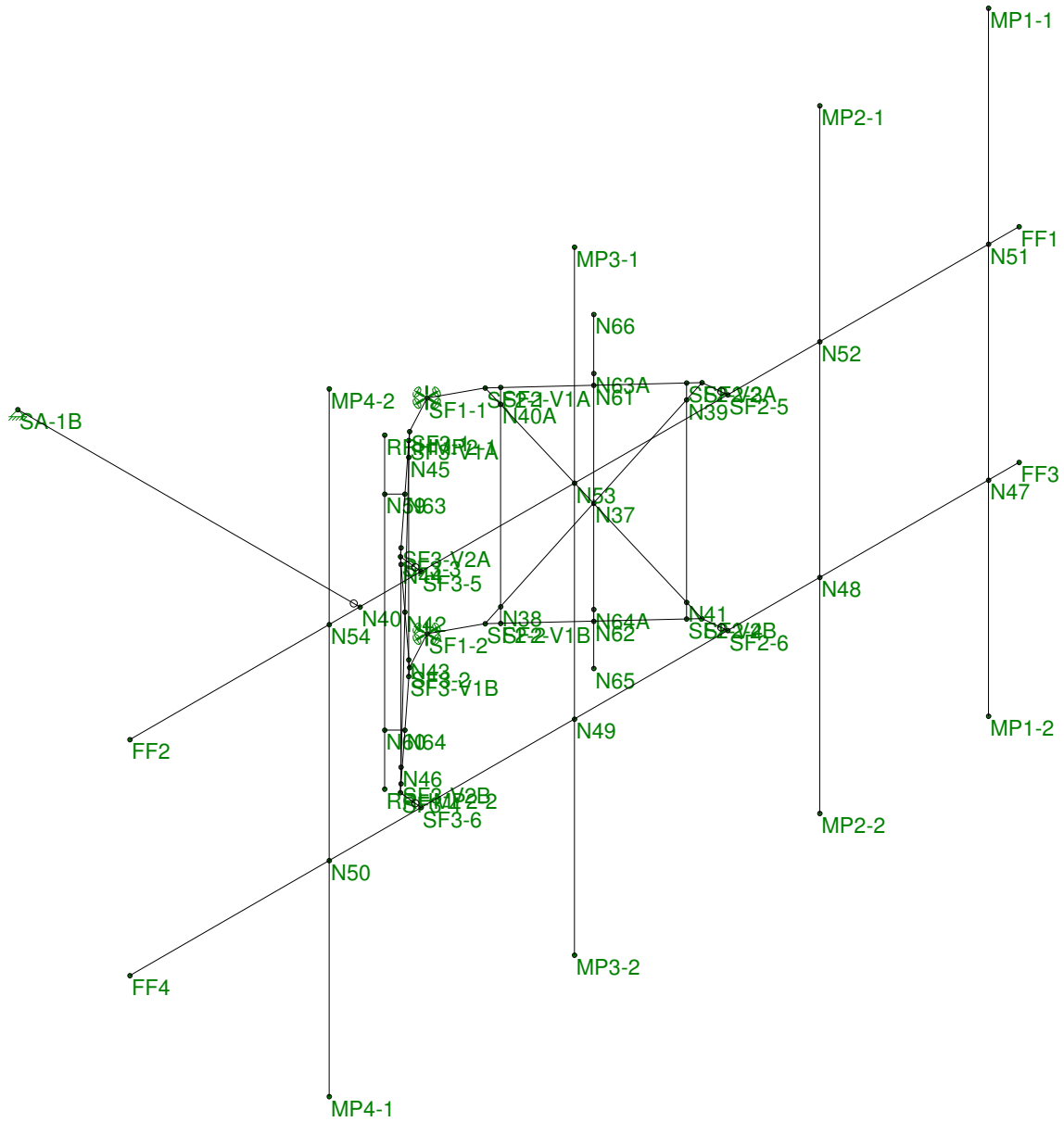
TEP No. 315788.736891

Newington (CT1145)

SK - 1

Aug 26, 2022 at 12:07 PM

S-37 Sector Mount.r3d



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SMA

TEP No. 315788.736891

Newington (CT1145)

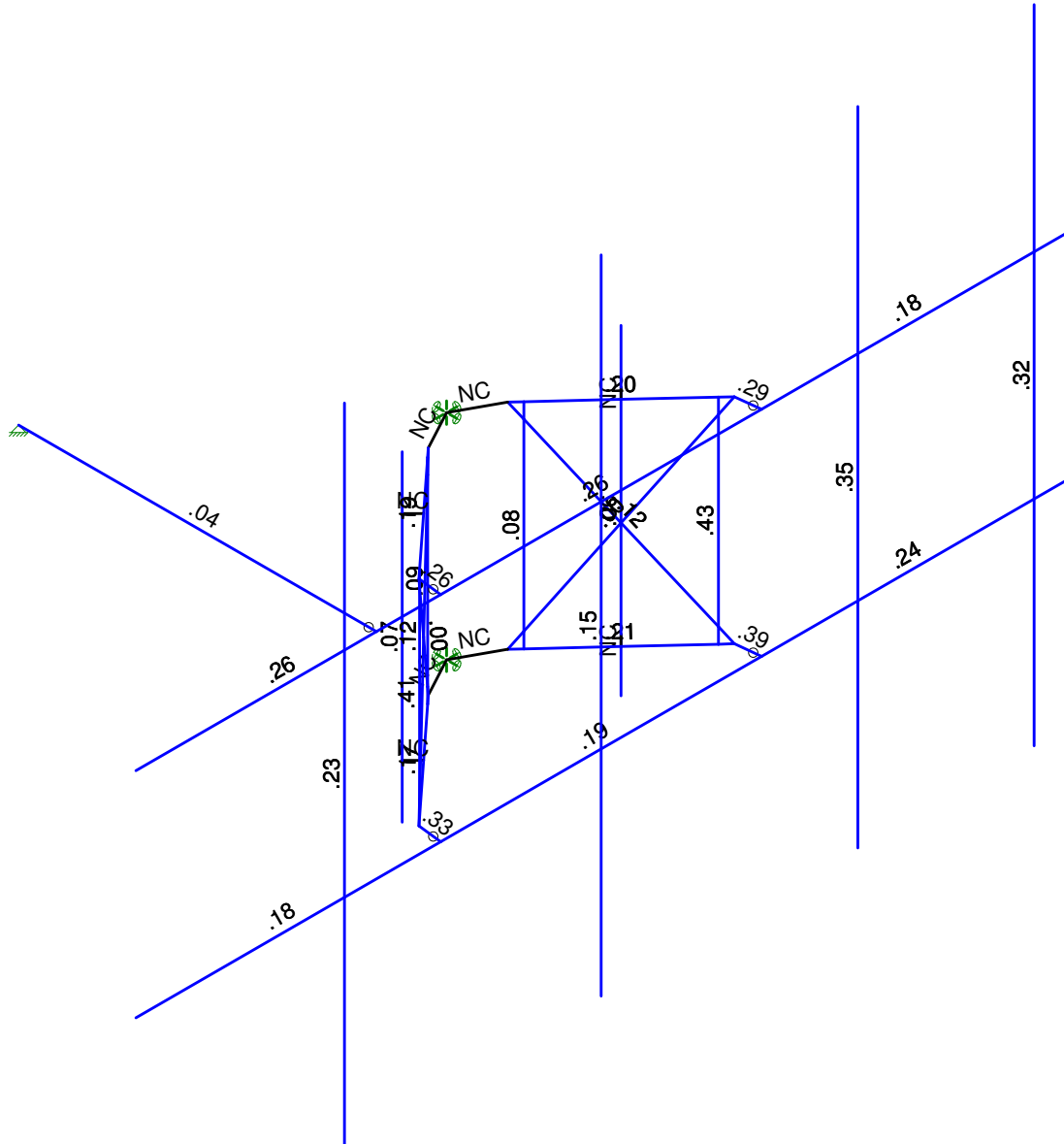
SK - 2

Aug 26, 2022 at 12:08 PM

S-37 Sector Mount.r3d

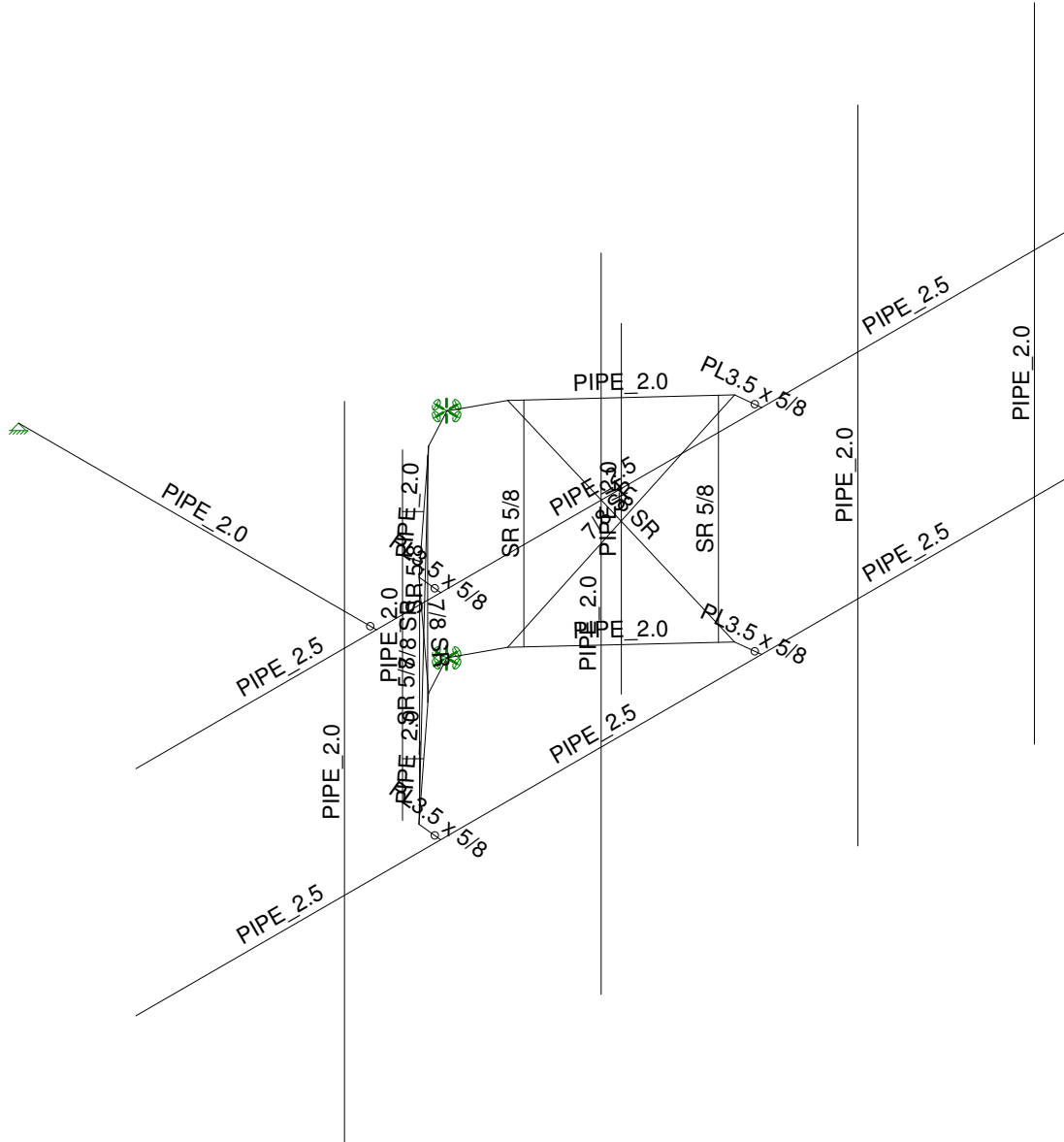


Code Check (Env)	
Black	No Calc
Red	> 1.0
Yellow	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)  
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Tower Engineering Profes...	Newington (CT1145)	SK - 3
SMA		Aug 26, 2022 at 12:08 PM
TEP No. 315788.736891		S-37 Sector Mount.r3d



Envelope Only Solution

Tower Engineering Profes...

SMA

TEP No. 315788.736891

Newington (CT1145)

SK - 4

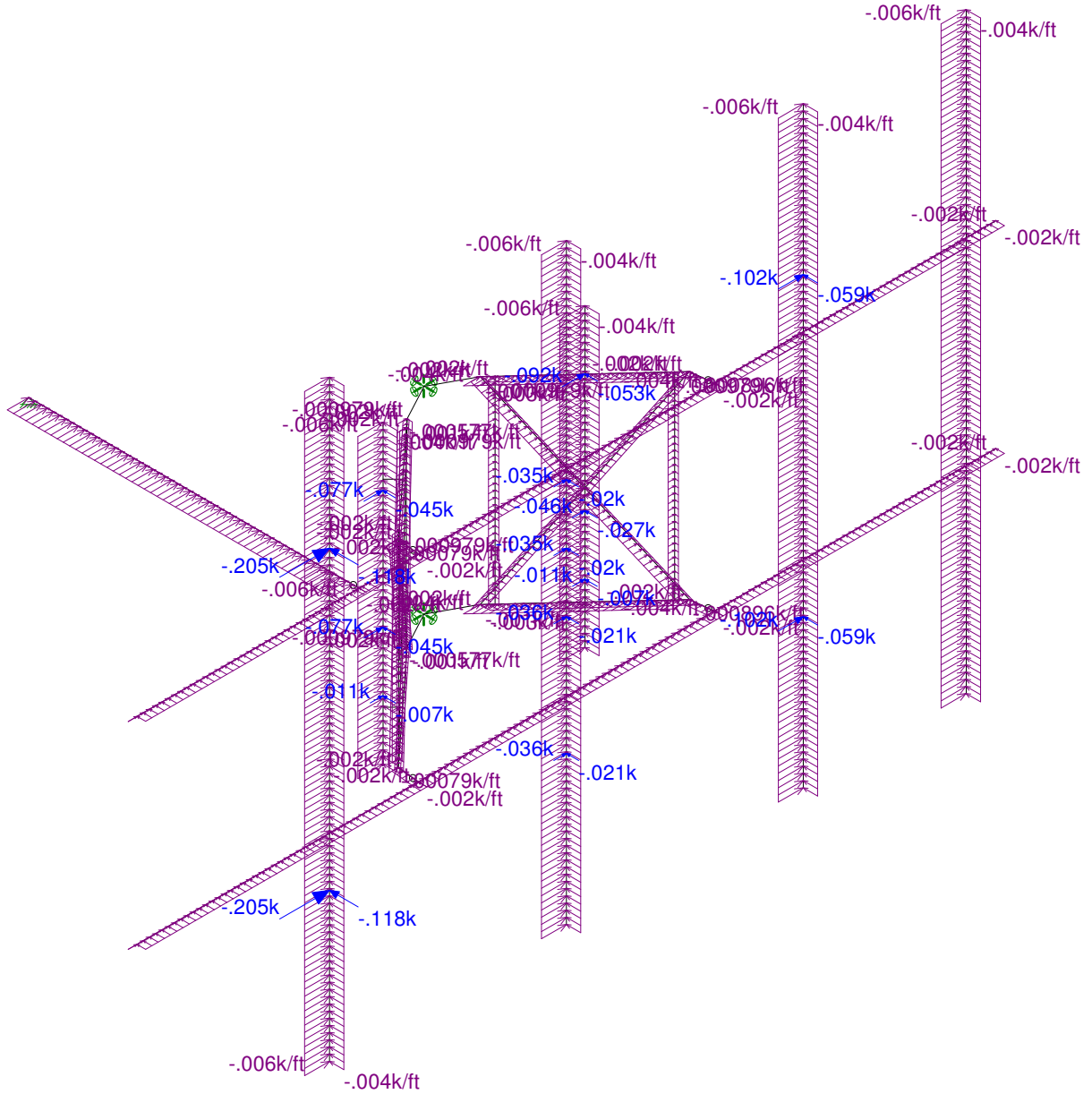
Aug 26, 2022 at 12:08 PM

S-37 Sector Mount.r3d









Loads: BLC 5, 60 Wind - No Ice  
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Tower Engineering Profes...

SMA

TEP No. 315788.736891

Newington (CT1145)

SK - 7

Aug 26, 2022 at 12:09 PM

S-37 Sector Mount.r3d





Company : Tower Engineering Professionals, Inc.  
 Designer : SMA  
 Job Number : TEP No. 315788.736891  
 Model Name : Newington (CT1145)

Aug 26, 2022  
 12:10 PM  
 Checked By: DEN

**(Global) Model Settings**

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISACONNECTION CODE	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8



Company : Tower Engineering Professionals, Inc.  
 Designer : SMA  
 Job Number : TEP No. 315788.736891  
 Model Name : Newington (CT1145)

Aug 26, 2022  
 12:10 PM  
 Checked By: DEN

**(Global) Model Settings, Continued**

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

**Hot Rolled Steel Properties**

	Label	F [ksi]	G [ksi]	Nu	Therm (1E..Density[k/ft..	Yield[ksi]	Ry	Fu[ksi]	Rt	
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

**Hot Rolled Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontals	PIPE 2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
2	Support Horizontal	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Bracing 1	7/8 SR	None	None	A36 Gr.36	Typical	.601	.029	.029	.058
4	Bracing 2	SR 5/8	None	None	A36 Gr.36	Typical	.307	.007	.007	.015
5	Connection Plate	PL3.5 x 5/8	None	None	A36 Gr.36	Typical	2.188	.071	2.233	.253
6	Mount Pipe	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	Stabilizer Arm	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25

**Cold Formed Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF1A	8CU1.25X057	Beam	None	A653 SS ...	Typical	.581	.057	4.41	.00063



Company : Tower Engineering Professionals, Inc.  
 Designer : SMA  
 Job Number : TEP No. 315788.736891  
 Model Name : Newington (CT1145)

Aug 26, 2022  
 12:10 PM  
 Checked By: DEN

**Material Takeoff**

	Material	Size	Pieces	Length[ft]	Weight[K]
1	General				
2	RIGID		8	3.8	0
3	Total General		8	3.8	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	7/8 SR	4	16.7	0
7	A36 Gr.36	PL3.5 x 5/8	4	1.5	0
8	A36 Gr.36	SR 5/8	4	13.3	0
9	A53 Gr.B	PIPE 2.0	11	65.6	.2
10	A53 Gr.B	PIPE 2.5	6	29	.2
11	Total HR Steel		29	126.1	.4

**Joint Boundary Conditions**

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	SF1-1	Reaction	Reaction	Reaction	Reaction		Reaction
2	SF1-2	Reaction	Reaction	Reaction	Reaction		Reaction
3	SA-1B	Reaction	Reaction	Reaction			

**Member Primary Data**

	Label	I Joint	J Joint	K Joint	Rotate(d...)	Section/Shape	Type	Design List	Material	Design R...
1	SF2-D1	SF2-2	SF2-3			Bracing 1	None	None	A36 Gr.36	Typical
2	SF2-D1-X	SF2-1	SF2-4			Bracing 1	None	None	A36 Gr.36	Typical
3	SF3-D1	SF3-2	SF3-3			Bracing 1	None	None	A36 Gr.36	Typical
4	SF3-D1-X	SF3-1	SF3-4			Bracing 1	None	None	A36 Gr.36	Typical
5	SF2-V1	SF2-V1A	SF2-V1B			Bracing 2	None	None	A36 Gr.36	Typical
6	SF2-V2	SF2-V2A	SF2-V2B			Bracing 2	None	None	A36 Gr.36	Typical
7	SF3-V1	SF3-V1A	SF3-V1B			Bracing 2	None	None	A36 Gr.36	Typical
8	SF3-V2	SF3-V2A	SF3-V2B			Bracing 2	None	None	A36 Gr.36	Typical
9	SF2-CPB	SF2-4	SF2-6	90		Connection Plate	None	None	A36 Gr.36	Typical
10	SF2-CPT	SF2-3	SF2-5	90		Connection Plate	None	None	A36 Gr.36	Typical
11	SF3-CPB	SF3-4	SF3-6	90		Connection Plate	None	None	A36 Gr.36	Typical
12	SF3-CPT	SF3-3	SF3-5	90		Connection Plate	None	None	A36 Gr.36	Typical
13	FFBH-1	FF3	SF2-6			Face Horizontals	None	None	A53 Gr.B	Typical
14	FFBH-2	SF2-6	SF3-6			Face Horizontals	None	None	A53 Gr.B	Typical
15	FFBH-3	SF3-6	FF4			Face Horizontals	None	None	A53 Gr.B	Typical
16	FFTH-1	FF1	SF2-5			Face Horizontals	None	None	A53 Gr.B	Typical
17	FFTH-2	SF2-5	SF3-5			Face Horizontals	None	None	A53 Gr.B	Typical
18	FFTH-3	SF3-5	FF2			Face Horizontals	None	None	A53 Gr.B	Typical
19	BC-BH1	SF3-2	SF1-2			RIGID	None	None	RIGID	Typical
20	BC-BH2	SF1-2	SF2-2			RIGID	None	None	RIGID	Typical
21	BC-TH1	SF3-1	SF1-1			RIGID	None	None	RIGID	Typical
22	BC-TH2	SF1-1	SF2-1			RIGID	None	None	RIGID	Typical
23	M23	N59	N63			RIGID	None	None	RIGID	Typical
24	M24	N60	N64			RIGID	None	None	RIGID	Typical
25	SA-R	N40	SA-1B			Stabilizer Arm	None	None	A53 Gr.B	Typical
26	SF2-BH	SF2-2	SF2-4			Support Horizontal	None	None	A53 Gr.B	Typical
27	SF2-TH	SF2-1	SF2-3			Support Horizontal	None	None	A53 Gr.B	Typical
28	SF3-BH	SF3-2	SF3-4			Support Horizontal	None	None	A53 Gr.B	Typical
29	SF3-TH	SF3-1	SF3-3			Support Horizontal	None	None	A53 Gr.B	Typical
30	MP1	MP1-1	MP1-2			Mount Pipe	None	None	A53 Gr.B	Typical
31	MP2	MP2-1	MP2-2			Mount Pipe	None	None	A53 Gr.B	Typical
32	MP3	MP3-1	MP3-2			Mount Pipe	None	None	A53 Gr.B	Typical
33	MP4	MP4-1	MP4-2			Mount Pipe	None	None	A53 Gr.B	Typical
34	RRHMP2	RRHMP...	RRHMP...			Mount Pipe	None	None	A53 Gr.B	Typical



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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...)	Section/Shape	Type	Design List	Material	Design R...
35	M35	N63A	N61			RIGID	None	None	RIGID	Typical
36	M36	N64A	N62			RIGID	None	None	RIGID	Typical
37	RRHMP1	N66	N65			Mount Pipe	None	None	A53 Gr.B	Typical

**Member Advanced Data**

	Label	I Release	J Release	I Offset(in)	J Offset(in)	T/C Only	Physical	Defl Ratio	Options	Analysis...	Inactive	Seismi...
1	SF2-D1					Tension ..	Yes	** NA	**			None
2	SF2-D1-X					Tension ..	Yes	** NA	**			None
3	SF3-D1					Tension ..	Yes	** NA	**			None
4	SF3-D1-X					Tension ..	Yes	** NA	**			None
5	SF2-V1						Yes	** NA	**			None
6	SF2-V2						Yes	** NA	**			None
7	SF3-V1						Yes	** NA	**			None
8	SF3-V2						Yes	** NA	**			None
9	SF2-CPB		BenPIN				Yes	** NA	**			None
10	SF2-CPT		BenPIN				Yes	** NA	**			None
11	SF3-CPB		BenPIN				Yes	** NA	**			None
12	SF3-CPT		BenPIN				Yes	** NA	**			None
13	FFBH-1						Yes	** NA	**			None
14	FFBH-2						Yes	** NA	**			None
15	FFBH-3						Yes	** NA	**			None
16	FFTH-1						Yes	** NA	**			None
17	FFTH-2						Yes	** NA	**			None
18	FFTH-3						Yes	** NA	**			None
19	BC-BH1						Yes	** NA	**			None
20	BC-BH2						Yes	** NA	**			None
21	BC-TH1						Yes	** NA	**			None
22	BC-TH2						Yes	** NA	**			None
23	M23						Yes	** NA	**			None
24	M24						Yes	** NA	**			None
25	SA-R	BenPIN					Yes	** NA	**			None
26	SF2-BH						Yes	** NA	**			None
27	SF2-TH						Yes	** NA	**			None
28	SF3-BH						Yes	** NA	**			None
29	SF3-TH						Yes	** NA	**			None
30	MP1						Yes	** NA	**			None
31	MP2						Yes	** NA	**			None
32	MP3						Yes	** NA	**			None
33	MP4						Yes	** NA	**			None
34	RRHMP2						Yes	** NA	**			None
35	M35						Yes	** NA	**			None
36	M36						Yes	** NA	**			None
37	RRHMP1						Yes	** NA	**			None

**Hot Rolled Steel Design Parameters**

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	SF2-D1	Bracing 1	4.167						.65	.65		Lateral
2	SF2-D1-X	Bracing 1	4.167						.65	.65		Lateral
3	SF3-D1	Bracing 1	4.167						.65	.65		Lateral
4	SF3-D1-X	Bracing 1	4.167						.65	.65		Lateral
5	SF2-V1	Bracing 2	3.333						.65	.65		Lateral
6	SF2-V2	Bracing 2	3.333						.65	.65		Lateral
7	SF3-V1	Bracing 2	3.333						.65	.65		Lateral
8	SF3-V2	Bracing 2	3.333						.65	.65		Lateral





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**Hot Rolled Steel Design Parameters (Continued)**

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp_top[ft]	Lcomp_bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
9	SF2-CPB	Connection ..	.383					1	1		Lateral
10	SF2-CPT	Connection ..	.383					1	1		Lateral
11	SF3-CPB	Connection ..	.383					1	1		Lateral
12	SF3-CPT	Connection ..	.383					1	1		Lateral
13	FFBH-1	Face Horizo...	4.75					2.1	2.1		Lateral
14	FFBH-2	Face Horizo...	5					1	1		Lateral
15	FFBH-3	Face Horizo...	4.75					2.1	2.1		Lateral
16	FFTH-1	Face Horizo...	4.75					2.1	2.1		Lateral
17	FFTH-2	Face Horizo...	5					1	1		Lateral
18	FFTH-3	Face Horizo...	4.75					2.1	2.1		Lateral
19	SA-R	Stabilizer Ar...	5.577					1	1		Lateral
20	SF2-BH	Support Hor...	2.5			2.145		1	1		Lateral
21	SF2-TH	Support Hor...	2.5			2.145		1	1		Lateral
22	SF3-BH	Support Hor...	2.5			2.145		1	1		Lateral
23	SF3-TH	Support Hor...	2.5			2.145		1	1		Lateral
24	MP1	Mount Pipe	10	Segment	Segment			2.1	2.1		Lateral
25	MP2	Mount Pipe	10	Segment	Segment			2.1	2.1		Lateral
26	MP3	Mount Pipe	10	Segment	Segment			2.1	2.1		Lateral
27	MP4	Mount Pipe	10	Segment	Segment			2.1	2.1		Lateral
28	RRHMP2	Mount Pipe	5	Segment	Segment			2.1	2.1		Lateral
29	RRHMP1	Mount Pipe	5	Segment	Segment			2.1	2.1		Lateral

**Cold Formed Steel Design Parameters**

Label	Shape	Length...	Lbyy[ft]	Lbzz[ft]	Lcomp_to...	Lcomp_b...	Kyy	Kzz	Cm-yy	Cm-zz	Cb	R	y_swayz	sway
No Data to Print ...														

**Basic Load Cases**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surfacel...
1	Dead		-1			18		
2	0 Wind - No Ice					18	29	
3	30 Wind - No Ice					36	58	
4	45 Wind - No Ice					36	58	
5	60 Wind - No Ice					36	58	
6	90 Wind - No Ice					18	29	
7	120 Wind - No Ice					36	58	
8	135 Wind - No Ice					36	58	
9	150 Wind - No Ice					36	58	
10	180 Wind - No Ice					18	29	
11	210 Wind - No Ice					36	58	
12	225 Wind - No Ice					36	58	
13	240 Wind - No Ice					36	58	
14	270 Wind - No Ice					18	29	
15	300 Wind - No Ice					36	58	
16	315 Wind - No Ice					36	58	
17	330 Wind - No Ice					36	58	
18	Ice Weight					18	29	
19	0 Wind - Ice					18	29	
20	30 Wind - Ice					36	58	
21	45 Wind - Ice					36	58	
22	60 Wind - Ice					36	58	
23	90 Wind - Ice					18	29	
24	120 Wind - Ice					36	58	
25	135 Wind - Ice					36	58	
26	150 Wind - Ice					36	58	



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**Basic Load Cases (Continued)**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surfacel...
27	180 Wind - Ice	None				18	29	
28	210 Wind - Ice	None				36	58	
29	225 Wind - Ice	None				36	58	
30	240 Wind - Ice	None				36	58	
31	270 Wind - Ice	None				18	29	
32	300 Wind - Ice	None				36	58	
33	315 Wind - Ice	None				36	58	
34	330 Wind - Ice	None				36	58	
35	Lm	None			1			
36	Lv	None			1			
37	Seismic Load X	ELX	-1			18		
38	Seismic Load Z	ELZ		-1		18		

**Load Combinations**

Description	So...	P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
1	1.4D	Yes	Y	1	1.4								
2	0.9D+1.0 0-Wind	Yes	Y	1	.9	2	1						
3	0.9D+1.0 30-Wind	Yes	Y	1	.9	3	1						
4	0.9D+1.0 45-Wind	Yes	Y	1	.9	4	1						
5	0.9D+1.0 60-Wind	Yes	Y	1	.9	5	1						
6	0.9D+1.0 90-Wind	Yes	Y	1	.9	6	1						
7	0.9D+1.0 120-Wind	Yes	Y	1	.9	7	1						
8	0.9D+1.0 135-Wind	Yes	Y	1	.9	8	1						
9	0.9D+1.0 150-Wind	Yes	Y	1	.9	9	1						
10	0.9D+1.0 180-Wind	Yes	Y	1	.9	10	1						
11	0.9D+1.0 210-Wind	Yes	Y	1	.9	11	1						
12	0.9D+1.0 225-Wind	Yes	Y	1	.9	12	1						
13	0.9D+1.0 240-Wind	Yes	Y	1	.9	13	1						
14	0.9D+1.0 270-Wind	Yes	Y	1	.9	14	1						
15	0.9D+1.0 300-Wind	Yes	Y	1	.9	15	1						
16	0.9D+1.0 315-Wind	Yes	Y	1	.9	16	1						
17	0.9D+1.0 330-Wind	Yes	Y	1	.9	17	1						
18	1.2D+1.0 0-Wind	Yes	Y	1	1.2	2	1						
19	1.2D+1.0 30-Wind	Yes	Y	1	1.2	3	1						
20	1.2D+1.0 45-Wind	Yes	Y	1	1.2	4	1						
21	1.2D+1.0 60-Wind	Yes	Y	1	1.2	5	1						
22	1.2D+1.0 90-Wind	Yes	Y	1	1.2	6	1						
23	1.2D+1.0 120-Wind	Yes	Y	1	1.2	7	1						
24	1.2D+1.0 135-Wind	Yes	Y	1	1.2	8	1						
25	1.2D+1.0 150-Wind	Yes	Y	1	1.2	9	1						
26	1.2D+1.0 180-Wind	Yes	Y	1	1.2	10	1						
27	1.2D+1.0 210-Wind	Yes	Y	1	1.2	11	1						
28	1.2D+1.0 225-Wind	Yes	Y	1	1.2	12	1						
29	1.2D+1.0 240-Wind	Yes	Y	1	1.2	13	1						
30	1.2D+1.0 270-Wind	Yes	Y	1	1.2	14	1						
31	1.2D+1.0 300-Wind	Yes	Y	1	1.2	15	1						
32	1.2D+1.0 315-Wind	Yes	Y	1	1.2	16	1						
33	1.2D+1.0 330-Wind	Yes	Y	1	1.2	17	1						
34	1.2D+1.0Di+1.0 0-Wi...	Yes	Y	1	1.2	18	1	19	1				
35	1.2D+1.0Di+1.0 30-W...	Yes	Y	1	1.2	18	1	20	1				
36	1.2D+1.0Di+1.0 45-W...	Yes	Y	1	1.2	18	1	21	1				
37	1.2D+1.0Di+1.0 60-W...	Yes	Y	1	1.2	18	1	22	1				
38	1.2D+1.0Di+1.0 90-W...	Yes	Y	1	1.2	18	1	23	1				
39	1.2D+1.0Di+1.0 120-...	Yes	Y	1	1.2	18	1	24	1				
40	1.2D+1.0Di+1.0 135-...	Yes	Y	1	1.2	18	1	25	1				



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**Load Combinations (Continued)**

Description	So.	P...	S...	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.
41	1.2D+1.0Di+1.0 150-...	Yes	Y	1	1.2	18	1	26	1			
42	1.2D+1.0Di+1.0 180-...	Yes	Y	1	1.2	18	1	27	1			
43	1.2D+1.0Di+1.0 210-...	Yes	Y	1	1.2	18	1	28	1			
44	1.2D+1.0Di+1.0 225-...	Yes	Y	1	1.2	18	1	29	1			
45	1.2D+1.0Di+1.0 240-...	Yes	Y	1	1.2	18	1	30	1			
46	1.2D+1.0Di+1.0 270-...	Yes	Y	1	1.2	18	1	31	1			
47	1.2D+1.0Di+1.0 300-...	Yes	Y	1	1.2	18	1	32	1			
48	1.2D+1.0Di+1.0 315-...	Yes	Y	1	1.2	18	1	33	1			
49	1.2D+1.0Di+1.0 330-...	Yes	Y	1	1.2	18	1	34	1			
50	1.2D+1.5Lv	Yes	Y	36	1.5	1	1.2					
51	1.2D+1.5Lm+1.0 0-W...	Yes	Y	1	1.2	2	.065	35	1.5			
52	1.2D+1.5Lm+1.0 30-...	Yes	Y	1	1.2	3	.065	35	1.5			
53	1.2D+1.5Lm+1.0 45-...	Yes	Y	1	1.2	4	.065	35	1.5			
54	1.2D+1.5Lm+1.0 60-...	Yes	Y	1	1.2	5	.065	35	1.5			
55	1.2D+1.5Lm+1.0 90-...	Yes	Y	1	1.2	6	.065	35	1.5			
56	1.2D+1.5Lm+1.0 120-...	Yes	Y	1	1.2	7	.065	35	1.5			
57	1.2D+1.5Lm+1.0 135-...	Yes	Y	1	1.2	8	.065	35	1.5			
58	1.2D+1.5Lm+1.0 150-...	Yes	Y	1	1.2	9	.065	35	1.5			
59	1.2D+1.5Lm+1.0 180-...	Yes	Y	1	1.2	10	.065	35	1.5			
60	1.2D+1.5Lm+1.0 210-...	Yes	Y	1	1.2	11	.065	35	1.5			
61	1.2D+1.5Lm+1.0 225-...	Yes	Y	1	1.2	12	.065	35	1.5			
62	1.2D+1.5Lm+1.0 240-...	Yes	Y	1	1.2	13	.065	35	1.5			
63	1.2D+1.5Lm+1.0 270-...	Yes	Y	1	1.2	14	.065	35	1.5			
64	1.2D+1.5Lm+1.0 300-...	Yes	Y	1	1.2	15	.065	35	1.5			
65	1.2D+1.5Lm+1.0 315-...	Yes	Y	1	1.2	16	.065	35	1.5			
66	1.2D+1.5Lm+1.0 330-...	Yes	Y	1	1.2	17	.065	35	1.5			
67	(1.2+0.2Sds)D+1.0 0 ...	Yes	Y	1	1.2	ELX	.03	0				
68	(1.2+0.2Sds)D+1.0 3 ...	Yes	Y	1	1.2	ELX	.026	ELZ-.015				
69	(1.2+0.2Sds)D+1.0 4 ...	Yes	Y	1	1.2	ELX	.021	ELZ-.021				
70	(1.2+0.2Sds)D+1.0 6 ...	Yes	Y	1	1.2	ELX	.015	ELZ-.026				
71	(1.2+0.2Sds)D+1.0 9 ...	Yes	Y	1	1.2	0		ELZ-.03				
72	(1.2+0.2Sds)D+1.0 1 ...	Yes	Y	1	1.2	ELX-.015		ELZ-.026				
73	(1.2+0.2Sds)D+1.0 1 ...	Yes	Y	1	1.2	ELX-.021		ELZ-.021				
74	(1.2+0.2Sds)D+1.0 1 ...	Yes	Y	1	1.2	ELX-.026		ELZ-.015				
75	(1.2+0.2Sds)D+1.0 1 ...	Yes	Y	1	1.2	ELX-.03	0					
76	(1.2+0.2Sds)D+1.0 2 ...	Yes	Y	1	1.2	ELX-.026		ELZ-.015				
77	(1.2+0.2Sds)D+1.0 2 ...	Yes	Y	1	1.2	ELX-.021		ELZ-.021				
78	(1.2+0.2Sds)D+1.0 2 ...	Yes	Y	1	1.2	ELX-.015		ELZ-.026				
79	(1.2+0.2Sds)D+1.0 2 ...	Yes	Y	1	1.2	0		ELZ-.03				
80	(1.2+0.2Sds)D+1.0 3 ...	Yes	Y	1	1.2	ELX-.015		ELZ-.026				
81	(1.2+0.2Sds)D+1.0 3 ...	Yes	Y	1	1.2	ELX-.021		ELZ-.021				
82	(1.2+0.2Sds)D+1.0 3 ...	Yes	Y	1	1.2	ELX-.026		ELZ-.015				
83	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX	.03	0				
84	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX	.026	ELZ-.015				
85	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX	.021	ELZ-.021				
86	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX	.015	ELZ-.026				
87	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	0		ELZ-.03				
88	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.015		ELZ-.026				
89	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.021		ELZ-.021				
90	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.026		ELZ-.015				
91	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.03	0					
92	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.026		ELZ-.015				
93	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.021		ELZ-.021				
94	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.015		ELZ-.026				
95	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	0		ELZ-.03				
96	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.015		ELZ-.026				
97	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX-.021		ELZ-.021				



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**Load Combinations (Continued)**

Description	So.	P...	S...	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.
98	(0.9-0.2Sds)*DL+1.0 ...	Yes	Y	1	.9	ELX	.026	ELZ-.015				

**Joint Loads and Enforced Displacements (BLC 35 : Lm)**

Joint Label	L,D,M	Direction	Magnitude[(k.k-ft), (in.rad), (k*s^2/ft, k*s^2*ft)]	
1	N47	L	Y	-5

**Joint Loads and Enforced Displacements (BLC 36 : Lv)**

Joint Label	L,D,M	Direction	Magnitude[(k.k-ft), (in.rad), (k*s^2/ft, k*s^2*ft)]	
1	FF1	L	Y	-25

**Member Point Loads (BLC 1 : Dead)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]	
1	MP2	Y	-0.65	2.5
2	MP3	Y	-0.02	3.5
3	MP3	Y	-0.04	5.5
4	MP4	Y	-0.65	2.5
5	RRHMP1	Y	-0.05	1
6	RRHMP1	Y	-0.06	1
7	RRHMP1	Y	-0.07	3
8	RRHMP1	Y	-0.03	3
9	RRHMP1	Y	-0.03	4
10	RRHMP2	Y	-0.07	1
11	RRHMP2	Y	-0.07	1
12	RRHMP2	Y	-0.07	3
13	RRHMP2	Y	-0.07	3
14	RRHMP2	Y	-0.03	4
15	MP2	Y	-0.65	7.5
16	MP3	Y	-0.02	4.5
17	MP3	Y	-0.04	7.5
18	MP4	Y	-0.65	7.5

**Member Point Loads (BLC 2 : 0 Wind - No Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]	
1	MP2	X	-0.202	2.5
2	MP3	X	-0.065	3.5
3	MP3	X	-0.063	5.5
4	MP4	X	-0.23	2.5
5	RRHMP1	X	-0.086	1
6	RRHMP1	X	-0.063	1
7	RRHMP1	X	-0.066	3
8	RRHMP1	X	-0.022	3
9	RRHMP1	X	-0.022	4
10	RRHMP2	X	-0.065	1
11	RRHMP2	X	-0.066	1
12	RRHMP2	X	-0.065	3
13	RRHMP2	X	-0.066	3
14	RRHMP2	X	-0.022	4
15	MP2	X	-0.202	7.5
16	MP3	X	-0.065	4.5
17	MP3	X	-0.063	7.5
18	MP4	X	-0.23	7.5



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**Member Point Loads (BLC 3 : 30 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-0.15	2.5
2	MP3	X	-0.049	3.5
3	MP3	X	-0.048	5.5
4	MP4	X	-0.201	2.5
5	RRHMP1	X	-0.067	1
6	RRHMP1	X	-0.05	1
7	RRHMP1	X	-0.05	3
8	RRHMP1	X	-0.017	3
9	RRHMP1	X	-0.017	4
10	RRHMP2	X	-0.052	1
11	RRHMP2	X	-0.05	1
12	RRHMP2	X	-0.052	3
13	RRHMP2	X	-0.05	3
14	RRHMP2	X	-0.017	4
15	MP2	X	-0.15	7.5
16	MP3	X	-0.049	4.5
17	MP3	X	-0.048	7.5
18	MP4	X	-0.201	7.5
19	MP2	Z	-0.087	2.5
20	MP3	Z	-0.028	3.5
21	MP3	Z	-0.028	5.5
22	MP4	Z	-0.116	2.5
23	RRHMP1	Z	-0.039	1
24	RRHMP1	Z	-0.029	1
25	RRHMP1	Z	-0.029	3
26	RRHMP1	Z	-0.01	3
27	RRHMP1	Z	-0.01	4
28	RRHMP2	Z	-0.03	1
29	RRHMP2	Z	-0.029	1
30	RRHMP2	Z	-0.03	3
31	RRHMP2	Z	-0.029	3
32	RRHMP2	Z	-0.01	4
33	MP2	Z	-0.087	7.5
34	MP3	Z	-0.028	4.5
35	MP3	Z	-0.028	7.5
36	MP4	Z	-0.116	7.5

**Member Point Loads (BLC 4 : 45 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-0.103	2.5
2	MP3	X	-0.034	3.5
3	MP3	X	-0.034	5.5
4	MP4	X	-0.165	2.5
5	RRHMP1	X	-0.049	1
6	RRHMP1	X	-0.036	1
7	RRHMP1	X	-0.034	3
8	RRHMP1	X	-0.011	3
9	RRHMP1	X	-0.011	4
10	RRHMP2	X	-0.039	1
11	RRHMP2	X	-0.034	1
12	RRHMP2	X	-0.039	3
13	RRHMP2	X	-0.034	3
14	RRHMP2	X	-0.011	4
15	MP2	X	-0.103	7.5
16	MP3	X	-0.034	4.5
17	MP3	X	-0.034	7.5



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**Member Point Loads (BLC 4 : 45 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
18	MP4	X	-0.165	7.5
19	MP2	Z	-0.103	2.5
20	MP3	Z	-0.034	3.5
21	MP3	Z	-0.034	5.5
22	MP4	Z	-0.165	2.5
23	RRHMP1	Z	-0.049	1
24	RRHMP1	Z	-0.036	1
25	RRHMP1	Z	-0.034	3
26	RRHMP1	Z	-0.011	3
27	RRHMP1	Z	-0.011	4
28	RRHMP2	Z	-0.039	1
29	RRHMP2	Z	-0.034	1
30	RRHMP2	Z	-0.039	3
31	RRHMP2	Z	-0.034	3
32	RRHMP2	Z	-0.011	4
33	MP2	Z	-0.103	7.5
34	MP3	Z	-0.034	4.5
35	MP3	Z	-0.034	7.5
36	MP4	Z	-0.165	7.5

**Member Point Loads (BLC 5 : 60 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-0.059	2.5
2	MP3	X	-0.02	3.5
3	MP3	X	-0.021	5.5
4	MP4	X	-0.118	2.5
5	RRHMP1	X	-0.03	1
6	RRHMP1	X	-0.023	1
7	RRHMP1	X	-0.02	3
8	RRHMP1	X	-0.007	3
9	RRHMP1	X	-0.007	4
10	RRHMP2	X	-0.025	1
11	RRHMP2	X	-0.02	1
12	RRHMP2	X	-0.025	3
13	RRHMP2	X	-0.02	3
14	RRHMP2	X	-0.007	4
15	MP2	X	-0.059	7.5
16	MP3	X	-0.02	4.5
17	MP3	X	-0.021	7.5
18	MP4	X	-0.118	7.5
19	MP2	Z	-0.102	2.5
20	MP3	Z	-0.035	3.5
21	MP3	Z	-0.036	5.5
22	MP4	Z	-0.205	2.5
23	RRHMP1	Z	-0.053	1
24	RRHMP1	Z	-0.039	1
25	RRHMP1	Z	-0.035	3
26	RRHMP1	Z	-0.011	3
27	RRHMP1	Z	-0.011	4
28	RRHMP2	Z	-0.043	1
29	RRHMP2	Z	-0.035	1
30	RRHMP2	Z	-0.043	3
31	RRHMP2	Z	-0.035	3
32	RRHMP2	Z	-0.011	4
33	MP2	Z	-0.102	7.5
34	MP3	Z	-0.035	4.5



**Member Point Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
35	MP3	Z	-036	7.5
36	MP4	Z	-205	7.5

**Member Point Loads (BLC 6 : 90 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	Z	-089	2.5
2	MP3	Z	-032	3.5
3	MP3	Z	-034	5.5
4	MP4	Z	-238	2.5
5	RRHMP1	Z	-052	1
6	RRHMP1	Z	-039	1
7	RRHMP1	Z	-032	3
8	RRHMP1	Z	-01	3
9	RRHMP1	Z	-01	4
10	RRHMP2	Z	-044	1
11	RRHMP2	Z	-032	1
12	RRHMP2	Z	-044	3
13	RRHMP2	Z	-032	3
14	RRHMP2	Z	-01	4
15	MP2	Z	-089	7.5
16	MP3	Z	-032	4.5
17	MP3	Z	-034	7.5
18	MP4	Z	-238	7.5

**Member Point Loads (BLC 7 : 120 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.059	2.5
2	MP3	X	.02	3.5
3	MP3	X	.021	5.5
4	MP4	X	.118	2.5
5	RRHMP1	X	.03	1
6	RRHMP1	X	.023	1
7	RRHMP1	X	.02	3
8	RRHMP1	X	.007	3
9	RRHMP1	X	.007	4
10	RRHMP2	X	.025	1
11	RRHMP2	X	.02	1
12	RRHMP2	X	.025	3
13	RRHMP2	X	.02	3
14	RRHMP2	X	.007	4
15	MP2	X	.059	7.5
16	MP3	X	.02	4.5
17	MP3	X	.021	7.5
18	MP4	X	.118	7.5
19	MP2	Z	-.102	2.5
20	MP3	Z	-.035	3.5
21	MP3	Z	-.036	5.5
22	MP4	Z	-.205	2.5
23	RRHMP1	Z	-.053	1
24	RRHMP1	Z	-.039	1
25	RRHMP1	Z	-.035	3
26	RRHMP1	Z	-.011	3
27	RRHMP1	Z	-.011	4
28	RRHMP2	Z	-.043	1
29	RRHMP2	Z	-.035	1
30	RRHMP2	Z	-.043	3



**Member Point Loads (BLC 7 : 120 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
31	RRHMP2	Z	-.035	3
32	RRHMP2	Z	-.011	4
33	MP2	Z	-.102	7.5
34	MP3	Z	-.035	4.5
35	MP3	Z	-.036	7.5
36	MP4	Z	-.205	7.5

**Member Point Loads (BLC 8 : 135 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.103	2.5
2	MP3	X	.034	3.5
3	MP3	X	.034	5.5
4	MP4	X	.165	2.5
5	RRHMP1	X	.049	1
6	RRHMP1	X	.036	1
7	RRHMP1	X	.034	3
8	RRHMP1	X	.011	3
9	RRHMP1	X	.011	4
10	RRHMP2	X	.039	1
11	RRHMP2	X	.034	1
12	RRHMP2	X	.039	3
13	RRHMP2	X	.034	3
14	RRHMP2	X	.011	4
15	MP2	X	.103	7.5
16	MP3	X	.034	4.5
17	MP3	X	.034	7.5
18	MP4	X	.165	7.5
19	MP2	Z	-.103	2.5
20	MP3	Z	-.034	3.5
21	MP3	Z	-.034	5.5
22	MP4	Z	-.165	2.5
23	RRHMP1	Z	-.049	1
24	RRHMP1	Z	-.036	1
25	RRHMP1	Z	-.034	3
26	RRHMP1	Z	-.011	3
27	RRHMP1	Z	-.011	4
28	RRHMP2	Z	-.039	1
29	RRHMP2	Z	-.034	1
30	RRHMP2	Z	-.039	3
31	RRHMP2	Z	-.034	3
32	RRHMP2	Z	-.011	4
33	MP2	Z	-.103	7.5
34	MP3	Z	-.034	4.5
35	MP3	Z	-.034	7.5
36	MP4	Z	-.165	7.5

**Member Point Loads (BLC 9 : 150 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.15	2.5
2	MP3	X	.049	3.5
3	MP3	X	.048	5.5
4	MP4	X	.201	2.5
5	RRHMP1	X	.067	1
6	RRHMP1	X	.05	1
7	RRHMP1	X	.05	3
8	RRHMP1	X	.017	3



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**Member Point Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
9	RRHMP1	X	.017	4
10	RRHMP2	X	.052	1
11	RRHMP2	X	.05	1
12	RRHMP2	X	.052	3
13	RRHMP2	X	.05	3
14	RRHMP2	X	.017	4
15	MP2	X	.15	7.5
16	MP3	X	.049	4.5
17	MP3	X	.048	7.5
18	MP4	X	.201	7.5
19	MP2	Z	-.087	2.5
20	MP3	Z	-.028	3.5
21	MP3	Z	-.028	5.5
22	MP4	Z	-.116	2.5
23	RRHMP1	Z	-.039	1
24	RRHMP1	Z	-.029	1
25	RRHMP1	Z	-.029	3
26	RRHMP1	Z	-.01	3
27	RRHMP1	Z	-.01	4
28	RRHMP2	Z	-.03	1
29	RRHMP2	Z	-.029	1
30	RRHMP2	Z	-.03	3
31	RRHMP2	Z	-.029	3
32	RRHMP2	Z	-.01	4
33	MP2	Z	-.087	7.5
34	MP3	Z	-.028	4.5
35	MP3	Z	-.028	7.5
36	MP4	Z	-.116	7.5

**Member Point Loads (BLC 10 : 180 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.202	2.5
2	MP3	X	.065	3.5
3	MP3	X	.063	5.5
4	MP4	X	.23	2.5
5	RRHMP1	X	.086	1
6	RRHMP1	X	.063	1
7	RRHMP1	X	.066	3
8	RRHMP1	X	.022	3
9	RRHMP1	X	.022	4
10	RRHMP2	X	.065	1
11	RRHMP2	X	.066	1
12	RRHMP2	X	.065	3
13	RRHMP2	X	.066	3
14	RRHMP2	X	.022	4
15	MP2	X	.202	7.5
16	MP3	X	.065	4.5
17	MP3	X	.063	7.5
18	MP4	X	.23	7.5

**Member Point Loads (BLC 11 : 210 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.15	2.5
2	MP3	X	.049	3.5
3	MP3	X	.048	5.5
4	MP4	X	.201	2.5



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**Member Point Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
5	RRHMP1	X	.067	1
6	RRHMP1	X	.05	1
7	RRHMP1	X	.05	3
8	RRHMP1	X	.017	3
9	RRHMP1	X	.017	4
10	RRHMP2	X	.052	1
11	RRHMP2	X	.05	1
12	RRHMP2	X	.052	3
13	RRHMP2	X	.05	3
14	RRHMP2	X	.017	4
15	MP2	X	.15	7.5
16	MP3	X	.049	4.5
17	MP3	X	.048	7.5
18	MP4	X	.201	7.5
19	MP2	Z	.087	2.5
20	MP3	Z	.028	3.5
21	MP3	Z	.028	5.5
22	MP4	Z	.116	2.5
23	RRHMP1	Z	.039	1
24	RRHMP1	Z	.029	1
25	RRHMP1	Z	.029	3
26	RRHMP1	Z	.01	3
27	RRHMP1	Z	.01	4
28	RRHMP2	Z	.03	1
29	RRHMP2	Z	.029	1
30	RRHMP2	Z	.03	3
31	RRHMP2	Z	.029	3
32	RRHMP2	Z	.01	4
33	MP2	Z	.087	7.5
34	MP3	Z	.028	4.5
35	MP3	Z	.028	7.5
36	MP4	Z	.116	7.5

**Member Point Loads (BLC 12 : 225 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.103	2.5
2	MP3	X	.034	3.5
3	MP3	X	.034	5.5
4	MP4	X	.165	2.5
5	RRHMP1	X	.049	1
6	RRHMP1	X	.036	1
7	RRHMP1	X	.034	3
8	RRHMP1	X	.011	3
9	RRHMP1	X	.011	4
10	RRHMP2	X	.039	1
11	RRHMP2	X	.034	1
12	RRHMP2	X	.039	3
13	RRHMP2	X	.034	3
14	RRHMP2	X	.011	4
15	MP2	X	.103	7.5
16	MP3	X	.034	4.5
17	MP3	X	.034	7.5
18	MP4	X	.165	7.5
19	MP2	Z	.103	2.5
20	MP3	Z	.034	3.5
21	MP3	Z	.034	5.5



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**Member Point Loads (BLC 12 : 225 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
22	MP4	Z	.165	2.5
23	RRHMP1	Z	.049	1
24	RRHMP1	Z	.036	1
25	RRHMP1	Z	.034	3
26	RRHMP1	Z	.011	3
27	RRHMP1	Z	.011	4
28	RRHMP2	Z	.039	1
29	RRHMP2	Z	.034	1
30	RRHMP2	Z	.039	3
31	RRHMP2	Z	.034	3
32	RRHMP2	Z	.011	4
33	MP2	Z	.103	7.5
34	MP3	Z	.034	4.5
35	MP3	Z	.034	7.5
36	MP4	Z	.165	7.5

**Member Point Loads (BLC 13 : 240 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.059	2.5
2	MP3	X	.02	3.5
3	MP3	X	.021	5.5
4	MP4	X	.118	2.5
5	RRHMP1	X	.03	1
6	RRHMP1	X	.023	1
7	RRHMP1	X	.02	3
8	RRHMP1	X	.007	3
9	RRHMP1	X	.007	4
10	RRHMP2	X	.025	1
11	RRHMP2	X	.02	1
12	RRHMP2	X	.025	3
13	RRHMP2	X	.02	3
14	RRHMP2	X	.007	4
15	MP2	X	.059	7.5
16	MP3	X	.02	4.5
17	MP3	X	.021	7.5
18	MP4	X	.118	7.5
19	MP2	Z	.102	2.5
20	MP3	Z	.035	3.5
21	MP3	Z	.036	5.5
22	MP4	Z	.205	2.5
23	RRHMP1	Z	.053	1
24	RRHMP1	Z	.039	1
25	RRHMP1	Z	.035	3
26	RRHMP1	Z	.011	3
27	RRHMP1	Z	.011	4
28	RRHMP2	Z	.043	1
29	RRHMP2	Z	.035	1
30	RRHMP2	Z	.043	3
31	RRHMP2	Z	.035	3
32	RRHMP2	Z	.011	4
33	MP2	Z	.102	7.5
34	MP3	Z	.035	4.5
35	MP3	Z	.036	7.5
36	MP4	Z	.205	7.5



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**Member Point Loads (BLC 14 : 270 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	Z	.089	2.5
2	MP3	Z	.032	3.5
3	MP3	Z	.034	5.5
4	MP4	Z	.238	2.5
5	RRHMP1	Z	.052	1
6	RRHMP1	Z	.039	1
7	RRHMP1	Z	.032	3
8	RRHMP1	Z	.01	3
9	RRHMP1	Z	.01	4
10	RRHMP2	Z	.044	1
11	RRHMP2	Z	.032	1
12	RRHMP2	Z	.044	3
13	RRHMP2	Z	.032	3
14	RRHMP2	Z	.01	4
15	MP2	Z	.089	7.5
16	MP3	Z	.032	4.5
17	MP3	Z	.034	7.5
18	MP4	Z	.238	7.5

**Member Point Loads (BLC 15 : 300 Wind - No Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-.059	2.5
2	MP3	X	-.02	3.5
3	MP3	X	-.021	5.5
4	MP4	X	-.118	2.5
5	RRHMP1	X	-.03	1
6	RRHMP1	X	-.023	1
7	RRHMP1	X	-.02	3
8	RRHMP1	X	-.007	3
9	RRHMP1	X	-.007	4
10	RRHMP2	X	-.025	1
11	RRHMP2	X	-.02	1
12	RRHMP2	X	-.025	3
13	RRHMP2	X	-.02	3
14	RRHMP2	X	-.007	4
15	MP2	X	-.059	7.5
16	MP3	X	-.02	4.5
17	MP3	X	-.021	7.5
18	MP4	X	-.118	7.5
19	MP2	Z	.102	2.5
20	MP3	Z	.035	3.5
21	MP3	Z	.036	5.5
22	MP4	Z	.205	2.5
23	RRHMP1	Z	.053	1
24	RRHMP1	Z	.039	1
25	RRHMP1	Z	.035	3
26	RRHMP1	Z	.011	3
27	RRHMP1	Z	.011	4
28	RRHMP2	Z	.043	1
29	RRHMP2	Z	.035	1
30	RRHMP2	Z	.043	3
31	RRHMP2	Z	.035	3
32	RRHMP2	Z	.011	4
33	MP2	Z	.102	7.5
34	MP3	Z	.035	4.5
35	MP3	Z	.036	7.5





**Member Point Loads (BLC 15 : 300 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
36 MP4	Z	.205	7.5

**Member Point Loads (BLC 16 : 315 Wind - No Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1 MP2	X	-.103	2.5
2 MP3	X	-.034	3.5
3 MP3	X	-.034	5.5
4 MP4	X	-.165	2.5
5 RRHMP1	X	-.049	1
6 RRHMP1	X	-.036	1
7 RRHMP1	X	-.034	3
8 RRHMP1	X	-.011	3
9 RRHMP1	X	-.011	4
10 RRHMP2	X	-.039	1
11 RRHMP2	X	-.034	1
12 RRHMP2	X	-.039	3
13 RRHMP2	X	-.034	3
14 RRHMP2	X	-.011	4
15 MP2	X	-.103	7.5
16 MP3	X	-.034	4.5
17 MP3	X	-.034	7.5
18 MP4	X	-.165	7.5
19 MP2	Z	.103	2.5
20 MP3	Z	.034	3.5
21 MP3	Z	.034	5.5
22 MP4	Z	.165	2.5
23 RRHMP1	Z	.049	1
24 RRHMP1	Z	.036	1
25 RRHMP1	Z	.034	3
26 RRHMP1	Z	.011	3
27 RRHMP1	Z	.011	4
28 RRHMP2	Z	.039	1
29 RRHMP2	Z	.034	1
30 RRHMP2	Z	.039	3
31 RRHMP2	Z	.034	3
32 RRHMP2	Z	.011	4
33 MP2	Z	.103	7.5
34 MP3	Z	.034	4.5
35 MP3	Z	.034	7.5
36 MP4	Z	.165	7.5

**Member Point Loads (BLC 17 : 330 Wind - No Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1 MP2	X	-.15	2.5
2 MP3	X	-.049	3.5
3 MP3	X	-.048	5.5
4 MP4	X	-.201	2.5
5 RRHMP1	X	-.067	1
6 RRHMP1	X	-.05	1
7 RRHMP1	X	-.05	3
8 RRHMP1	X	-.017	3
9 RRHMP1	X	-.017	4
10 RRHMP2	X	-.052	1
11 RRHMP2	X	-.05	1
12 RRHMP2	X	-.052	3
13 RRHMP2	X	-.05	3



**Member Point Loads (BLC 17 : 330 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
14 RRHMP2	X	-.017	4
15 MP2	X	-.15	7.5
16 MP3	X	-.049	4.5
17 MP3	X	-.048	7.5
18 MP4	X	-.201	7.5
19 MP2	Z	.087	2.5
20 MP3	Z	.028	3.5
21 MP3	Z	.028	5.5
22 MP4	Z	.116	2.5
23 RRHMP1	Z	.039	1
24 RRHMP1	Z	.029	1
25 RRHMP1	Z	.029	3
26 RRHMP1	Z	.01	3
27 RRHMP1	Z	.01	4
28 RRHMP2	Z	.03	1
29 RRHMP2	Z	.029	1
30 RRHMP2	Z	.03	3
31 RRHMP2	Z	.029	3
32 RRHMP2	Z	.01	4
33 MP2	Z	.087	7.5
34 MP3	Z	.028	4.5
35 MP3	Z	.028	7.5
36 MP4	Z	.116	7.5

**Member Point Loads (BLC 18 : Ice Weight)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1 MP2	Y	-.142	2.5
2 MP3	Y	-.058	3.5
3 MP3	Y	-.058	5.5
4 MP4	Y	-.252	2.5
5 RRHMP1	Y	-.086	1
6 RRHMP1	Y	-.072	1
7 RRHMP1	Y	-.068	3
8 RRHMP1	Y	-.03	3
9 RRHMP1	Y	-.03	4
10 RRHMP2	Y	-.077	1
11 RRHMP2	Y	-.068	1
12 RRHMP2	Y	-.077	3
13 RRHMP2	Y	-.068	3
14 RRHMP2	Y	-.03	4
15 MP2	Y	-.142	7.5
16 MP3	Y	-.058	4.5
17 MP3	Y	-.058	7.5
18 MP4	Y	-.252	7.5

**Member Point Loads (BLC 19 : 0 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1 MP2	X	-.044	2.5
2 MP3	X	-.016	3.5
3 MP3	X	-.015	5.5
4 MP4	X	-.049	2.5
5 RRHMP1	X	-.022	1
6 RRHMP1	X	-.017	1
7 RRHMP1	X	-.017	3
8 RRHMP1	X	-.009	3
9 RRHMP1	X	-.009	4



**Member Point Loads (BLC 19 : 0 Wind - Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
10	RRHMP2	X	-0.17	1
11	RRHMP2	X	-0.17	1
12	RRHMP2	X	-0.17	3
13	RRHMP2	X	-0.17	3
14	RRHMP2	X	-0.09	4
15	MP2	X	-0.44	7.5
16	MP3	X	-0.16	4.5
17	MP3	X	-0.15	7.5
18	MP4	X	-0.49	7.5

**Member Point Loads (BLC 20 : 30 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-0.33	2.5
2	MP3	X	-0.12	3.5
3	MP3	X	-0.12	5.5
4	MP4	X	-0.43	2.5
5	RRHMP1	X	-0.18	1
6	RRHMP1	X	-0.14	1
7	RRHMP1	X	-0.14	3
8	RRHMP1	X	-0.07	3
9	RRHMP1	X	-0.07	4
10	RRHMP2	X	-0.14	1
11	RRHMP2	X	-0.14	1
12	RRHMP2	X	-0.14	3
13	RRHMP2	X	-0.14	3
14	RRHMP2	X	-0.07	4
15	MP2	X	-0.33	7.5
16	MP3	X	-0.12	4.5
17	MP3	X	-0.12	7.5
18	MP4	X	-0.43	7.5
19	MP2	Z	-0.19	2.5
20	MP3	Z	-0.07	3.5
21	MP3	Z	-0.07	5.5
22	MP4	Z	-0.25	2.5
23	RRHMP1	Z	-0.1	1
24	RRHMP1	Z	-0.08	1
25	RRHMP1	Z	-0.08	3
26	RRHMP1	Z	-0.04	3
27	RRHMP1	Z	-0.04	4
28	RRHMP2	Z	-0.08	1
29	RRHMP2	Z	-0.08	1
30	RRHMP2	Z	-0.08	3
31	RRHMP2	Z	-0.08	3
32	RRHMP2	Z	-0.04	4
33	MP2	Z	-0.19	7.5
34	MP3	Z	-0.07	4.5
35	MP3	Z	-0.07	7.5
36	MP4	Z	-0.25	7.5

**Member Point Loads (BLC 21 : 45 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-0.23	2.5
2	MP3	X	-0.09	3.5
3	MP3	X	-0.09	5.5
4	MP4	X	-0.35	2.5
5	RRHMP1	X	-0.13	1



**Member Point Loads (BLC 21 : 45 Wind - Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
6	RRHMP1	X	-0.1	1
7	RRHMP1	X	-0.1	3
8	RRHMP1	X	-0.06	3
9	RRHMP1	X	-0.06	4
10	RRHMP2	X	-0.11	1
11	RRHMP2	X	-0.1	1
12	RRHMP2	X	-0.11	3
13	RRHMP2	X	-0.1	3
14	RRHMP2	X	-0.06	4
15	MP2	X	-0.23	7.5
16	MP3	X	-0.09	4.5
17	MP3	X	-0.09	7.5
18	MP4	X	-0.35	7.5
19	MP2	Z	-0.23	2.5
20	MP3	Z	-0.09	3.5
21	MP3	Z	-0.09	5.5
22	MP4	Z	-0.35	2.5
23	RRHMP1	Z	-0.13	1
24	RRHMP1	Z	-0.1	1
25	RRHMP1	Z	-0.1	3
26	RRHMP1	Z	-0.06	3
27	RRHMP1	Z	-0.06	4
28	RRHMP2	Z	-0.11	1
29	RRHMP2	Z	-0.1	1
30	RRHMP2	Z	-0.11	3
31	RRHMP2	Z	-0.1	3
32	RRHMP2	Z	-0.06	4
33	MP2	Z	-0.23	7.5
34	MP3	Z	-0.09	4.5
35	MP3	Z	-0.09	7.5
36	MP4	Z	-0.35	7.5

**Member Point Loads (BLC 22 : 60 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-0.14	2.5
2	MP3	X	-0.05	3.5
3	MP3	X	-0.05	5.5
4	MP4	X	-0.25	2.5
5	RRHMP1	X	-0.08	1
6	RRHMP1	X	-0.07	1
7	RRHMP1	X	-0.06	3
8	RRHMP1	X	-0.04	3
9	RRHMP1	X	-0.04	4
10	RRHMP2	X	-0.07	1
11	RRHMP2	X	-0.06	1
12	RRHMP2	X	-0.07	3
13	RRHMP2	X	-0.06	3
14	RRHMP2	X	-0.04	4
15	MP2	X	-0.14	7.5
16	MP3	X	-0.05	4.5
17	MP3	X	-0.05	7.5
18	MP4	X	-0.25	7.5
19	MP2	Z	-0.24	2.5
20	MP3	Z	-0.09	3.5
21	MP3	Z	-0.09	5.5
22	MP4	Z	-0.43	2.5



**Member Point Loads (BLC 22 : 60 Wind - Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
23	RRHMP1	Z	-0.15	1
24	RRHMP1	Z	-0.11	1
25	RRHMP1	Z	-0.01	3
26	RRHMP1	Z	-0.006	3
27	RRHMP1	Z	-0.006	4
28	RRHMP2	Z	-0.012	1
29	RRHMP2	Z	-0.01	1
30	RRHMP2	Z	-0.012	3
31	RRHMP2	Z	-0.01	3
32	RRHMP2	Z	-0.006	4
33	MP2	Z	-0.024	7.5
34	MP3	Z	-0.009	4.5
35	MP3	Z	-0.009	7.5
36	MP4	Z	-0.043	7.5

**Member Point Loads (BLC 23 : 90 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	Z	-0.023	2.5
2	MP3	Z	-0.009	3.5
3	MP3	Z	-0.009	5.5
4	MP4	Z	-0.051	2.5
5	RRHMP1	Z	-0.015	1
6	RRHMP1	Z	-0.012	1
7	RRHMP1	Z	-0.01	3
8	RRHMP1	Z	-0.006	3
9	RRHMP1	Z	-0.006	4
10	RRHMP2	Z	-0.013	1
11	RRHMP2	Z	-0.01	1
12	RRHMP2	Z	-0.013	3
13	RRHMP2	Z	-0.01	3
14	RRHMP2	Z	-0.006	4
15	MP2	Z	-0.023	7.5
16	MP3	Z	-0.009	4.5
17	MP3	Z	-0.009	7.5
18	MP4	Z	-0.051	7.5

**Member Point Loads (BLC 24 : 120 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.014	2.5
2	MP3	X	.005	3.5
3	MP3	X	.005	5.5
4	MP4	X	.025	2.5
5	RRHMP1	X	.008	1
6	RRHMP1	X	.007	1
7	RRHMP1	X	.006	3
8	RRHMP1	X	.004	3
9	RRHMP1	X	.004	4
10	RRHMP2	X	.007	1
11	RRHMP2	X	.006	1
12	RRHMP2	X	.007	3
13	RRHMP2	X	.006	3
14	RRHMP2	X	.004	4
15	MP2	X	.014	7.5
16	MP3	X	.005	4.5
17	MP3	X	.005	7.5
18	MP4	X	.025	7.5



**Member Point Loads (BLC 24 : 120 Wind - Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
19	MP2	Z	-0.024	2.5
20	MP3	Z	-0.009	3.5
21	MP3	Z	-0.009	5.5
22	MP4	Z	-0.043	2.5
23	RRHMP1	Z	-0.015	1
24	RRHMP1	Z	-0.011	1
25	RRHMP1	Z	-0.01	3
26	RRHMP1	Z	-0.006	3
27	RRHMP1	Z	-0.006	4
28	RRHMP2	Z	-0.012	1
29	RRHMP2	Z	-0.01	1
30	RRHMP2	Z	-0.012	3
31	RRHMP2	Z	-0.01	3
32	RRHMP2	Z	-0.006	4
33	MP2	Z	-0.024	7.5
34	MP3	Z	-0.009	4.5
35	MP3	Z	-0.009	7.5
36	MP4	Z	-0.043	7.5

**Member Point Loads (BLC 25 : 135 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.023	2.5
2	MP3	X	.009	3.5
3	MP3	X	.009	5.5
4	MP4	X	.035	2.5
5	RRHMP1	X	.013	1
6	RRHMP1	X	.01	1
7	RRHMP1	X	.01	3
8	RRHMP1	X	.006	3
9	RRHMP1	X	.006	4
10	RRHMP2	X	.011	1
11	RRHMP2	X	.01	1
12	RRHMP2	X	.011	3
13	RRHMP2	X	.01	3
14	RRHMP2	X	.006	4
15	MP2	X	.023	7.5
16	MP3	X	.009	4.5
17	MP3	X	.009	7.5
18	MP4	X	.035	7.5
19	MP2	Z	-0.023	2.5
20	MP3	Z	-0.009	3.5
21	MP3	Z	-0.009	5.5
22	MP4	Z	-0.035	2.5
23	RRHMP1	Z	-0.013	1
24	RRHMP1	Z	-0.01	1
25	RRHMP1	Z	-0.01	3
26	RRHMP1	Z	-0.006	3
27	RRHMP1	Z	-0.006	4
28	RRHMP2	Z	-0.011	1
29	RRHMP2	Z	-0.01	1
30	RRHMP2	Z	-0.011	3
31	RRHMP2	Z	-0.01	3
32	RRHMP2	Z	-0.006	4
33	MP2	Z	-0.023	7.5
34	MP3	Z	-0.009	4.5
35	MP3	Z	-0.009	7.5



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**Member Point Loads (BLC 25 : 135 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k.k-ft]	Location(ft.%)
36 MP4	Z	-035	7.5

**Member Point Loads (BLC 26 : 150 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location(ft.%)
1 MP2	X	.033	2.5
2 MP3	X	.012	3.5
3 MP3	X	.012	5.5
4 MP4	X	.043	2.5
5 RRHMP1	X	.018	1
6 RRHMP1	X	.014	1
7 RRHMP1	X	.014	3
8 RRHMP1	X	.007	3
9 RRHMP1	X	.007	4
10 RRHMP2	X	.014	1
11 RRHMP2	X	.014	1
12 RRHMP2	X	.014	3
13 RRHMP2	X	.014	3
14 RRHMP2	X	.007	4
15 MP2	X	.033	7.5
16 MP3	X	.012	4.5
17 MP3	X	.012	7.5
18 MP4	X	.043	7.5
19 MP2	Z	-.019	2.5
20 MP3	Z	-.007	3.5
21 MP3	Z	-.007	5.5
22 MP4	Z	-.025	2.5
23 RRHMP1	Z	-.01	1
24 RRHMP1	Z	-.008	1
25 RRHMP1	Z	-.008	3
26 RRHMP1	Z	-.004	3
27 RRHMP1	Z	-.004	4
28 RRHMP2	Z	-.008	1
29 RRHMP2	Z	-.008	1
30 RRHMP2	Z	-.008	3
31 RRHMP2	Z	-.008	3
32 RRHMP2	Z	-.004	4
33 MP2	Z	-.019	7.5
34 MP3	Z	-.007	4.5
35 MP3	Z	-.007	7.5
36 MP4	Z	-.025	7.5

**Member Point Loads (BLC 27 : 180 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location(ft.%)
1 MP2	X	.044	2.5
2 MP3	X	.016	3.5
3 MP3	X	.015	5.5
4 MP4	X	.049	2.5
5 RRHMP1	X	.022	1
6 RRHMP1	X	.017	1
7 RRHMP1	X	.017	3
8 RRHMP1	X	.009	3
9 RRHMP1	X	.009	4
10 RRHMP2	X	.017	1
11 RRHMP2	X	.017	1
12 RRHMP2	X	.017	3
13 RRHMP2	X	.017	3



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**Member Point Loads (BLC 27 : 180 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k.k-ft]	Location(ft.%)
14 RRHMP2	X	.009	4
15 MP2	X	.044	7.5
16 MP3	X	.016	4.5
17 MP3	X	.015	7.5
18 MP4	X	.049	7.5

**Member Point Loads (BLC 28 : 210 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location(ft.%)
1 MP2	X	.033	2.5
2 MP3	X	.012	3.5
3 MP3	X	.012	5.5
4 MP4	X	.043	2.5
5 RRHMP1	X	.018	1
6 RRHMP1	X	.014	1
7 RRHMP1	X	.014	3
8 RRHMP1	X	.007	3
9 RRHMP1	X	.007	4
10 RRHMP2	X	.014	1
11 RRHMP2	X	.014	1
12 RRHMP2	X	.014	3
13 RRHMP2	X	.014	3
14 RRHMP2	X	.007	4
15 MP2	X	.033	7.5
16 MP3	X	.012	4.5
17 MP3	X	.012	7.5
18 MP4	X	.043	7.5
19 MP2	Z	.019	2.5
20 MP3	Z	.007	3.5
21 MP3	Z	.007	5.5
22 MP4	Z	.025	2.5
23 RRHMP1	Z	.01	1
24 RRHMP1	Z	.008	1
25 RRHMP1	Z	.008	3
26 RRHMP1	Z	.004	3
27 RRHMP1	Z	.004	4
28 RRHMP2	Z	.008	1
29 RRHMP2	Z	.008	1
30 RRHMP2	Z	.008	3
31 RRHMP2	Z	.008	3
32 RRHMP2	Z	.004	4
33 MP2	Z	.019	7.5
34 MP3	Z	.007	4.5
35 MP3	Z	.007	7.5
36 MP4	Z	.025	7.5

**Member Point Loads (BLC 29 : 225 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location(ft.%)
1 MP2	X	.023	2.5
2 MP3	X	.009	3.5
3 MP3	X	.009	5.5
4 MP4	X	.035	2.5
5 RRHMP1	X	.013	1
6 RRHMP1	X	.01	1
7 RRHMP1	X	.01	3
8 RRHMP1	X	.006	3
9 RRHMP1	X	.006	4



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**Member Point Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
10	RRHMP2	.011	1
11	RRHMP2	X	1
12	RRHMP2	.011	3
13	RRHMP2	X	3
14	RRHMP2	.006	4
15	MP2	X	7.5
16	MP3	X	4.5
17	MP3	X	7.5
18	MP4	X	7.5
19	MP2	Z	2.5
20	MP3	Z	3.5
21	MP3	Z	5.5
22	MP4	Z	2.5
23	RRHMP1	Z	.013
24	RRHMP1	Z	.01
25	RRHMP1	Z	.01
26	RRHMP1	Z	.006
27	RRHMP1	Z	.006
28	RRHMP2	Z	.011
29	RRHMP2	Z	.01
30	RRHMP2	Z	.011
31	RRHMP2	Z	.01
32	RRHMP2	Z	.006
33	MP2	Z	7.5
34	MP3	Z	4.5
35	MP3	Z	7.5
36	MP4	Z	7.5

**Member Point Loads (BLC 30 : 240 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	.014
2	MP3	X	.005
3	MP3	X	.005
4	MP4	X	.025
5	RRHMP1	X	.008
6	RRHMP1	X	.007
7	RRHMP1	X	.006
8	RRHMP1	X	.004
9	RRHMP1	X	.004
10	RRHMP2	X	.007
11	RRHMP2	X	.006
12	RRHMP2	X	.007
13	RRHMP2	X	.006
14	RRHMP2	X	.004
15	MP2	X	.014
16	MP3	X	.005
17	MP3	X	.005
18	MP4	X	.025
19	MP2	Z	.024
20	MP3	Z	.009
21	MP3	Z	.009
22	MP4	Z	.043
23	RRHMP1	Z	.015
24	RRHMP1	Z	.011
25	RRHMP1	Z	.01
26	RRHMP1	Z	.006



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**Member Point Loads (BLC 30 : 240 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
27	RRHMP1	Z	.006
28	RRHMP2	Z	.012
29	RRHMP2	Z	.01
30	RRHMP2	Z	.012
31	RRHMP2	Z	.01
32	RRHMP2	Z	.006
33	MP2	Z	.024
34	MP3	Z	.009
35	MP3	Z	.009
36	MP4	Z	.043

**Member Point Loads (BLC 31 : 270 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	Z	.023
2	MP3	Z	.009
3	MP3	Z	.009
4	MP4	Z	.051
5	RRHMP1	Z	.015
6	RRHMP1	Z	.012
7	RRHMP1	Z	.01
8	RRHMP1	Z	.006
9	RRHMP1	Z	.006
10	RRHMP2	Z	.013
11	RRHMP2	Z	.01
12	RRHMP2	Z	.013
13	RRHMP2	Z	.01
14	RRHMP2	Z	.006
15	MP2	Z	.023
16	MP3	Z	.009
17	MP3	Z	.009
18	MP4	Z	.051

**Member Point Loads (BLC 32 : 300 Wind - Ice)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-.014
2	MP3	X	-.005
3	MP3	X	-.005
4	MP4	X	-.025
5	RRHMP1	X	-.008
6	RRHMP1	X	-.007
7	RRHMP1	X	-.006
8	RRHMP1	X	-.004
9	RRHMP1	X	-.004
10	RRHMP2	X	-.007
11	RRHMP2	X	-.006
12	RRHMP2	X	-.007
13	RRHMP2	X	-.006
14	RRHMP2	X	-.004
15	MP2	X	-.014
16	MP3	X	-.005
17	MP3	X	-.005
18	MP4	X	-.025
19	MP2	Z	.024
20	MP3	Z	.009
21	MP3	Z	.009
22	MP4	Z	.043



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**Member Point Loads (BLC 32 : 300 Wind - Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
23	RRHMP1	Z	.015	1
24	RRHMP1	Z	.011	1
25	RRHMP1	Z	.01	3
26	RRHMP1	Z	.006	3
27	RRHMP1	Z	.006	4
28	RRHMP2	Z	.012	1
29	RRHMP2	Z	.01	1
30	RRHMP2	Z	.012	3
31	RRHMP2	Z	.01	3
32	RRHMP2	Z	.006	4
33	MP2	Z	.024	7.5
34	MP3	Z	.009	4.5
35	MP3	Z	.009	7.5
36	MP4	Z	.043	7.5

**Member Point Loads (BLC 33 : 315 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-.023	2.5
2	MP3	X	-.009	3.5
3	MP3	X	-.009	5.5
4	MP4	X	-.035	2.5
5	RRHMP1	X	-.013	1
6	RRHMP1	X	-.01	1
7	RRHMP1	X	-.01	3
8	RRHMP1	X	-.006	3
9	RRHMP1	X	-.006	4
10	RRHMP2	X	-.011	1
11	RRHMP2	X	-.01	1
12	RRHMP2	X	-.011	3
13	RRHMP2	X	-.01	3
14	RRHMP2	X	-.006	4
15	MP2	X	-.023	7.5
16	MP3	X	-.009	4.5
17	MP3	X	-.009	7.5
18	MP4	X	-.035	7.5
19	MP2	Z	.023	2.5
20	MP3	Z	.009	3.5
21	MP3	Z	.009	5.5
22	MP4	Z	.035	2.5
23	RRHMP1	Z	.013	1
24	RRHMP1	Z	.01	1
25	RRHMP1	Z	.01	3
26	RRHMP1	Z	.006	3
27	RRHMP1	Z	.006	4
28	RRHMP2	Z	.011	1
29	RRHMP2	Z	.01	1
30	RRHMP2	Z	.011	3
31	RRHMP2	Z	.01	3
32	RRHMP2	Z	.006	4
33	MP2	Z	.023	7.5
34	MP3	Z	.009	4.5
35	MP3	Z	.009	7.5
36	MP4	Z	.035	7.5

**Member Point Loads (BLC 34 : 330 Wind - Ice)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 34 : 330 Wind - Ice) (Continued)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-.033	2.5
2	MP3	X	-.012	3.5
3	MP3	X	-.012	5.5
4	MP4	X	-.043	2.5
5	RRHMP1	X	-.018	1
6	RRHMP1	X	-.014	1
7	RRHMP1	X	-.014	3
8	RRHMP1	X	-.007	3
9	RRHMP1	X	-.007	4
10	RRHMP2	X	-.014	1
11	RRHMP2	X	-.014	1
12	RRHMP2	X	-.014	3
13	RRHMP2	X	-.014	3
14	RRHMP2	X	-.007	4
15	MP2	X	-.033	7.5
16	MP3	X	-.012	4.5
17	MP3	X	-.012	7.5
18	MP4	X	-.043	7.5
19	MP2	Z	-.019	2.5
20	MP3	Z	.007	3.5
21	MP3	Z	.007	5.5
22	MP4	Z	.025	2.5
23	RRHMP1	Z	.01	1
24	RRHMP1	Z	.008	1
25	RRHMP1	Z	.008	3
26	RRHMP1	Z	.004	3
27	RRHMP1	Z	.004	4
28	RRHMP2	Z	.008	1
29	RRHMP2	Z	.008	1
30	RRHMP2	Z	.008	3
31	RRHMP2	Z	.008	3
32	RRHMP2	Z	.004	4
33	MP2	Z	.019	7.5
34	MP3	Z	.007	4.5
35	MP3	Z	.007	7.5
36	MP4	Z	.025	7.5

**Member Point Loads (BLC 37 : Seismic Load X)**

	Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1	MP2	X	-.065	2.5
2	MP3	X	-.02	3.5
3	MP3	X	-.04	5.5
4	MP4	X	-.065	2.5
5	RRHMP1	X	-.05	1
6	RRHMP1	X	-.06	1
7	RRHMP1	X	-.07	3
8	RRHMP1	X	-.03	3
9	RRHMP1	X	-.03	4
10	RRHMP2	X	-.07	1
11	RRHMP2	X	-.07	1
12	RRHMP2	X	-.07	3
13	RRHMP2	X	-.07	3
14	RRHMP2	X	-.03	4
15	MP2	X	-.065	7.5
16	MP3	X	-.02	4.5
17	MP3	X	-.04	7.5



**Member Point Loads (BLC 37 : Seismic Load X) (Continued)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
18 MP4	X	-0.65	7.5

**Member Point Loads (BLC 38 : Seismic Load Z)**

Member Label	Direction	Magnitude[k.k-ft]	Location[ft.%]
1 MP2	Z	-0.65	2.5
2 MP3	Z	-0.2	3.5
3 MP3	Z	-0.4	5.5
4 MP4	Z	-0.65	2.5
5 RRHMP1	Z	-0.5	1
6 RRHMP1	Z	-0.6	1
7 RRHMP1	Z	-0.7	3
8 RRHMP1	Z	-0.3	3
9 RRHMP1	Z	-0.3	4
10 RRHMP2	Z	-0.7	1
11 RRHMP2	Z	-0.7	1
12 RRHMP2	Z	-0.7	3
13 RRHMP2	Z	-0.7	3
14 RRHMP2	Z	-0.3	4
15 MP2	Z	-0.65	7.5
16 MP3	Z	-0.2	4.5
17 MP3	Z	-0.4	7.5
18 MP4	Z	-0.65	7.5

**Member Distributed Loads (BLC 2 : 0 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1 SF2-D1	X	-0.03	-0.03	0	%100
2 SF2-D1-X	X	-0.03	-0.03	0	%100
3 SF3-D1	X	-0.03	-0.03	0	%100
4 SF3-D1-X	X	-0.03	-0.03	0	%100
5 SF2-V1	X	-0.02	-0.02	0	%100
6 SF2-V2	X	-0.02	-0.02	0	%100
7 SF3-V1	X	-0.02	-0.02	0	%100
8 SF3-V2	X	-0.02	-0.02	0	%100
9 SF2-CPB	X	-0.00212	-0.00212	0	%100
10 SF2-CPT	X	-0.00212	-0.00212	0	%100
11 SF3-CPB	X	-0.00212	-0.00212	0	%100
12 SF3-CPT	X	-0.00212	-0.00212	0	%100
13 FFBH-1	X	-0.09	-0.09	0	%100
14 FFBH-2	X	-0.09	-0.09	0	%100
15 FFBH-3	X	-0.09	-0.09	0	%100
16 FFTH-1	X	-0.09	-0.09	0	%100
17 FFTH-2	X	-0.09	-0.09	0	%100
18 FFTH-3	X	-0.09	-0.09	0	%100
19 SA-R	X	0	0	0	%100
20 SF2-BH	X	-0.04	-0.04	0	%100
21 SF2-TH	X	-0.04	-0.04	0	%100
22 SF3-BH	X	-0.04	-0.04	0	%100
23 SF3-TH	X	-0.04	-0.04	0	%100
24 MP1	X	-0.07	-0.07	0	%100
25 MP2	X	-0.07	-0.07	0	%100
26 MP3	X	-0.07	-0.07	0	%100
27 MP4	X	-0.07	-0.07	0	%100
28 RRHMP2	X	-0.07	-0.07	0	%100
29 RRHMP1	X	-0.07	-0.07	0	%100



**Member Distributed Loads (BLC 3 : 30 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1 SF2-D1	X	-0.02	-0.02	0	%100
2 SF2-D1-X	X	-0.02	-0.02	0	%100
3 SF3-D1	X	-0.02	-0.02	0	%100
4 SF3-D1-X	X	-0.02	-0.02	0	%100
5 SF2-V1	X	-0.02	-0.02	0	%100
6 SF2-V2	X	-0.02	-0.02	0	%100
7 SF3-V1	X	-0.02	-0.02	0	%100
8 SF3-V2	X	-0.02	-0.02	0	%100
9 SF2-CPB	X	-0.01	-0.01	0	%100
10 SF2-CPT	X	-0.01	-0.01	0	%100
11 SF3-CPB	X	-0.00684	-0.00684	0	%100
12 SF3-CPT	X	-0.00684	-0.00684	0	%100
13 FFBH-1	X	-0.07	-0.07	0	%100
14 FFBH-2	X	-0.07	-0.07	0	%100
15 FFBH-3	X	-0.07	-0.07	0	%100
16 FFTH-1	X	-0.07	-0.07	0	%100
17 FFTH-2	X	-0.07	-0.07	0	%100
18 FFTH-3	X	-0.07	-0.07	0	%100
19 SA-R	X	-0.02	-0.02	0	%100
20 SF2-BH	X	-0.04	-0.04	0	%100
21 SF2-TH	X	-0.04	-0.04	0	%100
22 SF3-BH	X	-0.01	-0.01	0	%100
23 SF3-TH	X	-0.01	-0.01	0	%100
24 MP1	X	-0.06	-0.06	0	%100
25 MP2	X	-0.06	-0.06	0	%100
26 MP3	X	-0.06	-0.06	0	%100
27 MP4	X	-0.06	-0.06	0	%100
28 RRHMP2	X	-0.06	-0.06	0	%100
29 RRHMP1	X	-0.06	-0.06	0	%100
30 SF2-D1	Z	-0.01	-0.01	0	%100
31 SF2-D1-X	Z	-0.01	-0.01	0	%100
32 SF3-D1	Z	-0.01	-0.01	0	%100
33 SF3-D1-X	Z	-0.01	-0.01	0	%100
34 SF2-V1	Z	-0.00979	-0.00979	0	%100
35 SF2-V2	Z	-0.00979	-0.00979	0	%100
36 SF3-V1	Z	-0.00979	-0.00979	0	%100
37 SF3-V2	Z	-0.00979	-0.00979	0	%100
38 SF2-CPB	Z	-0.0068	-0.0068	0	%100
39 SF2-CPT	Z	-0.0068	-0.0068	0	%100
40 SF3-CPB	Z	-0.00464	-0.00464	0	%100
41 SF3-CPT	Z	-0.00464	-0.00464	0	%100
42 FFBH-1	Z	-0.02	-0.02	0	%100
43 FFBH-2	Z	-0.04	-0.04	0	%100
44 FFBH-3	Z	-0.02	-0.02	0	%100
45 FFTH-1	Z	-0.02	-0.02	0	%100
46 FFTH-2	Z	-0.04	-0.04	0	%100
47 FFTH-3	Z	-0.02	-0.02	0	%100
48 SA-R	Z	-0.02	-0.02	0	%100
49 SF2-BH	Z	-0.03	-0.03	0	%100
50 SF2-TH	Z	-0.03	-0.03	0	%100
51 SF3-BH	Z	-0.00773	-0.00773	0	%100
52 SF3-TH	Z	-0.00773	-0.00773	0	%100
53 MP1	Z	-0.04	-0.04	0	%100
54 MP2	Z	-0.04	-0.04	0	%100
55 MP3	Z	-0.04	-0.04	0	%100
56 MP4	Z	-0.04	-0.04	0	%100
57 RRHMP2	Z	-0.04	-0.04	0	%100





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**Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
58	RRHMP1	Z	-0.04	0	%100

**Member Distributed Loads (BLC 4 : 45 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1	SF2-D1	X	-0.02	0	%100
2	SF2-D1-X	X	-0.02	0	%100
3	SF3-D1	X	-0.02	0	%100
4	SF3-D1-X	X	-0.02	0	%100
5	SF2-V1	X	-0.01	0	%100
6	SF2-V2	X	-0.01	0	%100
7	SF3-V1	X	-0.01	0	%100
8	SF3-V2	X	-0.01	0	%100
9	SF2-CPB	X	-0.01	0	%100
10	SF2-CPT	X	-0.01	0	%100
11	SF3-CPB	X	-0.00867	0	%100
12	SF3-CPT	X	-0.00867	0	%100
13	FFBH-1	X	-0.05	0	%100
14	FFBH-2	X	-0.05	0	%100
15	FFBH-3	X	-0.05	0	%100
16	FFTH-1	X	-0.05	0	%100
17	FFTH-2	X	-0.05	0	%100
18	FFTH-3	X	-0.05	0	%100
19	SA-R	X	-0.02	0	%100
20	SF2-BH	X	-0.04	0	%100
21	SF2-TH	X	-0.04	0	%100
22	SF3-BH	X	-0.00155	0	%100
23	SF3-TH	X	-0.00155	0	%100
24	MP1	X	-0.05	0	%100
25	MP2	X	-0.05	0	%100
26	MP3	X	-0.05	0	%100
27	MP4	X	-0.05	0	%100
28	RRHMP2	X	-0.05	0	%100
29	RRHMP1	X	-0.05	0	%100
30	SF2-D1	Z	-0.02	0	%100
31	SF2-D1-X	Z	-0.02	0	%100
32	SF3-D1	Z	-0.02	0	%100
33	SF3-D1-X	Z	-0.02	0	%100
34	SF2-V1	Z	-0.01	0	%100
35	SF2-V2	Z	-0.01	0	%100
36	SF3-V1	Z	-0.01	0	%100
37	SF3-V2	Z	-0.01	0	%100
38	SF2-CPB	Z	-0.01	0	%100
39	SF2-CPT	Z	-0.01	0	%100
40	SF3-CPB	Z	-0.01	0	%100
41	SF3-CPT	Z	-0.01	0	%100
42	FFBH-1	Z	-0.03	0	%100
43	FFBH-2	Z	-0.05	0	%100
44	FFBH-3	Z	-0.03	0	%100
45	FFTH-1	Z	-0.03	0	%100
46	FFTH-2	Z	-0.05	0	%100
47	FFTH-3	Z	-0.03	0	%100
48	SA-R	Z	-0.04	0	%100
49	SF2-BH	Z	-0.04	0	%100
50	SF2-TH	Z	-0.04	0	%100
51	SF3-BH	Z	-0.00152	0	%100
52	SF3-TH	Z	-0.00152	0	%100



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**Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
53	MP1	Z	-0.05	0	%100
54	MP2	Z	-0.05	0	%100
55	MP3	Z	-0.05	0	%100
56	MP4	Z	-0.05	0	%100
57	RRHMP2	Z	-0.05	0	%100
58	RRHMP1	Z	-0.05	0	%100

**Member Distributed Loads (BLC 5 : 60 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1	SF2-D1	X	-0.01	0	%100
2	SF2-D1-X	X	-0.01	0	%100
3	SF3-D1	X	-0.01	0	%100
4	SF3-D1-X	X	-0.01	0	%100
5	SF2-V1	X	-0.00979	0	%100
6	SF2-V2	X	-0.00979	0	%100
7	SF3-V1	X	-0.00979	0	%100
8	SF3-V2	X	-0.00979	0	%100
9	SF2-CPB	X	-0.00896	0	%100
10	SF2-CPT	X	-0.00896	0	%100
11	SF3-CPB	X	-0.0079	0	%100
12	SF3-CPT	X	-0.0079	0	%100
13	FFBH-1	X	-0.02	0	%100
14	FFBH-2	X	-0.02	0	%100
15	FFBH-3	X	-0.02	0	%100
16	FFTH-1	X	-0.02	0	%100
17	FFTH-2	X	-0.02	0	%100
18	FFTH-3	X	-0.02	0	%100
19	SA-R	X	-0.02	0	%100
20	SF2-BH	X	-0.03	0	%100
21	SF2-TH	X	-0.03	0	%100
22	SF3-BH	X	-0.00577	0	%100
23	SF3-TH	X	-0.00577	0	%100
24	MP1	X	-0.04	0	%100
25	MP2	X	-0.04	0	%100
26	MP3	X	-0.04	0	%100
27	MP4	X	-0.04	0	%100
28	RRHMP2	X	-0.04	0	%100
29	RRHMP1	X	-0.04	0	%100
30	SF2-D1	Z	-0.02	0	%100
31	SF2-D1-X	Z	-0.02	0	%100
32	SF3-D1	Z	-0.02	0	%100
33	SF3-D1-X	Z	-0.02	0	%100
34	SF2-V1	Z	-0.02	0	%100
35	SF2-V2	Z	-0.02	0	%100
36	SF3-V1	Z	-0.02	0	%100
37	SF3-V2	Z	-0.02	0	%100
38	SF2-CPB	Z	-0.02	0	%100
39	SF2-CPT	Z	-0.02	0	%100
40	SF3-CPB	Z	-0.02	0	%100
41	SF3-CPT	Z	-0.02	0	%100
42	FFBH-1	Z	-0.02	0	%100
43	FFBH-2	Z	-0.04	0	%100
44	FFBH-3	Z	-0.02	0	%100
45	FFTH-1	Z	-0.02	0	%100
46	FFTH-2	Z	-0.04	0	%100
47	FFTH-3	Z	-0.02	0	%100



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**Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
48	SA-R	Z	-0.06	-0.06	0	%100
49	SF2-BH	Z	-0.04	-0.04	0	%100
50	SF2-TH	Z	-0.04	-0.04	0	%100
51	SF3-BH	Z	-0.00979	-0.00979	0	%100
52	SF3-TH	Z	-0.00979	-0.00979	0	%100
53	MP1	Z	-0.06	-0.06	0	%100
54	MP2	Z	-0.06	-0.06	0	%100
55	MP3	Z	-0.06	-0.06	0	%100
56	MP4	Z	-0.06	-0.06	0	%100
57	RRHMP2	Z	-0.06	-0.06	0	%100
58	RRHMP1	Z	-0.06	-0.06	0	%100

**Member Distributed Loads (BLC 6 : 90 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	Z	-0.03	-0.03	0	%100
2	SF2-D1-X	Z	-0.03	-0.03	0	%100
3	SF3-D1	Z	-0.03	-0.03	0	%100
4	SF3-D1-X	Z	-0.03	-0.03	0	%100
5	SF2-V1	Z	-0.02	-0.02	0	%100
6	SF2-V2	Z	-0.02	-0.02	0	%100
7	SF3-V1	Z	-0.02	-0.02	0	%100
8	SF3-V2	Z	-0.02	-0.02	0	%100
9	SF2-CPB	Z	-0.02	-0.02	0	%100
10	SF2-CPT	Z	-0.02	-0.02	0	%100
11	SF3-CPB	Z	-0.02	-0.02	0	%100
12	SF3-CPT	Z	-0.02	-0.02	0	%100
13	FFBH-1	Z	0	0	0	%100
14	FFBH-2	Z	0	0	0	%100
15	FFBH-3	Z	0	0	0	%100
16	FFTH-1	Z	0	0	0	%100
17	FFTH-2	Z	0	0	0	%100
18	FFTH-3	Z	0	0	0	%100
19	SA-R	Z	-0.07	-0.07	0	%100
20	SF2-BH	Z	-0.04	-0.04	0	%100
21	SF2-TH	Z	-0.04	-0.04	0	%100
22	SF3-BH	Z	-0.04	-0.04	0	%100
23	SF3-TH	Z	-0.04	-0.04	0	%100
24	MP1	Z	-0.07	-0.07	0	%100
25	MP2	Z	-0.07	-0.07	0	%100
26	MP3	Z	-0.07	-0.07	0	%100
27	MP4	Z	-0.07	-0.07	0	%100
28	RRHMP2	Z	-0.07	-0.07	0	%100
29	RRHMP1	Z	-0.07	-0.07	0	%100

**Member Distributed Loads (BLC 7 : 120 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.001	.001	0	%100
2	SF2-D1-X	X	.001	.001	0	%100
3	SF3-D1	X	.001	.001	0	%100
4	SF3-D1-X	X	.001	.001	0	%100
5	SF2-V1	X	.000979	.000979	0	%100
6	SF2-V2	X	.000979	.000979	0	%100
7	SF3-V1	X	.000979	.000979	0	%100
8	SF3-V2	X	.000979	.000979	0	%100
9	SF2-CPB	X	.00079	.00079	0	%100
10	SF2-CPT	X	.00079	.00079	0	%100



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**Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
11	SF3-CPB	X	.000896	.000896	0	%100
12	SF3-CPT	X	.000896	.000896	0	%100
13	FFBH-1	X	.002	.002	0	%100
14	FFBH-2	X	.002	.002	0	%100
15	FFBH-3	X	.002	.002	0	%100
16	FFTH-1	X	.002	.002	0	%100
17	FFTH-2	X	.002	.002	0	%100
18	FFTH-3	X	.002	.002	0	%100
19	SA-R	X	.002	.002	0	%100
20	SF2-BH	X	.000577	.000577	0	%100
21	SF2-TH	X	.000577	.000577	0	%100
22	SF3-BH	X	.003	.003	0	%100
23	SF3-TH	X	.003	.003	0	%100
24	MP1	X	.004	.004	0	%100
25	MP2	X	.004	.004	0	%100
26	MP3	X	.004	.004	0	%100
27	MP4	X	.004	.004	0	%100
28	RRHMP2	X	.004	.004	0	%100
29	RRHMP1	X	.004	.004	0	%100
30	SF2-D1	Z	-0.02	-0.02	0	%100
31	SF2-D1-X	Z	-0.02	-0.02	0	%100
32	SF3-D1	Z	-0.02	-0.02	0	%100
33	SF3-D1-X	Z	-0.02	-0.02	0	%100
34	SF2-V1	Z	-0.02	-0.02	0	%100
35	SF2-V2	Z	-0.02	-0.02	0	%100
36	SF3-V1	Z	-0.02	-0.02	0	%100
37	SF3-V2	Z	-0.02	-0.02	0	%100
38	SF2-CPB	Z	-0.02	-0.02	0	%100
39	SF2-CPT	Z	-0.02	-0.02	0	%100
40	SF3-CPB	Z	-0.02	-0.02	0	%100
41	SF3-CPT	Z	-0.02	-0.02	0	%100
42	FFBH-1	Z	-0.02	-0.02	0	%100
43	FFBH-2	Z	-0.04	-0.04	0	%100
44	FFBH-3	Z	-0.02	-0.02	0	%100
45	FFTH-1	Z	-0.02	-0.02	0	%100
46	FFTH-2	Z	-0.04	-0.04	0	%100
47	FFTH-3	Z	-0.02	-0.02	0	%100
48	SA-R	Z	-0.06	-0.06	0	%100
49	SF2-BH	Z	-0.00979	-0.00979	0	%100
50	SF2-TH	Z	-0.00979	-0.00979	0	%100
51	SF3-BH	Z	-0.04	-0.04	0	%100
52	SF3-TH	Z	-0.04	-0.04	0	%100
53	MP1	Z	-0.06	-0.06	0	%100
54	MP2	Z	-0.06	-0.06	0	%100
55	MP3	Z	-0.06	-0.06	0	%100
56	MP4	Z	-0.06	-0.06	0	%100
57	RRHMP2	Z	-0.06	-0.06	0	%100
58	RRHMP1	Z	-0.06	-0.06	0	%100

**Member Distributed Loads (BLC 8 : 135 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.002	.002	0	%100
2	SF2-D1-X	X	.002	.002	0	%100
3	SF3-D1	X	.002	.002	0	%100
4	SF3-D1-X	X	.002	.002	0	%100
5	SF2-V1	X	.001	.001	0	%100



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**Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,...	Start Location[ft, %]	End Location[ft, %]
6	SF2-V2	X	.001	.001	0 %100
7	SF3-V1	X	.001	.001	0 %100
8	SF3-V2	X	.001	.001	0 %100
9	SF2-CPB	X	.000867	.000867	0 %100
10	SF2-CPT	X	.000867	.000867	0 %100
11	SF3-CPB	X	.001	.001	0 %100
12	SF3-CPT	X	.001	.001	0 %100
13	FFBH-1	X	.005	.005	0 %100
14	FFBH-2	X	.005	.005	0 %100
15	FFBH-3	X	.005	.005	0 %100
16	FFTH-1	X	.005	.005	0 %100
17	FFTH-2	X	.005	.005	0 %100
18	FFTH-3	X	.005	.005	0 %100
19	SA-R	X	.002	.002	0 %100
20	SF2-BH	X	.000155	.000155	0 %100
21	SF2-TH	X	.000155	.000155	0 %100
22	SF3-BH	X	.004	.004	0 %100
23	SF3-TH	X	.004	.004	0 %100
24	MP1	X	.005	.005	0 %100
25	MP2	X	.005	.005	0 %100
26	MP3	X	.005	.005	0 %100
27	MP4	X	.005	.005	0 %100
28	RRHMP2	X	.005	.005	0 %100
29	RRHMP1	X	.005	.005	0 %100
30	SF2-D1	Z	-.002	-.002	0 %100
31	SF2-D1-X	Z	-.002	-.002	0 %100
32	SF3-D1	Z	-.002	-.002	0 %100
33	SF3-D1-X	Z	-.002	-.002	0 %100
34	SF2-V1	Z	-.001	-.001	0 %100
35	SF2-V2	Z	-.001	-.001	0 %100
36	SF3-V1	Z	-.001	-.001	0 %100
37	SF3-V2	Z	-.001	-.001	0 %100
38	SF2-CPB	Z	-.001	-.001	0 %100
39	SF2-CPT	Z	-.001	-.001	0 %100
40	SF3-CPB	Z	-.001	-.001	0 %100
41	SF3-CPT	Z	-.001	-.001	0 %100
42	FFBH-1	Z	-.003	-.003	0 %100
43	FFBH-2	Z	-.005	-.005	0 %100
44	FFBH-3	Z	-.003	-.003	0 %100
45	FFTH-1	Z	-.003	-.003	0 %100
46	FFTH-2	Z	-.005	-.005	0 %100
47	FFTH-3	Z	-.003	-.003	0 %100
48	SA-R	Z	-.004	-.004	0 %100
49	SF2-BH	Z	-.000152	-.000152	0 %100
50	SF2-TH	Z	-.000152	-.000152	0 %100
51	SF3-BH	Z	-.004	-.004	0 %100
52	SF3-TH	Z	-.004	-.004	0 %100
53	MP1	Z	-.005	-.005	0 %100
54	MP2	Z	-.005	-.005	0 %100
55	MP3	Z	-.005	-.005	0 %100
56	MP4	Z	-.005	-.005	0 %100
57	RRHMP2	Z	-.005	-.005	0 %100
58	RRHMP1	Z	-.005	-.005	0 %100

**Member Distributed Loads (BLC 9 : 150 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,...	Start Location[ft, %]	End Location[ft, %]
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**Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,...	Start Location[ft, %]	End Location[ft, %]
1	SF2-D1	X	.002	.002	0 %100
2	SF2-D1-X	X	.002	.002	0 %100
3	SF3-D1	X	.002	.002	0 %100
4	SF3-D1-X	X	.002	.002	0 %100
5	SF2-V1	X	.002	.002	0 %100
6	SF2-V2	X	.002	.002	0 %100
7	SF3-V1	X	.002	.002	0 %100
8	SF3-V2	X	.002	.002	0 %100
9	SF2-CPB	X	.000684	.000684	0 %100
10	SF2-CPT	X	.000684	.000684	0 %100
11	SF3-CPB	X	.001	.001	0 %100
12	SF3-CPT	X	.001	.001	0 %100
13	FFBH-1	X	.007	.007	0 %100
14	FFBH-2	X	.007	.007	0 %100
15	FFBH-3	X	.007	.007	0 %100
16	FFTH-1	X	.007	.007	0 %100
17	FFTH-2	X	.007	.007	0 %100
18	FFTH-3	X	.007	.007	0 %100
19	SA-R	X	.002	.002	0 %100
20	SF2-BH	X	.001	.001	0 %100
21	SF2-TH	X	.001	.001	0 %100
22	SF3-BH	X	.004	.004	0 %100
23	SF3-TH	X	.004	.004	0 %100
24	MP1	X	.006	.006	0 %100
25	MP2	X	.006	.006	0 %100
26	MP3	X	.006	.006	0 %100
27	MP4	X	.006	.006	0 %100
28	RRHMP2	X	.006	.006	0 %100
29	RRHMP1	X	.006	.006	0 %100
30	SF2-D1	Z	-.001	-.001	0 %100
31	SF2-D1-X	Z	-.001	-.001	0 %100
32	SF3-D1	Z	-.001	-.001	0 %100
33	SF3-D1-X	Z	-.001	-.001	0 %100
34	SF2-V1	Z	-.000979	-.000979	0 %100
35	SF2-V2	Z	-.000979	-.000979	0 %100
36	SF3-V1	Z	-.000979	-.000979	0 %100
37	SF3-V2	Z	-.000979	-.000979	0 %100
38	SF2-CPB	Z	-.000464	-.000464	0 %100
39	SF2-CPT	Z	-.000464	-.000464	0 %100
40	SF3-CPB	Z	-.00068	-.00068	0 %100
41	SF3-CPT	Z	-.00068	-.00068	0 %100
42	FFBH-1	Z	-.002	-.002	0 %100
43	FFBH-2	Z	-.004	-.004	0 %100
44	FFBH-3	Z	-.002	-.002	0 %100
45	FFTH-1	Z	-.002	-.002	0 %100
46	FFTH-2	Z	-.004	-.004	0 %100
47	FFTH-3	Z	-.002	-.002	0 %100
48	SA-R	Z	-.002	-.002	0 %100
49	SF2-BH	Z	-.000773	-.000773	0 %100
50	SF2-TH	Z	-.000773	-.000773	0 %100
51	SF3-BH	Z	-.003	-.003	0 %100
52	SF3-TH	Z	-.003	-.003	0 %100
53	MP1	Z	-.004	-.004	0 %100
54	MP2	Z	-.004	-.004	0 %100
55	MP3	Z	-.004	-.004	0 %100
56	MP4	Z	-.004	-.004	0 %100
57	RRHMP2	Z	-.004	-.004	0 %100



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**Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
58	RRHMP1	Z	-.004	0	%100

**Member Distributed Loads (BLC 10 : 180 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.003	.003	0	%100
2	SF2-D1-X	X	.003	.003	0	%100
3	SF3-D1	X	.003	.003	0	%100
4	SF3-D1-X	X	.003	.003	0	%100
5	SF2-V1	X	.002	.002	0	%100
6	SF2-V2	X	.002	.002	0	%100
7	SF3-V1	X	.002	.002	0	%100
8	SF3-V2	X	.002	.002	0	%100
9	SF2-CPB	X	.000212	.000212	0	%100
10	SF2-CPT	X	.000212	.000212	0	%100
11	SF3-CPB	X	.000212	.000212	0	%100
12	SF3-CPT	X	.000212	.000212	0	%100
13	FFBH-1	X	.009	.009	0	%100
14	FFBH-2	X	.009	.009	0	%100
15	FFBH-3	X	.009	.009	0	%100
16	FFTH-1	X	.009	.009	0	%100
17	FFTH-2	X	.009	.009	0	%100
18	FFTH-3	X	.009	.009	0	%100
19	SA-R	X	0	0	0	%100
20	SF2-BH	X	.004	.004	0	%100
21	SF2-TH	X	.004	.004	0	%100
22	SF3-BH	X	.004	.004	0	%100
23	SF3-TH	X	.004	.004	0	%100
24	MP1	X	.007	.007	0	%100
25	MP2	X	.007	.007	0	%100
26	MP3	X	.007	.007	0	%100
27	MP4	X	.007	.007	0	%100
28	RRHMP2	X	.007	.007	0	%100
29	RRHMP1	X	.007	.007	0	%100

**Member Distributed Loads (BLC 11 : 210 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.002	.002	0	%100
2	SF2-D1-X	X	.002	.002	0	%100
3	SF3-D1	X	.002	.002	0	%100
4	SF3-D1-X	X	.002	.002	0	%100
5	SF2-V1	X	.002	.002	0	%100
6	SF2-V2	X	.002	.002	0	%100
7	SF3-V1	X	.002	.002	0	%100
8	SF3-V2	X	.002	.002	0	%100
9	SF2-CPB	X	.001	.001	0	%100
10	SF2-CPT	X	.001	.001	0	%100
11	SF3-CPB	X	.000684	.000684	0	%100
12	SF3-CPT	X	.000684	.000684	0	%100
13	FFBH-1	X	.007	.007	0	%100
14	FFBH-2	X	.007	.007	0	%100
15	FFBH-3	X	.007	.007	0	%100
16	FFTH-1	X	.007	.007	0	%100
17	FFTH-2	X	.007	.007	0	%100
18	FFTH-3	X	.007	.007	0	%100
19	SA-R	X	.002	.002	0	%100
20	SF2-BH	X	.004	.004	0	%100



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**Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
21	SF2-TH	X	.004	.004	0	%100
22	SF3-BH	X	.001	.001	0	%100
23	SF3-TH	X	.001	.001	0	%100
24	MP1	X	.006	.006	0	%100
25	MP2	X	.006	.006	0	%100
26	MP3	X	.006	.006	0	%100
27	MP4	X	.006	.006	0	%100
28	RRHMP2	X	.006	.006	0	%100
29	RRHMP1	X	.006	.006	0	%100
30	SF2-D1	X	.001	.001	0	%100
31	SF2-D1-X	Z	.001	.001	0	%100
32	SF3-D1	Z	.001	.001	0	%100
33	SF3-D1-X	Z	.001	.001	0	%100
34	SF2-V1	Z	.000979	.000979	0	%100
35	SF2-V2	Z	.000979	.000979	0	%100
36	SF3-V1	Z	.000979	.000979	0	%100
37	SF3-V2	Z	.000979	.000979	0	%100
38	SF2-CPB	Z	.00068	.00068	0	%100
39	SF2-CPT	Z	.00068	.00068	0	%100
40	SF3-CPB	Z	.000464	.000464	0	%100
41	SF3-CPT	Z	.000464	.000464	0	%100
42	FFBH-1	Z	.002	.002	0	%100
43	FFBH-2	Z	.004	.004	0	%100
44	FFBH-3	Z	.002	.002	0	%100
45	FFTH-1	Z	.002	.002	0	%100
46	FFTH-2	Z	.004	.004	0	%100
47	FFTH-3	Z	.002	.002	0	%100
48	SA-R	Z	.002	.002	0	%100
49	SF2-BH	Z	.003	.003	0	%100
50	SF2-TH	Z	.003	.003	0	%100
51	SF3-BH	Z	.000773	.000773	0	%100
52	SF3-TH	Z	.000773	.000773	0	%100
53	MP1	Z	.004	.004	0	%100
54	MP2	Z	.004	.004	0	%100
55	MP3	Z	.004	.004	0	%100
56	MP4	Z	.004	.004	0	%100
57	RRHMP2	Z	.004	.004	0	%100
58	RRHMP1	Z	.004	.004	0	%100

**Member Distributed Loads (BLC 12 : 225 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.002	.002	0	%100
2	SF2-D1-X	X	.002	.002	0	%100
3	SF3-D1	X	.002	.002	0	%100
4	SF3-D1-X	X	.002	.002	0	%100
5	SF2-V1	X	.001	.001	0	%100
6	SF2-V2	X	.001	.001	0	%100
7	SF3-V1	X	.001	.001	0	%100
8	SF3-V2	X	.001	.001	0	%100
9	SF2-CPB	X	.001	.001	0	%100
10	SF2-CPT	X	.001	.001	0	%100
11	SF3-CPB	X	.000867	.000867	0	%100
12	SF3-CPT	X	.000867	.000867	0	%100
13	FFBH-1	X	.005	.005	0	%100
14	FFBH-2	X	.005	.005	0	%100
15	FFBH-3	X	.005	.005	0	%100



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**Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
16	FFTH-1	X	.005	.005	0	%100
17	FFTH-2	X	.005	.005	0	%100
18	FFTH-3	X	.005	.005	0	%100
19	SA-R	X	.002	.002	0	%100
20	SF2-BH	X	.004	.004	0	%100
21	SF2-TH	X	.004	.004	0	%100
22	SF3-BH	X	.000155	.000155	0	%100
23	SF3-TH	X	.000155	.000155	0	%100
24	MP1	X	.005	.005	0	%100
25	MP2	X	.005	.005	0	%100
26	MP3	X	.005	.005	0	%100
27	MP4	X	.005	.005	0	%100
28	RRHMP2	X	.005	.005	0	%100
29	RRHMP1	X	.005	.005	0	%100
30	SF2-D1	Z	.002	.002	0	%100
31	SF2-D1-X	Z	.002	.002	0	%100
32	SF3-D1	Z	.002	.002	0	%100
33	SF3-D1-X	Z	.002	.002	0	%100
34	SF2-V1	Z	.001	.001	0	%100
35	SF2-V2	Z	.001	.001	0	%100
36	SF3-V1	Z	.001	.001	0	%100
37	SF3-V2	Z	.001	.001	0	%100
38	SF2-CPB	Z	.001	.001	0	%100
39	SF2-CPT	Z	.001	.001	0	%100
40	SF3-CPB	Z	.001	.001	0	%100
41	SF3-CPT	Z	.001	.001	0	%100
42	FFBH-1	Z	.003	.003	0	%100
43	FFBH-2	Z	.005	.005	0	%100
44	FFBH-3	Z	.003	.003	0	%100
45	FFTH-1	Z	.003	.003	0	%100
46	FFTH-2	Z	.005	.005	0	%100
47	FFTH-3	Z	.003	.003	0	%100
48	SA-R	Z	.004	.004	0	%100
49	SF2-BH	Z	.004	.004	0	%100
50	SF2-TH	Z	.004	.004	0	%100
51	SF3-BH	Z	.000152	.000152	0	%100
52	SF3-TH	Z	.000152	.000152	0	%100
53	MP1	Z	.005	.005	0	%100
54	MP2	Z	.005	.005	0	%100
55	MP3	Z	.005	.005	0	%100
56	MP4	Z	.005	.005	0	%100
57	RRHMP2	Z	.005	.005	0	%100
58	RRHMP1	Z	.005	.005	0	%100

**Member Distributed Loads (BLC 13 : 240 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.001	.001	0	%100
2	SF2-D1-X	X	.001	.001	0	%100
3	SF3-D1	X	.001	.001	0	%100
4	SF3-D1-X	X	.001	.001	0	%100
5	SF2-V1	X	.000979	.000979	0	%100
6	SF2-V2	X	.000979	.000979	0	%100
7	SF3-V1	X	.000979	.000979	0	%100
8	SF3-V2	X	.000979	.000979	0	%100
9	SF2-CPB	X	.000896	.000896	0	%100
10	SF2-CPT	X	.000896	.000896	0	%100



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 Designer : SMA  
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**Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
11	SF3-CPB	X	.00079	.00079	0	%100
12	SF3-CPT	X	.00079	.00079	0	%100
13	FFBH-1	X	.002	.002	0	%100
14	FFBH-2	X	.002	.002	0	%100
15	FFBH-3	X	.002	.002	0	%100
16	FFTH-1	X	.002	.002	0	%100
17	FFTH-2	X	.002	.002	0	%100
18	FFTH-3	X	.002	.002	0	%100
19	SA-R	X	.002	.002	0	%100
20	SF2-BH	X	.003	.003	0	%100
21	SF2-TH	X	.003	.003	0	%100
22	SF3-BH	X	.000577	.000577	0	%100
23	SF3-TH	X	.000577	.000577	0	%100
24	MP1	X	.004	.004	0	%100
25	MP2	X	.004	.004	0	%100
26	MP3	X	.004	.004	0	%100
27	MP4	X	.004	.004	0	%100
28	RRHMP2	X	.004	.004	0	%100
29	RRHMP1	X	.004	.004	0	%100
30	SF2-D1	Z	.002	.002	0	%100
31	SF2-D1-X	Z	.002	.002	0	%100
32	SF3-D1	Z	.002	.002	0	%100
33	SF3-D1-X	Z	.002	.002	0	%100
34	SF2-V1	Z	.002	.002	0	%100
35	SF2-V2	Z	.002	.002	0	%100
36	SF3-V1	Z	.002	.002	0	%100
37	SF3-V2	Z	.002	.002	0	%100
38	SF2-CPB	Z	.002	.002	0	%100
39	SF2-CPT	Z	.002	.002	0	%100
40	SF3-CPB	Z	.002	.002	0	%100
41	SF3-CPT	Z	.002	.002	0	%100
42	FFBH-1	Z	.002	.002	0	%100
43	FFBH-2	Z	.004	.004	0	%100
44	FFBH-3	Z	.002	.002	0	%100
45	FFTH-1	Z	.002	.002	0	%100
46	FFTH-2	Z	.004	.004	0	%100
47	FFTH-3	Z	.002	.002	0	%100
48	SA-R	Z	.006	.006	0	%100
49	SF2-BH	Z	.004	.004	0	%100
50	SF2-TH	Z	.004	.004	0	%100
51	SF3-BH	Z	.000979	.000979	0	%100
52	SF3-TH	Z	.000979	.000979	0	%100
53	MP1	Z	.006	.006	0	%100
54	MP2	Z	.006	.006	0	%100
55	MP3	Z	.006	.006	0	%100
56	MP4	Z	.006	.006	0	%100
57	RRHMP2	Z	.006	.006	0	%100
58	RRHMP1	Z	.006	.006	0	%100

**Member Distributed Loads (BLC 14 : 270 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	Z	.003	.003	0	%100
2	SF2-D1-X	Z	.003	.003	0	%100
3	SF3-D1	Z	.003	.003	0	%100
4	SF3-D1-X	Z	.003	.003	0	%100
5	SF2-V1	Z	.002	.002	0	%100



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**Member Distributed Loads (BLC 14 : 270 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location(ft.%)	End Location(ft.%)	
6	SF2-V2	Z	.002	.002	0	%100
7	SF3-V1	Z	.002	.002	0	%100
8	SF3-V2	Z	.002	.002	0	%100
9	SF2-CPB	Z	.002	.002	0	%100
10	SF2-CPT	Z	.002	.002	0	%100
11	SF3-CPB	Z	.002	.002	0	%100
12	SF3-CPT	Z	.002	.002	0	%100
13	FFBH-1	Z	0	0	0	%100
14	FFBH-2	Z	0	0	0	%100
15	FFBH-3	Z	0	0	0	%100
16	FFTH-1	Z	0	0	0	%100
17	FFTH-2	Z	0	0	0	%100
18	FFTH-3	Z	0	0	0	%100
19	SA-R	Z	.007	.007	0	%100
20	SF2-BH	Z	.004	.004	0	%100
21	SF2-TH	Z	.004	.004	0	%100
22	SF3-BH	Z	.004	.004	0	%100
23	SF3-TH	Z	.004	.004	0	%100
24	MP1	Z	.007	.007	0	%100
25	MP2	Z	.007	.007	0	%100
26	MP3	Z	.007	.007	0	%100
27	MP4	Z	.007	.007	0	%100
28	RRHMP2	Z	.007	.007	0	%100
29	RRHMP1	Z	.007	.007	0	%100

**Member Distributed Loads (BLC 15 : 300 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location(ft.%)	End Location(ft.%)	
1	SF2-D1	X	-.001	-.001	0	%100
2	SF2-D1-X	X	-.001	-.001	0	%100
3	SF3-D1	X	-.001	-.001	0	%100
4	SF3-D1-X	X	-.001	-.001	0	%100
5	SF2-V1	X	-.000979	-.000979	0	%100
6	SF2-V2	X	-.000979	-.000979	0	%100
7	SF3-V1	X	-.000979	-.000979	0	%100
8	SF3-V2	X	-.000979	-.000979	0	%100
9	SF2-CPB	X	-.00079	-.00079	0	%100
10	SF2-CPT	X	-.00079	-.00079	0	%100
11	SF3-CPB	X	-.000896	-.000896	0	%100
12	SF3-CPT	X	-.000896	-.000896	0	%100
13	FFBH-1	X	-.002	-.002	0	%100
14	FFBH-2	X	-.002	-.002	0	%100
15	FFBH-3	X	-.002	-.002	0	%100
16	FFTH-1	X	-.002	-.002	0	%100
17	FFTH-2	X	-.002	-.002	0	%100
18	FFTH-3	X	-.002	-.002	0	%100
19	SA-R	X	-.002	-.002	0	%100
20	SF2-BH	X	-.000577	-.000577	0	%100
21	SF2-TH	X	-.000577	-.000577	0	%100
22	SF3-BH	X	-.003	-.003	0	%100
23	SF3-TH	X	-.003	-.003	0	%100
24	MP1	X	-.004	-.004	0	%100
25	MP2	X	-.004	-.004	0	%100
26	MP3	X	-.004	-.004	0	%100
27	MP4	X	-.004	-.004	0	%100
28	RRHMP2	X	-.004	-.004	0	%100
29	RRHMP1	X	-.004	-.004	0	%100



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**Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location(ft.%)	End Location(ft.%)	
30	SF2-D1	Z	.002	.002	0	%100
31	SF2-D1-X	Z	.002	.002	0	%100
32	SF3-D1	Z	.002	.002	0	%100
33	SF3-D1-X	Z	.002	.002	0	%100
34	SF2-V1	Z	.002	.002	0	%100
35	SF2-V2	Z	.002	.002	0	%100
36	SF3-V1	Z	.002	.002	0	%100
37	SF3-V2	Z	.002	.002	0	%100
38	SF2-CPB	Z	.002	.002	0	%100
39	SF2-CPT	Z	.002	.002	0	%100
40	SF3-CPB	Z	.002	.002	0	%100
41	SF3-CPT	Z	.002	.002	0	%100
42	FFBH-1	Z	.002	.002	0	%100
43	FFBH-2	Z	.004	.004	0	%100
44	FFBH-3	Z	.002	.002	0	%100
45	FFTH-1	Z	.002	.002	0	%100
46	FFTH-2	Z	.004	.004	0	%100
47	FFTH-3	Z	.002	.002	0	%100
48	SA-R	Z	.006	.006	0	%100
49	SF2-BH	Z	.000979	.000979	0	%100
50	SF2-TH	Z	.000979	.000979	0	%100
51	SF3-BH	Z	.004	.004	0	%100
52	SF3-TH	Z	.004	.004	0	%100
53	MP1	Z	.006	.006	0	%100
54	MP2	Z	.006	.006	0	%100
55	MP3	Z	.006	.006	0	%100
56	MP4	Z	.006	.006	0	%100
57	RRHMP2	Z	.006	.006	0	%100
58	RRHMP1	Z	.006	.006	0	%100

**Member Distributed Loads (BLC 16 : 315 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location(ft.%)	End Location(ft.%)	
1	SF2-D1	X	-.002	-.002	0	%100
2	SF2-D1-X	X	-.002	-.002	0	%100
3	SF3-D1	X	-.002	-.002	0	%100
4	SF3-D1-X	X	-.002	-.002	0	%100
5	SF2-V1	X	-.001	-.001	0	%100
6	SF2-V2	X	-.001	-.001	0	%100
7	SF3-V1	X	-.001	-.001	0	%100
8	SF3-V2	X	-.001	-.001	0	%100
9	SF2-CPB	X	-.000867	-.000867	0	%100
10	SF2-CPT	X	-.000867	-.000867	0	%100
11	SF3-CPB	X	-.001	-.001	0	%100
12	SF3-CPT	X	-.001	-.001	0	%100
13	FFBH-1	X	-.005	-.005	0	%100
14	FFBH-2	X	-.005	-.005	0	%100
15	FFBH-3	X	-.005	-.005	0	%100
16	FFTH-1	X	-.005	-.005	0	%100
17	FFTH-2	X	-.005	-.005	0	%100
18	FFTH-3	X	-.005	-.005	0	%100
19	SA-R	X	-.002	-.002	0	%100
20	SF2-BH	X	-.000155	-.000155	0	%100
21	SF2-TH	X	-.000155	-.000155	0	%100
22	SF3-BH	X	-.004	-.004	0	%100
23	SF3-TH	X	-.004	-.004	0	%100
24	MP1	X	-.005	-.005	0	%100





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**Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
25	MP2	X	-0.05	-0.05	0	%100
26	MP3	X	-0.05	-0.05	0	%100
27	MP4	X	-0.05	-0.05	0	%100
28	RRHMP2	X	-0.05	-0.05	0	%100
29	RRHMP1	X	-0.05	-0.05	0	%100
30	SF2-D1	Z	.002	.002	0	%100
31	SF2-D1-X	Z	.002	.002	0	%100
32	SF3-D1	Z	.002	.002	0	%100
33	SF3-D1-X	Z	.002	.002	0	%100
34	SF2-V1	Z	.001	.001	0	%100
35	SF2-V2	Z	.001	.001	0	%100
36	SF3-V1	Z	.001	.001	0	%100
37	SF3-V2	Z	.001	.001	0	%100
38	SF2-CPB	Z	.001	.001	0	%100
39	SF2-CPT	Z	.001	.001	0	%100
40	SF3-CPB	Z	.001	.001	0	%100
41	SF3-CPT	Z	.001	.001	0	%100
42	FFBH-1	Z	.003	.003	0	%100
43	FFBH-2	Z	.005	.005	0	%100
44	FFBH-3	Z	.003	.003	0	%100
45	FFTH-1	Z	.003	.003	0	%100
46	FFTH-2	Z	.005	.005	0	%100
47	FFTH-3	Z	.003	.003	0	%100
48	SA-R	Z	.004	.004	0	%100
49	SF2-BH	Z	.000152	.000152	0	%100
50	SF2-TH	Z	.000152	.000152	0	%100
51	SF3-BH	Z	.004	.004	0	%100
52	SF3-TH	Z	.004	.004	0	%100
53	MP1	Z	.005	.005	0	%100
54	MP2	Z	.005	.005	0	%100
55	MP3	Z	.005	.005	0	%100
56	MP4	Z	.005	.005	0	%100
57	RRHMP2	Z	.005	.005	0	%100
58	RRHMP1	Z	.005	.005	0	%100

**Member Distributed Loads (BLC 17 : 330 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-0.02	-0.02	0	%100
2	SF2-D1-X	X	-0.02	-0.02	0	%100
3	SF3-D1	X	-0.02	-0.02	0	%100
4	SF3-D1-X	X	-0.02	-0.02	0	%100
5	SF2-V1	X	-0.02	-0.02	0	%100
6	SF2-V2	X	-0.02	-0.02	0	%100
7	SF3-V1	X	-0.02	-0.02	0	%100
8	SF3-V2	X	-0.02	-0.02	0	%100
9	SF2-CPB	X	-0.00684	-0.00684	0	%100
10	SF2-CPT	X	-0.00684	-0.00684	0	%100
11	SF3-CPB	X	-0.001	-0.001	0	%100
12	SF3-CPT	X	-0.001	-0.001	0	%100
13	FFBH-1	X	-0.007	-0.007	0	%100
14	FFBH-2	X	-0.007	-0.007	0	%100
15	FFBH-3	X	-0.007	-0.007	0	%100
16	FFTH-1	X	-0.007	-0.007	0	%100
17	FFTH-2	X	-0.007	-0.007	0	%100
18	FFTH-3	X	-0.007	-0.007	0	%100
19	SA-R	X	-0.02	-0.02	0	%100



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**Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
20	SF2-D1	X	-0.01	-0.01	0	%100
21	SF2-TH	X	-0.01	-0.01	0	%100
22	SF3-BH	X	-0.04	-0.04	0	%100
23	SF3-TH	X	-0.04	-0.04	0	%100
24	MP1	X	-0.06	-0.06	0	%100
25	MP2	X	-0.06	-0.06	0	%100
26	MP3	X	-0.06	-0.06	0	%100
27	MP4	X	-0.06	-0.06	0	%100
28	RRHMP2	X	-0.06	-0.06	0	%100
29	RRHMP1	X	-0.06	-0.06	0	%100
30	SF2-D1	Z	.001	.001	0	%100
31	SF2-D1-X	Z	.001	.001	0	%100
32	SF3-D1	Z	.001	.001	0	%100
33	SF3-D1-X	Z	.001	.001	0	%100
34	SF2-V1	Z	.000979	.000979	0	%100
35	SF2-V2	Z	.000979	.000979	0	%100
36	SF3-V1	Z	.000979	.000979	0	%100
37	SF3-V2	Z	.000979	.000979	0	%100
38	SF2-CPB	Z	.000464	.000464	0	%100
39	SF2-CPT	Z	.000464	.000464	0	%100
40	SF3-CPB	Z	.00068	.00068	0	%100
41	SF3-CPT	Z	.00068	.00068	0	%100
42	FFBH-1	Z	.002	.002	0	%100
43	FFBH-2	Z	.004	.004	0	%100
44	FFBH-3	Z	.002	.002	0	%100
45	FFTH-1	Z	.002	.002	0	%100
46	FFTH-2	Z	.004	.004	0	%100
47	FFTH-3	Z	.002	.002	0	%100
48	SA-R	Z	.002	.002	0	%100
49	SF2-BH	Z	.000773	.000773	0	%100
50	SF2-TH	Z	.000773	.000773	0	%100
51	SF3-BH	Z	.003	.003	0	%100
52	SF3-TH	Z	.003	.003	0	%100
53	MP1	Z	.004	.004	0	%100
54	MP2	Z	.004	.004	0	%100
55	MP3	Z	.004	.004	0	%100
56	MP4	Z	.004	.004	0	%100
57	RRHMP2	Z	.004	.004	0	%100
58	RRHMP1	Z	.004	.004	0	%100

**Member Distributed Loads (BLC 18 : Ice Weight)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	Y	-0.06	-0.06	0	%100
2	SF2-D1-X	Y	-0.06	-0.06	0	%100
3	SF3-D1	Y	-0.06	-0.06	0	%100
4	SF3-D1-X	Y	-0.06	-0.06	0	%100
5	SF2-V1	Y	-0.05	-0.05	0	%100
6	SF2-V2	Y	-0.05	-0.05	0	%100
7	SF3-V1	Y	-0.05	-0.05	0	%100
8	SF3-V2	Y	-0.05	-0.05	0	%100
9	SF2-CPB	Y	-0.1	-0.1	0	%100
10	SF2-CPT	Y	-0.1	-0.1	0	%100
11	SF3-CPB	Y	-0.1	-0.1	0	%100
12	SF3-CPT	Y	-0.1	-0.1	0	%100
13	FFBH-1	Y	-0.1	-0.1	0	%100
14	FFBH-2	Y	-0.1	-0.1	0	%100





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**Member Distributed Loads (BLC 18 : Ice Weight) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
15	FFBH-3	Y	-01	-01	0	%100
16	FFTH-1	Y	-01	-01	0	%100
17	FFTH-2	Y	-01	-01	0	%100
18	FFTH-3	Y	-01	-01	0	%100
19	SA-R	Y	-009	-009	0	%100
20	SF2-BH	Y	-009	-009	0	%100
21	SF2-TH	Y	-009	-009	0	%100
22	SF3-BH	Y	-009	-009	0	%100
23	SF3-TH	Y	-009	-009	0	%100
24	MP1	Y	-009	-009	0	%100
25	MP2	Y	-009	-009	0	%100
26	MP3	Y	-009	-009	0	%100
27	MP4	Y	-009	-009	0	%100
28	RRHMP2	Y	-009	-009	0	%100
29	RRHMP1	Y	-009	-009	0	%100

**Member Distributed Loads (BLC 19 : 0 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-002	-002	0	%100
2	SF2-D1-X	X	-002	-002	0	%100
3	SF3-D1	X	-002	-002	0	%100
4	SF3-D1-X	X	-002	-002	0	%100
5	SF2-V1	X	-002	-002	0	%100
6	SF2-V2	X	-002	-002	0	%100
7	SF3-V1	X	-002	-002	0	%100
8	SF3-V2	X	-002	-002	0	%100
9	SF2-CPB	X	-004	-004	0	%100
10	SF2-CPT	X	-004	-004	0	%100
11	SF3-CPB	X	-004	-004	0	%100
12	SF3-CPT	X	-004	-004	0	%100
13	FFBH-1	X	-004	-004	0	%100
14	FFBH-2	X	-004	-004	0	%100
15	FFBH-3	X	-004	-004	0	%100
16	FFTH-1	X	-004	-004	0	%100
17	FFTH-2	X	-004	-004	0	%100
18	FFTH-3	X	-004	-004	0	%100
19	SA-R	X	-002	-002	0	%100
20	SF2-BH	X	-002	-002	0	%100
21	SF2-TH	X	-002	-002	0	%100
22	SF3-BH	X	-002	-002	0	%100
23	SF3-TH	X	-002	-002	0	%100
24	MP1	X	-003	-003	0	%100
25	MP2	X	-003	-003	0	%100
26	MP3	X	-003	-003	0	%100
27	MP4	X	-003	-003	0	%100
28	RRHMP2	X	-002	-002	0	%100
29	RRHMP1	X	-002	-002	0	%100

**Member Distributed Loads (BLC 20 : 30 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-002	-002	0	%100
2	SF2-D1-X	X	-002	-002	0	%100
3	SF3-D1	X	-002	-002	0	%100
4	SF3-D1-X	X	-002	-002	0	%100
5	SF2-V1	X	-001	-001	0	%100
6	SF2-V2	X	-001	-001	0	%100



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**Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
7	SF3-V1	X	-001	-001	0	%100
8	SF3-V2	X	-001	-001	0	%100
9	SF2-CPB	X	-002	-002	0	%100
10	SF2-CPT	X	-002	-002	0	%100
11	SF3-CPB	X	-001	-001	0	%100
12	SF3-CPT	X	-001	-001	0	%100
13	FFBH-1	X	-003	-003	0	%100
14	FFBH-2	X	-003	-003	0	%100
15	FFBH-3	X	-003	-003	0	%100
16	FFTH-1	X	-003	-003	0	%100
17	FFTH-2	X	-003	-003	0	%100
18	FFTH-3	X	-003	-003	0	%100
19	SA-R	X	-000865	-000865	0	%100
20	SF2-BH	X	-002	-002	0	%100
21	SF2-TH	X	-002	-002	0	%100
22	SF3-BH	X	-00058	-00058	0	%100
23	SF3-TH	X	-00058	-00058	0	%100
24	MP1	X	-002	-002	0	%100
25	MP2	X	-002	-002	0	%100
26	MP3	X	-002	-002	0	%100
27	MP4	X	-002	-002	0	%100
28	RRHMP2	X	-002	-002	0	%100
29	RRHMP1	X	-002	-002	0	%100
30	SF2-D1	Z	-000989	-000989	0	%100
31	SF2-D1-X	Z	-000989	-000989	0	%100
32	SF3-D1	Z	-000989	-000989	0	%100
33	SF3-D1-X	Z	-000989	-000989	0	%100
34	SF2-V1	Z	-000908	-000908	0	%100
35	SF2-V2	Z	-000908	-000908	0	%100
36	SF3-V1	Z	-000908	-000908	0	%100
37	SF3-V2	Z	-000908	-000908	0	%100
38	SF2-CPB	Z	-001	-001	0	%100
39	SF2-CPT	Z	-001	-001	0	%100
40	SF3-CPB	Z	-000798	-000798	0	%100
41	SF3-CPT	Z	-000798	-000798	0	%100
42	FFBH-1	Z	-000911	-000911	0	%100
43	FFBH-2	Z	-001	-001	0	%100
44	FFBH-3	Z	-000911	-000911	0	%100
45	FFTH-1	Z	-000911	-000911	0	%100
46	FFTH-2	Z	-001	-001	0	%100
47	FFTH-3	Z	-000911	-000911	0	%100
48	SA-R	Z	-000652	-000652	0	%100
49	SF2-BH	Z	-001	-001	0	%100
50	SF2-TH	Z	-001	-001	0	%100
51	SF3-BH	Z	-000332	-000332	0	%100
52	SF3-TH	Z	-000332	-000332	0	%100
53	MP1	Z	-002	-002	0	%100
54	MP2	Z	-002	-002	0	%100
55	MP3	Z	-002	-002	0	%100
56	MP4	Z	-002	-002	0	%100
57	RRHMP2	Z	-001	-001	0	%100
58	RRHMP1	Z	-001	-001	0	%100

**Member Distributed Loads (BLC 21 : 45 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-001	-001	0	%100



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**Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft....]	Start Location[ft.%]	End Location[ft.%]	
2	SF2-D1-X	X	-0.001	-0.001	0	%100
3	SF3-D1	X	-0.001	-0.001	0	%100
4	SF3-D1-X	X	-0.001	-0.001	0	%100
5	SF2-V1	X	-0.001	-0.001	0	%100
6	SF2-V2	X	-0.001	-0.001	0	%100
7	SF3-V1	X	-0.001	-0.001	0	%100
8	SF3-V2	X	-0.001	-0.001	0	%100
9	SF2-CPB	X	-0.002	-0.002	0	%100
10	SF2-CPT	X	-0.002	-0.002	0	%100
11	SF3-CPB	X	-0.002	-0.002	0	%100
12	SF3-CPT	X	-0.002	-0.002	0	%100
13	FFBH-1	X	-0.002	-0.002	0	%100
14	FFBH-2	X	-0.002	-0.002	0	%100
15	FFBH-3	X	-0.002	-0.002	0	%100
16	FFTH-1	X	-0.002	-0.002	0	%100
17	FFTH-2	X	-0.002	-0.002	0	%100
18	FFTH-3	X	-0.002	-0.002	0	%100
19	SA-R	X	-0.000998	-0.000998	0	%100
20	SF2-BH	X	-0.002	-0.002	0	%100
21	SF2-TH	X	-0.002	-0.002	0	%100
22	SF3-BH	X	-6.6e-5	-6.6e-5	0	%100
23	SF3-TH	X	-6.6e-5	-6.6e-5	0	%100
24	MP1	X	-0.002	-0.002	0	%100
25	MP2	X	-0.002	-0.002	0	%100
26	MP3	X	-0.002	-0.002	0	%100
27	MP4	X	-0.002	-0.002	0	%100
28	RRHMP2	X	-0.002	-0.002	0	%100
29	RRHMP1	X	-0.002	-0.002	0	%100
30	SF2-D1	Z	-0.001	-0.001	0	%100
31	SF2-D1-X	Z	-0.001	-0.001	0	%100
32	SF3-D1	Z	-0.001	-0.001	0	%100
33	SF3-D1-X	Z	-0.001	-0.001	0	%100
34	SF2-V1	Z	-0.001	-0.001	0	%100
35	SF2-V2	Z	-0.001	-0.001	0	%100
36	SF3-V1	Z	-0.001	-0.001	0	%100
37	SF3-V2	Z	-0.001	-0.001	0	%100
38	SF2-CPB	Z	-0.002	-0.002	0	%100
39	SF2-CPT	Z	-0.002	-0.002	0	%100
40	SF3-CPB	Z	-0.002	-0.002	0	%100
41	SF3-CPT	Z	-0.002	-0.002	0	%100
42	FFBH-1	Z	-0.001	-0.001	0	%100
43	FFBH-2	Z	-0.002	-0.002	0	%100
44	FFBH-3	Z	-0.001	-0.001	0	%100
45	FFTH-1	Z	-0.001	-0.001	0	%100
46	FFTH-2	Z	-0.002	-0.002	0	%100
47	FFTH-3	Z	-0.001	-0.001	0	%100
48	SA-R	Z	-0.001	-0.001	0	%100
49	SF2-BH	Z	-0.002	-0.002	0	%100
50	SF2-TH	Z	-0.002	-0.002	0	%100
51	SF3-BH	Z	-6.5e-5	-6.5e-5	0	%100
52	SF3-TH	Z	-6.5e-5	-6.5e-5	0	%100
53	MP1	Z	-0.002	-0.002	0	%100
54	MP2	Z	-0.002	-0.002	0	%100
55	MP3	Z	-0.002	-0.002	0	%100
56	MP4	Z	-0.002	-0.002	0	%100
57	RRHMP2	Z	-0.002	-0.002	0	%100
58	RRHMP1	Z	-0.002	-0.002	0	%100



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**Member Distributed Loads (BLC 22 : 60 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-0.00089	-0.00089	0	%100
2	SF2-D1-X	X	-0.00089	-0.00089	0	%100
3	SF3-D1	X	-0.00089	-0.00089	0	%100
4	SF3-D1-X	X	-0.00089	-0.00089	0	%100
5	SF2-V1	X	-0.000817	-0.000817	0	%100
6	SF2-V2	X	-0.000817	-0.000817	0	%100
7	SF3-V1	X	-0.000817	-0.000817	0	%100
8	SF3-V2	X	-0.000817	-0.000817	0	%100
9	SF2-CPB	X	-0.002	-0.002	0	%100
10	SF2-CPT	X	-0.002	-0.002	0	%100
11	SF3-CPB	X	-0.002	-0.002	0	%100
12	SF3-CPT	X	-0.002	-0.002	0	%100
13	FFBH-1	X	-0.000902	-0.000902	0	%100
14	FFBH-2	X	-0.000902	-0.000902	0	%100
15	FFBH-3	X	-0.000902	-0.000902	0	%100
16	FFTH-1	X	-0.000902	-0.000902	0	%100
17	FFTH-2	X	-0.000902	-0.000902	0	%100
18	FFTH-3	X	-0.000902	-0.000902	0	%100
19	SA-R	X	-0.000865	-0.000865	0	%100
20	SF2-BH	X	-0.001	-0.001	0	%100
21	SF2-TH	X	-0.001	-0.001	0	%100
22	SF3-BH	X	-0.000245	-0.000245	0	%100
23	SF3-TH	X	-0.000245	-0.000245	0	%100
24	MP1	X	-0.001	-0.001	0	%100
25	MP2	X	-0.001	-0.001	0	%100
26	MP3	X	-0.001	-0.001	0	%100
27	MP4	X	-0.001	-0.001	0	%100
28	RRHMP2	X	-0.001	-0.001	0	%100
29	RRHMP1	X	-0.001	-0.001	0	%100
30	SF2-D1	Z	-0.002	-0.002	0	%100
31	SF2-D1-X	Z	-0.002	-0.002	0	%100
32	SF3-D1	Z	-0.002	-0.002	0	%100
33	SF3-D1-X	Z	-0.002	-0.002	0	%100
34	SF2-V1	Z	-0.002	-0.002	0	%100
35	SF2-V2	Z	-0.002	-0.002	0	%100
36	SF3-V1	Z	-0.002	-0.002	0	%100
37	SF3-V2	Z	-0.002	-0.002	0	%100
38	SF2-CPB	Z	-0.003	-0.003	0	%100
39	SF2-CPT	Z	-0.003	-0.003	0	%100
40	SF3-CPB	Z	-0.003	-0.003	0	%100
41	SF3-CPT	Z	-0.003	-0.003	0	%100
42	FFBH-1	Z	-0.000911	-0.000911	0	%100
43	FFBH-2	Z	-0.001	-0.001	0	%100
44	FFBH-3	Z	-0.000911	-0.000911	0	%100
45	FFTH-1	Z	-0.000911	-0.000911	0	%100
46	FFTH-2	Z	-0.001	-0.001	0	%100
47	FFTH-3	Z	-0.000911	-0.000911	0	%100
48	SA-R	Z	-0.002	-0.002	0	%100
49	SF2-BH	Z	-0.002	-0.002	0	%100
50	SF2-TH	Z	-0.002	-0.002	0	%100
51	SF3-BH	Z	-0.000421	-0.000421	0	%100
52	SF3-TH	Z	-0.000421	-0.000421	0	%100
53	MP1	Z	-0.003	-0.003	0	%100
54	MP2	Z	-0.003	-0.003	0	%100
55	MP3	Z	-0.003	-0.003	0	%100
56	MP4	Z	-0.003	-0.003	0	%100
57	RRHMP2	Z	-0.002	-0.002	0	%100



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**Member Distributed Loads (BLC 22 : 60 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
58	RRHMP1	Z	-0.02	0	%100

**Member Distributed Loads (BLC 23 : 90 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1	SF2-D1	Z	-0.02	0	%100
2	SF2-D1-X	Z	-0.02	0	%100
3	SF3-D1	Z	-0.02	0	%100
4	SF3-D1-X	Z	-0.02	0	%100
5	SF2-V1	Z	-0.02	0	%100
6	SF2-V2	Z	-0.02	0	%100
7	SF3-V1	Z	-0.02	0	%100
8	SF3-V2	Z	-0.02	0	%100
9	SF2-CPB	Z	-0.04	0	%100
10	SF2-CPT	Z	-0.04	0	%100
11	SF3-CPB	Z	-0.04	0	%100
12	SF3-CPT	Z	-0.04	0	%100
13	FFBH-1	Z	0	0	%100
14	FFBH-2	Z	0	0	%100
15	FFBH-3	Z	0	0	%100
16	FFTH-1	Z	0	0	%100
17	FFTH-2	Z	0	0	%100
18	FFTH-3	Z	0	0	%100
19	SA-R	Z	-0.03	0	%100
20	SF2-BH	Z	-0.02	0	%100
21	SF2-TH	Z	-0.02	0	%100
22	SF3-BH	Z	-0.02	0	%100
23	SF3-TH	Z	-0.02	0	%100
24	MP1	Z	-0.03	0	%100
25	MP2	Z	-0.03	0	%100
26	MP3	Z	-0.03	0	%100
27	MP4	Z	-0.03	0	%100
28	RRHMP2	Z	-0.03	0	%100
29	RRHMP1	Z	-0.03	0	%100

**Member Distributed Loads (BLC 24 : 120 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1	SF2-D1	X	.00089	0	%100
2	SF2-D1-X	X	.00089	0	%100
3	SF3-D1	X	.00089	0	%100
4	SF3-D1-X	X	.00089	0	%100
5	SF2-V1	X	.000817	0	%100
6	SF2-V2	X	.000817	0	%100
7	SF3-V1	X	.000817	0	%100
8	SF3-V2	X	.000817	0	%100
9	SF2-CPB	X	.002	0	%100
10	SF2-CPT	X	.002	0	%100
11	SF3-CPB	X	.002	0	%100
12	SF3-CPT	X	.002	0	%100
13	FFBH-1	X	.000902	0	%100
14	FFBH-2	X	.000902	0	%100
15	FFBH-3	X	.000902	0	%100
16	FFTH-1	X	.000902	0	%100
17	FFTH-2	X	.000902	0	%100
18	FFTH-3	X	.000902	0	%100
19	SA-R	X	.000865	0	%100
20	SF2-BH	X	.000245	0	%100



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**Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
21	SF2-TH	X	.000245	0	%100
22	SF3-BH	X	.001	0	%100
23	SF3-TH	X	.001	0	%100
24	MP1	X	.001	0	%100
25	MP2	X	.001	0	%100
26	MP3	X	.001	0	%100
27	MP4	X	.001	0	%100
28	RRHMP2	X	.001	0	%100
29	RRHMP1	X	.001	0	%100
30	SF2-D1	Z	-0.02	0	%100
31	SF2-D1-X	Z	-0.02	0	%100
32	SF3-D1	Z	-0.02	0	%100
33	SF3-D1-X	Z	-0.02	0	%100
34	SF2-V1	Z	-0.02	0	%100
35	SF2-V2	Z	-0.02	0	%100
36	SF3-V1	Z	-0.02	0	%100
37	SF3-V2	Z	-0.02	0	%100
38	SF2-CPB	Z	-0.03	0	%100
39	SF2-CPT	Z	-0.03	0	%100
40	SF3-CPB	Z	-0.03	0	%100
41	SF3-CPT	Z	-0.03	0	%100
42	FFBH-1	Z	-0.00911	0	%100
43	FFBH-2	Z	-0.01	0	%100
44	FFBH-3	Z	-0.00911	0	%100
45	FFTH-1	Z	-0.00911	0	%100
46	FFTH-2	Z	-0.01	0	%100
47	FFTH-3	Z	-0.00911	0	%100
48	SA-R	Z	-0.02	0	%100
49	SF2-BH	Z	-0.00421	0	%100
50	SF2-TH	Z	-0.00421	0	%100
51	SF3-BH	Z	-0.02	0	%100
52	SF3-TH	Z	-0.02	0	%100
53	MP1	Z	-0.03	0	%100
54	MP2	Z	-0.03	0	%100
55	MP3	Z	-0.03	0	%100
56	MP4	Z	-0.03	0	%100
57	RRHMP2	Z	-0.02	0	%100
58	RRHMP1	Z	-0.02	0	%100

**Member Distributed Loads (BLC 25 : 135 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1	SF2-D1	X	.001	0	%100
2	SF2-D1-X	X	.001	0	%100
3	SF3-D1	X	.001	0	%100
4	SF3-D1-X	X	.001	0	%100
5	SF2-V1	X	.001	0	%100
6	SF2-V2	X	.001	0	%100
7	SF3-V1	X	.001	0	%100
8	SF3-V2	X	.001	0	%100
9	SF2-CPB	X	.002	0	%100
10	SF2-CPT	X	.002	0	%100
11	SF3-CPB	X	.002	0	%100
12	SF3-CPT	X	.002	0	%100
13	FFBH-1	X	.002	0	%100
14	FFBH-2	X	.002	0	%100
15	FFBH-3	X	.002	0	%100



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**Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
16	FFTH-1	X	.002	.002	0 %100
17	FFTH-2	X	.002	.002	0 %100
18	FFTH-3	X	.002	.002	0 %100
19	SA-R	X	.000998	.000998	0 %100
20	SF2-BH	X	6.6e-5	6.6e-5	0 %100
21	SF2-TH	X	6.6e-5	6.6e-5	0 %100
22	SF3-BH	X	.002	.002	0 %100
23	SF3-TH	X	.002	.002	0 %100
24	MP1	X	.002	.002	0 %100
25	MP2	X	.002	.002	0 %100
26	MP3	X	.002	.002	0 %100
27	MP4	X	.002	.002	0 %100
28	RRHMP2	X	.002	.002	0 %100
29	RRHMP1	X	.002	.002	0 %100
30	SF2-D1	Z	-.001	-.001	0 %100
31	SF2-D1-X	Z	-.001	-.001	0 %100
32	SF3-D1	Z	-.001	-.001	0 %100
33	SF3-D1-X	Z	-.001	-.001	0 %100
34	SF2-V1	Z	-.001	-.001	0 %100
35	SF2-V2	Z	-.001	-.001	0 %100
36	SF3-V1	Z	-.001	-.001	0 %100
37	SF3-V2	Z	-.001	-.001	0 %100
38	SF2-CPB	Z	-.002	-.002	0 %100
39	SF2-CPT	Z	-.002	-.002	0 %100
40	SF3-CPB	Z	-.002	-.002	0 %100
41	SF3-CPT	Z	-.002	-.002	0 %100
42	FFBH-1	Z	-.001	-.001	0 %100
43	FFBH-2	Z	-.002	-.002	0 %100
44	FFBH-3	Z	-.001	-.001	0 %100
45	FFTH-1	Z	-.001	-.001	0 %100
46	FFTH-2	Z	-.002	-.002	0 %100
47	FFTH-3	Z	-.001	-.001	0 %100
48	SA-R	Z	-.001	-.001	0 %100
49	SF2-BH	Z	-6.5e-5	-6.5e-5	0 %100
50	SF2-TH	Z	-6.5e-5	-6.5e-5	0 %100
51	SF3-BH	Z	-.002	-.002	0 %100
52	SF3-TH	Z	-.002	-.002	0 %100
53	MP1	Z	-.002	-.002	0 %100
54	MP2	Z	-.002	-.002	0 %100
55	MP3	Z	-.002	-.002	0 %100
56	MP4	Z	-.002	-.002	0 %100
57	RRHMP2	Z	-.002	-.002	0 %100
58	RRHMP1	Z	-.002	-.002	0 %100

**Member Distributed Loads (BLC 26 : 150 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1	SF2-D1	X	.002	.002	0 %100
2	SF2-D1-X	X	.002	.002	0 %100
3	SF3-D1	X	.002	.002	0 %100
4	SF3-D1-X	X	.002	.002	0 %100
5	SF2-V1	X	.001	.001	0 %100
6	SF2-V2	X	.001	.001	0 %100
7	SF3-V1	X	.001	.001	0 %100
8	SF3-V2	X	.001	.001	0 %100
9	SF2-CPB	X	.001	.001	0 %100
10	SF2-CPT	X	.001	.001	0 %100



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 Designer : SMA  
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 Model Name : Newington (CT1145)

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**Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
11	SF3-CPB	X	.002	.002	0 %100
12	SF3-CPT	X	.002	.002	0 %100
13	FFBH-1	X	.003	.003	0 %100
14	FFBH-2	X	.003	.003	0 %100
15	FFBH-3	X	.003	.003	0 %100
16	FFTH-1	X	.003	.003	0 %100
17	FFTH-2	X	.003	.003	0 %100
18	FFTH-3	X	.003	.003	0 %100
19	SA-R	X	.000865	.000865	0 %100
20	SF2-BH	X	.00058	.00058	0 %100
21	SF2-TH	X	.00058	.00058	0 %100
22	SF3-BH	X	.002	.002	0 %100
23	SF3-TH	X	.002	.002	0 %100
24	MP1	X	.002	.002	0 %100
25	MP2	X	.002	.002	0 %100
26	MP3	X	.002	.002	0 %100
27	MP4	X	.002	.002	0 %100
28	RRHMP2	X	.002	.002	0 %100
29	RRHMP1	X	.002	.002	0 %100
30	SF2-D1	Z	-.000989	-.000989	0 %100
31	SF2-D1-X	Z	-.000989	-.000989	0 %100
32	SF3-D1	Z	-.000989	-.000989	0 %100
33	SF3-D1-X	Z	-.000989	-.000989	0 %100
34	SF2-V1	Z	-.000908	-.000908	0 %100
35	SF2-V2	Z	-.000908	-.000908	0 %100
36	SF3-V1	Z	-.000908	-.000908	0 %100
37	SF3-V2	Z	-.000908	-.000908	0 %100
38	SF2-CPB	Z	-.000798	-.000798	0 %100
39	SF2-CPT	Z	-.000798	-.000798	0 %100
40	SF3-CPB	Z	-.001	-.001	0 %100
41	SF3-CPT	Z	-.001	-.001	0 %100
42	FFBH-1	Z	-.000911	-.000911	0 %100
43	FFBH-2	Z	-.001	-.001	0 %100
44	FFBH-3	Z	-.000911	-.000911	0 %100
45	FFTH-1	Z	-.000911	-.000911	0 %100
46	FFTH-2	Z	-.001	-.001	0 %100
47	FFTH-3	Z	-.000911	-.000911	0 %100
48	SA-R	Z	-.000652	-.000652	0 %100
49	SF2-BH	Z	-.000332	-.000332	0 %100
50	SF2-TH	Z	-.000332	-.000332	0 %100
51	SF3-BH	Z	-.001	-.001	0 %100
52	SF3-TH	Z	-.001	-.001	0 %100
53	MP1	Z	-.002	-.002	0 %100
54	MP2	Z	-.002	-.002	0 %100
55	MP3	Z	-.002	-.002	0 %100
56	MP4	Z	-.002	-.002	0 %100
57	RRHMP2	Z	-.001	-.001	0 %100
58	RRHMP1	Z	-.001	-.001	0 %100

**Member Distributed Loads (BLC 27 : 180 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
1	SF2-D1	X	.002	.002	0 %100
2	SF2-D1-X	X	.002	.002	0 %100
3	SF3-D1	X	.002	.002	0 %100
4	SF3-D1-X	X	.002	.002	0 %100
5	SF2-V1	X	.002	.002	0 %100



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**Member Distributed Loads (BLC 27 : 180 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
6	SF2-V2	X	.002	.002	0	%100
7	SF3-V1	X	.002	.002	0	%100
8	SF3-V2	X	.002	.002	0	%100
9	SF2-CPB	X	.004	.004	0	%100
10	SF2-CPT	X	.004	.004	0	%100
11	SF3-CPB	X	.004	.004	0	%100
12	SF3-CPT	X	.004	.004	0	%100
13	FFBH-1	X	.004	.004	0	%100
14	FFBH-2	X	.004	.004	0	%100
15	FFBH-3	X	.004	.004	0	%100
16	FFTH-1	X	.004	.004	0	%100
17	FFTH-2	X	.004	.004	0	%100
18	FFTH-3	X	.004	.004	0	%100
19	SA-R	X	.002	.002	0	%100
20	SF2-BH	X	.002	.002	0	%100
21	SF2-TH	X	.002	.002	0	%100
22	SF3-BH	X	.002	.002	0	%100
23	SF3-TH	X	.002	.002	0	%100
24	MP1	X	.003	.003	0	%100
25	MP2	X	.003	.003	0	%100
26	MP3	X	.003	.003	0	%100
27	MP4	X	.003	.003	0	%100
28	RRHMP2	X	.002	.002	0	%100
29	RRHMP1	X	.002	.002	0	%100

**Member Distributed Loads (BLC 28 : 210 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.002	.002	0	%100
2	SF2-D1-X	X	.002	.002	0	%100
3	SF3-D1	X	.002	.002	0	%100
4	SF3-D1-X	X	.002	.002	0	%100
5	SF2-V1	X	.001	.001	0	%100
6	SF2-V2	X	.001	.001	0	%100
7	SF3-V1	X	.001	.001	0	%100
8	SF3-V2	X	.001	.001	0	%100
9	SF2-CPB	X	.002	.002	0	%100
10	SF2-CPT	X	.002	.002	0	%100
11	SF3-CPB	X	.001	.001	0	%100
12	SF3-CPT	X	.001	.001	0	%100
13	FFBH-1	X	.003	.003	0	%100
14	FFBH-2	X	.003	.003	0	%100
15	FFBH-3	X	.003	.003	0	%100
16	FFTH-1	X	.003	.003	0	%100
17	FFTH-2	X	.003	.003	0	%100
18	FFTH-3	X	.003	.003	0	%100
19	SA-R	X	.000865	.000865	0	%100
20	SF2-BH	X	.002	.002	0	%100
21	SF2-TH	X	.002	.002	0	%100
22	SF3-BH	X	.00058	.00058	0	%100
23	SF3-TH	X	.00058	.00058	0	%100
24	MP1	X	.002	.002	0	%100
25	MP2	X	.002	.002	0	%100
26	MP3	X	.002	.002	0	%100
27	MP4	X	.002	.002	0	%100
28	RRHMP2	X	.002	.002	0	%100
29	RRHMP1	X	.002	.002	0	%100



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**Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
30	SF2-D1	Z	.000989	.000989	0	%100
31	SF2-D1-X	Z	.000989	.000989	0	%100
32	SF3-D1	Z	.000989	.000989	0	%100
33	SF3-D1-X	Z	.000989	.000989	0	%100
34	SF2-V1	Z	.000908	.000908	0	%100
35	SF2-V2	Z	.000908	.000908	0	%100
36	SF3-V1	Z	.000908	.000908	0	%100
37	SF3-V2	Z	.000908	.000908	0	%100
38	SF2-CPB	Z	.001	.001	0	%100
39	SF2-CPT	Z	.001	.001	0	%100
40	SF3-CPB	Z	.000798	.000798	0	%100
41	SF3-CPT	Z	.000798	.000798	0	%100
42	FFBH-1	Z	.000911	.000911	0	%100
43	FFBH-2	Z	.001	.001	0	%100
44	FFBH-3	Z	.000911	.000911	0	%100
45	FFTH-1	Z	.000911	.000911	0	%100
46	FFTH-2	Z	.001	.001	0	%100
47	FFTH-3	Z	.000911	.000911	0	%100
48	SA-R	Z	.000652	.000652	0	%100
49	SF2-BH	Z	.001	.001	0	%100
50	SF2-TH	Z	.001	.001	0	%100
51	SF3-BH	Z	.000332	.000332	0	%100
52	SF3-TH	Z	.000332	.000332	0	%100
53	MP1	Z	.002	.002	0	%100
54	MP2	Z	.002	.002	0	%100
55	MP3	Z	.002	.002	0	%100
56	MP4	Z	.002	.002	0	%100
57	RRHMP2	Z	.001	.001	0	%100
58	RRHMP1	Z	.001	.001	0	%100

**Member Distributed Loads (BLC 29 : 225 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.001	.001	0	%100
2	SF2-D1-X	X	.001	.001	0	%100
3	SF3-D1	X	.001	.001	0	%100
4	SF3-D1-X	X	.001	.001	0	%100
5	SF2-V1	X	.001	.001	0	%100
6	SF2-V2	X	.001	.001	0	%100
7	SF3-V1	X	.001	.001	0	%100
8	SF3-V2	X	.001	.001	0	%100
9	SF2-CPB	X	.002	.002	0	%100
10	SF2-CPT	X	.002	.002	0	%100
11	SF3-CPB	X	.002	.002	0	%100
12	SF3-CPT	X	.002	.002	0	%100
13	FFBH-1	X	.002	.002	0	%100
14	FFBH-2	X	.002	.002	0	%100
15	FFBH-3	X	.002	.002	0	%100
16	FFTH-1	X	.002	.002	0	%100
17	FFTH-2	X	.002	.002	0	%100
18	FFTH-3	X	.002	.002	0	%100
19	SA-R	X	.000998	.000998	0	%100
20	SF2-BH	X	.002	.002	0	%100
21	SF2-TH	X	.002	.002	0	%100
22	SF3-BH	X	6.6e-5	6.6e-5	0	%100
23	SF3-TH	X	6.6e-5	6.6e-5	0	%100
24	MP1	X	.002	.002	0	%100



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 Designer : SMA  
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**Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
25	MP2	X	.002	.002	0	%100
26	MP3	X	.002	.002	0	%100
27	MP4	X	.002	.002	0	%100
28	RRHMP2	X	.002	.002	0	%100
29	RRHMP1	X	.002	.002	0	%100
30	SF2-D1	Z	.001	.001	0	%100
31	SF2-D1-X	Z	.001	.001	0	%100
32	SF3-D1	Z	.001	.001	0	%100
33	SF3-D1-X	Z	.001	.001	0	%100
34	SF2-V1	Z	.001	.001	0	%100
35	SF2-V2	Z	.001	.001	0	%100
36	SF3-V1	Z	.001	.001	0	%100
37	SF3-V2	Z	.001	.001	0	%100
38	SF2-CPB	Z	.002	.002	0	%100
39	SF2-CPT	Z	.002	.002	0	%100
40	SF3-CPB	Z	.002	.002	0	%100
41	SF3-CPT	Z	.002	.002	0	%100
42	FFBH-1	Z	.001	.001	0	%100
43	FFBH-2	Z	.002	.002	0	%100
44	FFBH-3	Z	.001	.001	0	%100
45	FFTH-1	Z	.001	.001	0	%100
46	FFTH-2	Z	.002	.002	0	%100
47	FFTH-3	Z	.001	.001	0	%100
48	SA-R	Z	.001	.001	0	%100
49	SF2-BH	Z	.002	.002	0	%100
50	SF2-TH	Z	.002	.002	0	%100
51	SF3-BH	Z	6.5e-5	6.5e-5	0	%100
52	SF3-TH	Z	6.5e-5	6.5e-5	0	%100
53	MP1	Z	.002	.002	0	%100
54	MP2	Z	.002	.002	0	%100
55	MP3	Z	.002	.002	0	%100
56	MP4	Z	.002	.002	0	%100
57	RRHMP2	Z	.002	.002	0	%100
58	RRHMP1	Z	.002	.002	0	%100

**Member Distributed Loads (BLC 30 : 240 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	.00089	.00089	0	%100
2	SF2-D1-X	X	.00089	.00089	0	%100
3	SF3-D1	X	.00089	.00089	0	%100
4	SF3-D1-X	X	.00089	.00089	0	%100
5	SF2-V1	X	.000817	.000817	0	%100
6	SF2-V2	X	.000817	.000817	0	%100
7	SF3-V1	X	.000817	.000817	0	%100
8	SF3-V2	X	.000817	.000817	0	%100
9	SF2-CPB	X	.002	.002	0	%100
10	SF2-CPT	X	.002	.002	0	%100
11	SF3-CPB	X	.002	.002	0	%100
12	SF3-CPT	X	.002	.002	0	%100
13	FFBH-1	X	.000902	.000902	0	%100
14	FFBH-2	X	.000902	.000902	0	%100
15	FFBH-3	X	.000902	.000902	0	%100
16	FFTH-1	X	.000902	.000902	0	%100
17	FFTH-2	X	.000902	.000902	0	%100
18	FFTH-3	X	.000902	.000902	0	%100
19	SA-R	X	.000865	.000865	0	%100



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 Designer : SMA  
 Job Number : TEP No. 315788.736891  
 Model Name : Newington (CT1145)

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**Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
20	SF2-D1	X	.001	.001	0	%100
21	SF2-TH	X	.001	.001	0	%100
22	SF3-BH	X	.000245	.000245	0	%100
23	SF3-TH	X	.000245	.000245	0	%100
24	MP1	X	.001	.001	0	%100
25	MP2	X	.001	.001	0	%100
26	MP3	X	.001	.001	0	%100
27	MP4	X	.001	.001	0	%100
28	RRHMP2	X	.001	.001	0	%100
29	RRHMP1	X	.001	.001	0	%100
30	SF2-D1	Z	.002	.002	0	%100
31	SF2-D1-X	Z	.002	.002	0	%100
32	SF3-D1	Z	.002	.002	0	%100
33	SF3-D1-X	Z	.002	.002	0	%100
34	SF2-V1	Z	.002	.002	0	%100
35	SF2-V2	Z	.002	.002	0	%100
36	SF3-V1	Z	.002	.002	0	%100
37	SF3-V2	Z	.002	.002	0	%100
38	SF2-CPB	Z	.003	.003	0	%100
39	SF2-CPT	Z	.003	.003	0	%100
40	SF3-CPB	Z	.003	.003	0	%100
41	SF3-CPT	Z	.003	.003	0	%100
42	FFBH-1	Z	.000911	.000911	0	%100
43	FFBH-2	Z	.001	.001	0	%100
44	FFBH-3	Z	.000911	.000911	0	%100
45	FFTH-1	Z	.000911	.000911	0	%100
46	FFTH-2	Z	.001	.001	0	%100
47	FFTH-3	Z	.000911	.000911	0	%100
48	SA-R	Z	.002	.002	0	%100
49	SF2-BH	Z	.002	.002	0	%100
50	SF2-TH	Z	.002	.002	0	%100
51	SF3-BH	Z	.000421	.000421	0	%100
52	SF3-TH	Z	.000421	.000421	0	%100
53	MP1	Z	.003	.003	0	%100
54	MP2	Z	.003	.003	0	%100
55	MP3	Z	.003	.003	0	%100
56	MP4	Z	.003	.003	0	%100
57	RRHMP2	Z	.002	.002	0	%100
58	RRHMP1	Z	.002	.002	0	%100

**Member Distributed Loads (BLC 31 : 270 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	Z	.002	.002	0	%100
2	SF2-D1-X	Z	.002	.002	0	%100
3	SF3-D1	Z	.002	.002	0	%100
4	SF3-D1-X	Z	.002	.002	0	%100
5	SF2-V1	Z	.002	.002	0	%100
6	SF2-V2	Z	.002	.002	0	%100
7	SF3-V1	Z	.002	.002	0	%100
8	SF3-V2	Z	.002	.002	0	%100
9	SF2-CPB	Z	.004	.004	0	%100
10	SF2-CPT	Z	.004	.004	0	%100
11	SF3-CPB	Z	.004	.004	0	%100
12	SF3-CPT	Z	.004	.004	0	%100
13	FFBH-1	Z	0	0	0	%100
14	FFBH-2	Z	0	0	0	%100





Company : Tower Engineering Professionals, Inc.  
 Designer : SMA  
 Job Number : TEP No. 315788.736891  
 Model Name : Newington (CT1145)

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**Member Distributed Loads (BLC 31 : 270 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]
15	FFBH-3	Z	0	0	%100
16	FFTH-1	Z	0	0	%100
17	FFTH-2	Z	0	0	%100
18	FFTH-3	Z	0	0	%100
19	SA-R	Z	.003	.003	%100
20	SF2-BH	Z	.002	.002	%100
21	SF2-TH	Z	.002	.002	%100
22	SF3-BH	Z	.002	.002	%100
23	SF3-TH	Z	.002	.002	%100
24	MP1	Z	.003	.003	%100
25	MP2	Z	.003	.003	%100
26	MP3	Z	.003	.003	%100
27	MP4	Z	.003	.003	%100
28	RRHMP2	Z	.003	.003	%100
29	RRHMP1	Z	.003	.003	%100

**Member Distributed Loads (BLC 32 : 300 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-.00089	-.00089	0	%100
2	SF2-D1-X	X	-.00089	-.00089	0	%100
3	SF3-D1	X	-.00089	-.00089	0	%100
4	SF3-D1-X	X	-.00089	-.00089	0	%100
5	SF2-V1	X	-.000817	-.000817	0	%100
6	SF2-V2	X	-.000817	-.000817	0	%100
7	SF3-V1	X	-.000817	-.000817	0	%100
8	SF3-V2	X	-.000817	-.000817	0	%100
9	SF2-CPB	X	-.002	-.002	0	%100
10	SF2-CPT	X	-.002	-.002	0	%100
11	SF3-CPB	X	-.002	-.002	0	%100
12	SF3-CPT	X	-.002	-.002	0	%100
13	FFBH-1	X	-.000902	-.000902	0	%100
14	FFBH-2	X	-.000902	-.000902	0	%100
15	FFBH-3	X	-.000902	-.000902	0	%100
16	FFTH-1	X	-.000902	-.000902	0	%100
17	FFTH-2	X	-.000902	-.000902	0	%100
18	FFTH-3	X	-.000902	-.000902	0	%100
19	SA-R	X	-.000865	-.000865	0	%100
20	SF2-BH	X	-.000245	-.000245	0	%100
21	SF2-TH	X	-.000245	-.000245	0	%100
22	SF3-BH	X	-.001	-.001	0	%100
23	SF3-TH	X	-.001	-.001	0	%100
24	MP1	X	-.001	-.001	0	%100
25	MP2	X	-.001	-.001	0	%100
26	MP3	X	-.001	-.001	0	%100
27	MP4	X	-.001	-.001	0	%100
28	RRHMP2	X	-.001	-.001	0	%100
29	RRHMP1	X	-.001	-.001	0	%100
30	SF2-D1	Z	.002	.002	0	%100
31	SF2-D1-X	Z	.002	.002	0	%100
32	SF3-D1	Z	.002	.002	0	%100
33	SF3-D1-X	Z	.002	.002	0	%100
34	SF2-V1	Z	.002	.002	0	%100
35	SF2-V2	Z	.002	.002	0	%100
36	SF3-V1	Z	.002	.002	0	%100
37	SF3-V2	Z	.002	.002	0	%100
38	SF2-CPB	Z	.003	.003	0	%100



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 Designer : SMA  
 Job Number : TEP No. 315788.736891  
 Model Name : Newington (CT1145)

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**Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
39	SF2-CPT	Z	.003	.003	0	%100
40	SF3-CPB	Z	.003	.003	0	%100
41	SF3-CPT	Z	.003	.003	0	%100
42	FFBH-1	Z	.000911	.000911	0	%100
43	FFBH-2	Z	.001	.001	0	%100
44	FFBH-3	Z	.000911	.000911	0	%100
45	FFTH-1	Z	.000911	.000911	0	%100
46	FFTH-2	Z	.001	.001	0	%100
47	FFTH-3	Z	.000911	.000911	0	%100
48	SA-R	Z	.002	.002	0	%100
49	SF2-BH	Z	.000421	.000421	0	%100
50	SF2-TH	Z	.000421	.000421	0	%100
51	SF3-BH	Z	.002	.002	0	%100
52	SF3-TH	Z	.002	.002	0	%100
53	MP1	Z	.003	.003	0	%100
54	MP2	Z	.003	.003	0	%100
55	MP3	Z	.003	.003	0	%100
56	MP4	Z	.003	.003	0	%100
57	RRHMP2	Z	.002	.002	0	%100
58	RRHMP1	Z	.002	.002	0	%100

**Member Distributed Loads (BLC 33 : 315 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-.001	-.001	0	%100
2	SF2-D1-X	X	-.001	-.001	0	%100
3	SF3-D1	X	-.001	-.001	0	%100
4	SF3-D1-X	X	-.001	-.001	0	%100
5	SF2-V1	X	-.001	-.001	0	%100
6	SF2-V2	X	-.001	-.001	0	%100
7	SF3-V1	X	-.001	-.001	0	%100
8	SF3-V2	X	-.001	-.001	0	%100
9	SF2-CPB	X	-.002	-.002	0	%100
10	SF2-CPT	X	-.002	-.002	0	%100
11	SF3-CPB	X	-.002	-.002	0	%100
12	SF3-CPT	X	-.002	-.002	0	%100
13	FFBH-1	X	-.002	-.002	0	%100
14	FFBH-2	X	-.002	-.002	0	%100
15	FFBH-3	X	-.002	-.002	0	%100
16	FFTH-1	X	-.002	-.002	0	%100
17	FFTH-2	X	-.002	-.002	0	%100
18	FFTH-3	X	-.002	-.002	0	%100
19	SA-R	X	-.000998	-.000998	0	%100
20	SF2-BH	X	-6.6e-5	-6.6e-5	0	%100
21	SF2-TH	X	-6.6e-5	-6.6e-5	0	%100
22	SF3-BH	X	-.002	-.002	0	%100
23	SF3-TH	X	-.002	-.002	0	%100
24	MP1	X	-.002	-.002	0	%100
25	MP2	X	-.002	-.002	0	%100
26	MP3	X	-.002	-.002	0	%100
27	MP4	X	-.002	-.002	0	%100
28	RRHMP2	X	-.002	-.002	0	%100
29	RRHMP1	X	-.002	-.002	0	%100
30	SF2-D1	Z	.001	.001	0	%100
31	SF2-D1-X	Z	.001	.001	0	%100
32	SF3-D1	Z	.001	.001	0	%100
33	SF3-D1-X	Z	.001	.001	0	%100





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**Member Distributed Loads (BLC 33 : 315 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
34	SF2-V1	Z	.001	.001	0	%100
35	SF2-V2	Z	.001	.001	0	%100
36	SF3-V1	Z	.001	.001	0	%100
37	SF3-V2	Z	.001	.001	0	%100
38	SF2-CPB	Z	.002	.002	0	%100
39	SF2-CPT	Z	.002	.002	0	%100
40	SF3-CPB	Z	.002	.002	0	%100
41	SF3-CPT	Z	.002	.002	0	%100
42	FFBH-1	Z	.001	.001	0	%100
43	FFBH-2	Z	.002	.002	0	%100
44	FFBH-3	Z	.001	.001	0	%100
45	FFTH-1	Z	.001	.001	0	%100
46	FFTH-2	Z	.002	.002	0	%100
47	FFTH-3	Z	.001	.001	0	%100
48	SA-R	Z	.001	.001	0	%100
49	SF2-BH	Z	6.5e-5	6.5e-5	0	%100
50	SF2-TH	Z	6.5e-5	6.5e-5	0	%100
51	SF3-BH	Z	.002	.002	0	%100
52	SF3-TH	Z	.002	.002	0	%100
53	MP1	Z	.002	.002	0	%100
54	MP2	Z	.002	.002	0	%100
55	MP3	Z	.002	.002	0	%100
56	MP4	Z	.002	.002	0	%100
57	RRHMP2	Z	.002	.002	0	%100
58	RRHMP1	Z	.002	.002	0	%100

**Member Distributed Loads (BLC 34 : 330 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
1	SF2-D1	X	-.002	-.002	0	%100
2	SF2-D1-X	X	-.002	-.002	0	%100
3	SF3-D1	X	-.002	-.002	0	%100
4	SF3-D1-X	X	-.002	-.002	0	%100
5	SF2-V1	X	-.001	-.001	0	%100
6	SF2-V2	X	-.001	-.001	0	%100
7	SF3-V1	X	-.001	-.001	0	%100
8	SF3-V2	X	-.001	-.001	0	%100
9	SF2-CPB	X	-.001	-.001	0	%100
10	SF2-CPT	X	-.001	-.001	0	%100
11	SF3-CPB	X	-.002	-.002	0	%100
12	SF3-CPT	X	-.002	-.002	0	%100
13	FFBH-1	X	-.003	-.003	0	%100
14	FFBH-2	X	-.003	-.003	0	%100
15	FFBH-3	X	-.003	-.003	0	%100
16	FFTH-1	X	-.003	-.003	0	%100
17	FFTH-2	X	-.003	-.003	0	%100
18	FFTH-3	X	-.003	-.003	0	%100
19	SA-R	X	-.000865	-.000865	0	%100
20	SF2-BH	X	-.00058	-.00058	0	%100
21	SF2-TH	X	-.00058	-.00058	0	%100
22	SF3-BH	X	-.002	-.002	0	%100
23	SF3-TH	X	-.002	-.002	0	%100
24	MP1	X	-.002	-.002	0	%100
25	MP2	X	-.002	-.002	0	%100
26	MP3	X	-.002	-.002	0	%100
27	MP4	X	-.002	-.002	0	%100
28	RRHMP2	X	-.002	-.002	0	%100



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**Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft....]	End Magnitude[k/ft.F....]	Start Location[ft.%]	End Location[ft.%]	
29	RRHMP1	X	-.002	-.002	0	%100
30	SF2-D1	Z	.000989	.000989	0	%100
31	SF2-D1-X	Z	.000989	.000989	0	%100
32	SF3-D1	Z	.000989	.000989	0	%100
33	SF3-D1-X	Z	.000989	.000989	0	%100
34	SF2-V1	Z	.000908	.000908	0	%100
35	SF2-V2	Z	.000908	.000908	0	%100
36	SF3-V1	Z	.000908	.000908	0	%100
37	SF3-V2	Z	.000908	.000908	0	%100
38	SF2-CPB	Z	.000798	.000798	0	%100
39	SF2-CPT	Z	.000798	.000798	0	%100
40	SF3-CPB	Z	.001	.001	0	%100
41	SF3-CPT	Z	.001	.001	0	%100
42	FFBH-1	Z	.000911	.000911	0	%100
43	FFBH-2	Z	.001	.001	0	%100
44	FFBH-3	Z	.000911	.000911	0	%100
45	FFTH-1	Z	.000911	.000911	0	%100
46	FFTH-2	Z	.001	.001	0	%100
47	FFTH-3	Z	.000911	.000911	0	%100
48	SA-R	Z	.000652	.000652	0	%100
49	SF2-BH	Z	.000332	.000332	0	%100
50	SF2-TH	Z	.000332	.000332	0	%100
51	SF3-BH	Z	.001	.001	0	%100
52	SF3-TH	Z	.001	.001	0	%100
53	MP1	Z	.002	.002	0	%100
54	MP2	Z	.002	.002	0	%100
55	MP3	Z	.002	.002	0	%100
56	MP4	Z	.002	.002	0	%100
57	RRHMP2	Z	.001	.001	0	%100
58	RRHMP1	Z	.001	.001	0	%100

**Member Area Loads**

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

**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	SF1-1	max	1.163	3	3.852	42	1.379	55	.899	64	0	98	1.465	34
		min	-2.341	43	1.031	3	-.91	14	-.28	23	0	1	.382	9
3	SF1-2	max	2.178	34	.461	34	.622	5	.062	14	0	98	.377	42
		min	-.67	10	.134	13	-1.36	62	-.124	56	0	1	.116	2
5	SA-1B	max	.988	31	.037	38	.021	22	0	98	0	98	0	98
		min	-.987	23	.009	16	-.02	30	0	1	0	1	0	1
7	Totals:	max	2.408	2	4.326	49	1.614	22						
		min	-2.408	10	1.238	13	-1.614	14						

**Envelope AISC 15th(360-16): LRFD Steel Code Checks**

Member	Shape	Code Check	Lo...	LC	She...	Lo...	LC	phi*Pnc [k]	phi*Pnt [k]	phi*M...	phi*M...	Eqn
1	SF2-V2 SR 5/8	.431	3.09	64	.022	3.09	64	2.503	9.94	.104	.104	H1-1a
2	SF3-V2 SR 5/8	.412	0	39	.021	3.1...	48	2.503	9.94	.104	.104	H1-1a
3	SF2-CPB PL3.5 x ...	.388	0	65	.243	0	62	68.496	70.875	9.23	5.168	H1-1b
4	MP2 PIPE 2.0	.347	6.6...	56	.044	3.3...	56	17.855	32.13	1.872	1.872	H1-1b



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**Envelope AISI 15th(360-16): LRFD Steel Code Checks (Continued)**

Member	Shape	Code Check	Lo	LC	Shear	Lo	LC	phi*Pnc [k]	phi*Pnt [k]	phi*M <sub>x</sub>	phi*M <sub>y</sub>	Eqn
5	SF3-CPB	PL3.5 x ...	.329	0	35	.168	.383	42	68.496	70.875	.923	5.168 ... H1-1b
6	MP1	PIPE 2.0	.319	3.3	56	.037	3.3	53	17.855	32.13	1.872	1.872 ... H1-1b
7	SF2-CPT	PL3.5 x ...	.287	0	60	.159	0	54	68.496	70.875	.923	5.168 ... H1-1b
8	SF3-CPT	PL3.5 x ...	.264	0	37	.094	0	47	68.496	70.875	.923	5.168 ... H1-1b
9	FFTH-2	PIPE 2.5	.264	5	20	.065	5	28	41.333	50.715	3.596	3.596 ... H1-1b
10	FFTH-3	PIPE 2.5	.262	0	20	.113	0	28	22.464	50.715	3.596	3.596 ... H1-1b
11	FFBH-1	PIPE 2.5	.239	4.75	65	.067	4.75	64	22.464	50.715	3.596	3.596 ... H1-1b
12	MP4	PIPE 2.0	.233	6.6	47	.097	6.6	31	17.855	32.13	1.872	1.872 ... H1-1b
13	SF2-BH	PIPE 2.0	.208	2.5	65	.154	2.5	47	29.81	32.13	1.872	1.872 ... H1-1b
14	SF2-TH	PIPE 2.0	.204	2.3	60	.122	2.3	64	29.81	32.13	1.872	1.872 ... H1-1b
15	SF3-TH	PIPE 2.0	.194	2.5	20	.128	2.3	39	29.81	32.13	1.872	1.872 ... H1-1b
16	FFBH-2	PIPE 2.5	.187	0	65	.074	2.5	31	41.333	50.715	3.596	3.596 ... H1-1b
17	FFTH-1	PIPE 2.5	.183	4.75	60	.054	4.75	65	22.464	50.715	3.596	3.596 ... H1-1b
18	FFBH-3	PIPE 2.5	.179	0	19	.075	0	31	22.464	50.715	3.596	3.596 ... H1-1b
19	SF3-BH	PIPE 2.0	.166	2.5	35	.163	2.5	37	29.81	32.13	1.872	1.872 ... H1-1b
20	MP3	PIPE 2.0	.148	3.3	29	.049	3.3	64	17.855	32.13	1.872	1.872 ... H1-1b
21	SF2-D1-X	7/8 SR	.124	.304	64	.038	4.1	65	6.154	19.483	.284	.284 ... H1-1a
22	SF3-D1-X	7/8 SR	.121	.304	39	.022	4.1	35	6.154	19.483	.284	.284 ... H1-1a
23	SF3-V1	SR 5/8	.091	0	38	.029	0	23	2.503	9.94	.104	.104 ... H1-1b
24	SF2-V1	SR 5/8	.081	0	46	.028	.208	64	2.503	9.94	.104	.104 ... H1-1b
25	RRHMP2	PIPE 2.0	.071	.833	31	.053	.833	31	30.972	32.13	1.872	1.872 ... H1-1b
26	RRHMP1	PIPE 2.0	.058	4.1	32	.043	.833	61	30.972	32.13	1.872	1.872 ... H1-1b
27	SA-R	PIPE 2.0	.045	5.5	31	.004	0	46	22.128	32.13	1.872	1.872 ... H1-1a
28	SF3-D1	7/8 SR	.002	0	13	.005	3.9	13	6.154	19.483	.284	.284 ... H1-1a
29	SF2-D1	7/8 SR	.000	0	98	.000	0	98	6.154	19.483	.284	.284 ... H1-1a

**Envelope None Cold Formed Steel Code Checks**

Member	Shape	Code	Loc [ft]	LC Shear	Loc [ft]	Dir	LC	Pn [k]	Tn [k]	Mny [k-ft]	Mnz [k-ft]	Cb	Cmy	cmz	Eqn
No Data to Print ...															

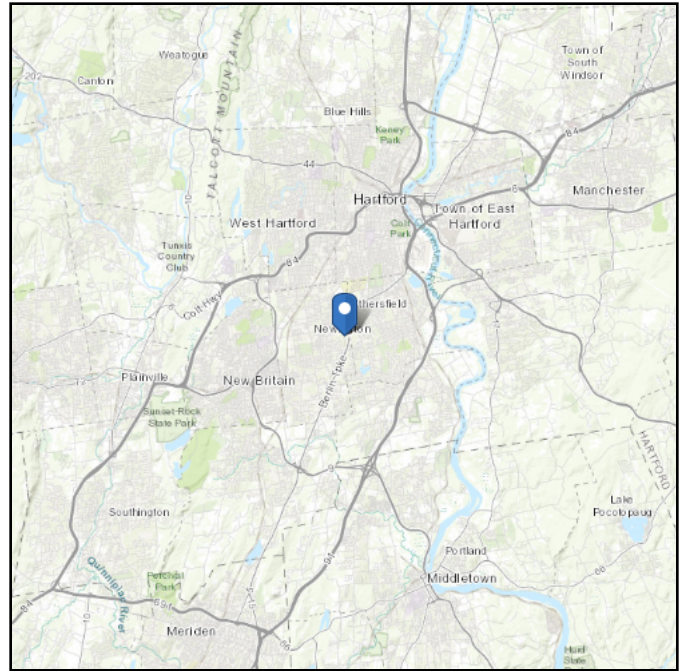
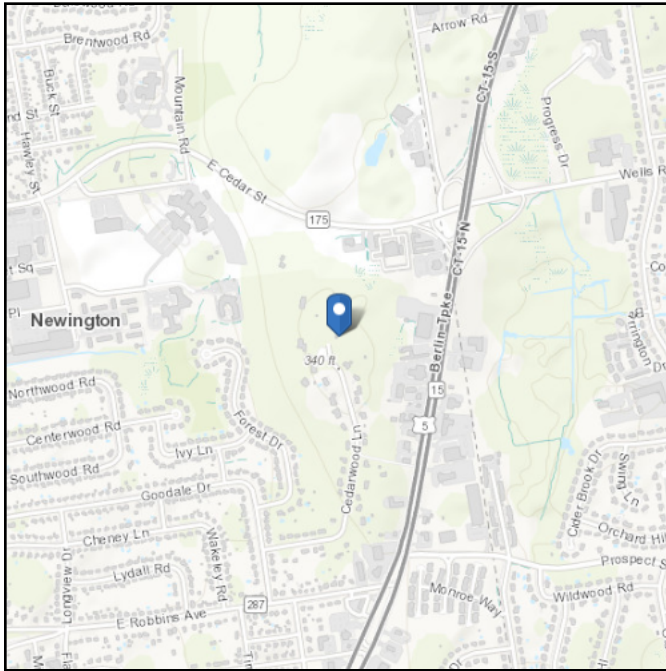
**APPENDIX B**  
**ADDITIONAL CALCULATIONS**

# ASCE 7 Hazards Report

**Address:**  
No Address at This Location

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Default (see Section 11.4.3)

**Elevation:** 345.58 ft (NAVD 88)  
**Latitude:** 41.69477  
**Longitude:** -72.708971



## Wind

### Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed: Wed Aug 24 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

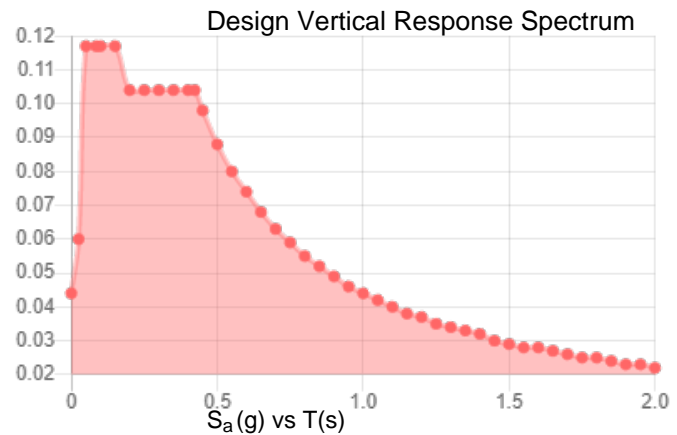
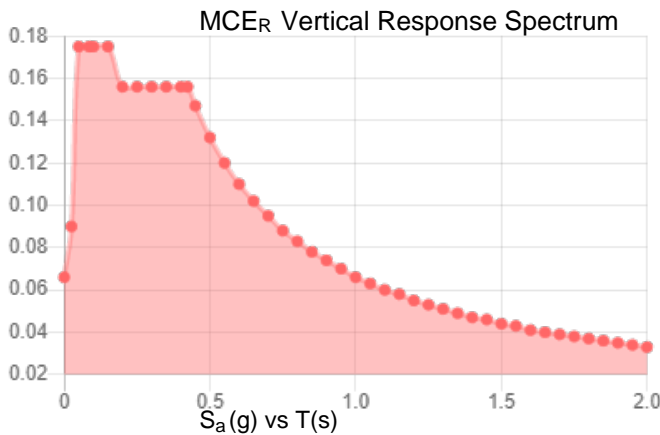
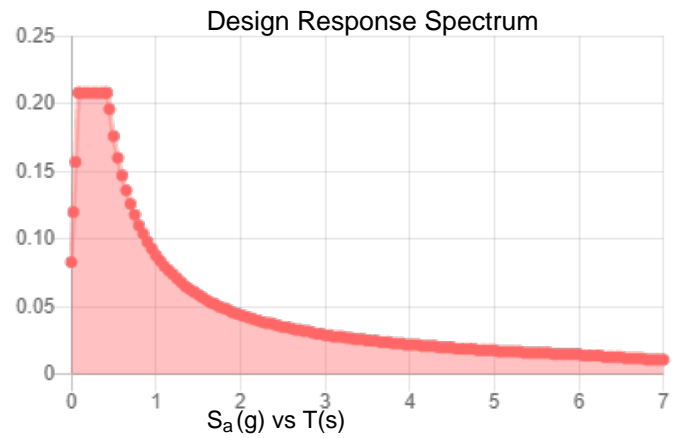
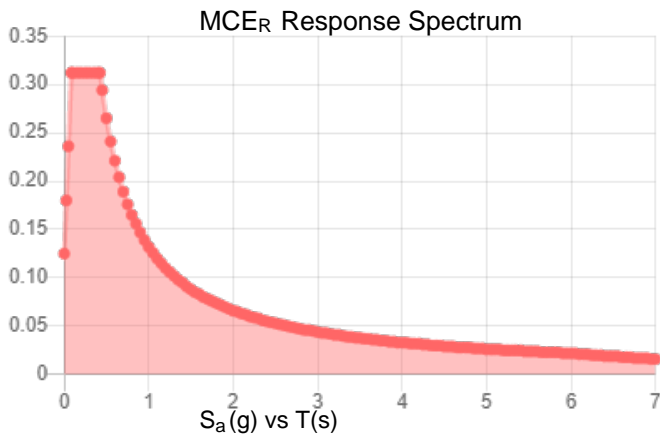
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

**Site Soil Class:** D - Default (see Section 11.4.3)

**Results:**

$S_s$ :	0.195	$S_{D1}$ :	0.088
$S_1$ :	0.055	$T_L$ :	6
$F_a$ :	1.6	PGA :	0.106
$F_v$ :	2.4	PGA <sub>M</sub> :	0.169
$S_{MS}$ :	0.312	$F_{PGA}$ :	1.587
$S_{M1}$ :	0.132	$I_e$ :	1
$S_{DS}$ :	0.208	$C_v$ :	0.7

**Seismic Design Category** B



**Data Accessed:** Wed Aug 24 2022

**Date Source:**

**USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.**

## Ice

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**Results:**

Ice Thickness: 1.50 in.  
Concurrent Temperature: 15 F  
Gust Speed 50 mph

**Data Source:** Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

**Date Accessed:** Wed Aug 24 2022

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 500-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.

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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.

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Code Revisions:	TIA-222-H	IBC 2018
Tower Type:	3 Sided Guyed Tower	

**Wind Inputs:**

Ult. Wind Velocity:	118.0	mph
Live Load Velocity:	30.0	mph
Ice Wind Velocity:	50.0	mph
Base Ice Thickness:	1.50	inches
Mount Centerline:	120.0	ft
Antenna Centerline:	120.0	ft
Exposure Category:	B	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	346	ft

**Wind Calculations:**

$K_{zt}$ :	1.000	Section 2.6.6
$K_d$ :	0.950	
$K_{z-Mount}$ :	1.041	Section 2.6.5.2
$K_{z-Antenna}$ :	1.041	Section 2.6.5.2
$K_{iz}$ :	1.138	Section 2.6.10
Ice Thickness:	1.707	inches - Section 2.6.10

Without Ice - (psf)		With Ice - (psf)	
$(q_z G_h)_{Mount}$ :	34.82	$(q_z G_h)_{Mount}$ :	6.25
$(q_z G_h)_{Antenna}$ :	34.82	$(q_z G_h)_{Antenna}$ :	6.25





Antenna Loads are Calculated in Accordance with TIA-222-H

Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

MFR	Model	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Azimuth°	Qty	Shape	Member Label	Distance from start node of the member		
										Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
Quintel	QD6616-7	72.00	20.70	7.70	130.00	0.00	1	Flat	MP2	2.50	7.50	
Ericsson	AIR6419 B77G	31.10	16.10	7.30	40.00	0.00	1	Flat	MP3	3.50	4.50	
Ericsson	AIR6449 B77D	30.40	15.90	8.10	80.00	0.00	1	Flat	MP3	5.50	7.50	
Matsing	MS-MBA-3.2-H4-L4	72.00	24.00	25.00	130.00	0.00	1	Flat	MP4	2.50	7.50	
Ericsson	RRUS-32 B30	27.20	12.10	7.00	50.00	0.00	1	Flat	RRHMP1	1.00		
Ericsson	RRUS 4478 B14	18.10	13.40	8.30	60.00	0.00	1	Flat	RRHMP1	1.00		
Ericsson	RRUS 8843 B2/B66A	17.50	14.40	6.90	70.00	0.00	1	Flat	RRHMP1	3.00		
Kaelus	DBC0051F3V51-2	8.54	5.00	2.17	15.00	0.00	2	Flat	RRHMP1	3.00		
Kaelus	DBC0051F3V51-2	8.54	5.00	2.17	15.00	0.00	2	Flat	RRHMP1	4.00		
Ericsson	RRUS 4449 B5/B12	17.90	13.90	9.40	70.00	0.00	1	Flat	RRHMP2	1.00		
Ericsson	RRUS 8843 B2/B66A	17.50	14.40	6.90	70.00	0.00	1	Flat	RRHMP2	1.00		
Ericsson	RRUS 4449 B5/B12	17.90	13.90	9.40	70.00	0.00	1	Flat	RRHMP2	3.00		
Ericsson	RRUS 8843 B2/B66A	17.50	14.40	6.90	70.00	0.00	1	Flat	RRHMP2	3.00		
Ericsson	RRUS 8843 B2/B66A	17.50	14.40	6.90	70.00	0.00	1	Flat	RRHMP2	3.00		
Kaelus	DBC0051F3V51-2	8.54	5.00	2.17	15.00	0.00	2	Flat	RRHMP2	4.00		



TOWER  
ENGINEERING  
PROFESSIONALS

Newington (CT1145)

TEP No. 315788.736891  
 Analysis By: SMA 8/26/2022  
 Checked By: DEN 8/26/2022

Member Forces are Calculated in Accordance with TIA-222-H

Member Name	Wind Proj. (in)	Length (in)	Shape	θ (°)	Perimeter (in)
SF2-D1	0.875	50.00	Round		2.75
SF2-D1-X	0.875	50.00	Round		2.75
SF3-D1	0.875	50.00	Round		2.75
SF3-D1-X	0.875	50.00	Round		2.75
SF2-V1	0.625	40.00	Round		1.96
SF2-V2	0.625	40.00	Round		1.96
SF3-V1	0.625	40.00	Round		1.96
SF3-V2	0.625	40.00	Round		1.96
SF2-CPB	0.625	4.59	Flat	6.22	8.25
SF2-CPT	0.625	4.59	Flat	6.22	8.25
SF3-CPB	0.625	4.59	Flat	-6.22	8.25
SF3-CPT	0.625	4.59	Flat	-6.22	8.25
FFBH-1	2.875	174.00	Round	90.00	9.03
FFBH-2	2.875	174.00	Round	90.00	9.03
FFBH-3	2.875	174.00	Round	-90.00	9.03
FFTH-1	2.875	174.00	Round	90.00	9.03
FFTH-2	2.875	174.00	Round	90.00	9.03
FFTH-3	2.875	174.00	Round	-90.00	9.03
SA-R	2.375	66.93	Round	0.00	7.46
SF2-BH	2.375	30.00	Round	47.38	7.46
SF2-TH	2.375	30.00	Round	47.38	7.46
SF3-BH	2.375	30.00	Round	-47.38	7.46
SF3-TH	2.375	30.00	Round	-47.38	7.46
MP1	2.375	120.00	Round		7.46
MP2	2.375	120.00	Round		7.46
MP3	2.375	120.00	Round		7.46
MP4	2.375	120.00	Round		7.46
RRHMP2	2.375	60.00	Round		7.46
RRHMP1	2.375	60.00	Round		7.46

## Moment Bolt Group - Leg Connection

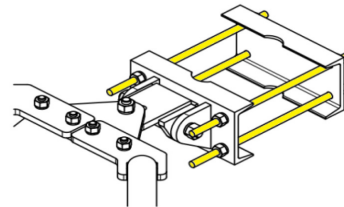
Code Revisions:	ANSI/TIA-222-H
Bolt Type:	Threaded Rods

### Connection Inputs:

Bolt Size:	0.625	in
# Bolts:	4	
Plate Width:	N/A	in
Plate Height:	N/A	in
Bolt H Gap:	9.5	in
Bolt V Gap:	3.5	in
Plate T:	N/A	in
Slip Member Ø:	3.5	in
Bolt Grade:	A36	

### Capacities:

Single Bolt Capacity=	10.6%	PASS
Slip Capacity=	16.4%	PASS
Bolt Capacity=	31.1%	PASS
Plate Capacity=	2.1%	PASS



### Bolt Properties:

$F_{y\text{bolt}}$ :	36.0	ksi
$F_{u\text{bolt}}$ :	58.0	ksi
r:	5.1	in
J:	102.5	in <sup>4</sup> /in <sup>2</sup>
$A_{\text{bolt}}$ :	0.3	in <sup>2</sup>
$A_{\text{bolt, Net Tensile}}$ :	0.2	in <sup>2</sup>
Pretension:	9.2	kips
Slotted Holes:	No	

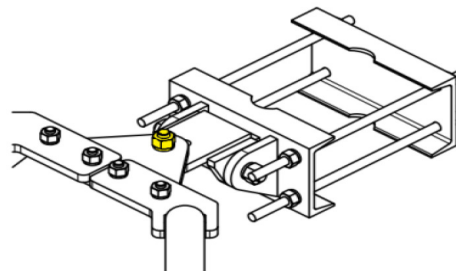
Member Shape:	Flat	
Plate $F_y$ :	36	ksi
Plate Thickness:	0.625	in
Plate $F_u$ :	58	in
$A_{\text{gross}}$ :	2.79	in <sup>2</sup>
$A_{\text{Net Tensile}}$ :	1.88	in <sup>2</sup>
$T_n$ =	81.89	kips

### Single Bolt Check

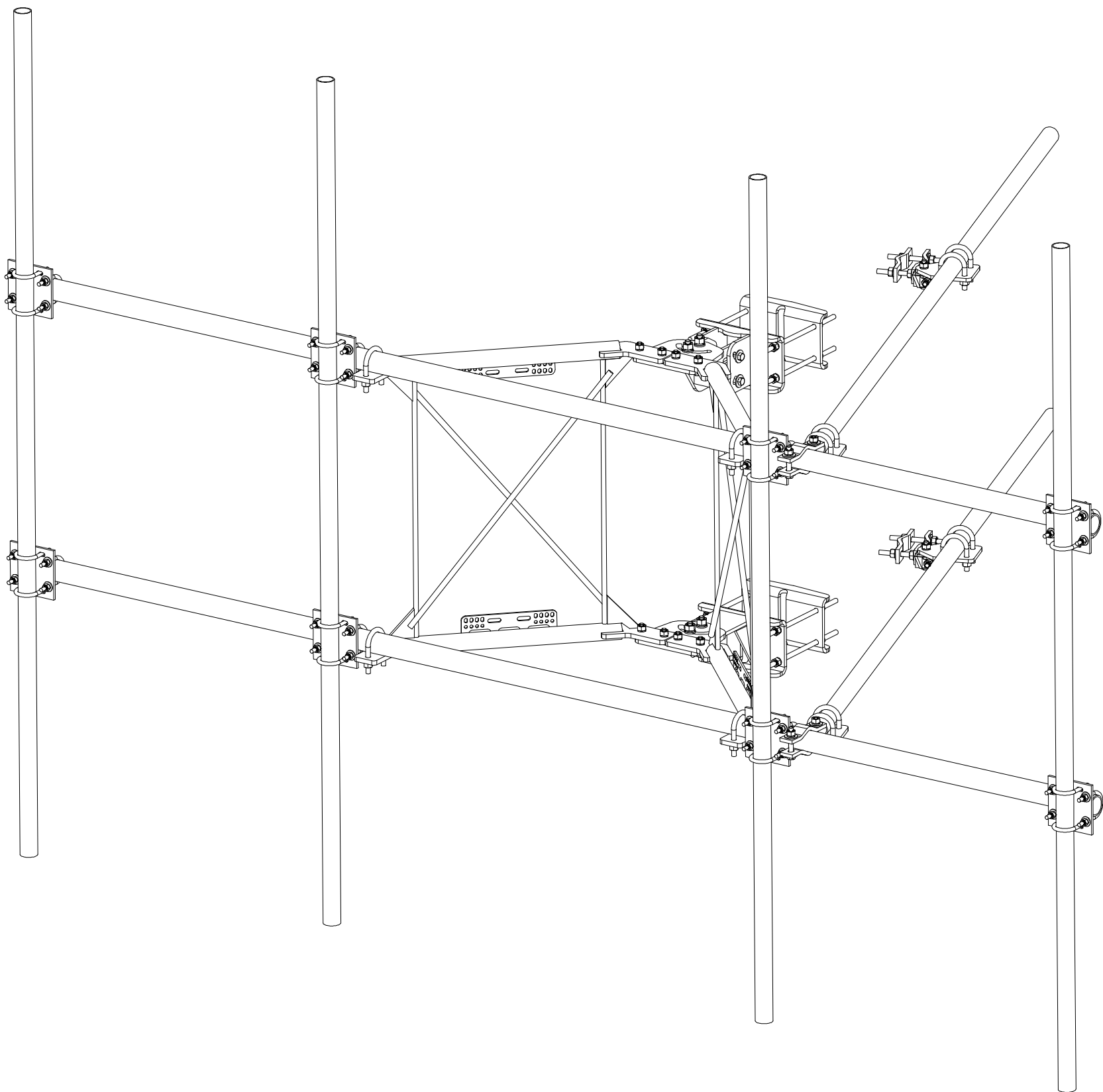
Bolt Size:	0.75	
Bolt $F_u$ :	120	ksi
$A_{\text{bolt, Net Tensile}}$ :	0.334	in <sup>2</sup>

Max $F_x$ :	1.794	kip
Max $F_y$ :	2.055	kip
Max $F_z$ :	0.623	kip

$V_{\text{max}}$ =	1.899	kips
$\phi R_{\text{NV}}$ =	17.892	kips
$T_{\text{max}}$ =	2.055	kips
$\phi R_{\text{NT}}$ =	30.06	kips



**APPENDIX C**  
**STRUCTURAL MODIFICATION GRAPHICS AND CUT SHEETS**



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	1	X-HDCAMTBW	CLAMP WELDMENT FOR BCAM-HD		33.86	33.86
3	1	X-MHTPHD	MULTI-HOLE TAPER PLATE WELDMENT		36.24	36.24
4	2	X-VFAPL4	VFA-HD PIVOT PLATE	12 in	15.88	31.77
5	2	X-LCBP4	BENT BACKING PLATE	13 in	20.04	40.09
6	1	X-HDCAMSS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.39	16.39
7	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
8	4	X-SPTB	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	23.49
9	4	X-TBCA	TIE BACK CLIP ANGLE		2.01	8.02
10	8	SCX2	CROSSOVER PLATE	7 in	4.80	38.37
11	4	MCP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	14.37
12	8	DCP	1/2" THICK, 5-3/4" CNTR TO CENTER CLAMP HALF	8 1/8 in	2.36	18.90
13	2	P2126	2-3/8" X 126" (2" SCH. 40) GALVANIZED PIPE	126 in	40.75	81.50
14	2	P30174	2-7/8" O.D. x 174" SCH. 40 PIPE	174 in	84.20	168.39
15	4	A34212	3/4" x 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	1.92
16	4	G34FW	3/4" HDG USS FLATWASHER		0.06	0.24
17	4	G34LW	3/4" HDG LOCKWASHER		0.04	0.17
18	4	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.85
19	8	G58R-18	5/8" x 18" THREADED ROD (HDG.)		1.57	12.54
20	4	G58R-12	5/8" x 12" THREADED ROD (HDG.)		1.05	4.18
21	6	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	4.18
22	4	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
23	8	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	8.00
24	2	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	1.41
25	1	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
26	8	G5804	5/8" x 4" HDG HEX BOLT GR5		0.44	3.55
27	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
28	8	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	2.50
29	25	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.76
30	68	G58LW	5/8" HDG LOCKWASHER		0.03	1.77
31	73	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	9.48
32	32	X-UB1300	1/2" X 3" X 5" X 2" GALV U-BOLT		0.74	23.64
33	16	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	10.00
34	64	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.18
35	64	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.89
36	64	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	4.58
37	4	P2120	2-3/8" x 120" (2" SCH. 40) GALVANIZED PIPE	120 in	38.81	155.25
					<b>TOTAL WT. #</b>	<b>912.18</b>

**TOLERANCE NOTES**

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

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

DESCRIPTION  
**14' 6" HEAVY DUTY  
 V-FRAME ASSEMBLY W/ TWO STIFF ARMS  
 AND MOUNT PIPES**

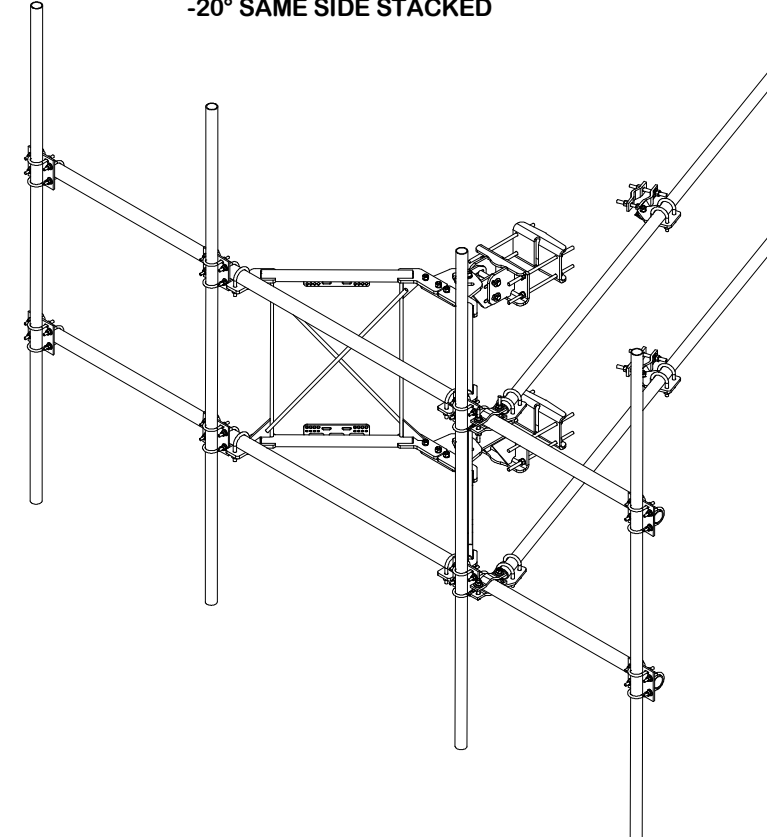
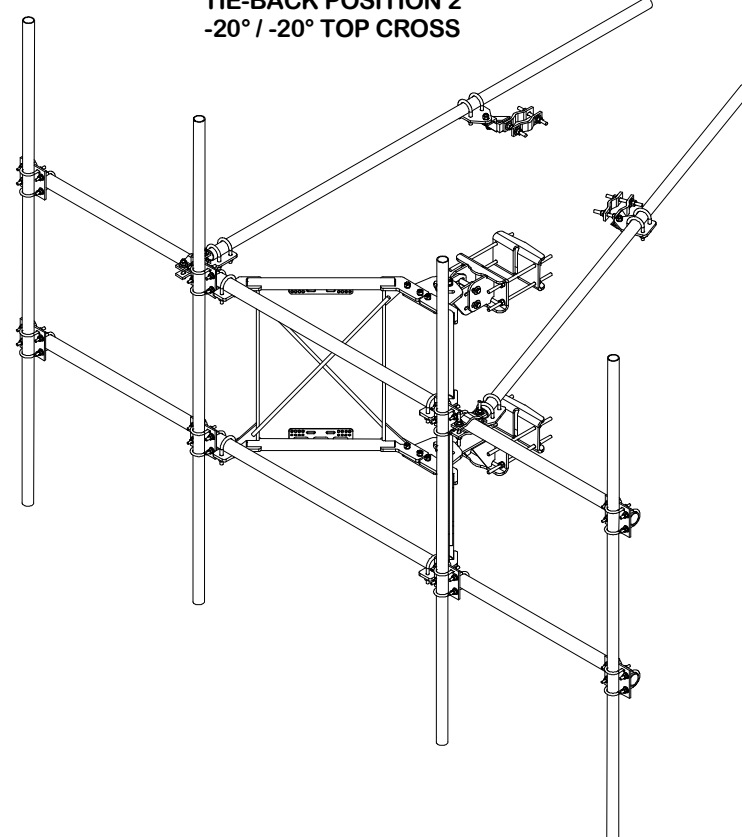
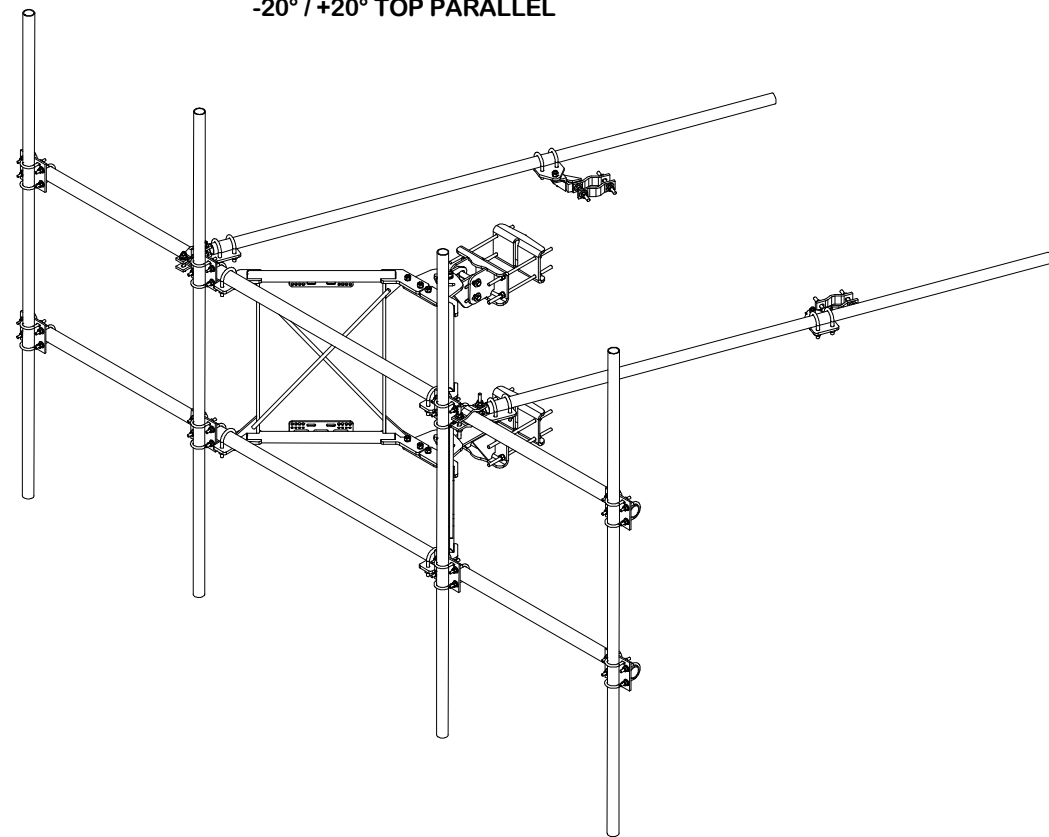
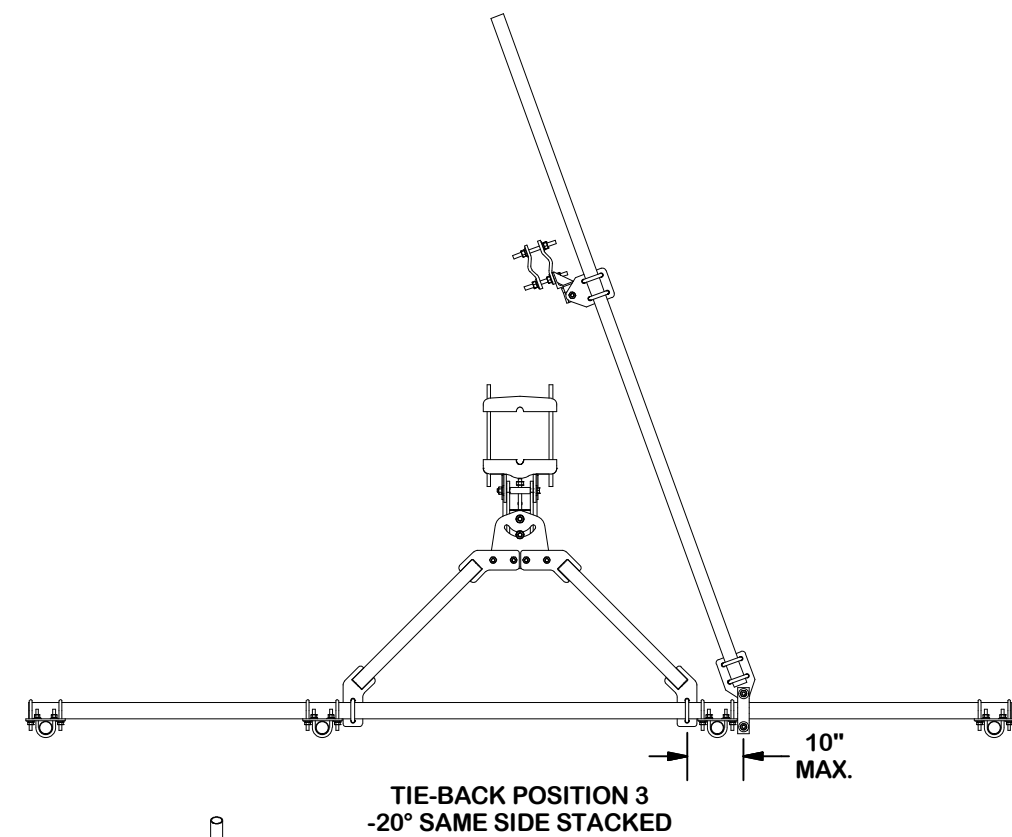
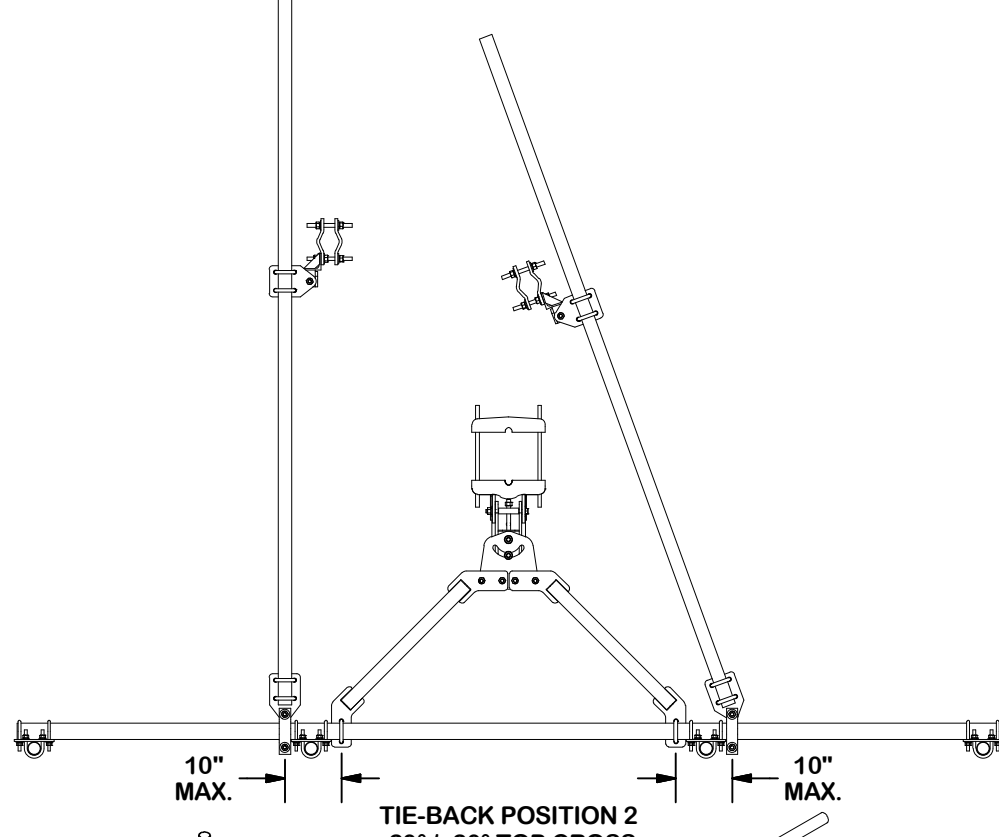
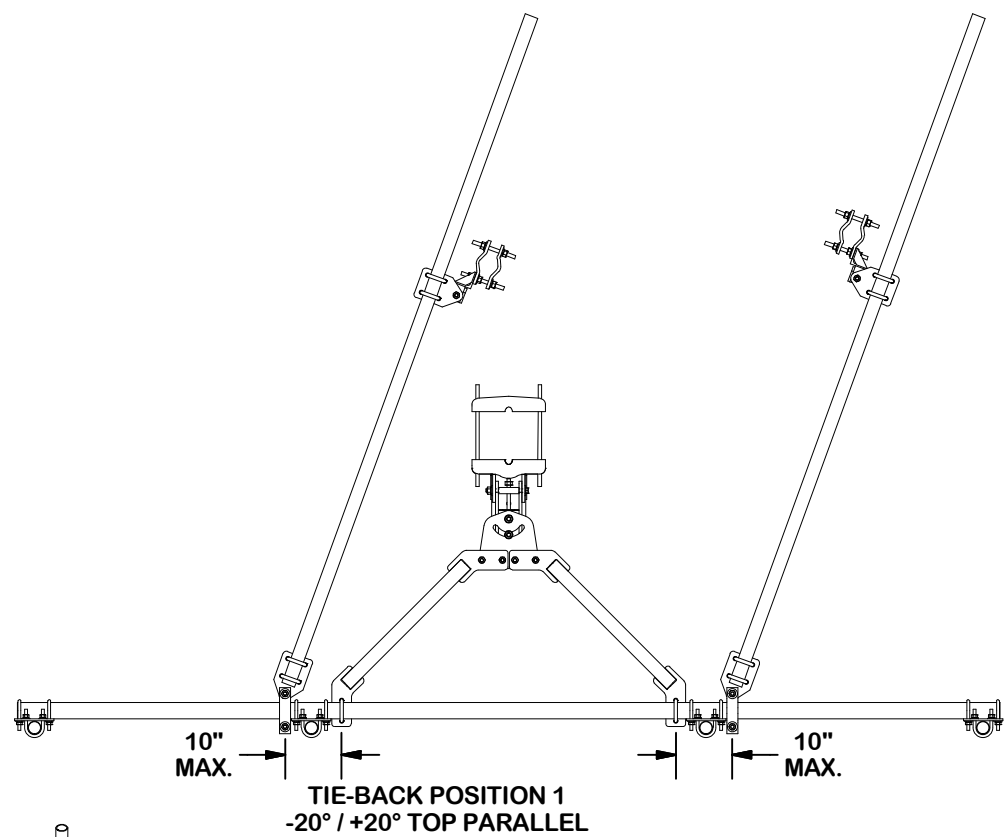
**SITE PRO 1**  
 A valmont COMPANY

Engineering Support Team:  
 1-888-753-7446

Locations:  
 New York, NY  
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 Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL
	CMFL 12/7/2020	
CLASS	SUB	DRAWING USAGE
87	02	CUSTOMER
		CHECKED BY
		BMC 12/14/2017

PART NO.	VFA14-H10-2120
DWG. NO.	VFA14-H10-2120



# TIE-BACK POSITIONS

### TOLERANCE NOTES

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

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DESCRIPTION  
**14' 6" HEAVY DUTY  
 V-FRAME ASSEMBLY W/ TWO STIFF ARMS  
 AND MOUNT PIPES**

**SITE PRO 1**  
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Engineering Support Team:  
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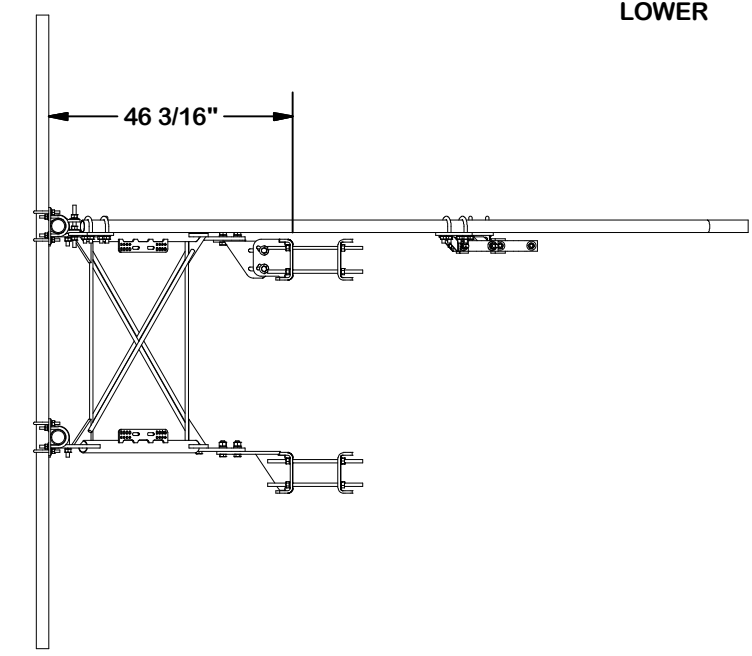
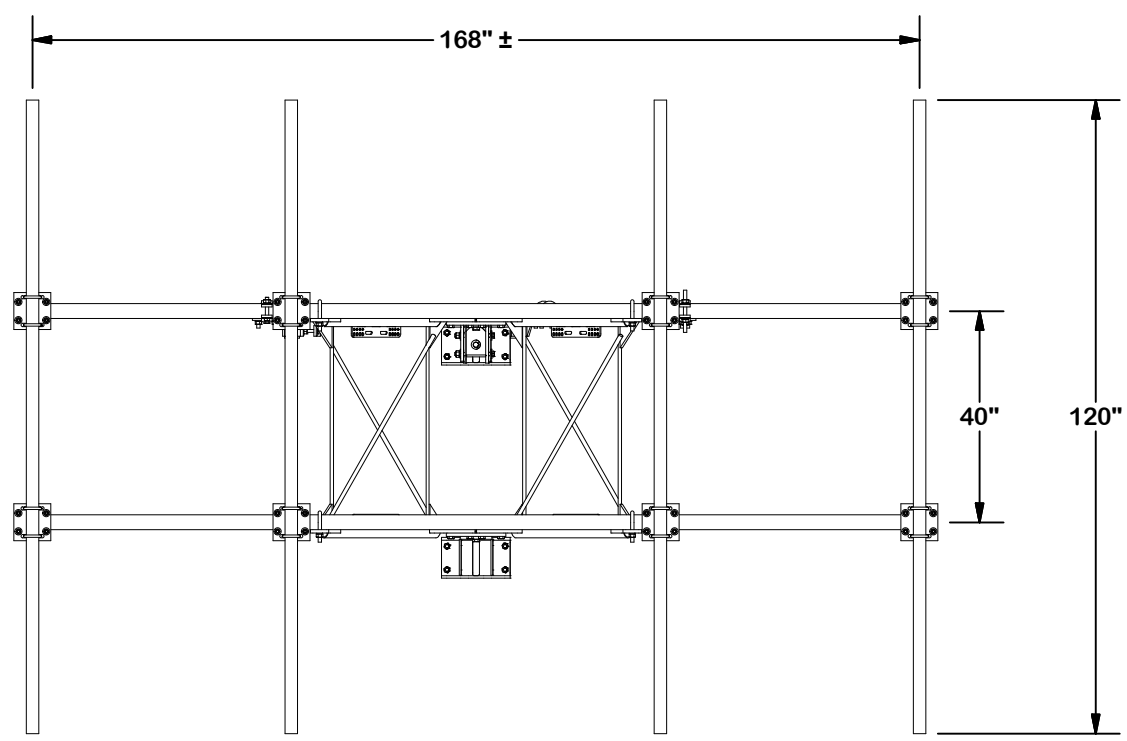
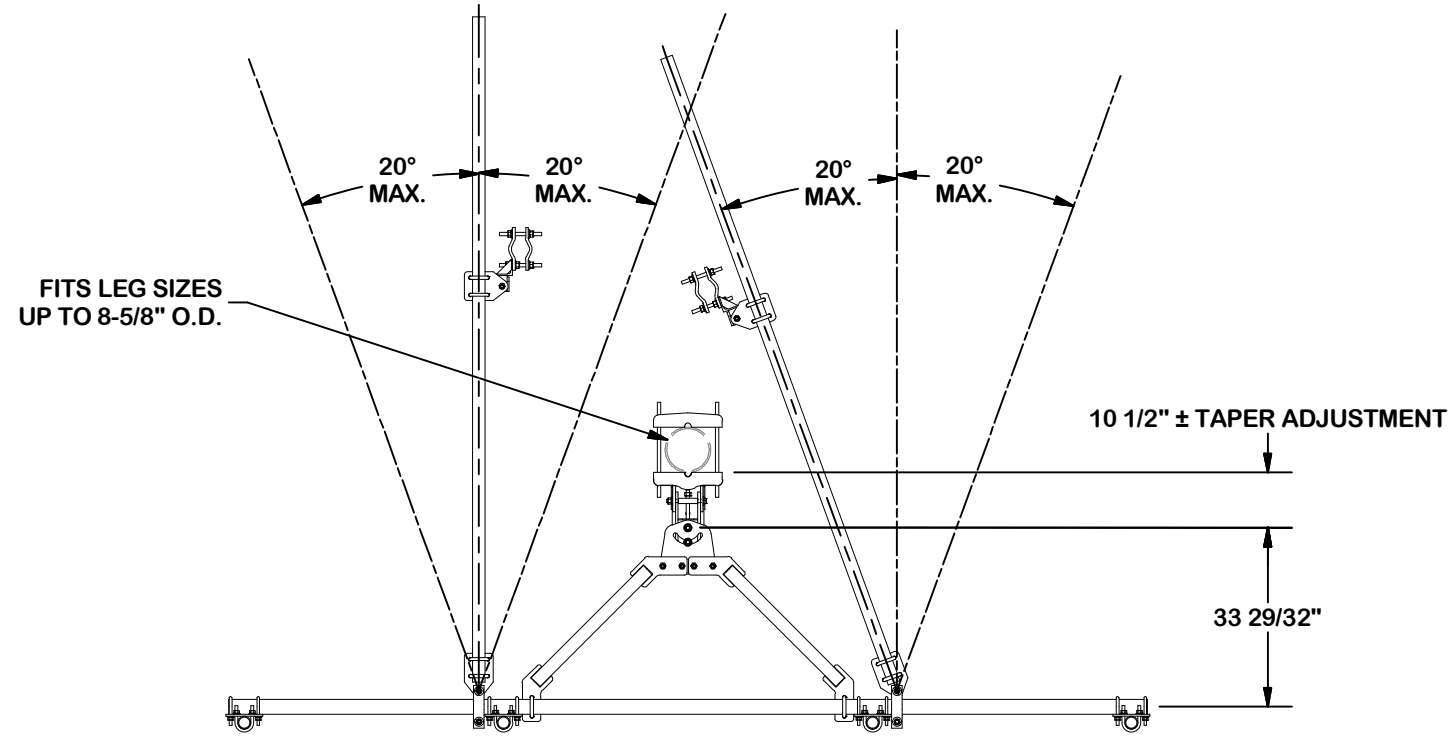
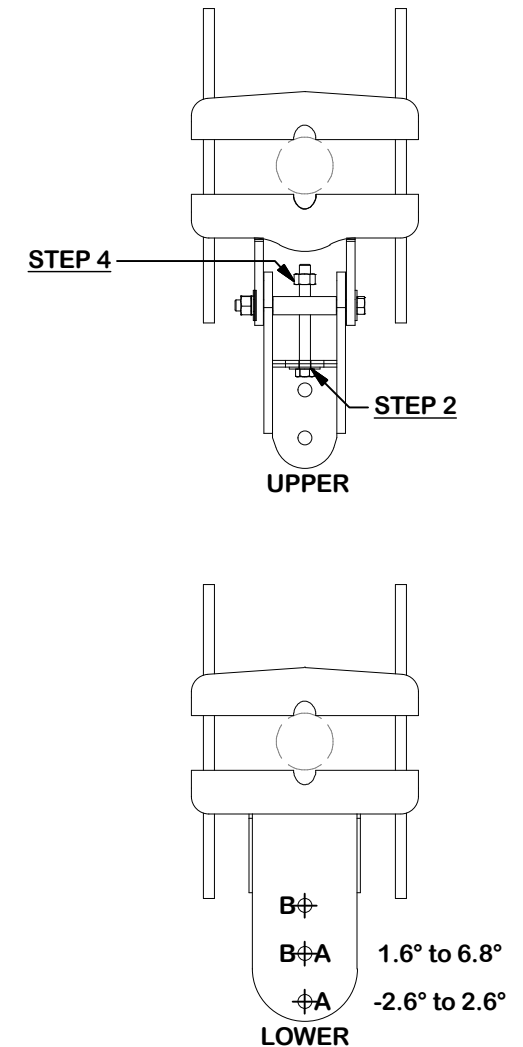
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87	02	CUSTOMER
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PART NO.	VFA14-H10-2120
DWG. NO.	VFA14-H10-2120

**ANGLE CALIBRATING PROCEDURE:**

1. MEASURE TOWER TAPER AND PICK LOWER BRACKET HOLE:
  - HOLE A = -2.6° TO 2.6°
  - HOLE B = 1.6° TO 6.8°
2. USE CALIBRATING BOLT TO ADJUST FRAME TO DESIRED TAPER
3. TORQUE LOCKING BOLTS TO 100 ft.-lbs.
4. ADVANCE LOCKING NUT TO POSITIONING PLATE, THEN TIGHTEN.



**TOLERANCE NOTES**

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

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 AND MOUNT PIPES**

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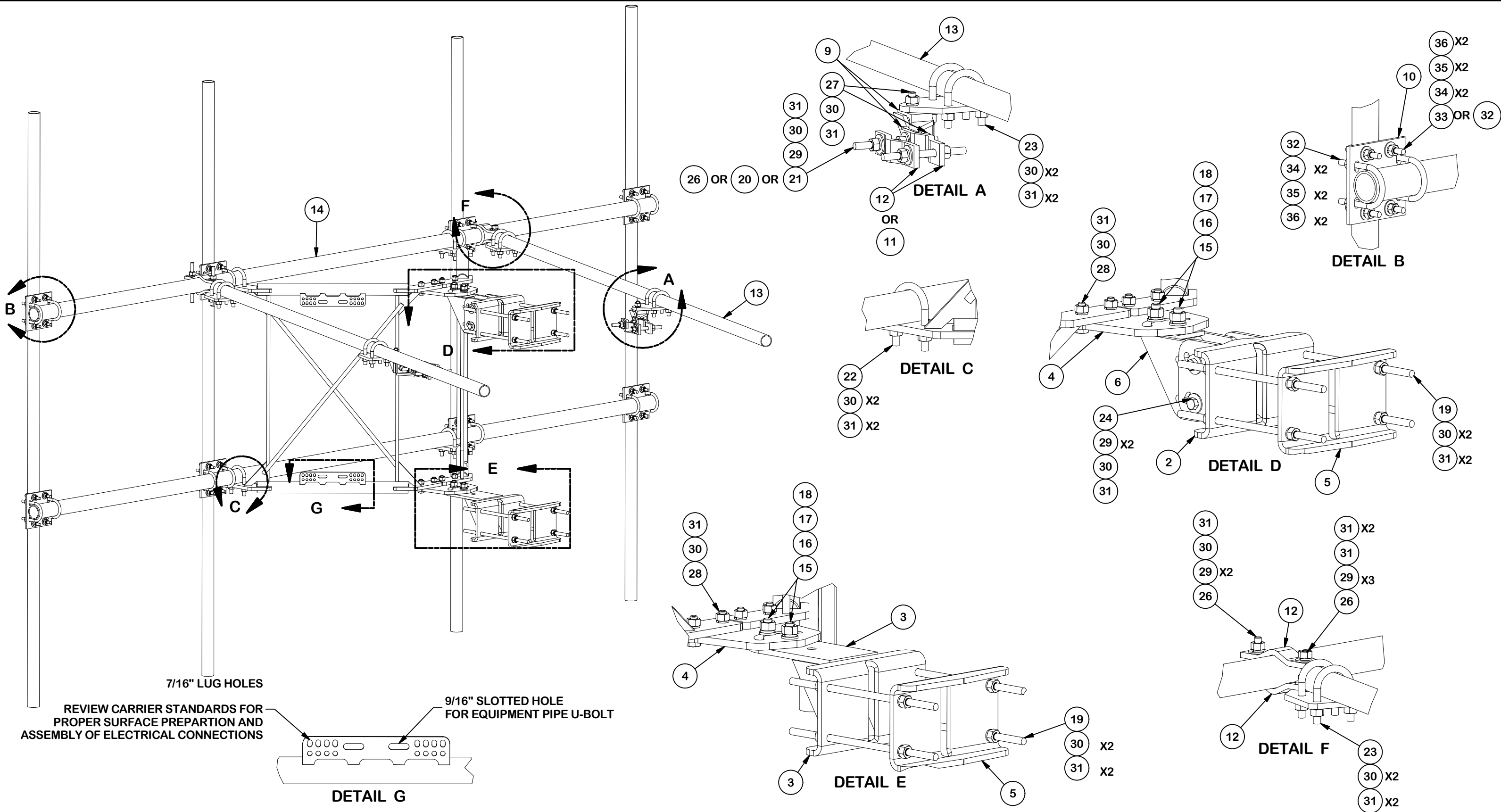
CPD NO. DRAWN BY CMFL 12/7/2020 ENG. APPROVAL

PART NO. **VFA14-H10-2120**

CLASS 87 SUB 02 DRAWING USAGE CUSTOMER CHECKED BY BMC 12/14/2017

DWG. NO. **VFA14-H10-2120**





7/16" LUG HOLES

REVIEW CARRIER STANDARDS FOR PROPER SURFACE PREPARATION AND ASSEMBLY OF ELECTRICAL CONNECTIONS

9/16" SLOTTED HOLE FOR EQUIPMENT PIPE U-BOLT

DETAIL G

**TOLERANCE NOTES**

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

PROPRIETARY NOTE:  
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 1-888-753-7446

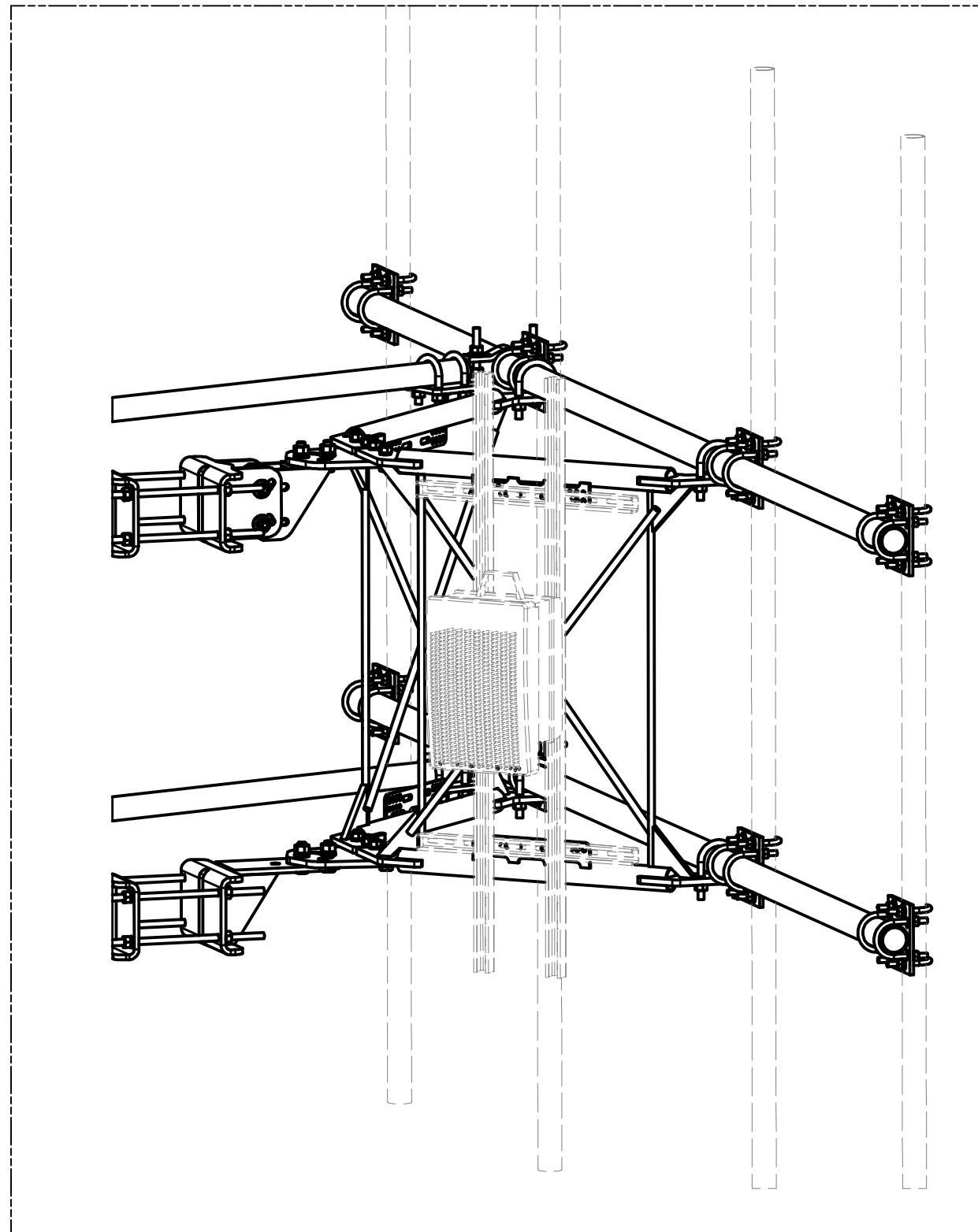
Locations:  
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CPD NO. DRAWN BY CMFL 12/7/2020 ENG. APPROVAL

PART NO. **VFA14-H10-2120**

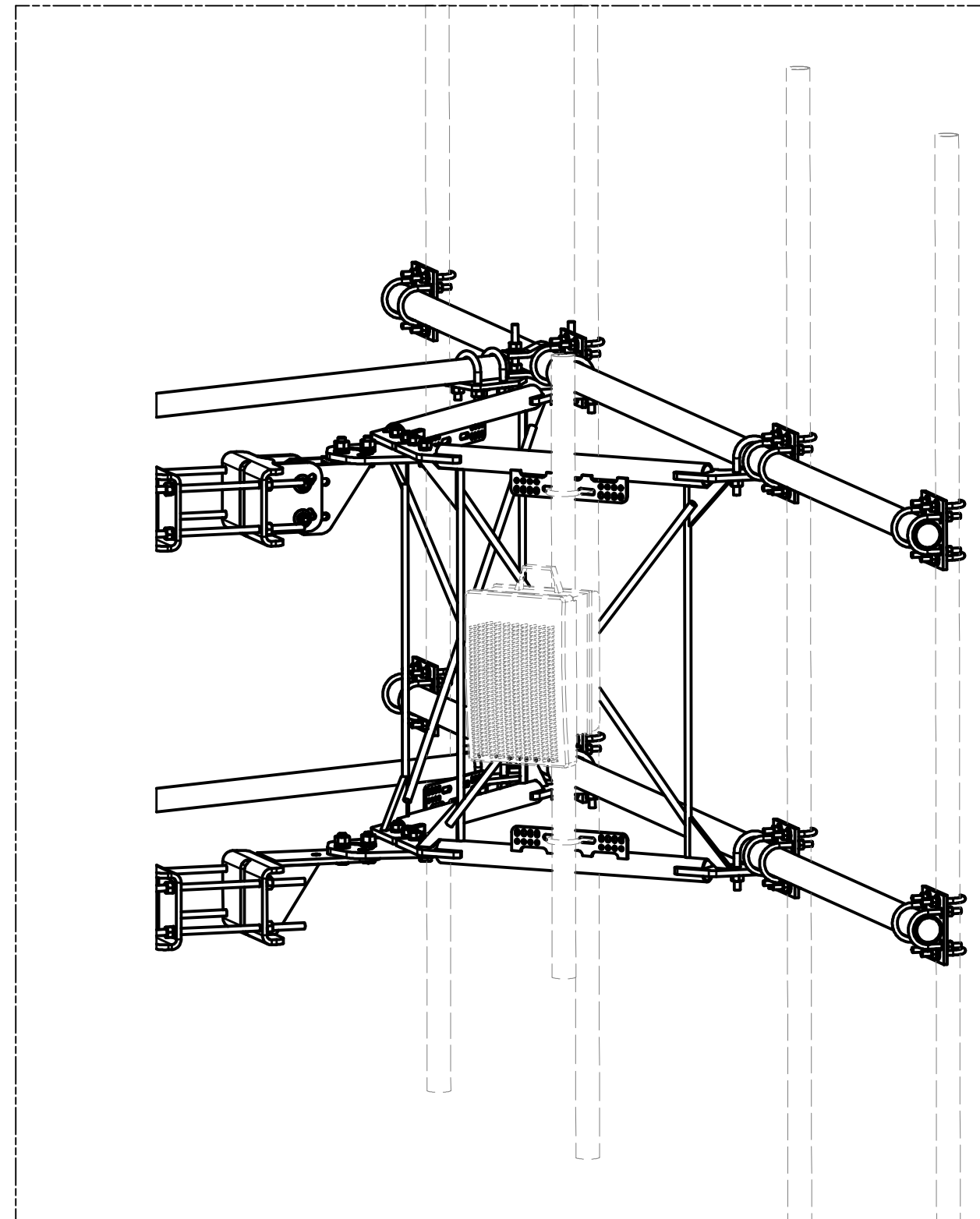
CLASS 87 SUB 02 DRAWING USAGE CUSTOMER CHECKED BY BMC 12/14/2017

DWG. NO. **VFA14-H10-2120**



UNISTRUT AND HARDWARE  
SOLD SEPARATELY.

REQUIRES 3/8" HARDWARE



EQUIPMENT PIPE AND HARDWARE  
SOLD SEPARATELY.

REQUIRES 1/2" HARDWARE  
AND 2-3/8" TO 4-1/2" O.D. PIPE

**TOLERANCE NOTES**

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

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

DESCRIPTION  
 14' 6" HEAVY DUTY  
 V-FRAME ASSEMBLY W/ TWO STIFF ARMS  
 AND MOUNT PIPES

CPD NO.	DRAWN BY CMFL 12/7/2020	ENG. APPROVAL
CLASS 87	SUB 02	DRAWING USAGE CUSTOMER
	CHECKED BY BMC 12/14/2017	

**SITE PRO 1**  
 A valmont COMPANY

Engineering Support Team:  
 1-888-753-7446

Locations:  
 New York, NY  
 Atlanta, GA  
 Los Angeles, CA  
 Plymouth, IN  
 Salem, OR  
 Dallas, TX

PART NO.	VFA14-H10-2120
DWG. NO.	VFA14-H10-2120

# EXHIBIT 5

# Radio Frequency Exposure Analysis Report

August 29, 2022

Centerline on behalf of AT&T

AT&T Site Name: NEWINGTON

Site Number: CT1145

FA#: 10035097

USID: 59389

Site Address: 99 CEDARWOOD LANE, NEWINGTON, CT 06111



Michael Fischer, P.E.  
Registered Professional Engineer (Electrical)  
Connecticut License Number 33928  
Expires January 31, 2023

Signed 29 August 2022

## Site Compliance Summary

AT&T Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	3.24655 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Ground Level):	0.37864%



August 29, 2022

Centerline  
Attn: Jennifer Iliades, Project Manager  
750 W Center St, Suite 301  
West Bridgewater, MA 02379

#### RF Exposure Analysis for Site: **NEWINGTON**

Centerline Communications, LLC (“Centerline”) was contracted to analyze the proposed AT&T facility at **99 CEDARWOOD LANE, NEWINGTON, CT 06111** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ) or microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in  $\text{mW}/\text{cm}^2$ ) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ( $f_{\text{MHz}}/1500$ ). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of  $1 \text{ mW}/\text{cm}^2$  ( $1000 \mu\text{W}/\text{cm}^2$ ). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the MPE limits for General Population/Uncontrolled environments as defined below.

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

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Additional details can be found in FCC OET 65.



## **Calculation Methodology**

Centerline Communications, LLC has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.



## **Data & Results**

The following table details the antennas and operating parameters for the AT&T antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at ground level.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.





**Maximum Calculated Cumulative Power Density @ Ground Level (Location: approximately 12' southwest of site)**

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/Channel (watts)	ERP (watts)	Calculated Power Density ( $\mu\text{W}/\text{cm}^2$ )	General Population MPE Limit ( $\mu\text{W}/\text{cm}^2$ )	General Population % MPE
AT&T A 1	QUINTEL QD6616-7 V1	700	11.94	120.00	4.00	30.00	1877.89	0.00008	466.67	0.00002
AT&T A 1	QUINTEL QD6616-7 V1	1900	15.07	120.00	4.00	30.00	3858.17	0.00001	1000.00	0.00000
AT&T A 1	QUINTEL QD6616-7 V1	2100	15.50	120.00	4.00	30.00	4257.96	0.00005	1000.00	0.00001
AT&T A 1	QUINTEL QD6616-7 V1	700	11.94	120.00	2.00	30.00	938.95	0.00004	466.67	0.00001
AT&T A 2	ERICSSON AIR6449	3700	23.55	118.50	1.00	108.40	24548.74	0.00264	1000.00	0.00026
AT&T A 3	ERICSSON AIR6419	3450	23.55	121.50	1.00	108.40	24548.74	0.00251	1000.00	0.00025
AT&T A 4	KATHREIN 80010965	700	11.85	120.00	4.00	30.00	1837.30	0.00014	466.67	0.00003
AT&T A 4	KATHREIN 80010965	850	13.55	120.00	4.00	30.00	2717.57	0.00006	566.67	0.00001
AT&T A 4	KATHREIN 80010965	2300	15.75	120.00	4.00	18.00	2706.03	0.00009	1000.00	0.00001
AT&T B 5	QUINTEL QD6616-7 V1	700	11.99	120.00	4.00	30.00	1899.16	0.08343	466.67	0.01788
AT&T B 5	QUINTEL QD6616-7 V1	2300	16.33	120.00	4.00	18.00	3093.37	0.06313	1000.00	0.00631
AT&T B 5	QUINTEL QD6616-7 V1	700	11.93	120.00	2.00	30.00	935.93	0.04063	466.67	0.00871
AT&T B 6	ERICSSON AIR6449	3700	23.55	118.50	1.00	108.40	24548.74	1.00871	1000.00	0.10087
AT&T B 7	ERICSSON AIR6419	3450	23.55	121.50	1.00	108.40	24548.74	0.95989	1000.00	0.09599
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ+30	700	9.83	120.00	4.00	30.00	1153.93	0.05277	466.67	0.01131
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ-30	700	10.07	120.00	4.00	30.00	1219.50	0.00999	466.67	0.00214
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ+30	850	12.18	120.00	4.00	30.00	1982.35	0.04710	566.67	0.00831
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ-30	850	12.80	120.00	4.00	30.00	2286.55	0.00211	566.67	0.00037
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ-40	1900	15.66	120.00	4.00	30.00	4417.55	0.00088	1000.00	0.00009
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ0	1900	15.18	120.00	4.00	30.00	3955.32	0.20708	1000.00	0.02071
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ+40	1900	15.32	120.00	4.00	30.00	4084.90	0.00072	1000.00	0.00007
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ-40	2100	16.30	120.00	4.00	30.00	5118.95	0.00090	1000.00	0.00009
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ0	2100	15.87	120.00	4.00	30.00	4636.40	0.20495	1000.00	0.02050
AT&T B 8	MATSING MS-MBA-3.2-H4-L4 AZ+40	2100	16.06	120.00	4.00	30.00	4843.74	0.00308	1000.00	0.00031
AT&T C 9	QUINTEL QD6616-7 V1	700	11.99	120.00	4.00	30.00	1899.16	0.00051	466.67	0.00011
AT&T C 9	QUINTEL QD6616-7 V1	1900	15.11	120.00	4.00	30.00	3888.22	0.00000	1000.00	0.00000
AT&T C 9	QUINTEL QD6616-7 V1	2100	15.33	120.00	4.00	30.00	4093.28	0.00005	1000.00	0.00001
AT&T C 9	QUINTEL QD6616-7 V1	700	11.99	120.00	2.00	30.00	949.58	0.00025	466.67	0.00005
AT&T C 10	ERICSSON AIR6449	3700	23.55	118.50	1.00	108.40	24548.74	0.01081	1000.00	0.00108
AT&T C 11	ERICSSON AIR6419	3450	23.55	121.50	1.00	108.40	24548.74	0.01029	1000.00	0.00103
AT&T C 12	KATHREIN 80010965	700	11.95	120.00	4.00	30.00	1880.10	0.00038	466.67	0.00008
AT&T C 12	KATHREIN 80010965	850	13.55	120.00	4.00	30.00	2717.57	0.00039	566.67	0.00007
AT&T C 12	KATHREIN 80010965	2300	15.75	120.00	4.00	18.00	2706.03	0.00025	1000.00	0.00003
Unknown A 13	GENERIC OMNI 6FT	850	5.96	173.00	1.00	25.00	98.61	0.00156	566.67	0.00028
Unknown A 14	GENERIC OMNI 6FT	850	5.96	173.00	1.00	25.00	98.61	0.00156	566.67	0.00028



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ( $\mu\text{W}/\text{cm}^2$ )	General Population MPE Limit ( $\mu\text{W}/\text{cm}^2$ )	General Population % MPE
Unknown A 15	GENERIC PANEL 4FT	850	11.52	170.00	1.00	60.00	851.43	0.00011	566.67	0.00002
T-Mobile A 16	GENERIC PANEL 6FT	1900	15.84	156.00	2.00	60.00	4604.49	0.00004	1000.00	0.00000
T-Mobile A 17	GENERIC PANEL 6FT	600	12.33	156.00	2.00	60.00	2052.02	0.00003	400.00	0.00001
T-Mobile A 18	GENERIC PANEL 6FT	700	12.33	156.00	2.00	60.00	2052.02	0.00003	466.67	0.00001
T-Mobile A 19	GENERIC PANEL 6FT	2100	15.84	156.00	2.00	60.00	4604.49	0.00004	1000.00	0.00000
T-Mobile B 20	GENERIC PANEL 6FT	1900	15.84	156.00	2.00	60.00	4604.49	0.05040	1000.00	0.00504
T-Mobile B 21	GENERIC PANEL 6FT	600	12.33	156.00	2.00	60.00	2052.02	0.04837	400.00	0.01209
T-Mobile B 22	GENERIC PANEL 6FT	700	12.33	156.00	2.00	60.00	2052.02	0.04837	466.67	0.01037
T-Mobile B 23	GENERIC PANEL 6FT	2100	15.84	156.00	2.00	60.00	4604.49	0.05040	1000.00	0.00504
T-Mobile C 24	GENERIC PANEL 6FT	1900	15.84	156.00	2.00	60.00	4604.49	0.00002	1000.00	0.00000
T-Mobile C 25	GENERIC PANEL 6FT	600	12.33	156.00	2.00	60.00	2052.02	0.00025	400.00	0.00006
T-Mobile C 26	GENERIC PANEL 6FT	700	12.33	156.00	2.00	60.00	2052.02	0.00025	466.67	0.00005
T-Mobile C 27	GENERIC PANEL 6FT	2100	15.84	156.00	2.00	60.00	4604.49	0.00002	1000.00	0.00000
Unknown A 28	GENERIC PANEL 6FT	850	12.62	140.00	4.00	40.00	2924.96	0.00006	566.67	0.00001
Unknown A 29	GENERIC PANEL 6FT	1900	15.84	140.00	4.00	40.00	6139.32	0.00007	1000.00	0.00001
Unknown A 30	GENERIC PANEL 6FT	2100	16.39	140.00	4.00	40.00	6968.19	0.00003	1000.00	0.00000
Unknown A 30	GENERIC PANEL 6FT	700	12.33	140.00	4.00	40.00	2736.02	0.00004	466.67	0.00001
Unknown B 31	GENERIC PANEL 6FT	850	12.62	140.00	4.00	40.00	2924.96	0.08257	566.67	0.01457
Unknown B 32	GENERIC PANEL 6FT	1900	15.84	140.00	4.00	40.00	6139.32	0.08388	1000.00	0.00839
Unknown B 33	GENERIC PANEL 6FT	2100	16.39	140.00	4.00	40.00	6968.19	0.08354	1000.00	0.00835
Unknown B 33	GENERIC PANEL 6FT	700	12.33	140.00	4.00	40.00	2736.02	0.08051	466.67	0.01725
Unknown C 34	GENERIC PANEL 6FT	850	12.62	140.00	4.00	40.00	2924.96	0.00001	566.67	0.00000
Unknown C 35	GENERIC PANEL 6FT	1900	15.84	140.00	4.00	40.00	6139.32	0.00003	1000.00	0.00000
Unknown C 36	GENERIC PANEL 6FT	2100	16.39	140.00	4.00	40.00	6968.19	0.00007	1000.00	0.00001
Unknown C 36	GENERIC PANEL 6FT	700	12.33	140.00	4.00	40.00	2736.02	0.00042	466.67	0.00009
							<b>Cumulative Power Density:</b>	<b>3.24655 <math>\mu\text{W}/\text{cm}^2</math></b>	<b>Cumulative % MPE:</b>	<b>0.37864%</b>



## Summary

The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at ground level that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **compliant** with FCC rules and regulations.

A handwritten signature in black ink, appearing to read "Katrina Styx", with a long, sweeping flourish extending to the right.

Katrina Styx  
RF EME Technical Writer  
Centerline Communications, LLC

# EXHIBIT 6

# TOWN OF NEWINGTON

Town Hall • 131 Cedar Street, Newington, Connecticut 06111  
June 30, 1975 Telephone 666-4661



OFFICE OF: Town Planning and Zoning Commission

Greater Hartford CATV, Inc.  
801 Parker Street  
Manchester, Connecticut 06040

Attn: Mr. Vince King, General Manager

Re: Petition 447-75

Dear Sir:

This is to confirm that the Newington Town Planning and Zoning Commission at its meeting June 25, 1975 granted your petition for a Special Exception to permit the location of your antenna tower and service building on property north-east of the end of Cedarwood Lane, as shown on plan submitted. The effective date of this action is July 5, 1975.

Very truly yours,

Kenneth L. Babcock  
Administrative Officer

KLB/k

No. 644932

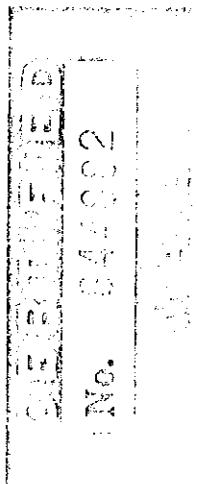
## RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

SENT TO		POSTMARK OR DATE
Greater Hartford CATV, Inc.		
STREET AND NO.		
801 Parker Street		
P.O., STATE AND ZIP CODE		
Manchester, Connecticut 06040		
OPTIONAL SERVICES FOR ADDITIONAL FEES		
RETURN	1. Shows to whom and date delivered	15¢
RECEIPT SERVICES	With delivery to addressee only	65¢
	2. Shows to whom, date and where delivered	35¢
	With delivery to addressee only	65¢
	DELIVER TO ADDRESSEE ONLY	50¢
	REGULAR DELIVERY (extra fee required)	

PS Form 3800  
Nov. 1971

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL

(See other side)  
• GPO: 1970 O 807-488





Greater Hartford CATV, Inc.

801 PARKER STREET • MANCHESTER, CONNECTICUT 06040 • 203/646-6400

June 10, 1975

Town of Newington  
Town Planning and Zoning Commission  
131 Cedar Street  
Newington, Conn. 06111

Subject: Proposed site for tower on Cedar Mountain, for CATV

Dear Sirs;

We, of Greater Hartford CATV, Inc., respectfully propose a CATV / micro wave hub site, on Cedar Mountain, to facilitate and serve Newington, Wethersfield and Rocky Hill, with Cable TV service.

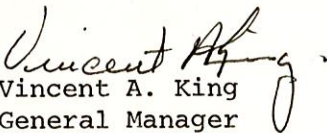
We, therefore, respectfully propose a 50' x 50' parcel of land to be leased on Cedar Mountain, from Fred Callahan, of Newington.

The site will be fenced with an 8' fence; graveled interior; with a 10' x 15' x 8' Butler type building. The tower will be a Rohn self supporting - maximum 75' high. A micro wave dish will be attached to the tower, meeting with Federal Communications Commission, Federal Aviation Administration and Public Utilities Commission maximum standards.

The ecology of the site will be strictly adhered to, in that we will try to the best of our ability to mask the site with natural flora. The hub site will be maintained to the highest standards possible.

Being a Public Utility, we will adhere to all the standards set forth by the state of Connecticut and the city of Newington.

Respectfully submitted,

  
Vincent A. King  
General Manager  
Greater Hartford CATV, Inc.

VAK/lc

1500 FT.

X Proposed  
Tower site.  
50x50 FT.

145

Cedarwood La.

154

144

134

900 FT.

Fredric Callahan.

1500 FT.

Turnpike.

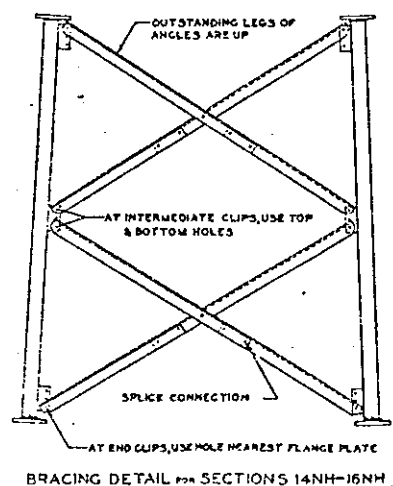
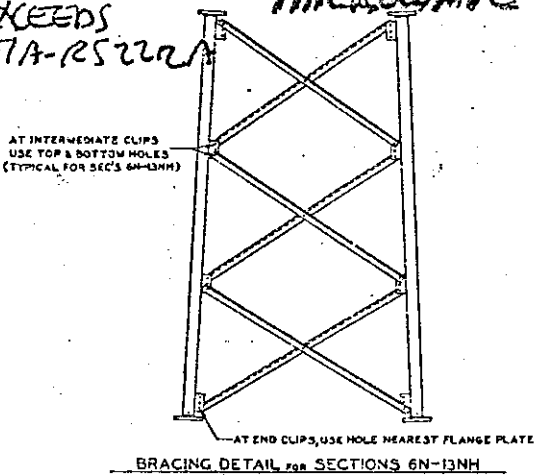
ROHN INDUST CO.  
PEORIA, ILL.

TOWER SCHEDULE								
SECTION NO.	SPREAD DIMENSION		TOWER LEGS 50X31 YIELD STR.	TOWER BRACES 50X31 YIELD STR.	FLANGE PLATES		FLANGE BOLTS	BRACE BOLTS
	UPPER	LOWER			TOP	BOTTOM		
1W	1'-2"	1'-2"	9/16" SOLID	3/8" SOLID	NONE	3 X 3 X 3/8" 2 1/2" B.C.	12-3/8 X 1 1/2"	NONE
2W	1'-2"	1'-8"	1/2" SOLID	3/8" SOLID	3 X 3 X 3/8" 2 1/2" B.C.	3 X 3 X 3/8" 2 1/2" B.C.	12-3/8 X 1 1/2"	NONE
3W	1'-8"	1'-10"	15/16" SOLID	1/2" SOLID	3 X 3 X 3/8" 2 1/2" B.C.	3 1/2 X 3 1/2 X 1/2" 3" B.C.	12-1/2 X 2"	NONE
4W	1'-10"	2'-2"	1/2" SOLID	1/2" SOLID	3 1/2 X 3 1/2 X 1/2" 3" B.C.	3 1/2 X 3 1/2 X 1/2" 3" B.C.	12-1/2 X 2"	NONE
5W	2'-2"	2'-6"	1/2" SOLID	5/8" SOLID	3 1/2 X 3 1/2 X 1/2" 3" B.C.	4 1/2 X 4 1/2 X 1/2" 4 1/4" B.C.	12-5/8 X 2 1/2"	NONE
6N	2'-6"	4'-6 1/4"	2" PIPE	L 1 1/2 X 1 1/2 X 1/8"	4 1/2 X 4 1/2 X 1/2" 4 1/4" B.C.	5 X 5 X 3/4" 4 1/2" B.C.	12-5/8 X 2 1/2"	75-1/2 X 1 1/4"
7N	4'-6 1/4"	6'-6 3/4"	2" PIPE	L 1 1/2 X 1 1/2 X 1/8"	5 X 5 X 3/4" 4 1/2" B.C.	5 X 5 X 3/4" 4 1/2" B.C.	12-5/8 X 2 1/2"	75-1/2 X 1 1/4"
8N	6'-6 3/4"	8'-6 3/4"	2 1/2" PIPE	L 1 1/2 X 1 1/2 X 1/8"	5 X 5 X 3/4" 4 1/2" B.C.	5 X 5 X 3/4" 4 1/2" B.C.	12-5/8 X 2 1/2"	60-1/2 X 1 1/4"
9NH	8'-6 3/4"	10'-6 3/4"	2 1/2" EH PIPE	L 1 1/2 X 1 1/2 X 1/8"	5 X 5 X 3/4" 4 1/2" B.C.	5 X 5 X 3/4" 4 1/2" B.C.	12-5/8 X 2 1/2"	45-1/2 X 1 1/4"
10NH	10'-6 3/4"	12'-7 1/4"	2 1/2" EH PIPE	L 2 X 2 X 1/8"	5 X 5 X 3/4" 4 1/2" B.C.	6 X 6 X 3/4" 5 1/2" B.C.	12-5/8 X 2 1/2"	45-1/2 X 1 1/4"
11N	12'-7 1/4"	14'-7 1/4"	3" PIPE	L 2 1/2 X 2 1/2 X 1/16"	6 X 6 X 3/4" 5 1/2" B.C.	7 X 7 X 1" 6" B.C.	12-7/8 X 3"	45-1/2 X 1 1/4"
12NH	14'-7 1/4"	16'-8 3/8"	3" EH PIPE	L 3 X 3 X 1/16"	7 X 7 X 1" 6" B.C.	7 X 7 X 1" 6" B.C.	12-7/8 X 3"	30-5/8 X 1 1/2"
13NH	16'-8 3/8"	18'-8 3/8"	4" EH PIPE	L 3 X 3 X 3/16"	7 X 7 X 1" 6" B.C.	7 X 7 X 1" 6" B.C.	12-7/8 X 3"	30-5/8 X 1 1/2"
14NH	18'-8 3/8"	20'-9 3/8"	4" EH PIPE	L 3 1/2 X 3 1/2 X 1/32"	7 X 7 X 1" 6" B.C.	9 1/2 X 9 1/2 X 1/4" 7 1/2" B.C.	12-1 X 4 1/4"	54-5/8 X 1 1/2"
15NH	20'-9 3/8"	22'-9 3/8"	5" EH PIPE	L 4 X 4 X 1/32"	9 1/2 X 9 1/2 X 1/4" 7 1/2" B.C.	9 1/2 X 9 1/2 X 1/4" 7 1/2" B.C.	12-1 X 4 1/4"	54-5/8 X 1 1/2"
16NH	22'-9 3/8"	24'-9 3/8"	5" EH PIPE	L 4 X 4 X 1/32"	9 1/2 X 9 1/2 X 1/4" 7 1/2" B.C.	9 1/2 X 9 1/2 X 1/4" 7 1/2" B.C.	12-1 X 4 1/4"	54-5/8 X 1 1/2"

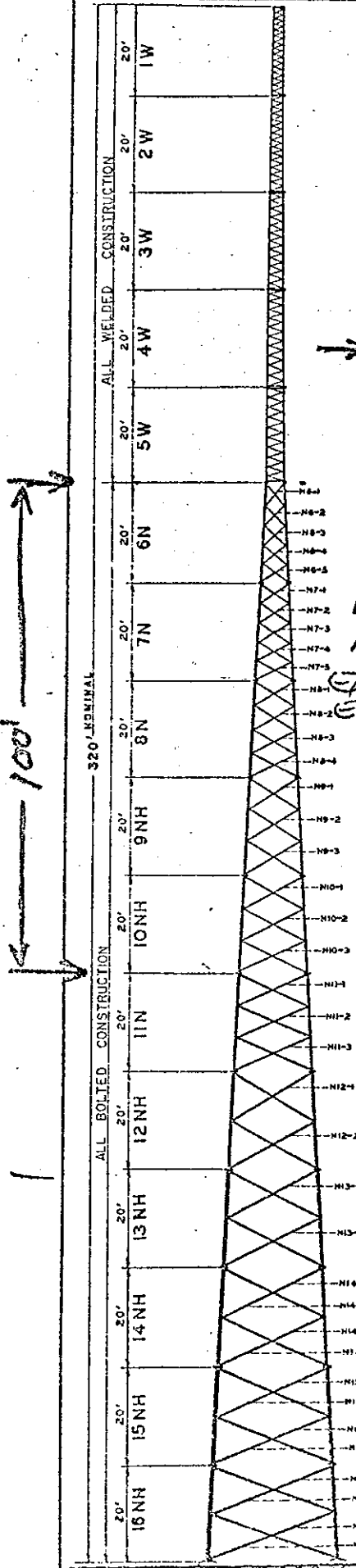
\* ASTERISK INDICATES THAT THE BOTTOM FLANGE 2 OF THAT SECTION IS OFFSET

MINIMUM 50# WIND LOAD EQUIVALENT TO  
110 MPH WIND - FULLY LOADED WITH  
ANTENNAS - CATV &  
MICROWAVE  
EXCEEDS  
ETA-RS222A

WEIGHTS			
SEC. NO.	LEGS	BRACES	TOTAL
1W	---	---	116
2W	---	---	180
3W	---	---	230
4W	---	---	335
5W	---	---	435
6N	290	190	480
7N	300	245	545
8N	426	274	700
9NH	535	305	840
10NH	545	400	945
11N	570	840	1410
12NH	905	825	1730
13NH	1050	910	1960
14NH	1110	970	2080
15NH	1530	1180	2710
16NH	1530	1270	2800



- GENERAL NOTES:
- 1 LEG MARK NO'S ARE THE SAME AS SECTION NO'S AND ARE STAMPED AT THE BASE OF EACH LEG OF EACH SECTION.
  - 2 ALL MARK NO'S METAL STAMPED BEFORE GALVANIZING.
  - 3 PAL NUTS PROVIDED FOR ALL TOWER BOLTS.
  - 4 STEP BOLTS PROVIDED ON ONE LEG FOR SECTIONS 8N THRU 11N, AND STEP BOLTS ON 3 LEGS FOR SECTIONS 12NH THRU 16NH.
  - 5 ALL TOWER MEMBERS ARE HOT-DIPPED GALVANIZED AFTER FABRICATION.
  - 6 SEE DWG. NO. D-700200 FOR FOUNDATION DETAILS.



320' TOWER ELEVATION

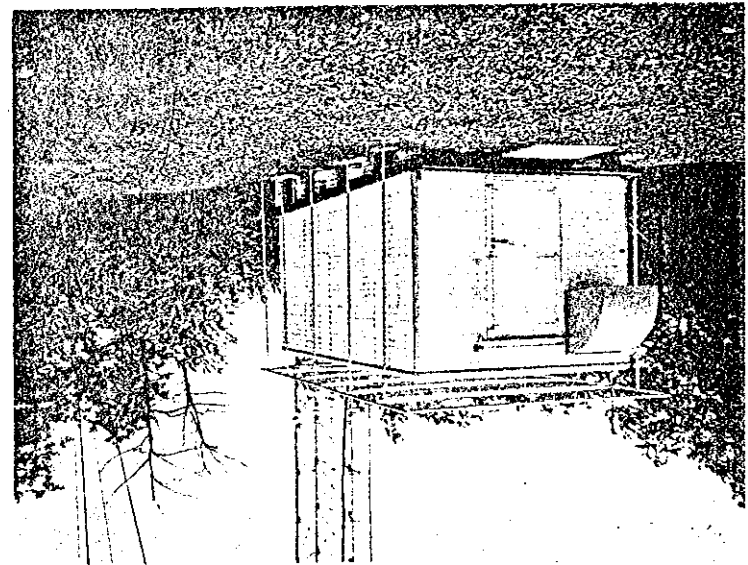
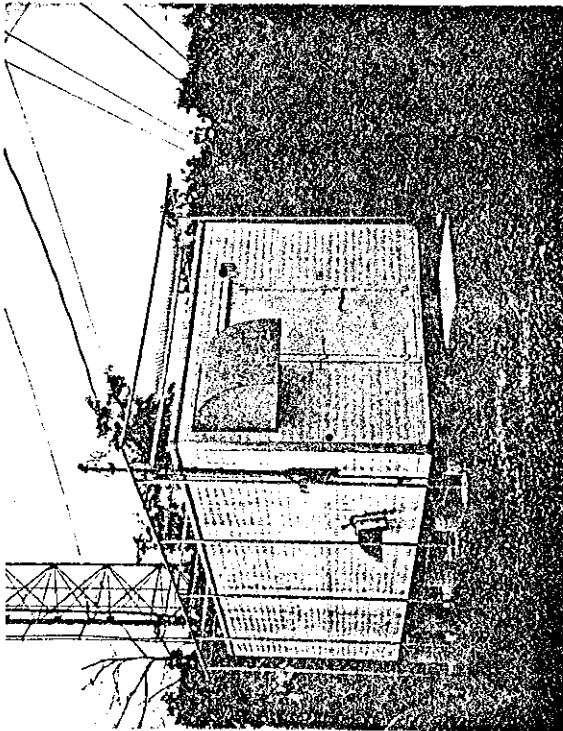
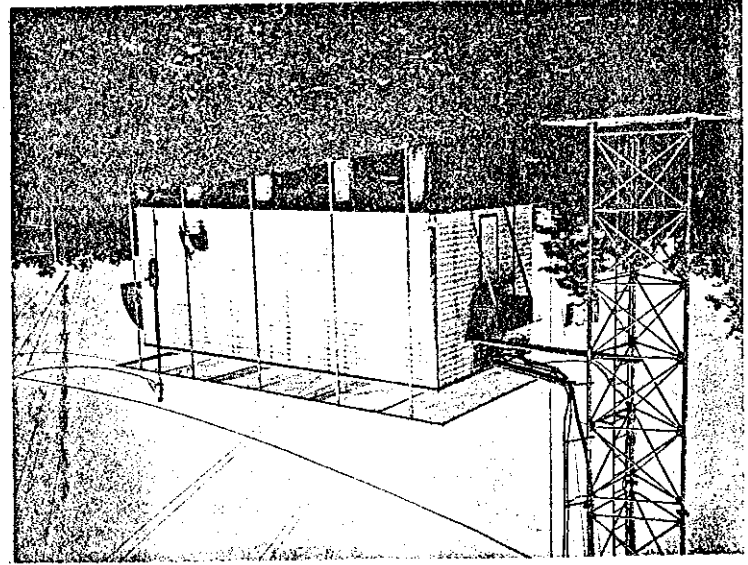
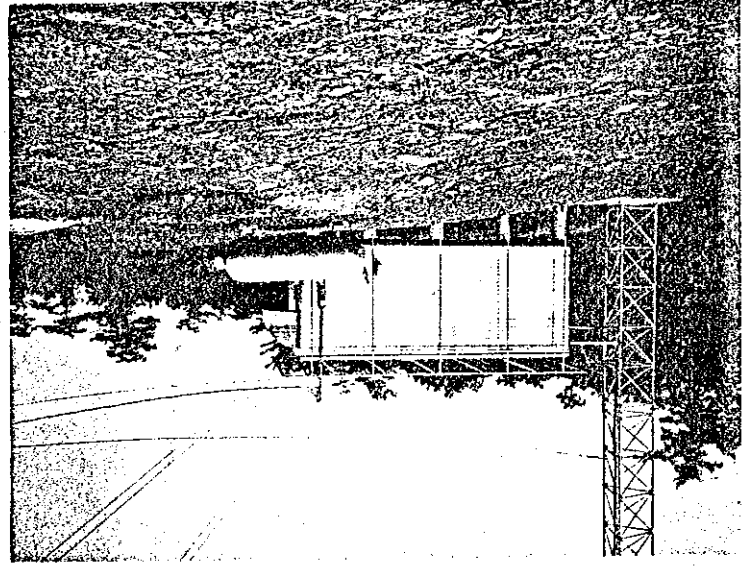
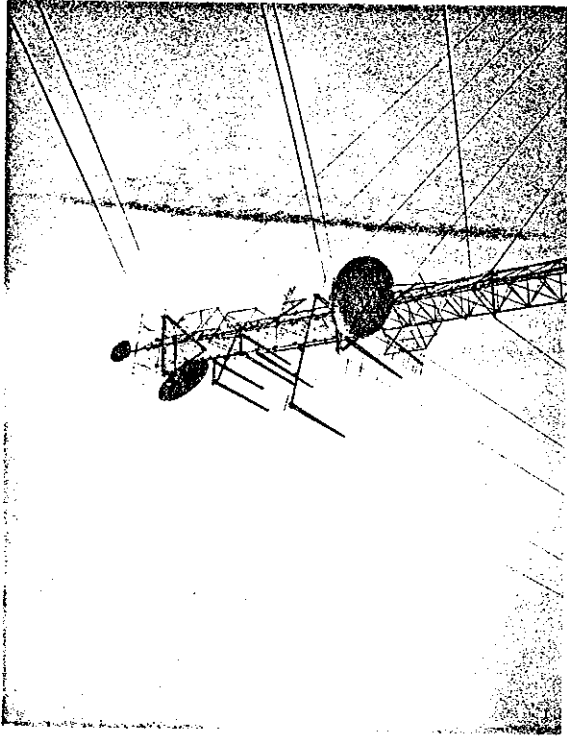
ROHN  
MODEL 33V TOWER  
HEAVY SERIES

ROHN INDUST CO.  
PEORIA, ILL.

DATE: 1-19-78  
DRAWN BY: J. L. WOOD  
CHECKED BY: J. L. WOOD  
SCALE: AS SHOWN

E-68001





No. 447-75

\$ 25.00  
Fee

**NEWINGTON ZONING COMMISSION**  
Town Hall  
NEWINGTON, CONN.

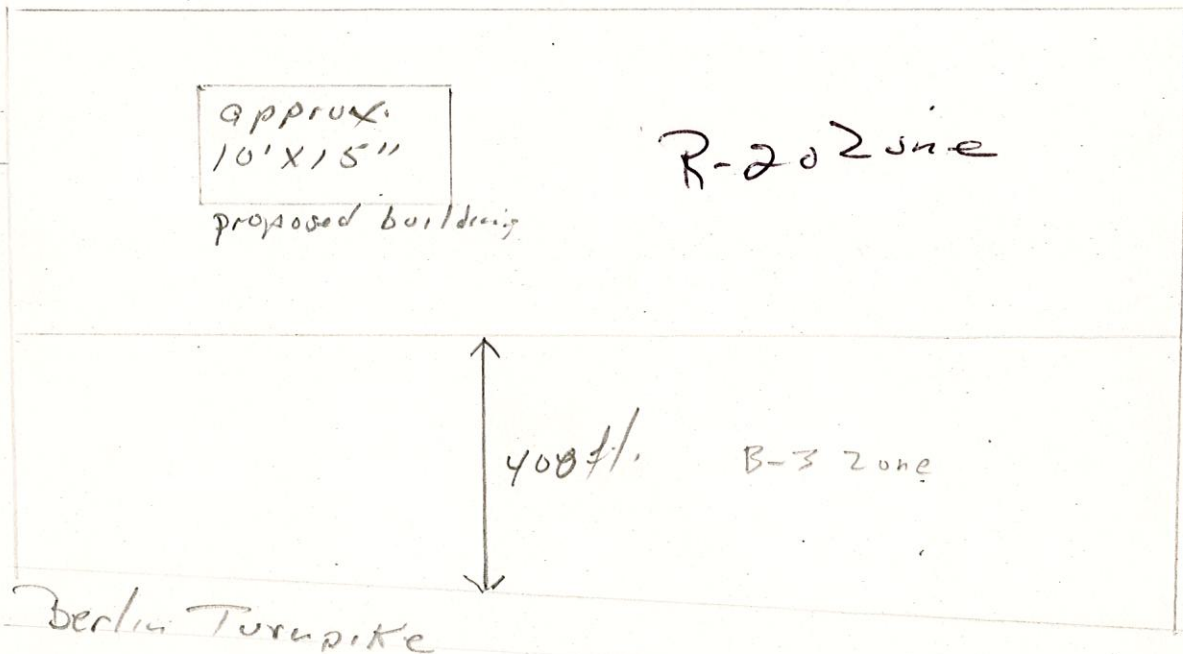
Application for Variation of Zoning Ordinance Requirement

Applicant Greater Hartford CATV, Inc. Date May 28 1975  
Fred H. Callahan Jr. Address 2111 Berlin Turnpike Newington  
Location of Property 2111 Berlin Pike Rear Zone R-20  
Owner Fred H. Callahan Jr. Address 2111 Berlin Turnpike Newington

Indicate plot by diagram in space below, showing streets, lot lines, building lines, zone boundary lines, dimension, and buildings present and proposed.

State clearly variation requested and reasons for same.

Special exception under Article II, Section 1, Subsection 8(d) is requested to permit television tower and associated equipment structure on above property as per plans submitted herewith.



Signature Fred H. Callahan Jr.

25.00  
Notice: A fee of \$500 must be deposited at the office of the building inspector before acceptance of application. Make checks payable to THE TOWN OF NEWINGTON.

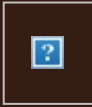
Received from Fred Callahan Date 5-28-75  
Fee \$25.00 For petition 447-75

NEWINGTON ZONING COMMISSION  
By Kenneth L. Blawie  
Building Inspector

# EXHIBIT 7

**From:** [UPS](#)  
**To:** [Evan Renwick](#)  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030335912294  
**Date:** Friday, September 2, 2022 1:05:38 PM

---



**Hello, your package has been delivered.**

**Delivery Date:** Friday, 09/02/2022

**Delivery Time:** 1:04 PM

**Left At:** FRONT DOOR



[Set Delivery Instructions](#)

[Manage Preferences](#)

[View My Packages](#)

## CENTERLINE SITE ACQUISITION

**Tracking Number:**

[1Z9Y45030335912294](#)

**Ship To:**

CALLAHAN ACRES, LLC  
750 WEST CENTER ST  
WEST BRIDGEWATER, MA 023791545  
US

**Number of Packages:**

1

**UPS Service:**

UPS Ground

**Package Weight:**

1.0 LBS

**Reference Number:**

CT1145-CSC\_CALLAHAN ACRES, LLC



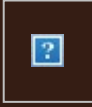
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**From:** [UPS](#)  
**To:** [Evan Renwick](#)  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030337098073  
**Date:** Friday, September 2, 2022 1:18:30 PM

---



**Hello, your package has been delivered.**

**Delivery Date:** Friday, 09/02/2022

**Delivery Time:** 1:17 PM

**Signed by:** DJ

## CENTERLINE SITE ACQUISITION

<b>Tracking Number:</b>	<a href="#">1Z9Y45030337098073</a>
<b>Ship To:</b>	ZONING DEPARTMENT 750 WEST CENTER ST WEST BRIDGEWATER, MA 023791545 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	CT1145-CSC_ZEO

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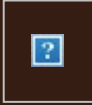
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**From:** [UPS](#)  
**To:** [Evan Renwick](#)  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030339855858  
**Date:** Friday, September 2, 2022 1:20:25 PM

---



**Hello, your package has been delivered.**

**Delivery Date:** Friday, 09/02/2022

**Delivery Time:** 1:19 PM

**Signed by:** OFFICE

## CENTERLINE SITE ACQUISITION

<b>Tracking Number:</b>	<a href="#">1Z9Y45030339855858</a>
<b>Ship To:</b>	OFFICE OF THE MAYOR 750 WEST CENTER ST WEST BRIDGEWATER, MA 023791545 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	CT1145-CSC_MAYOR

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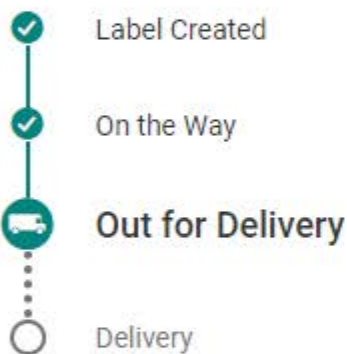
Your shipment from



## CENTERLINE SITE ACQUISITION

Estimated delivery

**Today, September 06 between 4:15 P.M. - 7:15 P.M.** [?](#)



### Ship To

TIGR ACQUISITIONS III, LLC  
PROPERTY MANAGEMENT  
1170 PEACHTREE STREET  
ATLANTA, GA 303097649 US

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