



December 22, 2020

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

Re: Notice of Exempt Modification New Cingular Wireless PCS, LLC ("AT&T") Site CT1124
175 Dickinson Rd, Glastonbury, CT 06073 (the "Property")
Latitude: 41.655895 N Longitude: 72.523271 W

Dear Ms. Bachman:

AT&T currently maintains (9) antennas at the 137-foot level on the existing 180-foot monopole tower ("Tower") at 175 Dickinson Rd, Glastonbury, CT. The tower is owned by SBA Towers, Inc ("SBA") and the property is owned Randall S. Chapman & Karrie-Lynne Bronzi. AT&T intends to modify its facility by replacing (6) antennas with (3) DMP65R-BU6DA, & (3) HPA-65R-BU6AA antennas and replacing (6) RRUs with (3) B5/B12 4449 & (3) 8843 B2 B66A RRUs. The height of AT&Ts existing and proposed antennas & RRUs is 137'.

This modification includes B2, B5, and B12 hardware that is both 4G (LTE) and 5GNR capable through remote software configuration and either or both services may be turned on or off at various times.

A Special Exception for the SBA facility was approved by the Town of Glastonbury Zoning Board of Appeals on August 9, 2000. This approval contained no conditions that could be violated by this modification, including facility height or mounting restrictions. AT&Ts modification complies with the above-mentioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies ("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 to R.C.S.A §16-50j-73, a copy of this letter is being sent to Mr. Richard J. Johnson, Town Manager, Town of Glastonbury, Mr. Peter R. Carey, Building Official/Zoning Enforcement Officer, Town of Glastonbury, Randall S. Chapman & Karrie-Lynn Bronzi the property owners. SBA, the tower owner received a copy by email.

The planned modifications of 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.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and foundation can support the proposed loading.

For the foregoing reasons, AT&T respectfully submits the proposed modifications to the above referenced telecommunication facility constitute an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2).

Sincerely,

Hollis M. Redding

Hollis M. Redding
SAI Communications, LLC
12 Industrial Way
Salem, NH 03079
Mobile: 860-834-6964
hredding@saigrp.com

Enclosures

Cc: Mr. Richard J. Johnson, Town Manager, Town of Glastonbury
Mr. Peter R. Carey, Building Official/Zoning Enforcement Officer, Town of Glastonbury
Randall S. Chapman & Karrie-Lynne Bronzi, property owners
SBA Towers, Inc., tower owner

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz ^{**})	Limit S (mW/cm ²)	%MPE
Other Carriers*							7.93%
AT&T UMTS	2	414	137	0.0174	850	0.5667	0.31%
AT&T PCS UMTS	2	656	137	0.0275	1900	1.0000	0.27%
AT&T LTE	2	940	137	0.0394	700	0.4667	0.84%
AT&T PCS LTE	2	1791	137	0.0751	1900	1.0000	0.75%
AT&T GSM	2	414	137	0.0174	850	0.5667	0.31%
AT&T PCS GSM	2	656	137	0.0275	1900	1.0000	0.27%
Site Total							10.68%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz ^{**})	Limit S (mW/cm ²)	%MPE
Other Carriers*							7.93%
AT&T UMTS	1	302	137	0.0063	850	0.5667	0.11%
AT&T LTE	1	2951	137	0.0618	700	0.4667	1.33%
AT&T LTE	2	4842	137	0.2029	1900	1.0000	2.03%
AT&T LTE	1	1476	137	0.0309	700	0.4667	0.66%
AT&T LTE	1	1000	137	0.0210	850	0.5667	0.37%
AT&T LTE AWS	1	5070	137	0.1062	2100	1.0000	1.06%
AT&T 5G	1	1000	137	0.0210	850	0.5667	0.37%
Site Total							13.86%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

PROJECT INFORMATION

SCOPE OF WORK: **ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:**

- NEW AT&T ANTENNAS: DMP65R-BU6DA (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T ANTENNAS: HPA-65R-BU6AA (TYP. OF 1 PER SECTOR, TOTAL OF 3) (TYP. OF 1 PER SECTOR, TOTAL OF 3) (TO BE RELOCATED TO POS. 3)
- NEW AT&T RRUS: B5/B12 4449 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 8843 B2/B66A (PCS/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW Y CABLES (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- MOVE EXISTING UMS RET SMART BIAS TS FROM GSM LINES TO UMS LINES.
- NEW AT&T (2) 1" DC TRUNKS TO REPLACE EXISTING.
- PROPOSED MOUNT MODS (SEE S-1 SHEET).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- NEW AT&T SURGE ARRESTOR: TSXDC-4310FM (TYP. OF 4 PER ALPHA & GAMMA SECTORS, TOTAL OF 8).
- NEW AT&T RRUS: B14 4478 (700) (TYP. OF 1 PER ALPHA & GAMMA SECTORS, TOTAL OF 2) (ALPHA & BETA WILL SHARE).
- ADD (1) RBS 6630 FOR 5G.
- INSTALL (1) IDLE.
- INSTALL NEW NETSURE 7100 WITH 3 STR BATT, ADD (1) ARGUS SHELF (TO REPLACE EXISTING)
- INSTALL NEW FIF RACK.

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNAS: 7770 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T ANTENNAS: HPA-65R-BUU-H6 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-32 B2 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T DIPLEXER LGP21901 (TYP. OF 4 PER SECTOR, TOTAL OF 12).

ITEMS TO REMAIN:

- (3) ANTENNAS, (6) TMA'S (1) SURGE ARRESTOR, (6) DIPLEXERS, (12) COAX CABLES, & (1) FIBER.

SITE ADDRESS: 175 DICKINSON ROAD
MARLBOROUGH, CT 06073

LATITUDE: 41.655895° N, 41° 39' 21.22" N
LONGITUDE: 72.523271° W, 72° 31' 23.77" W
TYPE OF SITE: MONOPOLE / INDOOR
STRUCTURE HEIGHT: 180'-0"±
RAD CENTER: 137'-0"±
CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT1124

SITE NAME: GLASTONBURY SOUTH

FA CODE: 10042319

PACE ID: MRCTB048925, MRCTB048957, MRCTB048879, MRCTB048900

PROJECT: LTE 3C_4C_4TX4RX_5G 2020 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

GET ON I-93 S FROM INDUSTRIAL WAY AND MANOR PKWY, HEAD SOUTHEAST TOWARD INDUSTRIAL WAY, TURN LEFT AT THE 1ST CROSS STREET ONTO INDUSTRIAL WAY, TURN RIGHT ONTO MANOR PKWY, TURN LEFT ONTO PELHAM RD, USE THE RIGHT LANE TO MERGE ONTO I-93 S VIA THE RAMP TO METHUEN, DRIVE FROM I-495 S, I-290 W, I-90 W AND I-84 TO GLASTONBURY. TAKE EXIT 10 FROM CT-2 E, MERGE ONTO I-93 S, ENTERING MASSACHUSETTS, TAKE EXIT 44B TO MERGE ONTO I-495 S TOWARD LOWELL, TAKE EXIT 25B TO MERGE ONTO I-290 W TOWARD WORCESTER, TAKE EXIT 7 FOR I-90/MASS. PIKE, (TOLL ROAD), KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR I-90 W/SPRINGFIELD/ALBANY AND MERGE ONTO I-90 W, (TOLL ROAD), USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I-84 TOWARD HARTFORD CT/NEW YORK CITY, (TOLL ROAD), CONTINUE ONTO I-84, (TOLL ROAD), ENTERING CONNECTICUT, USE THE LEFT LANE TO TAKE EXIT 55 FOR CT-2 E TOWARD NORWICH, CONTINUE ONTO CT-2 E, TAKE EXIT 10 FOR CT-83 TOWARD E GLASTONBURY/MANCHESTER, TAKE WASSUC RD, COUNTRY CLUB RD AND MOTT HILL RD TO DICKINSON RD, TURN RIGHT ONTO CT-83 S/MANCHESTER RD, TURN LEFT ONTO NEW LONDON TURNPIKE, CONTINUE ONTO WASSUC RD, TURN RIGHT ONTO COUNTRY CLUB RD, TURN LEFT ONTO MOTT HILL RD, SLIGHT LEFT ONTO DICKINSON RD



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	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & EQUIPMENT PLANS	0
A-2	ANTENNA LAYOUTS & ELEVATION	0
A-3	DETAILS	0
SN-1	STRUCTURAL NOTES	0
S-1	MOUNT MODIFICATION DESIGN	0
G-1	GROUNDING DETAILS	0
RF-1	RF PLUMBING DIAGRAM	0

SBA SITE NAME: CT02216
SBA SITE #: 1222500

72 HOURS

CALL BEFORE YOU DIG
CALL TOLL FREE 1-800-922-4455
OR CALL 811

UNDERGROUND SERVICE ALERT

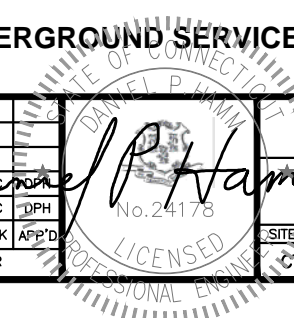
HDG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1124
SITE NAME: GLASTONBURY SOUTH
SBA SITE # ID: 1222500
175 DICKINSON ROAD
MARLBOROUGH, CT 06073
HARTFORD COUNTY

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

NO.		DATE	REVISIONS	BY	CHK	APP'D	AT&T	
0	12/15/20		ISSUED FOR REVIEW	CA	OPH		TITLE SHEET	
A	10/13/20		ISSUED FOR REVIEW	AR	HC	OPH	LTE 3C_4C_4TX4RX_5G 2020 UPGRADE	
SCALE: AS SHOWN		DESIGNED BY: HC		DRAWN BY: AR		SITE NUMBER: CT1124		
						DRAWING NUMBER: T-1		REV: 0



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) LIGHTING 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 EQUIPMENT 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 – SAI
 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	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

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

SAI
 12 INDUSTRIAL WAY SALEM, NH 03079

SITE NUMBER: CT1124
 SITE NAME: GLASTONBURY SOUTH
 SBA SITE # ID: 1222500
 175 DICKINSON ROAD MARLBOROUGH, CT 06073
 HARTFORD COUNTY

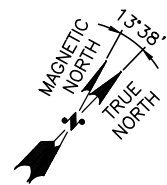
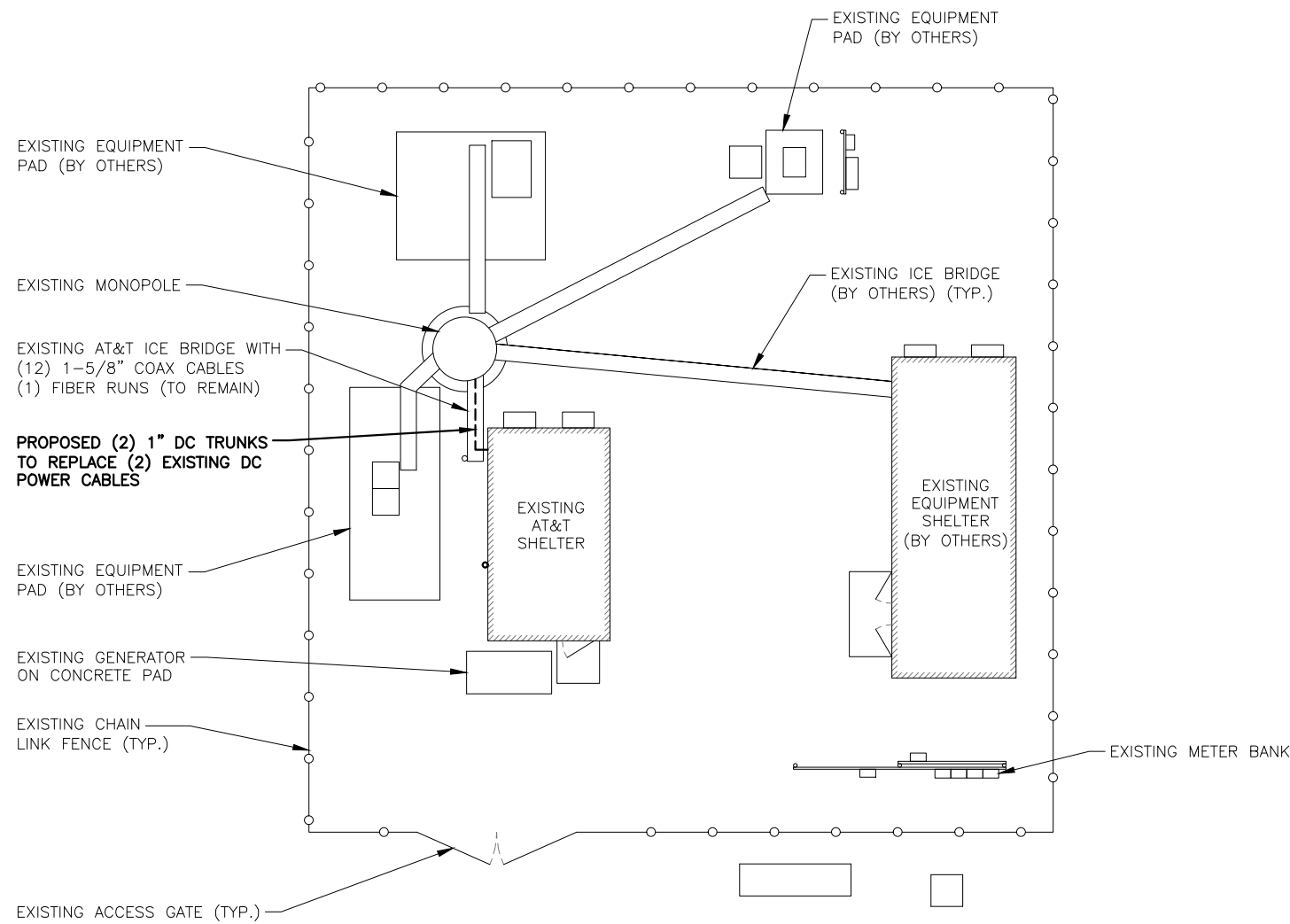
at&t
 500 ENTERPRISE DRIVE, SUITE 3A
 ROCKY HILL, CT 06067

NO.		DATE	REVISIONS	BY	CHK	APP'D	
0	12/15/20		ISSUED FOR REVIEW	CA			
A	10/13/20		ISSUED FOR REVIEW	AR	HC	DPH	
SCALE:		AS SHOWN		DESIGNED BY: HC		DRAWN BY: AR	

AT&T
 GENERAL NOTES
 LTE 3C_4C_4TX4RX_5G 2020 UPGRADE
 Daniel P. Hamm
 No. 24178
 LICENSED PROFESSIONAL ENGINEER
 STATE OF CONNECTICUT
 SITE NUMBER: CT1124
 DRAWING NUMBER: GN-1
 REV: 0

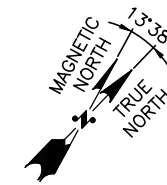
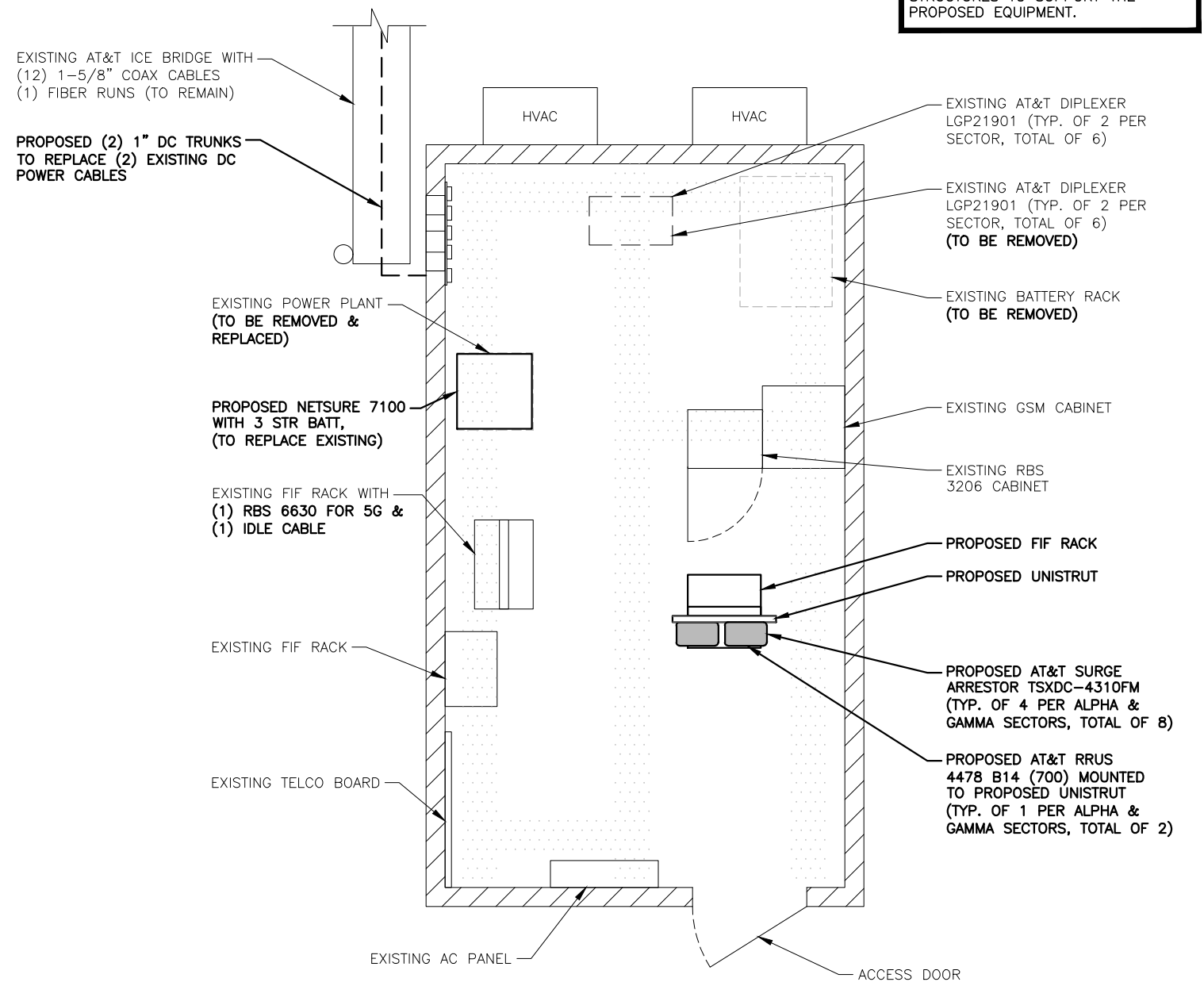
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
REFER TO **STRUCTURAL ANALYSIS** BY: SBA DATED: DECEMBER 2, 2020 FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



COMPOUND PLAN
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

1
A-1



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

2
A-1



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

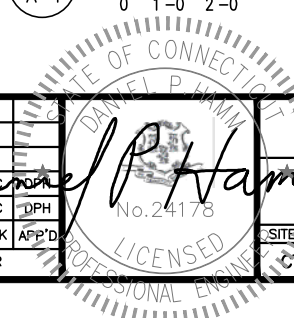
SAI
12 INDUSTRIAL WAY SALEM, NH 03079

SITE NUMBER: CT1124
SITE NAME: GLASTONBURY SOUTH
SBA SITE # ID: 1222500
175 DICKINSON ROAD MARLBOROUGH, CT 06073 HARTFORD COUNTY

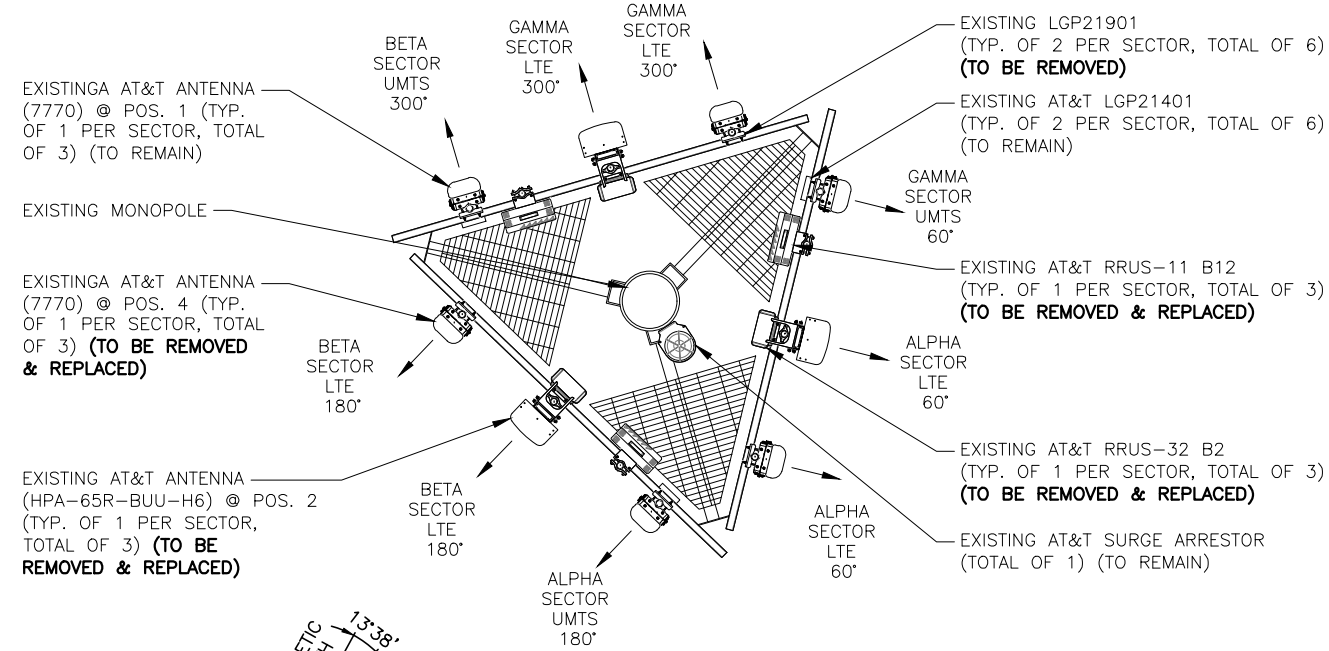
at&t
500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
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A	10/13/20	ISSUED FOR REVIEW	AR	HC	OPH

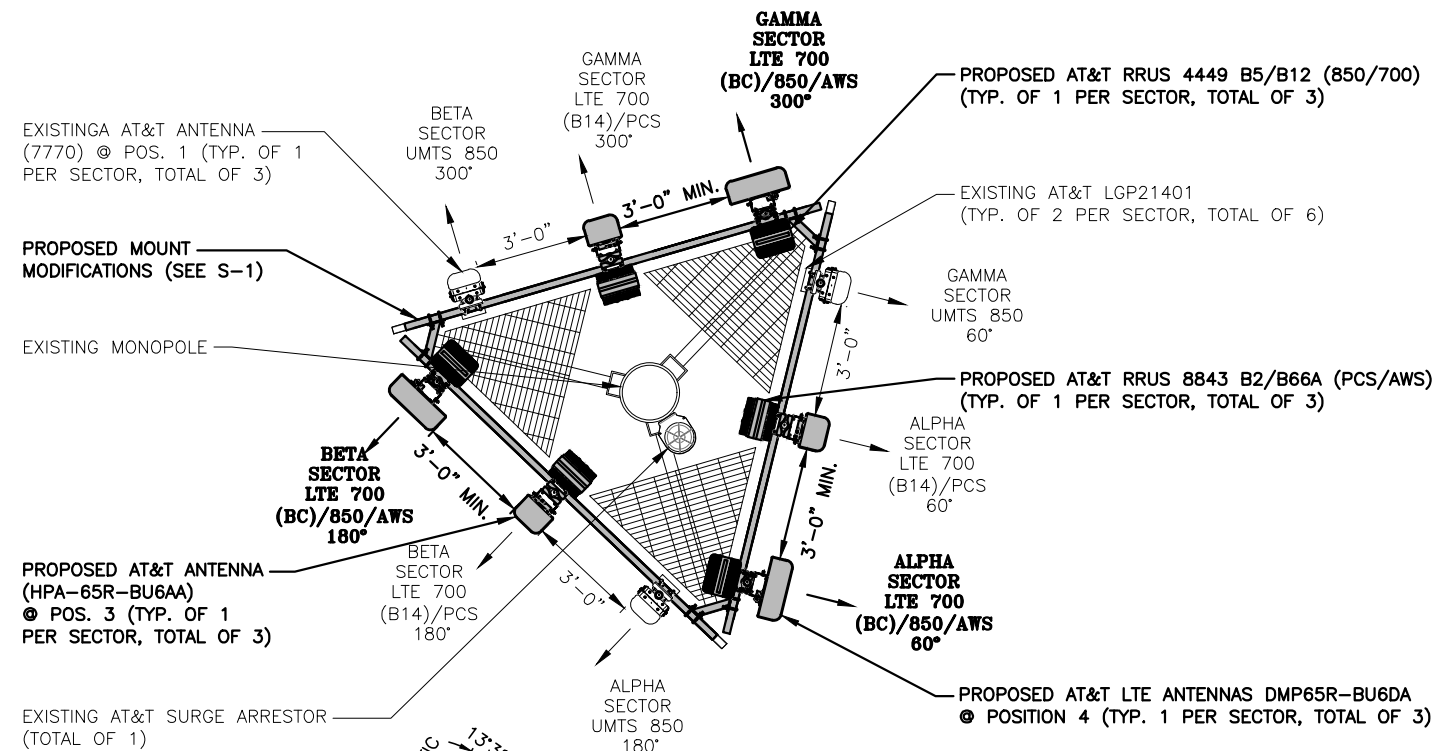
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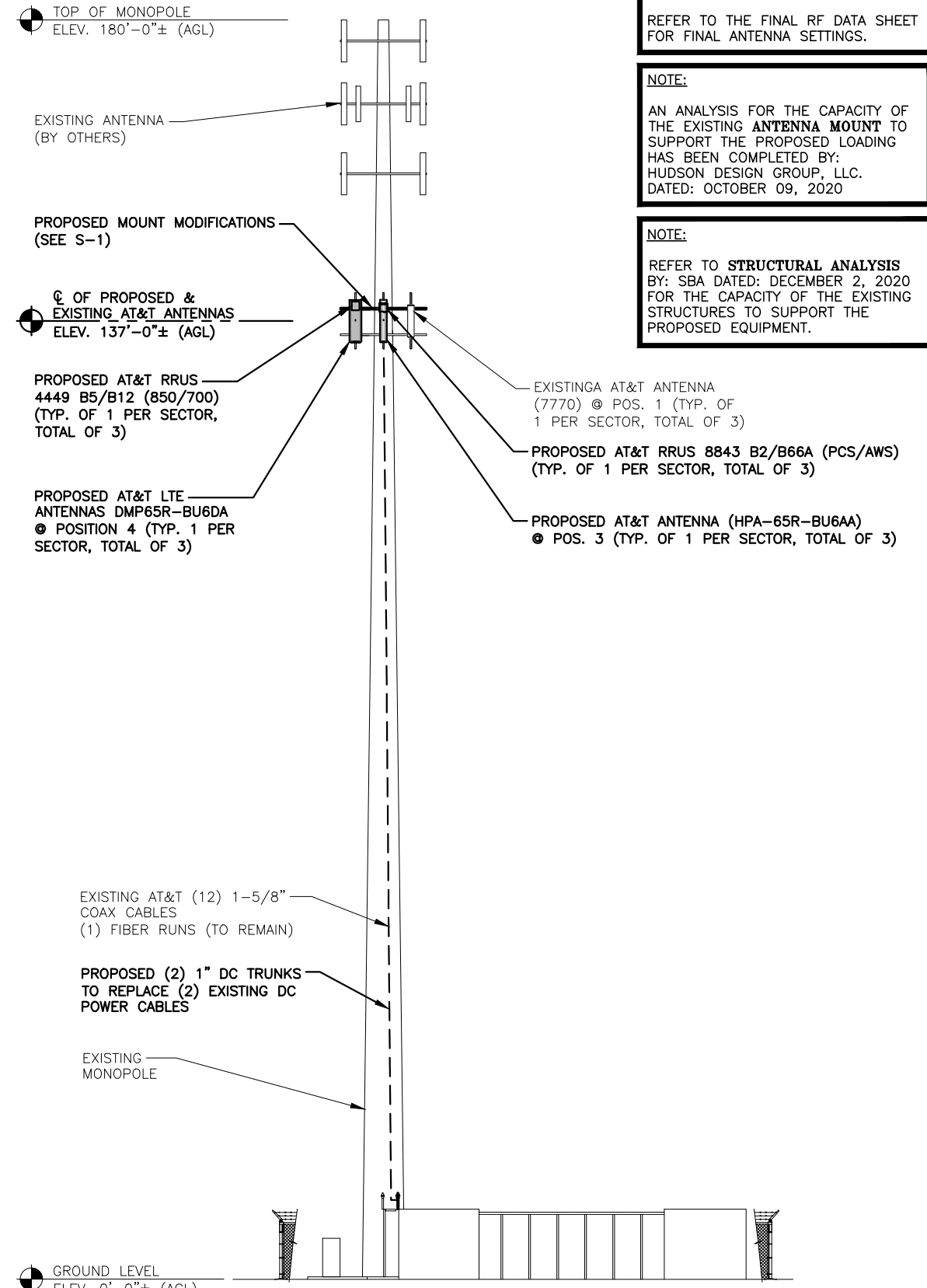
AT&T
COMPOUND & EQUIPMENT PLANS
LTE 3C_4C_4TX4RX_5G 2020 UPGRADE
SITE NUMBER: CT1124 DRAWING NUMBER: A-1 REV: 0



EXISTING ANTENNA LAYOUT 1
SCALE: N.T.S. A-2



PROPOSED ANTENNA LAYOUT 2
SCALE: N.T.S. A-2



ELEVATION 3
22x34 SCALE: 3/32"=1'-0" A-2
11x17 SCALE: 3/64"=1'-0" A-2

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

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY:
HUDSON DESIGN GROUP, LLC.
DATED: OCTOBER 09, 2020

NOTE:
REFER TO **STRUCTURAL ANALYSIS** BY: SBA DATED: DECEMBER 2, 2020 FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

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

SAI
12 INDUSTRIAL WAY SALEM, NH 03079

SITE NUMBER: CT1124
SITE NAME: GLASTONBURY SOUTH
SBA SITE # ID: 1222500
175 DICKINSON ROAD MARLBOROUGH, CT 06073 HARTFORD COUNTY

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

				AT&T	
				ANTENNA LAYOUTS & ELEVATION	
				LTE 3C_4C_4TX4RX_5G 2020 UPGRADE	
NO.	DATE	REVISIONS	BY	CHK	APP'D
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A	10/13/20	ISSUED FOR REVIEW	AR	HC	OPH
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SITE NUMBER			DRAWING NUMBER		REV
CT1124			A-2		0

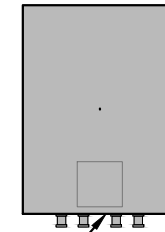
ANTENNA SCHEDULE

SECTOR	EXISTING/PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA Q HEIGHT	AZIMUTH	TMA/DIPLEXER	RRU	FREQUENCY	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	7770	55X11X5	137'-0"±	180°	(2)(E) LGP21401 (2)(E)(G) LGP21901	-	-	-	(2)1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8F
A2	-	-	-	-	-	-	-	-	-	-	-	
A3	PROPOSED	LTE 700 (B14)/PCS	HPA-65R-BU6AA	71.2x11.7x8.4	137'-0"±	60°	-	(1)(P)(G) 4478 B14 (1)(P) 8843 B2/B66A	(700) (PCS/AWS)	18.1x13.4x8.3 14.9x13.2x10.9	(2)1-5/8 COAX	
A4	PROPOSED	LTE 700 (BC)/850/AWS	DMP65R-BU6DA	71.2x20.7x7.7	137'-0"±	60°	-	(1)(P) 4449 B5/B12	(850/700)	17.9x13.2x10.4	(2)(P) DC POWER (1)(E) FIBER	
B1	EXISTING	UMTS 850	7770	55X11X5	137'-0"±	300°	(2)(E) LGP21401 (2)(E)(G) LGP21901	-	-	-	(2)1-5/8 COAX	1
B2	-	-	-	-	-	-	-	-	-	-	-	
B3	PROPOSED	LTE 700 (B14)/PCS	HPA-65R-BU6AA	71.2x11.7x8.4	137'-0"±	180°	-	(1)(P) 8843 B2/B66A	(PCS/AWS)	14.9x13.2x10.9	(2)1-5/8 COAX	
B4	PROPOSED	LTE 700 (BC)/850/AWS	DMP65R-BU6DA	71.2x20.7x7.7	137'-0"±	180°	-	(1)(P) 4449 B5/B12	(850/700)	17.9x13.2x10.4	-	
C1	EXISTING	UMTS 850	7770	55X11X5	137'-0"±	60°	(2)(E) LGP21401 (2)(E)(G) LGP21901	-	-	-	(2)1-5/8 COAX	1
C2	-	-	-	-	-	-	-	-	-	-	-	
C3	PROPOSED	LTE 700 (B14)/PCS	HPA-65R-BU6AA	71.2x11.7x8.4	137'-0"±	300°	-	(1)(P)(G) 4478 B14 (1)(P) 8843 B2/B66A	(700) (PCS/AWS)	18.1x13.4x8.3 14.9x13.2x10.9	(2)1-5/8 COAX	
C4	PROPOSED	LTE 700 (BC)/850/AWS	DMP65R-BU6DA	71.2x20.7x7.7	137'-0"±	300°	-	(1)(P) 4449 B5/B12	(850/700)	17.9x13.2x10.4	-	

RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
3(P)	4449 (850/700)	17.9"x13.2"x10.4"
3(P)	8843 (PCS/AWS)	14.9"x13.2"x10.9"
2(P)	4478 B14 (700)	18.1"x13.4"x8.3"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS



NOTE:
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL
SCALE: N.T.S

NOTE:

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

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: OCTOBER 09, 2020

NOTE:

REFER TO **STRUCTURAL ANALYSIS** BY: SBA DATED: DECEMBER 2, 2020 FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

FINAL ANTENNA SCHEDULE

SCALE: N.T.S

1
A-3



PROPOSED NETSURE 7100 WITH 3 STR BATT, (TO REPLACE EXISTING)

PROPOSED NETSURE 7100 POWER PLANT DETAIL
SCALE: N.T.S

3
A-3

PROPOSED 19" FIF RACK

PROPOSED UNISTRUT (TYP.)

PROPOSED AT&T RRUS 4478 B14 (700) MOUNTED TO PROPOSED UNISTRUT (TYP. OF 1 PER ALPHA & GAMMA SECTORS, TOTAL OF 2)

PROPOSED AT&T SURGE ARRESTOR TSXDC-4310FM (TYP. OF 4 PER ALPHA & GAMMA SECTORS, TOTAL OF 8)

PROPOSED 5/8" HILTI KWIK BOLT - TZ (TYP. -NEW RACK ONLY)

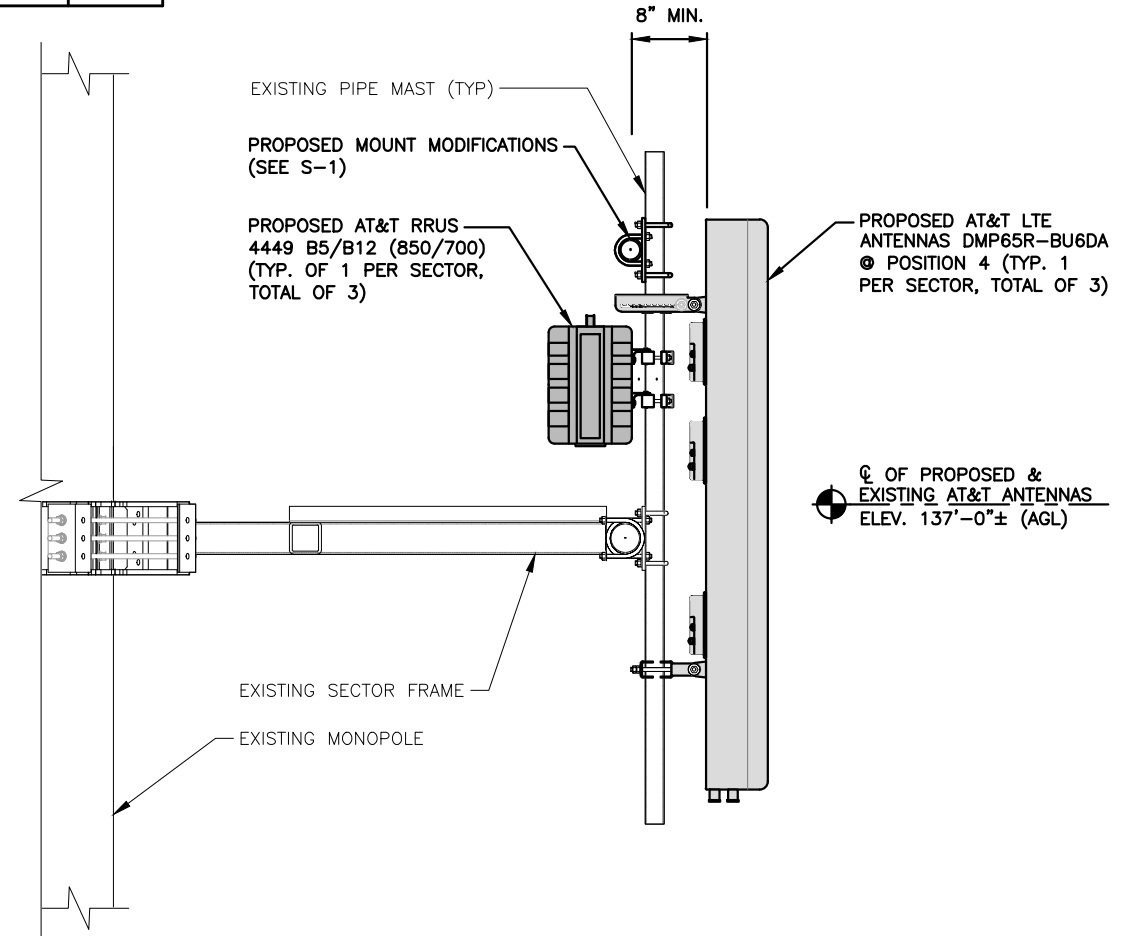
84"

EXISTING FLOOR

PROPOSED FIF RACK DETAIL

SCALE: N.T.S

7
A-4



PROPOSED LTE ANTENNA MOUNTING DETAIL

22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

4
A-3

STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
- STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
- UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS, AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
- EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
- WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
- ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
- NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
- SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

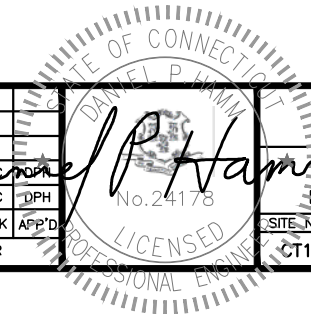
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1124
SITE NAME: GLASTONBURY SOUTH
SBA SITE # ID: 1222500
175 DICKINSON ROAD
MARLBOROUGH, CT 06073
HARTFORD COUNTY

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

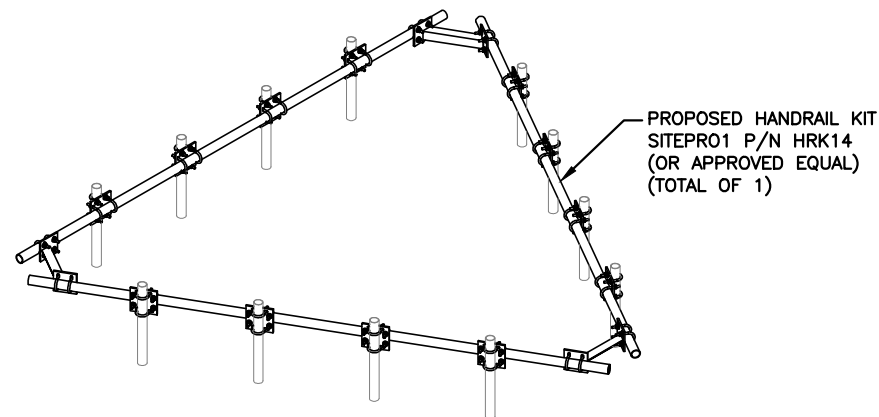
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						DRAWING NUMBER: SN-1		REV: 0



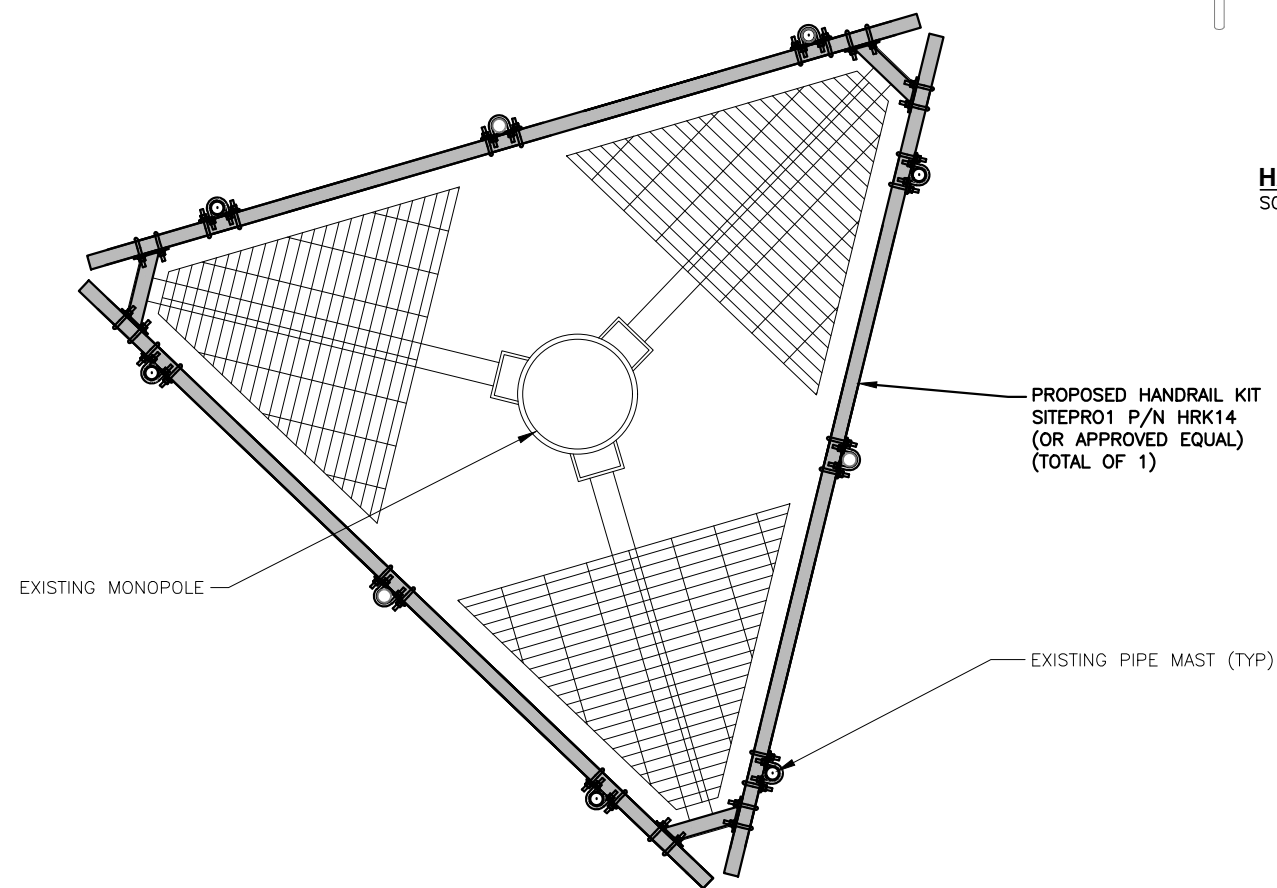
NOTE:
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DATED: OCTOBER 09, 2020

NOTE:
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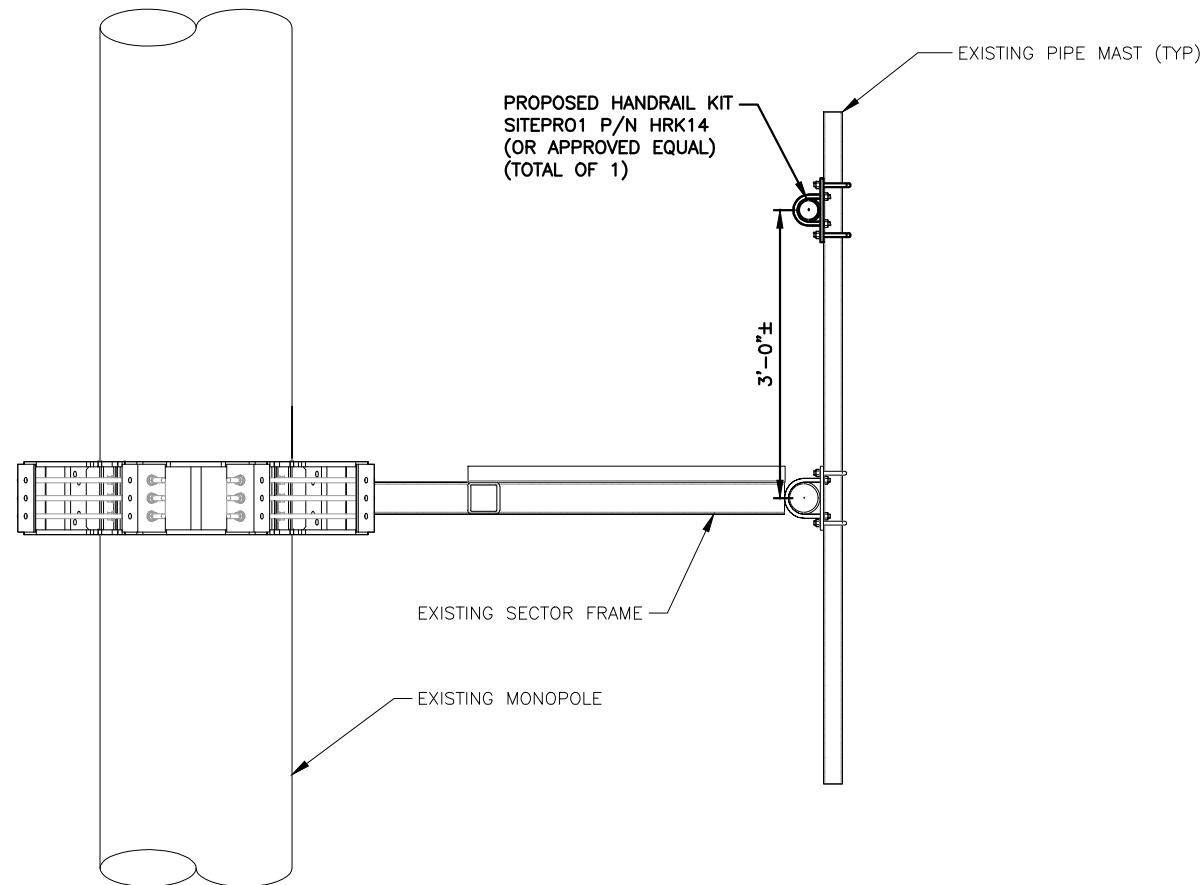


HANDRAIL DETAIL 2
SCALE: N.T.S



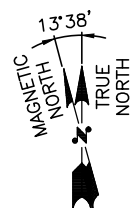
PROPOSED MOUNT MODIFICATIONS PLAN 1
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

S-1



PROPOSED MOUNT MODIFICATIONS DETAIL 3
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

S-1



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



12 INDUSTRIAL WAY
SALEM, NH 03079

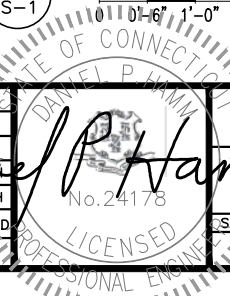
SITE NUMBER: CT1124
SITE NAME: GLASTONBURY SOUTH
SBA SITE # ID: 1222500

175 DICKINSON ROAD
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HARTFORD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
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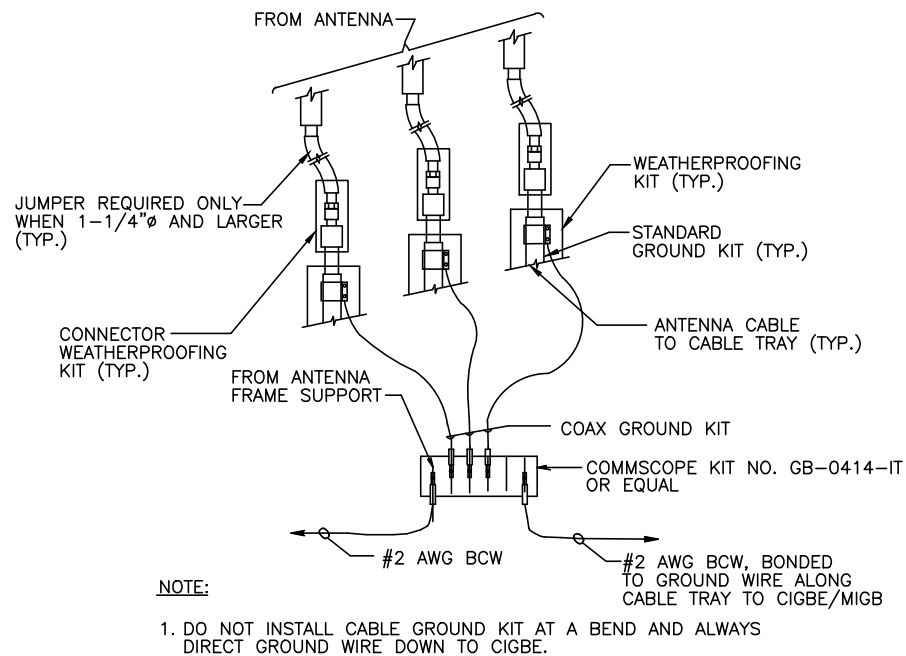
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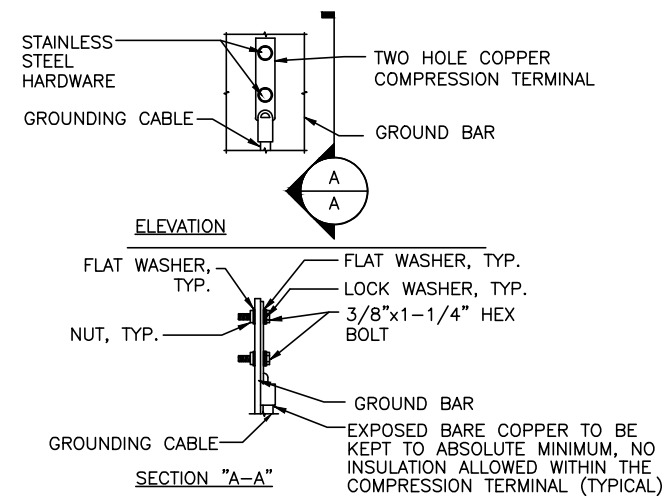
AT&T

MOUNT MODIFICATION DESIGN
LTE 3C_4C_4TX4RX_5G 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1124	S-1	0

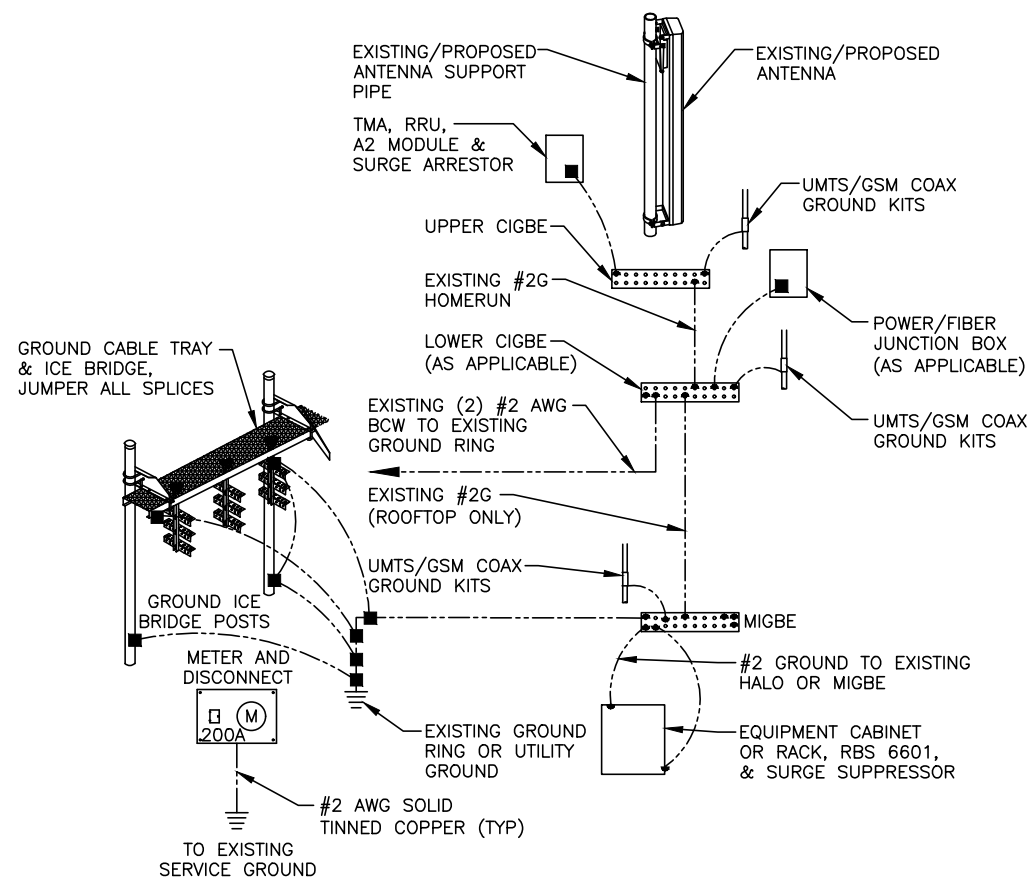


GROUND WIRE TO GROUND BAR CONNECTION DETAIL (1)
SCALE: N.T.S. G-1



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

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



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

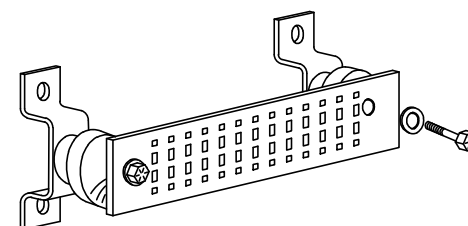
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

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.

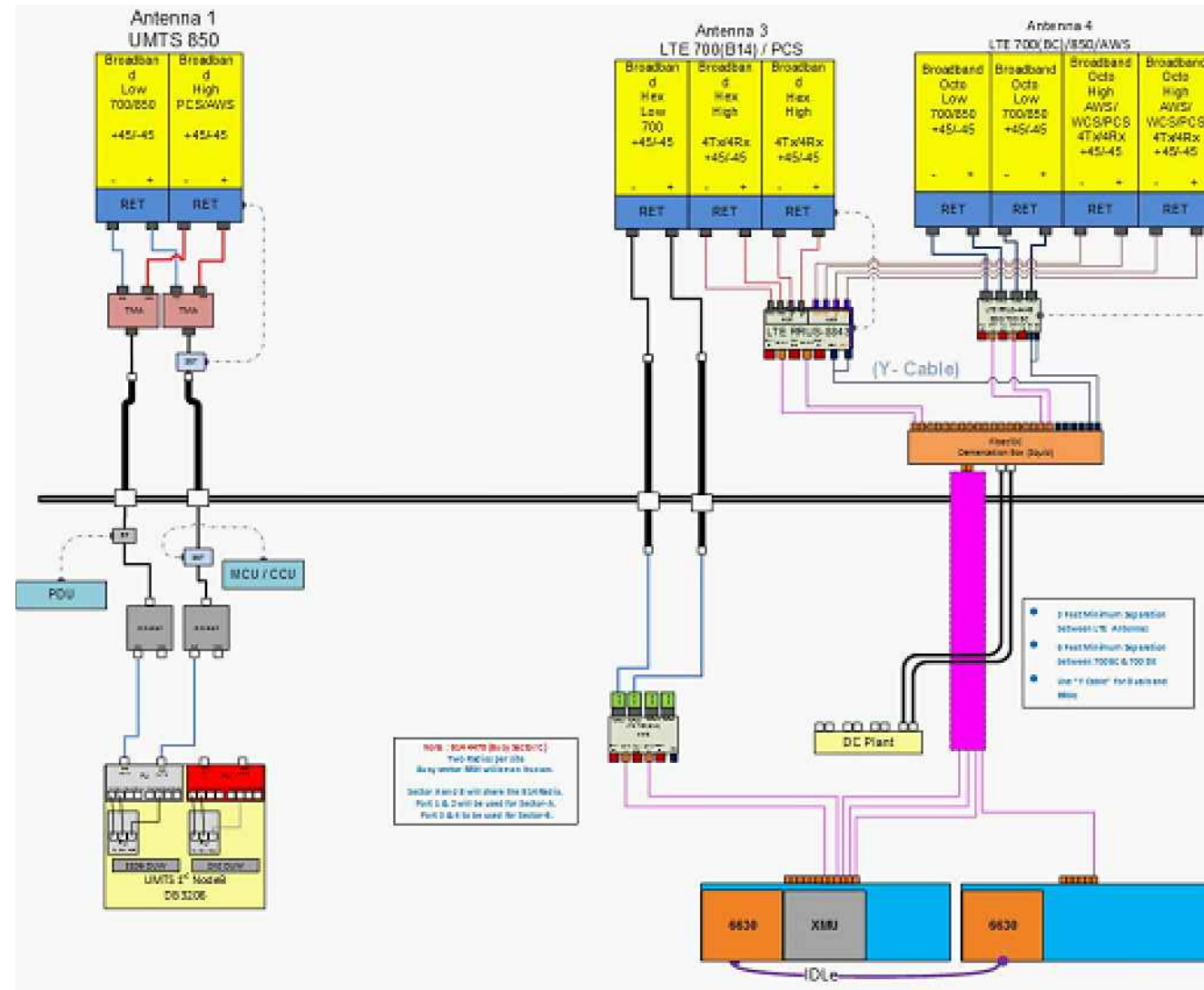
SECTION "A" - SURGE ABSORBERS

- 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) (14)
SCALE: N.T.S. G-1

				AT&T	
				GROUNDING DETAILS	
				LTE 3C_4C_4TX4RX_5G 2020 UPGRADE	
NO.	DATE	REVISIONS	BY	CHK	APP'D
0	12/15/20	ISSUED FOR REVIEW	CA	OPH	
A	10/13/20	ISSUED FOR REVIEW	AR	HC	
SCALE: AS SHOWN			DESIGNED BY: HC	DRAWN BY: AR	
SITE NUMBER			DRAWING NUMBER		REV
CT1124			G-1		0



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

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.

0	12/15/20	ISSUED FOR REVIEW	GA	HC	DPH
A	10/13/20	ISSUED FOR REVIEW	AR	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: AR		

AT&T		
RF PLUMBING DIAGRAM		
LTE 3C_4C_4TX4RX_5G 2020 UPGRADE		
SITE NUMBER	DRAWING NUMBER	REV
CT1124	RF-1	0



Structural Analysis Report

Client: AT&T

Client Site ID / Name: CT11336A / Glastonbury
Application #: 141477, v1

SBA Site ID / Name: CT02216-S / Glastonbury

176 ft Monopole

175 Dickenson Road
Glastonbury, Connecticut 06073
Lat: 41.655897, Long: -72.523255

Project number: CT02216-ATT-120220

Analysis Results

Tower	82.6%	Pass
Foundation	65.0%	Pass

Change in tower stress due to mount modification / replacement	1.1%
--	------

Prepared by:

Serge Berthomieux
Structural Analyst
561-226-9365
SBerthomieux@sbasite.com

December 2, 2020

Exp.01/31/2021



12/03/2020

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
F + 561 995 7626

sbasite.com



Structural Analysis Report

Client: AT&T

Client Site ID / Name: CT11336A / Glastonbury
Application #: 141477, v1

SBA Site ID / Name: CT02216-S / Glastonbury

176 ft Monopole

175 Dickenson Road
Glastonbury, Connecticut 06073
Lat: 41.655897, Long: -72.523255

Project number: CT02216-ATT-120220

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Table of Contents

Introduction.....	3
Analysis Criteria	3
Appurtenance Loading	4
Existing Loading:	4
Proposed Loading:	5
Analysis Results	6
Tower	6
Foundation.....	6
Operational Condition (Rigidity).....	Error! Bookmark not defined.
Conclusions.....	7
Installation Requirements.....	7
Assumptions and Limitations	8
Assumptions	8
Limitations.....	8
Appendix	9
Tower Geometry.....	
Coax Layout.....	
TESPole Report.....	
Foundation Analysis Report.....	

Introduction

The purpose of this report is to summarize the analysis results on the 176 ft Monopole to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Paul J. Ford and Company, Job #29200-887 dated June 19, 2000
Foundation drawings	Paul J. Ford and Company, Job #29200-887 dated June 19, 2000
Geotechnical report	FDH Engineering, Project #1204838EG1 dated August 13, 2012
Modification drawings	N/A
Latest SA	TES, Project Number: 78646, dated 06/19/2019

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut/Hartford/Glastonbury
Governing Codes	ANSI/TIA/EIA 222-G, 2015 IBC; 2018 CBC
Basic Wind Speed (3-Sec gust)	97.0 mph (Ultimate Wind Speed: 125 mph)
Wind Speed with Ice (3-Sec gust)	50 mph (3-Sec. Gust)
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	1.00"
Structural Class*	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft
Seismic Parameter S_s**	0.179
Seismic Parameter S_1	0.063

*This structural analysis is based upon the tower being classified as a structural class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

**Earthquake effects were ignored as per section 2.7.3 of the TIA-222-G code provisions for $S_s < 1.0$.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	176.0	3	APXVAARR24_43-U-NA20 - Panel	Low profile platform w/HRK & reinforcement kit Sitepro RMQP-4096-HK	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
2		3	KRY 112 489/2			
3		3	KRY 112 89/4			
4		3	4449			
5		3	RR90-17-02DP - Panel			
6		6	MHA FE15501P77/75			
7	167.0	3	RRH2X60-AWS	Low Profile Platform	(6) 1 5/8" (2) 1 5/8" Hybrid	Verizon
8		3	RRH2X60-700			
9		6	SBNHH-1D65B - Panel			
10		4	LPA-80063-4CF-EDIN-5 - Panel			
11		2	APL868013 - Panel			
12		1	DB-T16Z-8AB-0Z			
13	157.0	3	ALU 1900 Mhz	Low Profile Platform w/ Mount Reinforcement kit: (1) Sitepro PRK-1245L (1) Sitepro HRK14-U (1) Sitepro PRK-SFS-H-L	(4) 1 1/4" Fiber	Sprint Nextel
14		6	ALU 800 Mhz			
15		3	ALU TD-RRH8x20-25			
16		3	RFS APXVTM14-C-I20 - Panel			
17		3	Commscope NNVV-65B-R4 - Panel			
18	137.0	3	Powerwave 7770 Panel - Panel	LP Platform-Round	(12) 1 5/8" (2) 3/4" DC (1) 1/2" (1) 3" Conduit	AT&T
19		3	Ericsson RRUS-11 Panel			
20		3	KMW HPA-65R-BUU-H6 Panel			
21		3	Ericsson RRUS 32-B2 RRU			
24		3	Powerwave 7770 Panel			
25		6	Powerwave LGP21401 TMA			
28		6	Powerwave LGP21903 Diplexer			
29		12	Powerwave 7020.00 RET			
30		1	Raycap DC6-48-60-18-8F			
31		3	Smart Bias T 1001940			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: from AT&T and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
22	137.0	3	KMW HPA-65R-BU6AA Panel	LP Platform w/ handrail Handrail SitePro 1: HRK14	(12) 1 5/8" (2) 1" DC Power (1) 1/2"	AT&T
23		3	CCI DMP65R-BU6DA Panel			
24		3	Powerwave 7770 Panel			
25		6	Powerwave LGP21401 TMA			
26		3	Ericsson 4449 B5/B12 RRU			
27		3	Ericsson RRUS 8843 B2 B66A RRU			
28		6	Powerwave LGP21903 Diplexer			
29		12	Powerwave 7020.00 RET			
30		1	Raycap DC6-48-60-18-8F			
31		3	Smart Bias T 1001940			

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	74.6%	66.5%	82.6%
Pass/Fail	Pass	Pass	Pass

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	65.0%	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be sufficient to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

Appendix

Usage Diagram - Max Ratio 74.57% at 49.0ft

Structure: CT02216-S
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-G
Exposure: C
Gh: 1.1

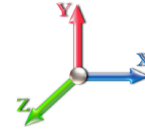
12/2/2020



Page: 1

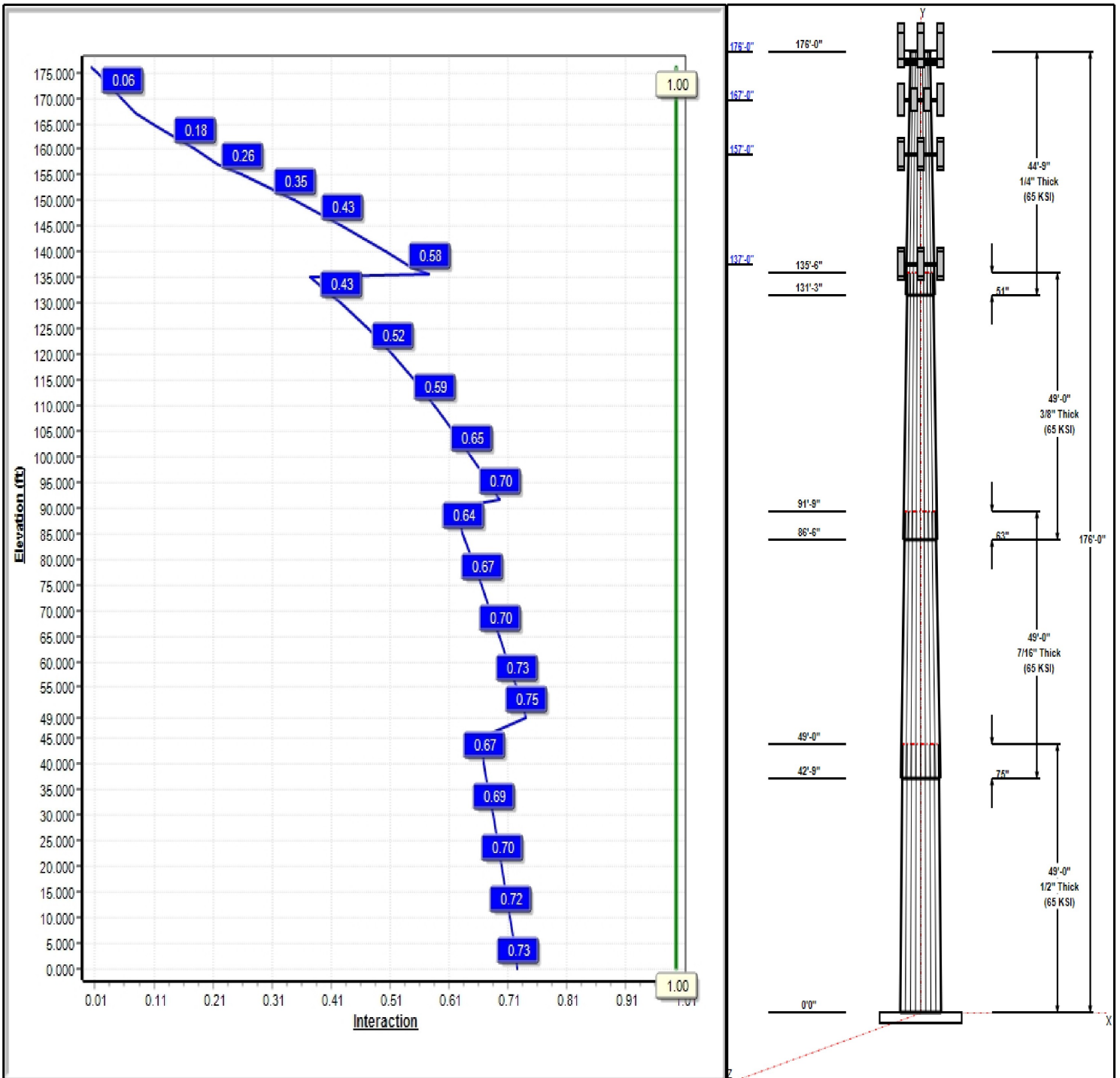
Dead Load Factor: 1.20
 Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 26

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Structure: CT02216-S

Type: Tapered
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.19702

12/2/2020

Page: 2



Shaft Properties

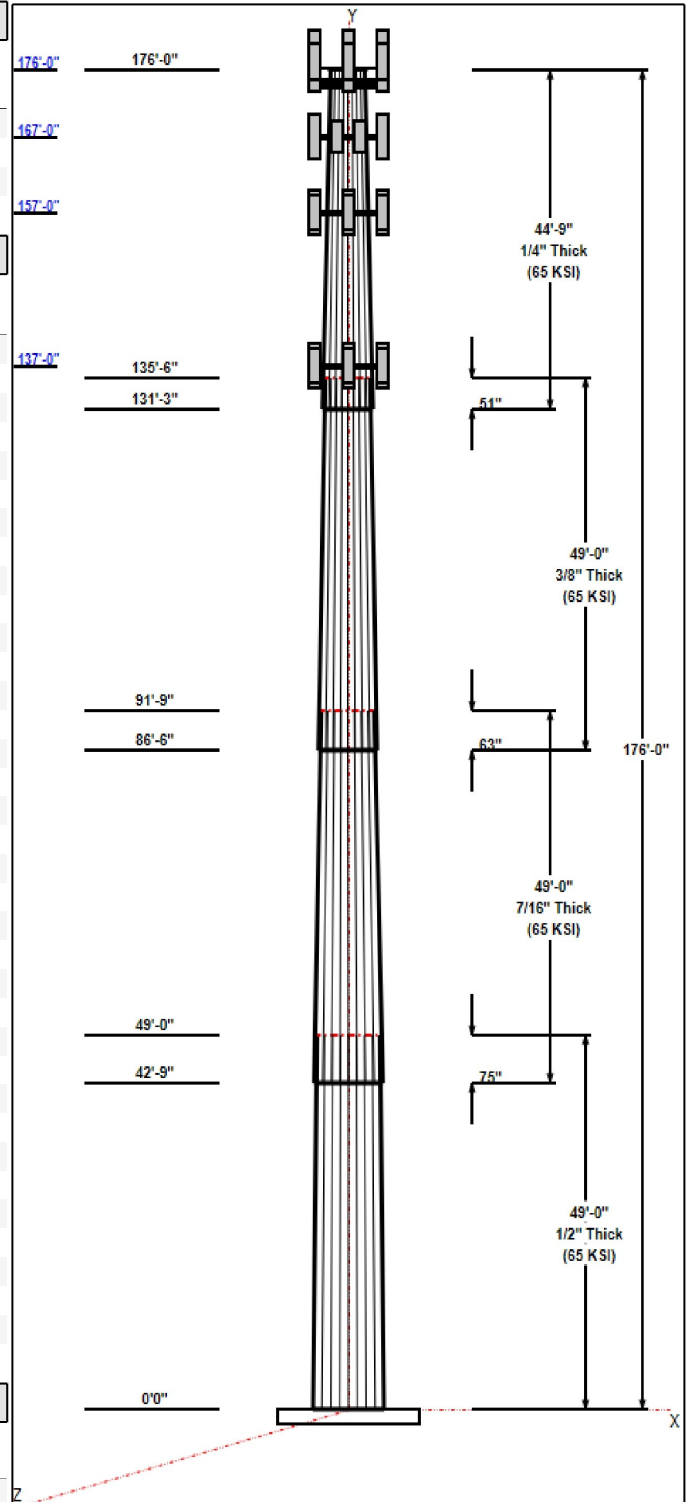
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	49.00	46.90	56.55	0.500		0.19702	65
2	49.00	39.35	49.00	0.438	Slip	0.19702	65
3	49.00	31.48	41.13	0.375	Slip	0.19702	65
4	44.75	24.00	32.82	0.250	Slip	0.19702	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
176.00	177.00	3	APXVAARR24_43-U-NA20	T-Mobile
176.00	177.00	1	RMQP-496-HK	T-Mobile
176.00	177.00	3	KRY 112 489/2	T-Mobile
176.00	177.00	3	KRY 112 89/4	T-Mobile
176.00	177.00	3	4449	T-Mobile
176.00	179.50	1	Lightning Rod	
176.00	177.00	3	RR90-17-02DP	T-Mobile
176.00	177.00	6	MHA FE15501P77/75	T-Mobile
167.00	167.00	1	Low Profile	Verizon
167.00	167.00	3	RRH2X60-AWS	Verizon
167.00	167.00	3	RRH2X60-700	Verizon
167.00	167.00	6	SBNHH-1D65B	Verizon
167.00	167.00	4	LPA-80063-4CF-EDIN-5	Verizon
167.00	167.00	2	APL868013	Verizon
167.00	167.00	1	DB-T16Z-8AB-0Z	Verizon
157.00	157.00	1	Low Profile Platform	Sprint Nextel
157.00	157.00	3	ALU 1900 Mhz	Sprint Nextel
157.00	157.00	6	ALU 800 Mhz	Sprint Nextel
157.00	157.00	3	ALU TD-RRH8x20-25	Sprint Nextel
157.00	157.00	3	RFS APXVTM14-C-I20	Sprint Nextel
157.00	157.00	3	Commscope	Sprint Nextel
157.00	157.00	1	Sitepro PRK-1245L	Sprint Nextel
157.00	157.00	1	Sitepro HRK14-U	Sprint Nextel
157.00	157.00	1	Sitepro PRK-SFS-H-L	Sprint Nextel
137.00	137.00	3	KMW HPA-65R-BU6AA	AT&T
137.00	137.00	3	CCI DMP65R-BU6DA	AT&T
137.00	137.00	3	Ericsson 4449 B5/B12	AT&T
137.00	137.00	3	Ericsson RRUS 8843 B2	AT&T
137.00	137.00	1	Handrail Kit	AT&T
137.00	137.00	1	LP Platform-Round	AT&T
137.00	137.00	3	Powerwave 7770 Panel	AT&T
137.00	137.00	6	Powerwave LGP21401	AT&T
137.00	137.00	6	Powerwave LGP21903	AT&T
137.00	137.00	1	Raycap DC6-48-60-18-8F	AT&T
137.00	137.00	12	Powerwave 7020.00 RET	AT&T
137.00	137.00	3	Smart Bias T 1001940	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	176.00	Inside	1 5/8" Coax	T-Mobile
0.00	176.00	Inside	1 5/8" Fiber	T-Mobile
0.00	176.00	Outside	Safety Cable	
0.00	176.00	Outside	Step bolts (ladder)	
0.00	167.00	Inside	1 5/8" Coax	Verizon
0.00	167.00	Inside	1 5/8" Hybrid	Verizon



Structure: CT02216-S

Type: Tapered	Base Shape: 18 Sided	12/2/2020
Site Name: Glastonbury	Taper: 0.19702	
Height: 176.00 (ft)		
Base Elev: 0.00 (ft)		Page: 3



0.00	157.00	Inside	1 1/4" Fiber	Sprint Nextel
0.00	137.00	Inside	1 5/8" Coax	AT&T
0.00	137.00	Inside	1" DC Power	AT&T
0.00	137.00	Inside	1/2" Coax	AT&T

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	66.0	50.0	Clipped

Reactions

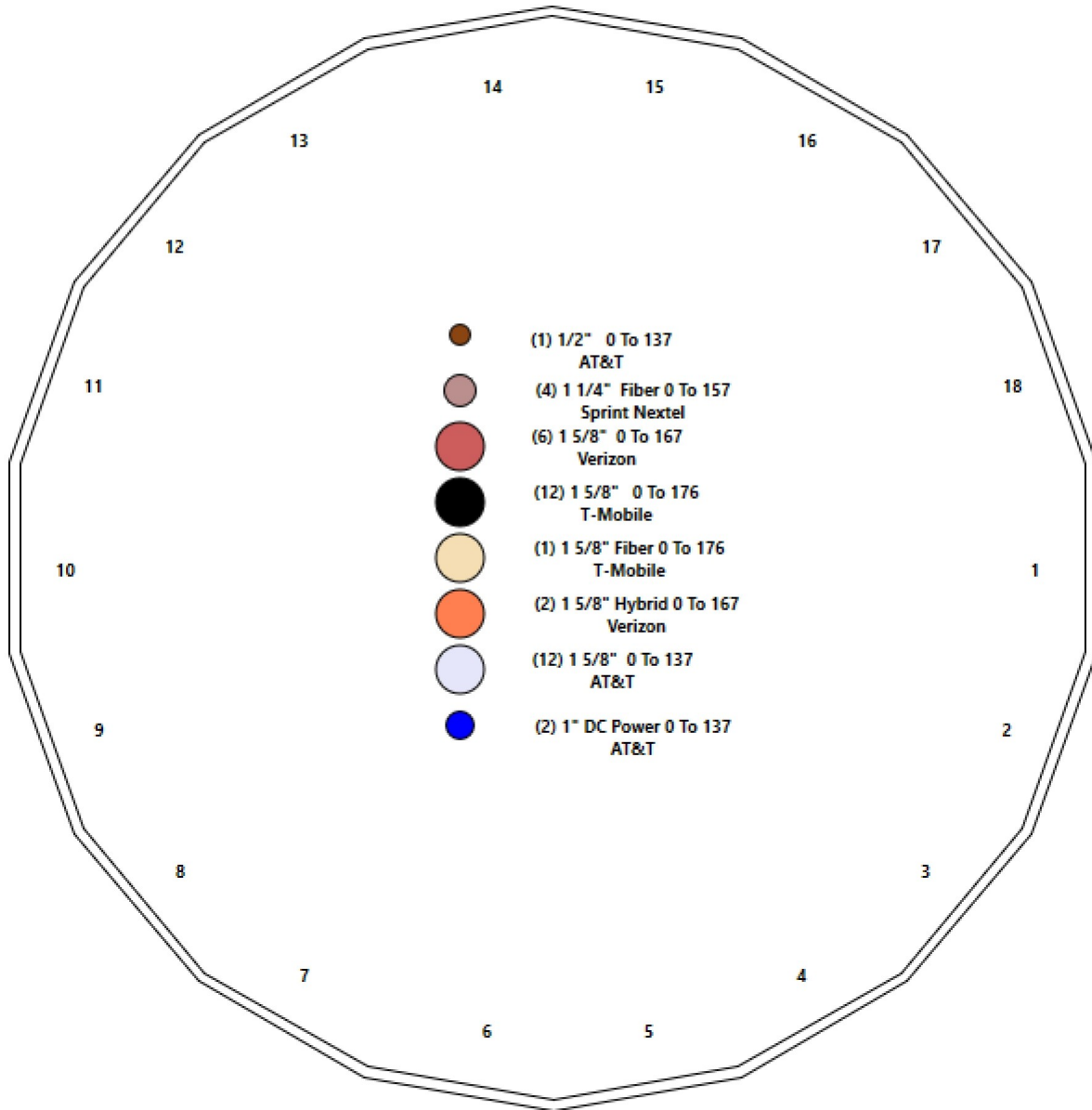
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	5287.7	39.9	63.1
0.9D + 1.6W 97 mph Wind	5210.3	39.9	47.3
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1650.8	12.0	106.8
1.2D + 1.0E	352.4	2.5	63.2
0.9D + 1.0E	346.7	2.5	47.4
1.0D + 1.0W 60 mph Wind	1255.2	9.5	52.6

Structure: CT02216-S - Coax Line Placement

Type: Monopole
Site Name: Glastonbury
Height: 176.00 (ft)

12/2/2020

Page: 4



Shaft Properties

Structure: CT02216-S Site Name: Glastonbury Height: 176.00 (ft) Base Elev: 0.000 (ft) Gh: 1.1	Code: EIA/TIA-222-G 12/2/2020 Exposure: C Crest Height: 0.00 Site Class: D - Stiff Soil Struct Class: II
Topography: 1	Page: 5



Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	49.000	0.5000	65		0.00	13,554
2	18	49.000	0.4375	65	Slip	75.00	10,126
3	18	49.000	0.3750	65	Slip	63.00	7,131
4	18	44.750	0.2500	65	Slip	51.00	3,402
Total Shaft Weight:							34,213

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	56.55	0.00	88.95	35305.41	18.53	113.10	46.90	49.00	73.63	20024.4	15.13	93.79	0.197017
2	49.00	42.75	67.44	20095.24	18.34	112.01	39.35	91.75	54.03	10335.8	14.45	89.94	0.197017
3	41.13	86.50	48.51	10181.58	17.93	109.69	31.48	135.50	37.02	4525.14	13.39	83.94	0.197017
4	32.82	131.2	25.84	3462.57	21.74	131.27	24.00	176.00	18.84	1343.00	15.52	96.00	0.197017

Load Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 6

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	176.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	720.02	22.848	0.70	0.00	1.00
2	176.00	RMQP-496-HK	1	2449.00	46.00	1.00	5923.32	89.506	1.00	0.00	1.00
3	176.00	KRY 112 489/2	3	15.40	0.65	0.67	39.27	1.479	0.67	0.00	1.00
4	176.00	KRY 112 89/4	3	15.40	0.65	0.67	39.27	1.479	0.67	0.00	1.00
5	176.00	4449	3	70.00	1.65	0.67	171.14	2.407	0.67	0.00	1.00
6	176.00	Lightning Rod	1	35.00	1.05	1.00	77.56	4.266	1.00	0.00	3.50
7	176.00	RR90-17-02DP	3	13.50	4.36	0.68	161.46	5.741	0.68	0.00	1.00
8	176.00	MHA FE15501P77/75	6	11.00	0.93	0.65	37.10	1.886	0.65	0.00	1.00
9	167.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	3264.05	45.803	1.00	0.00	0.00
10	167.00	RRH2X60-AWS	3	60.00	3.50	0.76	177.64	4.564	0.76	0.00	0.00
11	167.00	RRH2X60-700	3	60.00	3.50	0.76	177.64	4.564	0.76	0.00	0.00
12	167.00	SBNHH-1D65B	6	40.00	8.16	0.83	332.23	9.954	0.83	0.00	0.00
13	167.00	LPA-80063-4CF-EDIN-5	4	20.00	6.15	0.93	266.55	8.702	0.93	0.00	0.00
14	167.00	APL868013	2	6.30	2.86	0.93	163.90	4.061	0.93	0.00	0.00
15	167.00	DB-T16Z-8AB-0Z	1	18.90	4.80	1.00	224.85	6.005	1.00	0.00	0.00
16	157.00	Low Profile Platform	1	1500.00	22.00	1.00	3253.19	45.656	1.00	0.00	0.00
17	157.00	ALU 1900 Mhz	3	60.00	2.77	0.67	171.76	4.469	0.67	0.00	0.00
18	157.00	ALU 800 Mhz	6	53.00	2.49	0.67	152.06	4.022	0.67	0.00	0.00
19	157.00	ALU TD-RRH8x20-25	3	70.00	4.05	0.67	228.65	5.168	0.67	0.00	0.00
20	157.00	RFS APXVTM14-C-I20	3	56.20	6.34	0.77	286.02	7.864	0.77	0.00	0.00
21	157.00	Commscope NNVV-65B-R4	3	77.40	12.27	0.75	459.89	14.220	0.75	0.00	0.00
22	157.00	Sitepro PRK-1245L	1	464.91	9.50	1.00	899.62	22.824	1.00	0.00	0.00
23	157.00	Sitepro HRK14-U	1	302.36	8.13	1.00	782.98	18.773	1.00	0.00	0.00
24	157.00	Sitepro PRK-SFS-H-L	1	230.00	6.70	1.00	660.12	16.097	1.00	0.00	0.00
25	137.00	KMW HPA-65R-BU6AA Panel	3	43.00	7.86	0.89	337.70	9.590	0.89	0.00	0.00
26	137.00	CCI DMP65R-BU6DA Panel	3	79.40	12.71	0.73	477.28	14.705	0.73	0.00	0.00
27	137.00	Ericsson 4449 B5/B12 RRU	3	71.00	1.97	0.86	194.87	3.732	0.86	0.00	0.00
28	137.00	Ericsson RRUS 8843 B2 B66A RRU	3	72.00	1.64	0.92	138.41	2.321	0.92	0.00	0.00
29	137.00	Handrail Kit	1	436.00	9.02	1.00	1106.27	13.556	1.00	0.00	0.00
30	137.00	LP Platform-Round	1	1500.00	22.00	1.00	3229.47	45.336	1.00	0.00	0.00
31	137.00	Powerwave 7770 Panel	3	35.00	5.50	0.73	226.86	6.937	0.73	0.00	0.00
32	137.00	Powerwave LGP21401 TMA	6	19.00	1.29	0.67	63.51	2.394	0.67	0.00	0.00
33	137.00	Powerwave LGP21903 Diplexer	6	5.00	0.27	0.84	15.12	0.795	0.84	3.00	0.00
34	137.00	Raycap DC6-48-60-18-8F	1	32.80	1.47	1.00	117.06	2.395	1.00	0.00	0.00
35	137.00	Powerwave 7020.00 RET	12	2.20	0.40	0.50	15.71	1.040	0.50	0.00	0.00
36	137.00	Smart Bias T 1001940	3	2.00	0.09	0.67	4.64	0.400	0.67	5.70	0.00
Totals:			110	12,140.87			36,758.83				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	176.00	(12) 1 5/8" Coax	0.00	Inside
0.00	176.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	176.00	(1) Safety Cable	0.38	Outside
0.00	176.00	(1) Step bolts (ladder)	0.63	Outside
0.00	167.00	(6) 1 5/8" Coax	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	167.00	(2) 1 5/8" Hybrid		0.00		Inside					
0.00	157.00	(4) 1 1/4" Fiber		0.00		Inside					
0.00	137.00	(12) 1 5/8" Coax		0.00		Inside					
0.00	137.00	(2) 1" DC Power		0.00		Inside					
0.00	137.00	(1) 1/2" Coax		0.00		Inside					

Shaft Section Properties

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 8



Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.5000	56.550	88.948	35305.4	18.53	113.10	79.6	1229.	0.0
5.00		0.5000	55.565	87.385	33476.4	18.18	111.13	80.0	1186.	1500.1
10.00		0.5000	54.580	85.822	31711.8	17.84	109.16	80.4	1144.	1473.5
15.00		0.5000	53.595	84.258	30010.2	17.49	107.19	80.8	1102.	1446.9
20.00		0.5000	52.610	82.695	28370.6	17.14	105.22	81.2	1062.	1420.3
25.00		0.5000	51.625	81.132	26791.9	16.79	103.25	81.6	1022.	1393.7
30.00		0.5000	50.639	79.569	25272.8	16.45	101.28	82.1	983.0	1367.1
35.00		0.5000	49.654	78.005	23812.3	16.10	99.31	82.5	944.6	1340.5
40.00		0.5000	48.669	76.442	22409.2	15.75	97.34	82.5	906.9	1313.9
42.75	Bot - Section 2	0.5000	48.128	75.582	21661.5	15.56	96.26	82.5	886.5	711.3
45.00		0.5000	47.684	74.879	21062.3	15.41	95.37	82.5	870.0	1089.9
49.00	Top - Section 1	0.4375	47.771	65.726	18605.1	17.84	109.19	0.0	0.0	1912.7
50.00		0.4375	47.574	65.453	18373.8	17.76	108.74	80.5	760.7	223.2
55.00		0.4375	46.589	64.085	17245.7	17.37	106.49	81.0	729.1	1102.0
60.00		0.4375	45.604	62.717	16164.8	16.97	104.24	81.4	698.2	1078.7
65.00		0.4375	44.619	61.349	15130.1	16.57	101.99	81.9	667.9	1055.4
70.00		0.4375	43.634	59.981	14140.4	16.18	99.73	82.4	638.3	1032.2
75.00		0.4375	42.649	58.613	13194.9	15.78	97.48	82.5	609.4	1008.9
80.00		0.4375	41.664	57.246	12292.5	15.38	95.23	82.5	581.1	985.6
85.00		0.4375	40.679	55.878	11432.2	14.98	92.98	82.5	553.5	962.3
86.50	Bot - Section 3	0.4375	40.383	55.467	11182.2	14.87	92.30	82.5	545.4	284.2
90.00		0.4375	39.693	54.510	10613.0	14.59	90.73	82.5	526.6	1227.8
91.75	Top - Section 2	0.3750	40.099	47.279	9425.9	17.44	106.93	0.0	0.0	605.9
95.00		0.3750	39.458	46.517	8977.4	17.14	105.22	81.2	448.1	518.7
100.00		0.3750	38.473	45.345	8315.6	16.68	102.60	81.8	425.7	781.5
105.00		0.3750	37.488	44.172	7687.1	16.22	99.97	82.3	403.9	761.5
110.00		0.3750	36.503	43.000	7091.1	15.75	97.34	82.5	382.6	741.6
115.00		0.3750	35.518	41.827	6526.7	15.29	94.71	82.5	361.9	721.6
120.00		0.3750	34.533	40.655	5993.1	14.83	92.09	82.5	341.8	701.7
125.00		0.3750	33.548	39.483	5489.4	14.36	89.46	82.5	322.3	681.7
130.00		0.3750	32.563	38.310	5014.7	13.90	86.83	82.5	303.3	661.8
131.25	Bot - Section 4	0.3750	32.317	38.017	4900.5	13.78	86.18	82.5	298.7	162.3
135.00		0.3750	31.578	37.138	4568.3	13.44	84.21	82.5	284.9	805.5
135.50	Top - Section 3	0.2500	31.979	25.176	3202.3	21.14	127.92	0.0	0.0	106.0
137.00		0.2500	31.684	24.942	3113.6	20.94	126.73	76.8	193.6	127.9
140.00		0.2500	31.093	24.473	2941.3	20.52	124.37	77.3	186.3	252.2
145.00		0.2500	30.108	23.691	2668.4	19.82	120.43	78.1	174.6	409.7
150.00		0.2500	29.122	22.909	2412.9	19.13	116.49	78.9	163.2	396.4
155.00		0.2500	28.137	22.128	2174.2	18.43	112.55	79.7	152.2	383.1
157.00		0.2500	27.743	21.815	2083.4	18.16	110.97	80.0	147.9	149.5
160.00		0.2500	27.152	21.346	1951.9	17.74	108.61	80.5	141.6	220.3
165.00		0.2500	26.167	20.565	1745.2	17.05	104.67	81.4	131.4	356.5
167.00		0.2500	25.773	20.252	1666.8	16.77	103.09	81.7	127.4	138.9
170.00		0.2500	25.182	19.783	1553.7	16.35	100.73	82.2	121.5	204.3
175.00		0.2500	24.197	19.001	1376.7	15.66	96.79	82.5	112.1	329.9
176.00		0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	64.4

34212.9

Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

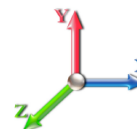


Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.60



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	427.94	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	420.48	0.650	0.000	5.00	23.718	15.42	527.7	0.0	1800.1
10.00		1.00	0.85	19.450	21.40	413.03	0.650	0.000	5.00	23.301	15.15	518.5	0.0	1768.1
15.00		1.00	0.85	19.450	21.40	405.57	0.650	0.000	5.00	22.884	14.87	509.2	0.0	1736.2
20.00		1.00	0.90	20.638	22.70	410.09	0.650	0.000	5.00	22.467	14.60	530.4	0.0	1704.3
25.00		1.00	0.95	21.630	23.79	411.98	0.650	0.000	5.00	22.050	14.33	545.6	0.0	1672.4
30.00		1.00	0.98	22.477	24.72	411.95	0.650	0.000	5.00	21.634	14.06	556.3	0.0	1640.5
35.00		1.00	1.01	23.218	25.54	410.54	0.650	0.000	5.00	21.217	13.79	563.5	0.0	1608.6
40.00		1.00	1.04	23.880	26.27	408.09	0.650	0.000	5.00	20.800	13.52	568.2	0.0	1576.6
42.75	Bot - Section 2	1.00	1.06	24.217	26.64	406.38	0.650	0.000	2.75	11.262	7.32	312.0	0.0	853.6
45.00		1.00	1.07	24.479	26.93	404.82	0.650	0.000	2.25	9.288	6.04	260.1	0.0	1307.9
49.00	Top - Section 1	1.00	1.09	24.922	27.41	401.71	0.650	0.000	4.00	16.303	10.60	464.8	0.0	2295.3
50.00		1.00	1.09	25.029	27.53	408.39	0.650	0.000	1.00	4.034	2.62	115.5	0.0	267.8
55.00		1.00	1.12	25.536	28.09	403.97	0.650	0.000	5.00	19.920	12.95	581.9	0.0	1322.4
60.00		1.00	1.14	26.008	28.61	399.06	0.650	0.000	5.00	19.503	12.68	580.3	0.0	1294.4
65.00		1.00	1.16	26.450	29.09	393.75	0.650	0.000	5.00	19.086	12.41	577.5	0.0	1266.5
70.00		1.00	1.17	26.866	29.55	388.07	0.650	0.000	5.00	18.670	12.14	573.8	0.0	1238.6
75.00		1.00	1.19	27.259	29.98	382.07	0.650	0.000	5.00	18.253	11.86	569.2	0.0	1210.7
80.00		1.00	1.21	27.632	30.39	375.79	0.650	0.000	5.00	17.836	11.59	563.8	0.0	1182.7
85.00		1.00	1.22	27.987	30.79	369.25	0.650	0.000	5.00	17.419	11.32	557.7	0.0	1154.8
86.50	Bot - Section 3	1.00	1.23	28.090	30.90	367.25	0.650	0.000	1.50	5.145	3.34	165.3	0.0	341.0
90.00		1.00	1.24	28.325	31.16	362.49	0.650	0.000	3.50	12.080	7.85	391.4	0.0	1473.3
91.75	Top - Section 2	1.00	1.24	28.441	31.28	360.07	0.650	0.000	1.75	5.963	3.88	194.0	0.0	727.1
95.00		1.00	1.25	28.650	31.51	362.40	0.650	0.000	3.25	10.940	7.11	358.5	0.0	622.4
100.00		1.00	1.27	28.961	31.86	355.26	0.650	0.000	5.00	16.486	10.72	546.2	0.0	937.8
105.00		1.00	1.28	29.260	32.19	347.95	0.650	0.000	5.00	16.069	10.45	537.9	0.0	913.8
110.00		1.00	1.29	29.548	32.50	340.47	0.650	0.000	5.00	15.653	10.17	529.1	0.0	889.9
115.00		1.00	1.30	29.826	32.81	332.83	0.650	0.000	5.00	15.236	9.90	519.9	0.0	865.9
120.00		1.00	1.32	30.094	33.10	325.06	0.650	0.000	5.00	14.819	9.63	510.2	0.0	842.0
125.00		1.00	1.33	30.354	33.39	317.14	0.650	0.000	5.00	14.402	9.36	500.1	0.0	818.1
130.00		1.00	1.34	30.605	33.67	309.11	0.650	0.000	5.00	13.986	9.09	489.7	0.0	794.1
131.25	Bot - Section 4	1.00	1.34	30.667	33.73	307.08	0.650	0.000	1.25	3.431	2.23	120.4	0.0	194.8
135.00		1.00	1.35	30.850	33.93	300.95	0.650	0.000	3.75	10.296	6.69	363.4	0.0	966.6
135.50	Top - Section 3	1.00	1.35	30.874	33.96	300.13	0.650	0.000	0.50	1.355	0.88	47.9	0.0	127.2
137.00	Appurtenance(s)	1.00	1.35	30.945	34.04	302.42	0.650	0.000	1.50	4.040	2.63	143.0	0.0	153.5
140.00		1.00	1.36	31.087	34.20	297.46	0.650	0.000	3.00	7.968	5.18	283.4	0.0	302.7
145.00		1.00	1.37	31.317	34.45	289.10	0.650	0.000	5.00	12.947	8.42	463.8	0.0	491.7
150.00		1.00	1.38	31.541	34.70	280.64	0.650	0.000	5.00	12.530	8.14	452.1	0.0	475.7
155.00		1.00	1.39	31.760	34.94	272.09	0.650	0.000	5.00	12.113	7.87	440.1	0.0	459.8
157.00	Appurtenance(s)	1.00	1.39	31.846	35.03	268.64	0.650	0.000	2.00	4.729	3.07	172.3	0.0	179.4
160.00		1.00	1.40	31.973	35.17	263.44	0.650	0.000	3.00	6.968	4.53	254.9	0.0	264.4
165.00		1.00	1.41	32.181	35.40	254.71	0.650	0.000	5.00	11.280	7.33	415.3	0.0	427.8
167.00	Appurtenance(s)	1.00	1.41	32.262	35.49	251.19	0.650	0.000	2.00	4.395	2.86	162.2	0.0	166.7
170.00		1.00	1.42	32.384	35.62	245.89	0.650	0.000	3.00	6.468	4.20	239.6	0.0	245.2
175.00		1.00	1.42	32.582	35.84	236.99	0.650	0.000	5.00	10.446	6.79	389.4	0.0	395.9
176.00	Appurtenance(s)	1.00	1.43	32.621	35.88	235.20	0.650	0.000	1.00	2.039	1.33	76.1	0.0	77.3

Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 10



Totals:	176.00	18,242.3	41,055.5
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Discrete Appurtenance Forces

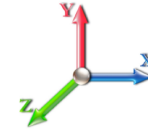
Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 11

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	
1	176.00	RR90-17-02DP	3	32.660	35.926	0.51	0.75	6.67	48.60	0.000	1.000	383.45	0.00	383.45	
2	176.00	Lightning Rod	1	32.756	36.032	1.00	1.00	1.05	42.00	0.000	3.500	60.53	0.00	211.87	
3	176.00	4449	3	32.660	35.926	0.50	0.75	2.49	252.00	0.000	1.000	142.98	0.00	142.98	
4	176.00	KRY 112 89/4	3	32.660	35.926	0.50	0.75	0.98	55.44	0.000	1.000	56.32	0.00	56.32	
5	176.00	KRY 112 489/2	3	32.660	35.926	0.50	0.75	0.98	55.44	0.000	1.000	56.32	0.00	56.32	
6	176.00	RMQP-496-HK	1	32.660	35.926	1.00	1.00	46.00	2938.80	0.000	1.000	2644.15	0.00	2644.15	
7	176.00	APXVAARR24_43-U-NA2	3	32.660	35.926	0.52	0.75	31.88	460.80	0.000	1.000	1832.39	0.00	1832.39	
8	176.00	MHA FE15501P77/75	6	32.660	35.926	0.49	0.75	2.72	79.20	0.000	1.000	156.36	0.00	156.36	
9	167.00	RRH2X60-AWS	3	32.262	35.489	0.61	0.80	6.38	216.00	0.000	0.000	362.50	0.00	0.00	
10	167.00	RRH2X60-700	3	32.262	35.489	0.61	0.80	6.38	216.00	0.000	0.000	362.50	0.00	0.00	
11	167.00	Low Profile	1	32.262	35.489	1.00	1.00	22.00	1800.00	0.000	0.000	1249.20	0.00	0.00	
12	167.00	DB-T16Z-8AB-0Z	1	32.262	35.489	1.00	1.00	4.80	22.68	0.000	0.000	272.55	0.00	0.00	
13	167.00	SBNHH-1D65B	6	32.262	35.489	0.66	0.80	32.51	288.00	0.000	0.000	1845.95	0.00	0.00	
14	167.00	LPA-80063-4CF-EDIN-5	4	32.262	35.489	0.74	0.80	18.30	96.00	0.000	0.000	1039.25	0.00	0.00	
15	167.00	APL868013	2	32.262	35.489	0.84	0.90	4.79	15.12	0.000	0.000	271.85	0.00	0.00	
16	157.00	Sitepro PRK-SFS-H-L	1	31.846	35.030	1.00	1.00	6.70	276.00	0.000	0.000	375.53	0.00	0.00	
17	157.00	Sitepro HRK14-U	1	31.846	35.030	1.00	1.00	8.13	362.83	0.000	0.000	455.67	0.00	0.00	
18	157.00	Sitepro PRK-1245L	1	31.846	35.030	1.00	1.00	9.50	557.89	0.000	0.000	532.46	0.00	0.00	
19	157.00	Commscope	3	31.846	35.030	0.60	0.80	22.09	278.64	0.000	0.000	1237.89	0.00	0.00	
20	157.00	RFS APXVTM14-C-I20	3	31.846	35.030	0.62	0.80	11.72	202.32	0.000	0.000	656.68	0.00	0.00	
21	157.00	ALU TD-RRH8x20-25	3	31.846	35.030	0.54	0.80	6.51	252.00	0.000	0.000	365.01	0.00	0.00	
22	157.00	ALU 800 Mhz	6	31.846	35.030	0.54	0.80	8.01	381.60	0.000	0.000	448.83	0.00	0.00	
23	157.00	ALU 1900 Mhz	3	31.846	35.030	0.54	0.80	4.45	216.00	0.000	0.000	249.65	0.00	0.00	
24	157.00	Low Profile Platform	1	31.846	35.030	1.00	1.00	22.00	1800.00	0.000	0.000	1233.07	0.00	0.00	
25	137.00	Handrail Kit	1	30.945	34.040	1.00	1.00	9.02	523.20	0.000	0.000	491.26	0.00	0.00	
26	137.00	Ericsson RRUS 8843 B2	3	30.945	34.040	0.74	0.80	3.62	259.20	0.000	0.000	197.22	0.00	0.00	
27	137.00	LP Platform-Round	1	30.945	34.040	1.00	1.00	22.00	1800.00	0.000	0.000	1198.20	0.00	0.00	
28	137.00	Ericsson 4449 B5/B12	3	30.945	34.040	0.69	0.80	4.07	255.60	0.000	0.000	221.45	0.00	0.00	
29	137.00	CCI DMP65R-BU6DA	3	30.945	34.040	0.58	0.80	22.27	285.84	0.000	0.000	1212.79	0.00	0.00	
30	137.00	KMW HPA-65R-BU6AA	3	30.945	34.040	0.71	0.80	16.79	154.80	0.000	0.000	914.39	0.00	0.00	
31	137.00	Powerwave LGP21903	6	30.945	34.040	0.67	0.80	1.09	36.00	4.341	0.000	59.29	160.85	0.00	
32	137.00	Powerwave 7770 Panel	3	30.945	34.040	0.58	0.80	9.64	126.00	0.000	0.000	524.81	0.00	0.00	
33	137.00	Powerwave LGP21401	6	30.945	34.040	0.54	0.80	4.15	136.80	0.000	0.000	225.95	0.00	0.00	
34	137.00	Raycap DC6-48-60-18-8F	1	30.945	34.040	1.00	1.00	1.47	39.36	0.000	0.000	80.06	0.00	0.00	
35	137.00	Powerwave 7020.00 RET	12	30.945	34.040	0.40	0.80	1.92	31.68	0.000	0.000	104.57	0.00	0.00	
36	137.00	Smart Bias T 1001940	3	30.945	34.040	0.54	0.80	0.14	7.20	7.041	0.000	7.88	34.68	0.00	
Totals:									14,569.04						21,528.97

Total Applied Force Summary

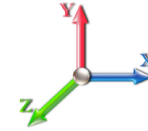
Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 12

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		527.74	2036.54	0.00	0.00
10.00		518.47	2004.63	0.00	0.00
15.00		509.20	1972.71	0.00	0.00
20.00		530.44	1940.79	0.00	0.00
25.00		545.64	1908.88	0.00	0.00
30.00		556.27	1876.96	0.00	0.00
35.00		563.55	1845.04	0.00	0.00
40.00		568.23	1813.13	0.00	0.00
42.75		312.01	983.61	0.00	0.00
45.00		260.09	1414.34	0.00	0.00
49.00		464.81	2484.45	0.00	0.00
50.00		115.50	315.12	0.00	0.00
55.00		581.92	1558.84	0.00	0.00
60.00		580.28	1530.91	0.00	0.00
65.00		577.53	1502.99	0.00	0.00
70.00		573.80	1475.06	0.00	0.00
75.00		569.20	1447.13	0.00	0.00
80.00		563.81	1419.21	0.00	0.00
85.00		557.71	1391.28	0.00	0.00
86.50		165.32	411.94	0.00	0.00
90.00		391.45	1638.84	0.00	0.00
91.75		194.03	809.89	0.00	0.00
95.00		358.55	776.09	0.00	0.00
100.00		546.21	1174.24	0.00	0.00
105.00		537.90	1150.30	0.00	0.00
110.00		529.10	1126.36	0.00	0.00
115.00		519.85	1102.42	0.00	0.00
120.00		510.18	1078.49	0.00	0.00
125.00		500.12	1054.55	0.00	0.00
130.00		489.67	1030.61	0.00	0.00
131.25		120.38	253.91	0.00	0.00
135.00		363.37	1143.96	0.00	0.00
135.50		47.86	150.83	0.00	0.00
137.00	(45) attachments	5380.90	3880.11	195.53	0.00
140.00		283.37	396.17	0.00	0.00
145.00		463.84	647.51	0.00	0.00
150.00		452.12	631.55	0.00	0.00
155.00		440.11	615.59	0.00	0.00
157.00	(22) attachments	5727.06	4569.05	0.00	0.00
160.00		254.86	348.36	0.00	0.00
165.00		415.26	567.84	0.00	0.00
167.00	(20) attachments	5566.01	2876.47	0.00	0.00
170.00		239.61	298.83	0.00	0.00
175.00		389.36	485.28	0.00	0.00
176.00	(23) attachments	5408.61	4027.42	0.00	5483.85

Total Applied Force Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 13

Totals:	39,771.28	63,168.25	195.53	5,483.85
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Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



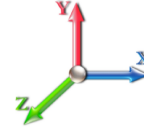
Page: 14

Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.60



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	19.450	0.00	1.64
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	19.450	0.00	6.24
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	19.450	0.00	1.64
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	19.450	0.00	6.24
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	19.450	0.00	1.64
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	19.450	0.00	6.24
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	20.638	0.00	1.64
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	20.638	0.00	6.24
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	21.630	0.00	1.64
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	21.630	0.00	6.24
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	22.477	0.00	1.64
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	22.477	0.00	6.24
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	23.218	0.00	1.64
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	23.218	0.00	6.24
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	23.880	0.00	1.64
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	23.880	0.00	6.24
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.021	0.000	24.217	0.00	0.90
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	0.14	0.00	0.021	0.000	24.217	0.00	3.43
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.021	0.000	24.479	0.00	0.74
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.12	0.00	0.021	0.000	24.479	0.00	2.81
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.021	0.000	24.922	0.00	1.31
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.021	0.000	24.922	0.00	4.99
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.021	0.000	25.029	0.00	0.33
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.021	0.000	25.029	0.00	1.25
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	25.536	0.00	1.64
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	25.536	0.00	6.24
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	26.008	0.00	1.64
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	26.008	0.00	6.24
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	26.450	0.00	1.64
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	26.450	0.00	6.24
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	26.866	0.00	1.64
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	26.866	0.00	6.24
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	27.259	0.00	1.64
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	27.259	0.00	6.24
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	27.632	0.00	1.64
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	27.632	0.00	6.24
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	27.987	0.00	1.64
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	27.987	0.00	6.24
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.025	0.000	28.090	0.00	0.49
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.025	0.000	28.090	0.00	1.87
90.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.025	0.000	28.325	0.00	1.15
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	0.18	0.00	0.025	0.000	28.325	0.00	4.37
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.025	0.000	28.441	0.00	0.57
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.025	0.000	28.441	0.00	2.18
95.00	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.025	0.000	28.650	0.00	1.06
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.025	0.000	28.650	0.00	4.06
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	28.961	0.00	1.64

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



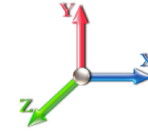
Page: 15

Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.60



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	28.961	0.00	6.24
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	29.260	0.00	1.64
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	29.260	0.00	6.24
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.027	0.000	29.548	0.00	1.64
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.027	0.000	29.548	0.00	6.24
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	29.826	0.00	1.64
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	29.826	0.00	6.24
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	30.094	0.00	1.64
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	30.094	0.00	6.24
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	30.354	0.00	1.64
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	30.354	0.00	6.24
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.030	0.000	30.605	0.00	1.64
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.030	0.000	30.605	0.00	6.24
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.031	0.000	30.667	0.00	0.41
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.031	0.000	30.667	0.00	1.56
135.00	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.031	0.000	30.850	0.00	1.23
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.031	0.000	30.850	0.00	4.68
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.032	0.000	30.874	0.00	0.16
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.032	0.000	30.874	0.00	0.62
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.031	0.000	30.945	0.00	0.49
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.031	0.000	30.945	0.00	1.87
140.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.032	0.000	31.087	0.00	0.98
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.032	0.000	31.087	0.00	3.74
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.033	0.000	31.317	0.00	1.64
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.033	0.000	31.317	0.00	6.24
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.034	0.000	31.541	0.00	1.64
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.034	0.000	31.541	0.00	6.24
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	31.760	0.00	1.64
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	31.760	0.00	6.24
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.036	0.000	31.846	0.00	0.66
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.036	0.000	31.846	0.00	2.50
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	31.973	0.00	0.98
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	31.973	0.00	3.74
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	32.181	0.00	1.64
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	32.181	0.00	6.24
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.038	0.000	32.262	0.00	0.66
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.038	0.000	32.262	0.00	2.50
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.039	0.000	32.384	0.00	0.98
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.039	0.000	32.384	0.00	3.74
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	32.582	0.00	1.64
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	32.582	0.00	6.24
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.041	0.000	32.621	0.00	0.33
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.041	0.000	32.621	0.00	1.25
Totals:											0.0	277.3

Calculated Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 97 mph Wind	Iterations 26
Dead Load Factor 1.20	
Wind Load Factor 1.60	

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-63.09	-39.89	-0.19	-5287.6	0.00	5287.66	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.730
5.00	-60.91	-39.58	-0.19	-5088.2	0.00	5088.22	6292.68	3146.34	14220.7	7120.95	0.11	-0.209	0.000	0.724
10.00	-58.77	-39.27	-0.19	-4890.3	0.00	4890.32	6211.66	3105.83	13784.2	6902.39	0.44	-0.421	0.000	0.718
15.00	-56.65	-38.96	-0.19	-4693.9	0.00	4693.97	6129.50	3064.75	13351.9	6685.89	1.00	-0.636	0.000	0.711
20.00	-54.57	-38.61	-0.19	-4499.1	0.00	4499.19	6046.18	3023.09	12923.8	6471.51	1.78	-0.854	0.000	0.704
25.00	-52.52	-38.24	-0.19	-4306.1	0.00	4306.14	5961.72	2980.86	12500.0	6259.33	2.80	-1.075	0.000	0.697
30.00	-50.51	-37.84	-0.19	-4114.9	-0.01	4114.95	5876.11	2938.05	12080.8	6049.42	4.04	-1.298	0.000	0.689
35.00	-48.53	-37.43	-0.19	-3925.7	-0.01	3925.75	5789.35	2894.67	11666.3	5841.84	5.52	-1.524	0.000	0.681
40.00	-46.62	-36.95	-0.19	-3738.6	-0.01	3738.63	5679.25	2839.63	11212.8	5614.75	7.24	-1.753	0.000	0.674
42.75	-45.57	-36.70	-0.19	-3637.0	-0.01	3637.02	5615.38	2807.69	10960.7	5488.51	8.29	-1.882	0.000	0.671
45.00	-44.07	-36.51	-0.19	-3554.4	-0.01	3554.45	5563.11	2781.56	10756.6	5386.29	9.20	-1.988	0.000	0.668
49.00	-41.53	-36.04	-0.19	-3408.4	-0.01	3408.42	4756.80	2378.40	9239.06	4626.40	10.95	-2.177	0.000	0.746
50.00	-41.13	-36.02	-0.19	-3372.3	-0.01	3372.39	4742.51	2371.25	9172.60	4593.12	11.41	-2.225	0.000	0.743
55.00	-39.44	-35.55	-0.19	-3192.3	-0.01	3192.30	4670.33	2335.16	8842.49	4427.82	13.87	-2.479	0.000	0.730
60.00	-37.78	-35.07	-0.19	-3014.5	-0.01	3014.55	4597.00	2298.50	8516.13	4264.39	16.61	-2.735	0.000	0.715
65.00	-36.15	-34.58	-0.19	-2839.2	-0.01	2839.21	4522.52	2261.26	8193.68	4102.93	19.61	-2.992	0.000	0.700
70.00	-34.55	-34.08	-0.19	-2666.3	-0.01	2666.30	4446.89	2223.45	7875.26	3943.48	22.88	-3.251	0.000	0.684
75.00	-32.99	-33.58	-0.19	-2495.8	-0.01	2495.88	4354.69	2177.34	7534.33	3772.77	26.42	-3.511	0.000	0.669
80.00	-31.46	-33.07	-0.19	-2327.9	-0.01	2327.98	4253.06	2126.53	7185.02	3597.85	30.24	-3.771	0.000	0.655
85.00	-30.01	-32.51	-0.19	-2162.6	-0.01	2162.63	4151.43	2075.72	6843.99	3427.08	34.32	-4.031	0.000	0.639
86.50	-29.54	-32.38	-0.19	-2113.8	-0.01	2113.87	4120.95	2060.47	6743.30	3376.66	35.60	-4.111	0.000	0.633
90.00	-27.86	-31.94	-0.19	-2000.5	-0.01	2000.53	4049.81	2024.90	6511.26	3260.47	38.68	-4.294	0.000	0.621
91.75	-26.99	-31.75	-0.19	-1944.6	-0.01	1944.64	3441.70	1720.85	5608.94	2808.64	40.27	-4.386	0.000	0.701
95.00	-26.12	-31.43	-0.19	-1841.4	-0.01	1841.47	3401.05	1700.53	5452.51	2730.31	43.31	-4.556	0.000	0.682
100.00	-24.85	-30.91	-0.19	-1684.3	-0.01	1684.31	3337.56	1668.78	5214.58	2611.16	48.23	-4.835	0.000	0.653
105.00	-23.60	-30.39	-0.19	-1529.7	-0.01	1529.76	3272.92	1636.46	4980.08	2493.74	53.43	-5.110	0.000	0.621
110.00	-22.39	-29.86	-0.19	-1377.8	-0.01	1377.82	3194.68	1597.34	4730.71	2368.87	58.92	-5.379	0.000	0.589
115.00	-21.21	-29.33	-0.19	-1228.5	-0.01	1228.51	3107.57	1553.79	4474.96	2240.81	64.69	-5.640	0.000	0.555
120.00	-20.07	-28.80	-0.19	-1081.8	-0.01	1081.85	3020.47	1510.23	4226.32	2116.30	70.72	-5.892	0.000	0.518
125.00	-18.96	-28.27	-0.19	-937.83	-0.01	937.83	2933.36	1466.68	3984.78	1995.35	77.01	-6.132	-0.001	0.477
130.00	-17.92	-27.72	-0.19	-796.46	-0.02	796.46	2846.25	1423.13	3750.35	1877.96	83.54	-6.356	-0.001	0.431
131.25	-17.63	-27.60	-0.19	-761.81	-0.02	761.81	2824.47	1412.24	3692.86	1849.17	85.21	-6.412	-0.001	0.419
135.00	-16.49	-27.14	-0.20	-658.30	-0.02	658.30	2759.14	1379.57	3523.03	1764.13	90.30	-6.566	-0.001	0.380
135.50	-16.33	-27.08	-0.20	-644.73	-0.02	644.73	1734.08	867.04	2260.78	1132.07	90.99	-6.587	-0.001	0.580
137.00	-13.06	-21.32	0.00	-604.11	0.01	604.11	1723.43	861.72	2225.81	1114.56	93.07	-6.646	-0.001	0.550
140.00	-12.62	-21.03	0.00	-540.16	0.01	540.16	1701.83	850.91	2156.25	1079.73	97.28	-6.802	-0.001	0.508
145.00	-11.96	-20.54	0.00	-435.00	0.00	435.00	1664.90	832.45	2041.54	1022.29	104.52	-7.038	-0.001	0.433
150.00	-11.32	-20.05	0.00	-332.30	0.00	332.30	1626.81	813.41	1928.48	965.67	111.99	-7.243	-0.001	0.352
155.00	-10.73	-19.55	0.00	-232.05	0.00	232.05	1587.58	793.79	1817.22	909.96	119.65	-7.409	-0.001	0.262
157.00	-6.93	-13.29	0.00	-192.94	0.00	192.94	1571.57	785.79	1773.24	887.94	122.75	-7.465	-0.001	0.222
160.00	-6.60	-13.00	0.00	-153.07	0.00	153.07	1547.20	773.60	1707.88	855.21	127.46	-7.536	-0.001	0.184
165.00	-6.08	-12.52	0.00	-88.05	0.00	88.05	1505.67	752.84	1600.62	801.50	135.38	-7.623	-0.001	0.114
167.00	-3.96	-6.63	0.00	-63.01	0.00	63.01	1488.74	744.37	1558.33	780.32	138.57	-7.648	-0.001	0.083
170.00	-3.70	-6.35	0.00	-43.13	0.00	43.13	1462.99	731.50	1495.57	748.90	143.37	-7.675	-0.001	0.060
175.00	-3.27	-5.90	0.00	-11.38	0.00	11.38	1411.70	705.85	1385.55	693.80	151.40	-7.700	-0.001	0.019
176.00	0.00	-5.41	0.00	-5.48	0.00	5.48	1400.09	700.04	1362.73	682.38	153.01	-7.702	-0.001	0.008

Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



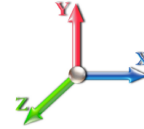
Page: 17

Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 0.90

Wind Load Factor 1.60



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	427.94	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	420.48	0.650	0.000	5.00	23.718	15.42	527.7	0.0	1350.0
10.00		1.00	0.85	19.450	21.40	413.03	0.650	0.000	5.00	23.301	15.15	518.5	0.0	1326.1
15.00		1.00	0.85	19.450	21.40	405.57	0.650	0.000	5.00	22.884	14.87	509.2	0.0	1302.2
20.00		1.00	0.90	20.638	22.70	410.09	0.650	0.000	5.00	22.467	14.60	530.4	0.0	1278.2
25.00		1.00	0.95	21.630	23.79	411.98	0.650	0.000	5.00	22.050	14.33	545.6	0.0	1254.3
30.00		1.00	0.98	22.477	24.72	411.95	0.650	0.000	5.00	21.634	14.06	556.3	0.0	1230.4
35.00		1.00	1.01	23.218	25.54	410.54	0.650	0.000	5.00	21.217	13.79	563.5	0.0	1206.4
40.00		1.00	1.04	23.880	26.27	408.09	0.650	0.000	5.00	20.800	13.52	568.2	0.0	1182.5
42.75	Bot - Section 2	1.00	1.06	24.217	26.64	406.38	0.650	0.000	2.75	11.262	7.32	312.0	0.0	640.2
45.00		1.00	1.07	24.479	26.93	404.82	0.650	0.000	2.25	9.288	6.04	260.1	0.0	980.9
49.00	Top - Section 1	1.00	1.09	24.922	27.41	401.71	0.650	0.000	4.00	16.303	10.60	464.8	0.0	1721.5
50.00		1.00	1.09	25.029	27.53	408.39	0.650	0.000	1.00	4.034	2.62	115.5	0.0	200.9
55.00		1.00	1.12	25.536	28.09	403.97	0.650	0.000	5.00	19.920	12.95	581.9	0.0	991.8
60.00		1.00	1.14	26.008	28.61	399.06	0.650	0.000	5.00	19.503	12.68	580.3	0.0	970.8
65.00		1.00	1.16	26.450	29.09	393.75	0.650	0.000	5.00	19.086	12.41	577.5	0.0	949.9
70.00		1.00	1.17	26.866	29.55	388.07	0.650	0.000	5.00	18.670	12.14	573.8	0.0	928.9
75.00		1.00	1.19	27.259	29.98	382.07	0.650	0.000	5.00	18.253	11.86	569.2	0.0	908.0
80.00		1.00	1.21	27.632	30.39	375.79	0.650	0.000	5.00	17.836	11.59	563.8	0.0	887.0
85.00		1.00	1.22	27.987	30.79	369.25	0.650	0.000	5.00	17.419	11.32	557.7	0.0	866.1
86.50	Bot - Section 3	1.00	1.23	28.090	30.90	367.25	0.650	0.000	1.50	5.145	3.34	165.3	0.0	255.7
90.00		1.00	1.24	28.325	31.16	362.49	0.650	0.000	3.50	12.080	7.85	391.4	0.0	1105.0
91.75	Top - Section 2	1.00	1.24	28.441	31.28	360.07	0.650	0.000	1.75	5.963	3.88	194.0	0.0	545.3
95.00		1.00	1.25	28.650	31.51	362.40	0.650	0.000	3.25	10.940	7.11	358.5	0.0	466.8
100.00		1.00	1.27	28.961	31.86	355.26	0.650	0.000	5.00	16.486	10.72	546.2	0.0	703.3
105.00		1.00	1.28	29.260	32.19	347.95	0.650	0.000	5.00	16.069	10.45	537.9	0.0	685.4
110.00		1.00	1.29	29.548	32.50	340.47	0.650	0.000	5.00	15.653	10.17	529.1	0.0	667.4
115.00		1.00	1.30	29.826	32.81	332.83	0.650	0.000	5.00	15.236	9.90	519.9	0.0	649.5
120.00		1.00	1.32	30.094	33.10	325.06	0.650	0.000	5.00	14.819	9.63	510.2	0.0	631.5
125.00		1.00	1.33	30.354	33.39	317.14	0.650	0.000	5.00	14.402	9.36	500.1	0.0	613.6
130.00		1.00	1.34	30.605	33.67	309.11	0.650	0.000	5.00	13.986	9.09	489.7	0.0	595.6
131.25	Bot - Section 4	1.00	1.34	30.667	33.73	307.08	0.650	0.000	1.25	3.431	2.23	120.4	0.0	146.1
135.00		1.00	1.35	30.850	33.93	300.95	0.650	0.000	3.75	10.296	6.69	363.4	0.0	724.9
135.50	Top - Section 3	1.00	1.35	30.874	33.96	300.13	0.650	0.000	0.50	1.355	0.88	47.9	0.0	95.4
137.00	Appurtenance(s)	1.00	1.35	30.945	34.04	302.42	0.650	0.000	1.50	4.040	2.63	143.0	0.0	115.1
140.00		1.00	1.36	31.087	34.20	297.46	0.650	0.000	3.00	7.968	5.18	283.4	0.0	227.0
145.00		1.00	1.37	31.317	34.45	289.10	0.650	0.000	5.00	12.947	8.42	463.8	0.0	368.8
150.00		1.00	1.38	31.541	34.70	280.64	0.650	0.000	5.00	12.530	8.14	452.1	0.0	356.8
155.00		1.00	1.39	31.760	34.94	272.09	0.650	0.000	5.00	12.113	7.87	440.1	0.0	344.8
157.00	Appurtenance(s)	1.00	1.39	31.846	35.03	268.64	0.650	0.000	2.00	4.729	3.07	172.3	0.0	134.6
160.00		1.00	1.40	31.973	35.17	263.44	0.650	0.000	3.00	6.968	4.53	254.9	0.0	198.3
165.00		1.00	1.41	32.181	35.40	254.71	0.650	0.000	5.00	11.280	7.33	415.3	0.0	320.9
167.00	Appurtenance(s)	1.00	1.41	32.262	35.49	251.19	0.650	0.000	2.00	4.395	2.86	162.2	0.0	125.0
170.00		1.00	1.42	32.384	35.62	245.89	0.650	0.000	3.00	6.468	4.20	239.6	0.0	183.9
175.00		1.00	1.42	32.582	35.84	236.99	0.650	0.000	5.00	10.446	6.79	389.4	0.0	296.9
176.00	Appurtenance(s)	1.00	1.43	32.621	35.88	235.20	0.650	0.000	1.00	2.039	1.33	76.1	0.0	58.0

Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 18



Totals:	176.00	18,242.3	30,791.6
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Discrete Appurtenance Forces

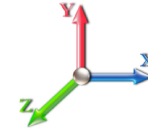
Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 19

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	
1	176.00	RR90-17-02DP	3	32.660	35.926	0.51	0.75	6.67	36.45	0.000	1.000	383.45	0.00	383.45	
2	176.00	Lightning Rod	1	32.756	36.032	1.00	1.00	1.05	31.50	0.000	3.500	60.53	0.00	211.87	
3	176.00	4449	3	32.660	35.926	0.50	0.75	2.49	189.00	0.000	1.000	142.98	0.00	142.98	
4	176.00	KRY 112 89/4	3	32.660	35.926	0.50	0.75	0.98	41.58	0.000	1.000	56.32	0.00	56.32	
5	176.00	KRY 112 489/2	3	32.660	35.926	0.50	0.75	0.98	41.58	0.000	1.000	56.32	0.00	56.32	
6	176.00	RMQP-496-HK	1	32.660	35.926	1.00	1.00	46.00	2204.10	0.000	1.000	2644.15	0.00	2644.15	
7	176.00	APXVAARR24_43-U-NA2	3	32.660	35.926	0.52	0.75	31.88	345.60	0.000	1.000	1832.39	0.00	1832.39	
8	176.00	MHA FE15501P77/75	6	32.660	35.926	0.49	0.75	2.72	59.40	0.000	1.000	156.36	0.00	156.36	
9	167.00	RRH2X60-AWS	3	32.262	35.489	0.61	0.80	6.38	162.00	0.000	0.000	362.50	0.00	0.00	
10	167.00	RRH2X60-700	3	32.262	35.489	0.61	0.80	6.38	162.00	0.000	0.000	362.50	0.00	0.00	
11	167.00	Low Profile	1	32.262	35.489	1.00	1.00	22.00	1350.00	0.000	0.000	1249.20	0.00	0.00	
12	167.00	DB-T16Z-8AB-0Z	1	32.262	35.489	1.00	1.00	4.80	17.01	0.000	0.000	272.55	0.00	0.00	
13	167.00	SBNHH-1D65B	6	32.262	35.489	0.66	0.80	32.51	216.00	0.000	0.000	1845.95	0.00	0.00	
14	167.00	LPA-80063-4CF-EDIN-5	4	32.262	35.489	0.74	0.80	18.30	72.00	0.000	0.000	1039.25	0.00	0.00	
15	167.00	APL868013	2	32.262	35.489	0.84	0.90	4.79	11.34	0.000	0.000	271.85	0.00	0.00	
16	157.00	Sitepro PRK-SFS-H-L	1	31.846	35.030	1.00	1.00	6.70	207.00	0.000	0.000	375.53	0.00	0.00	
17	157.00	Sitepro HRK14-U	1	31.846	35.030	1.00	1.00	8.13	272.12	0.000	0.000	455.67	0.00	0.00	
18	157.00	Sitepro PRK-1245L	1	31.846	35.030	1.00	1.00	9.50	418.42	0.000	0.000	532.46	0.00	0.00	
19	157.00	Commscope	3	31.846	35.030	0.60	0.80	22.09	208.98	0.000	0.000	1237.89	0.00	0.00	
20	157.00	RFS APXVTM14-C-I20	3	31.846	35.030	0.62	0.80	11.72	151.74	0.000	0.000	656.68	0.00	0.00	
21	157.00	ALU TD-RRH8x20-25	3	31.846	35.030	0.54	0.80	6.51	189.00	0.000	0.000	365.01	0.00	0.00	
22	157.00	ALU 800 Mhz	6	31.846	35.030	0.54	0.80	8.01	286.20	0.000	0.000	448.83	0.00	0.00	
23	157.00	ALU 1900 Mhz	3	31.846	35.030	0.54	0.80	4.45	162.00	0.000	0.000	249.65	0.00	0.00	
24	157.00	Low Profile Platform	1	31.846	35.030	1.00	1.00	22.00	1350.00	0.000	0.000	1233.07	0.00	0.00	
25	137.00	Handrail Kit	1	30.945	34.040	1.00	1.00	9.02	392.40	0.000	0.000	491.26	0.00	0.00	
26	137.00	Ericsson RRUS 8843 B2	3	30.945	34.040	0.74	0.80	3.62	194.40	0.000	0.000	197.22	0.00	0.00	
27	137.00	LP Platform-Round	1	30.945	34.040	1.00	1.00	22.00	1350.00	0.000	0.000	1198.20	0.00	0.00	
28	137.00	Ericsson 4449 B5/B12	3	30.945	34.040	0.69	0.80	4.07	191.70	0.000	0.000	221.45	0.00	0.00	
29	137.00	CCI DMP65R-BU6DA	3	30.945	34.040	0.58	0.80	22.27	214.38	0.000	0.000	1212.79	0.00	0.00	
30	137.00	KMW HPA-65R-BU6AA	3	30.945	34.040	0.71	0.80	16.79	116.10	0.000	0.000	914.39	0.00	0.00	
31	137.00	Powerwave LGP21903	6	30.945	34.040	0.67	0.80	1.09	27.00	4.341	0.000	59.29	160.85	0.00	
32	137.00	Powerwave 7770 Panel	3	30.945	34.040	0.58	0.80	9.64	94.50	0.000	0.000	524.81	0.00	0.00	
33	137.00	Powerwave LGP21401	6	30.945	34.040	0.54	0.80	4.15	102.60	0.000	0.000	225.95	0.00	0.00	
34	137.00	Raycap DC6-48-60-18-8F	1	30.945	34.040	1.00	1.00	1.47	29.52	0.000	0.000	80.06	0.00	0.00	
35	137.00	Powerwave 7020.00 RET	12	30.945	34.040	0.40	0.80	1.92	23.76	0.000	0.000	104.57	0.00	0.00	
36	137.00	Smart Bias T 1001940	3	30.945	34.040	0.54	0.80	0.14	5.40	7.041	0.000	7.88	34.68	0.00	
Totals:									10,926.78						21,528.97

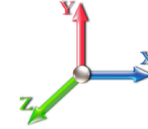
Total Applied Force Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 20



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		527.74	1527.41	0.00	0.00
10.00		518.47	1503.47	0.00	0.00
15.00		509.20	1479.53	0.00	0.00
20.00		530.44	1455.60	0.00	0.00
25.00		545.64	1431.66	0.00	0.00
30.00		556.27	1407.72	0.00	0.00
35.00		563.55	1383.78	0.00	0.00
40.00		568.23	1359.84	0.00	0.00
42.75		312.01	737.71	0.00	0.00
45.00		260.09	1060.75	0.00	0.00
49.00		464.81	1863.34	0.00	0.00
50.00		115.50	236.34	0.00	0.00
55.00		581.92	1169.13	0.00	0.00
60.00		580.28	1148.19	0.00	0.00
65.00		577.53	1127.24	0.00	0.00
70.00		573.80	1106.30	0.00	0.00
75.00		569.20	1085.35	0.00	0.00
80.00		563.81	1064.40	0.00	0.00
85.00		557.71	1043.46	0.00	0.00
86.50		165.32	308.95	0.00	0.00
90.00		391.45	1229.13	0.00	0.00
91.75		194.03	607.42	0.00	0.00
95.00		358.55	582.07	0.00	0.00
100.00		546.21	880.68	0.00	0.00
105.00		537.90	862.73	0.00	0.00
110.00		529.10	844.77	0.00	0.00
115.00		519.85	826.82	0.00	0.00
120.00		510.18	808.87	0.00	0.00
125.00		500.12	790.91	0.00	0.00
130.00		489.67	772.96	0.00	0.00
131.25		120.38	190.43	0.00	0.00
135.00		363.37	857.97	0.00	0.00
135.50		47.86	113.12	0.00	0.00
137.00	(45) attachments	5380.90	2910.08	195.53	0.00
140.00		283.37	297.12	0.00	0.00
145.00		463.84	485.63	0.00	0.00
150.00		452.12	473.66	0.00	0.00
155.00		440.11	461.70	0.00	0.00
157.00	(22) attachments	5727.06	3426.79	0.00	0.00
160.00		254.86	261.27	0.00	0.00
165.00		415.26	425.88	0.00	0.00
167.00	(20) attachments	5566.01	2157.35	0.00	0.00
170.00		239.61	224.12	0.00	0.00
175.00		389.36	363.96	0.00	0.00
176.00	(23) attachments	5408.61	3020.57	0.00	5483.85

Total Applied Force Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 21

Totals:	39,771.28	47,376.19	195.53	5,483.85
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Linear Appurtenance Segment Forces (Factored)

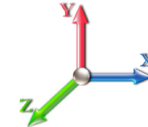
Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 22

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	19.450	0.00	1.23
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	19.450	0.00	4.68
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	19.450	0.00	1.23
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	19.450	0.00	4.68
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	19.450	0.00	1.23
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	19.450	0.00	4.68
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	20.638	0.00	1.23
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	20.638	0.00	4.68
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	21.630	0.00	1.23
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	21.630	0.00	4.68
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	22.477	0.00	1.23
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	22.477	0.00	4.68
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	23.218	0.00	1.23
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	23.218	0.00	4.68
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	23.880	0.00	1.23
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	23.880	0.00	4.68
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.021	0.000	24.217	0.00	0.68
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	0.14	0.00	0.021	0.000	24.217	0.00	2.57
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.021	0.000	24.479	0.00	0.55
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.12	0.00	0.021	0.000	24.479	0.00	2.11
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.021	0.000	24.922	0.00	0.98
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.021	0.000	24.922	0.00	3.74
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.021	0.000	25.029	0.00	0.25
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.021	0.000	25.029	0.00	0.94
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	25.536	0.00	1.23
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	25.536	0.00	4.68
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	26.008	0.00	1.23
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	26.008	0.00	4.68
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	26.450	0.00	1.23
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	26.450	0.00	4.68
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	26.866	0.00	1.23
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	26.866	0.00	4.68
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	27.259	0.00	1.23
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	27.259	0.00	4.68
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	27.632	0.00	1.23
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	27.632	0.00	4.68
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	27.987	0.00	1.23
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	27.987	0.00	4.68
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.025	0.000	28.090	0.00	0.37
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.025	0.000	28.090	0.00	1.40
90.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.025	0.000	28.325	0.00	0.86
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	0.18	0.00	0.025	0.000	28.325	0.00	3.28
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.025	0.000	28.441	0.00	0.43
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.025	0.000	28.441	0.00	1.64
95.00	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.025	0.000	28.650	0.00	0.80
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.025	0.000	28.650	0.00	3.04
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	28.961	0.00	1.23

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



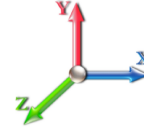
Page: 23

Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 0.90

Wind Load Factor 1.60



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	28.961	0.00	4.68
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	29.260	0.00	1.23
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	29.260	0.00	4.68
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.027	0.000	29.548	0.00	1.23
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.027	0.000	29.548	0.00	4.68
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	29.826	0.00	1.23
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	29.826	0.00	4.68
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	30.094	0.00	1.23
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	30.094	0.00	4.68
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	30.354	0.00	1.23
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	30.354	0.00	4.68
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.030	0.000	30.605	0.00	1.23
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.030	0.000	30.605	0.00	4.68
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.031	0.000	30.667	0.00	0.31
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.031	0.000	30.667	0.00	1.17
135.00	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.031	0.000	30.850	0.00	0.92
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.031	0.000	30.850	0.00	3.51
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.032	0.000	30.874	0.00	0.12
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.032	0.000	30.874	0.00	0.47
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.031	0.000	30.945	0.00	0.37
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.031	0.000	30.945	0.00	1.40
140.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.032	0.000	31.087	0.00	0.74
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.032	0.000	31.087	0.00	2.81
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.033	0.000	31.317	0.00	1.23
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.033	0.000	31.317	0.00	4.68
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.034	0.000	31.541	0.00	1.23
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.034	0.000	31.541	0.00	4.68
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	31.760	0.00	1.23
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	31.760	0.00	4.68
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.036	0.000	31.846	0.00	0.49
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.036	0.000	31.846	0.00	1.87
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	31.973	0.00	0.74
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	31.973	0.00	2.81
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	32.181	0.00	1.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	32.181	0.00	4.68
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.038	0.000	32.262	0.00	0.49
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.038	0.000	32.262	0.00	1.87
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.039	0.000	32.384	0.00	0.74
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.039	0.000	32.384	0.00	2.81
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	32.582	0.00	1.23
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	32.582	0.00	4.68
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.041	0.000	32.621	0.00	0.25
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.041	0.000	32.621	0.00	0.94
Totals:											0.0	208.0

Calculated Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

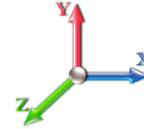


Page: 24

Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 0.90
Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.30	-39.86	-0.19	-5210.3	0.00	5210.31	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.717
5.00	-45.63	-39.49	-0.19	-5011.0	0.00	5011.03	6292.68	3146.34	14220.7	7120.95	0.11	-0.206	0.000	0.711
10.00	-43.99	-39.13	-0.19	-4813.5	0.00	4813.57	6211.66	3105.83	13784.2	6902.39	0.44	-0.415	0.000	0.705
15.00	-42.37	-38.76	-0.19	-4617.9	0.00	4617.93	6129.50	3064.75	13351.9	6685.89	0.99	-0.626	0.000	0.698
20.00	-40.78	-38.37	-0.19	-4424.1	0.00	4424.12	6046.18	3023.09	12923.8	6471.51	1.76	-0.840	0.000	0.691
25.00	-39.21	-37.95	-0.19	-4232.2	0.00	4232.29	5961.72	2980.86	12500.0	6259.33	2.75	-1.058	0.000	0.683
30.00	-37.67	-37.51	-0.19	-4042.5	0.00	4042.56	5876.11	2938.05	12080.8	6049.42	3.98	-1.277	0.000	0.675
35.00	-36.16	-37.05	-0.19	-3855.0	0.00	3855.02	5789.35	2894.67	11666.3	5841.84	5.43	-1.499	0.000	0.666
40.00	-34.70	-36.55	-0.19	-3669.7	0.00	3669.75	5679.25	2839.63	11212.8	5614.75	7.12	-1.724	0.000	0.660
42.75	-33.90	-36.29	-0.19	-3569.2	0.00	3569.24	5615.38	2807.69	10960.7	5488.51	8.16	-1.851	0.000	0.657
45.00	-32.76	-36.07	-0.19	-3487.5	0.00	3487.59	5563.11	2781.56	10756.6	5386.29	9.05	-1.955	0.000	0.654
49.00	-30.84	-35.60	-0.19	-3343.3	0.00	3343.30	4756.80	2378.40	9239.06	4626.40	10.77	-2.139	0.000	0.729
50.00	-30.52	-35.56	-0.19	-3307.7	0.00	3307.70	4742.51	2371.25	9172.60	4593.12	11.22	-2.187	0.000	0.727
55.00	-29.22	-35.06	-0.19	-3129.9	-0.01	3129.90	4670.33	2335.16	8842.49	4427.82	13.65	-2.436	0.000	0.713
60.00	-27.95	-34.55	-0.19	-2954.6	-0.01	2954.60	4597.00	2298.50	8516.13	4264.39	16.33	-2.687	0.000	0.699
65.00	-26.70	-34.04	-0.19	-2781.8	-0.01	2781.85	4522.52	2261.26	8193.68	4102.93	19.28	-2.939	0.000	0.684
70.00	-25.48	-33.52	-0.19	-2611.6	-0.01	2611.66	4446.89	2223.45	7875.26	3943.48	22.49	-3.193	0.000	0.668
75.00	-24.28	-33.00	-0.19	-2444.0	-0.01	2444.07	4354.69	2177.34	7534.33	3772.77	25.97	-3.447	0.000	0.654
80.00	-23.11	-32.47	-0.19	-2279.1	-0.01	2279.10	4253.06	2126.53	7185.02	3597.85	29.71	-3.702	0.000	0.639
85.00	-22.01	-31.91	-0.19	-2116.7	-0.01	2116.75	4151.43	2075.72	6843.99	3427.08	33.72	-3.956	0.000	0.623
86.50	-21.65	-31.77	-0.19	-2068.8	-0.01	2068.89	4120.95	2060.47	6743.30	3376.66	34.98	-4.034	0.000	0.618
90.00	-20.37	-31.34	-0.19	-1957.7	-0.01	1957.70	4049.81	2024.90	6511.26	3260.47	38.00	-4.213	0.000	0.606
91.75	-19.71	-31.14	-0.19	-1902.8	-0.01	1902.86	3441.70	1720.85	5608.94	2808.64	39.56	-4.304	0.000	0.684
95.00	-19.04	-30.82	-0.19	-1801.6	-0.01	1801.64	3401.05	1700.53	5452.51	2730.31	42.55	-4.470	0.000	0.666
100.00	-18.06	-30.29	-0.19	-1647.5	-0.01	1647.57	3337.56	1668.78	5214.58	2611.16	47.37	-4.743	0.000	0.637
105.00	-17.11	-29.76	-0.19	-1496.1	-0.01	1496.14	3272.92	1636.46	4980.08	2493.74	52.48	-5.012	0.000	0.606
110.00	-16.19	-29.23	-0.19	-1347.3	-0.01	1347.35	3194.68	1597.34	4730.71	2368.87	57.86	-5.275	0.000	0.574
115.00	-15.29	-28.70	-0.19	-1201.2	-0.01	1201.22	3107.57	1553.79	4474.96	2240.81	63.52	-5.531	0.000	0.541
120.00	-14.41	-28.17	-0.19	-1057.7	-0.01	1057.72	3020.47	1510.23	4226.32	2116.30	69.43	-5.777	0.000	0.505
125.00	-13.57	-27.65	-0.19	-916.86	-0.01	916.86	2933.36	1466.68	3984.78	1995.35	75.60	-6.011	-0.001	0.464
130.00	-12.79	-27.11	-0.19	-778.62	-0.01	778.62	2846.25	1423.13	3750.35	1877.96	82.00	-6.231	-0.001	0.419
131.25	-12.56	-26.99	-0.19	-744.74	-0.01	744.74	2824.47	1412.24	3692.86	1849.17	83.64	-6.285	-0.001	0.408
135.00	-11.71	-26.55	-0.20	-643.52	-0.02	643.52	2759.14	1379.57	3523.03	1764.13	88.63	-6.436	-0.001	0.369
135.50	-11.59	-26.50	-0.20	-630.24	-0.02	630.24	1734.08	867.04	2260.78	1132.07	89.30	-6.456	-0.001	0.564
137.00	-9.27	-20.84	0.00	-590.49	0.01	590.49	1723.43	861.72	2225.81	1114.56	91.33	-6.513	-0.001	0.536
140.00	-8.93	-20.56	0.00	-527.97	0.01	527.97	1701.83	850.91	2156.25	1079.73	95.47	-6.667	-0.001	0.495
145.00	-8.43	-20.07	0.00	-425.19	0.00	425.19	1664.90	832.45	2041.54	1022.29	102.56	-6.897	-0.001	0.422
150.00	-7.95	-19.59	0.00	-324.83	0.00	324.83	1626.81	813.41	1928.48	965.67	109.88	-7.097	-0.001	0.342
155.00	-7.52	-19.11	0.00	-226.89	0.00	226.89	1587.58	793.79	1817.22	909.96	117.38	-7.260	-0.001	0.255
157.00	-4.83	-13.00	0.00	-188.67	0.00	188.67	1571.57	785.79	1773.24	887.94	120.43	-7.314	-0.001	0.216
160.00	-4.59	-12.72	0.00	-149.68	0.00	149.68	1547.20	773.60	1707.88	855.21	125.04	-7.383	-0.001	0.178
165.00	-4.21	-12.26	0.00	-86.08	0.00	86.08	1505.67	752.84	1600.62	801.50	132.80	-7.469	-0.001	0.110
167.00	-2.79	-6.46	0.00	-61.57	0.00	61.57	1488.74	744.37	1558.33	780.32	135.93	-7.493	-0.001	0.081
170.00	-2.59	-6.19	0.00	-42.20	0.00	42.20	1462.99	731.50	1495.57	748.90	140.63	-7.520	-0.001	0.058
175.00	-2.28	-5.76	0.00	-11.24	0.00	11.24	1411.70	705.85	1385.55	693.80	148.50	-7.544	-0.001	0.018
176.00	0.00	-5.41	0.00	-5.48	0.00	5.48	1400.09	700.04	1362.73	682.38	150.07	-7.546	-0.001	0.008

Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



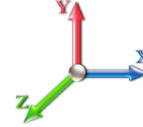
Page: 25

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	25.098	30.12	171.2	593.6	2393.6
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	24.780	29.74	169.0	626.5	2394.7
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	24.424	29.31	166.6	641.9	2378.1
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	24.053	28.86	174.1	649.5	2353.8
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	23.671	28.41	179.6	652.7	2325.1
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	23.285	27.94	183.6	652.9	2293.4
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	22.893	27.47	186.4	651.0	2259.5
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	22.499	27.00	188.4	647.5	2224.1
42.75	Bot - Section 2	1.00	1.06	6.434	7.08	0.00	1.200	2.052	2.75	12.203	14.64	103.6	354.8	1208.3
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	2.25	10.061	12.07	86.4	294.3	1602.2
49.00	Top - Section 1	1.00	1.09	6.622	7.28	0.00	1.200	2.081	4.00	17.690	21.23	154.6	519.7	2814.9
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	1.00	4.381	5.26	38.5	129.7	397.5
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	5.00	21.674	26.01	194.1	641.9	1964.2
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	21.273	25.53	194.0	634.6	1929.0
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	20.870	25.04	193.6	626.7	1893.2
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	20.466	24.56	192.8	618.3	1856.9
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	20.062	24.07	191.8	609.4	1820.0
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	19.657	23.59	190.5	600.0	1782.7
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	19.251	23.10	189.0	590.3	1745.1
86.50	Bot - Section 3	1.00	1.23	7.464	8.21	0.00	1.200	2.202	1.50	5.695	6.83	56.1	176.2	517.2
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	3.50	13.370	16.04	132.8	413.4	1886.7
91.75	Top - Section 2	1.00	1.24	7.557	8.31	0.00	1.200	2.215	1.75	6.610	7.93	65.9	205.4	932.6
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	3.25	12.144	14.57	122.0	377.1	999.5
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	5.00	18.348	22.02	186.4	569.5	1507.3
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	17.941	21.53	184.1	558.6	1472.4
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	17.533	21.04	181.7	547.4	1437.3
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	17.124	20.55	179.1	536.0	1402.0
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	16.715	20.06	176.4	524.4	1366.4
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	5.00	16.306	19.57	173.6	512.6	1330.7
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	5.00	15.897	19.08	170.6	500.6	1294.7
131.25	Bot - Section 4	1.00	1.34	8.148	8.96	0.00	1.200	2.296	1.25	3.910	4.69	42.1	124.4	319.2
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	3.75	11.735	14.08	127.0	371.7	1338.3
135.50	Top - Section 3	1.00	1.35	8.203	9.02	0.00	1.200	2.303	0.50	1.547	1.86	16.8	49.4	176.6
137.00	Appurtenance(s)	1.00	1.35	8.222	9.04	0.00	1.200	2.306	1.50	4.617	5.54	50.1	147.2	300.7
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	3.00	9.124	10.95	99.5	289.9	592.6
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	14.879	17.86	163.4	470.7	962.4
150.00		1.00	1.38	8.381	9.22	0.00	1.200	2.327	5.00	14.469	17.36	160.1	458.1	933.8
155.00		1.00	1.39	8.439	9.28	0.00	1.200	2.335	5.00	14.059	16.87	156.6	445.3	905.0
157.00	Appurtenance(s)	1.00	1.39	8.462	9.31	0.00	1.200	2.338	2.00	5.508	6.61	61.5	176.1	355.5
160.00		1.00	1.40	8.495	9.34	0.00	1.200	2.342	3.00	8.139	9.77	91.3	259.4	523.8
165.00		1.00	1.41	8.551	9.41	0.00	1.200	2.349	5.00	13.237	15.88	149.4	419.3	847.1
167.00	Appurtenance(s)	1.00	1.41	8.572	9.43	0.00	1.200	2.352	2.00	5.179	6.21	58.6	165.6	332.3
170.00		1.00	1.42	8.604	9.46	0.00	1.200	2.356	3.00	7.646	9.17	86.8	243.7	488.9
175.00		1.00	1.42	8.657	9.52	0.00	1.200	2.363	5.00	12.415	14.90	141.9	392.8	788.7
176.00	Appurtenance(s)	1.00	1.43	8.667	9.53	0.00	1.200	2.364	1.00	2.433	2.92	27.8	78.0	155.3

Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 26



Totals:	176.00	6,209.6	60,803.4
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Discrete Appurtenance Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

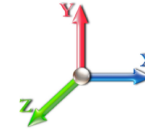


Page: 27

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.00



No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	176.00	RR90-17-02DP	3	8.678	9.546	0.51	0.75	8.78	492.47	0.000	1.000	83.85	0.00	83.85
2	176.00	Lightning Rod	1	8.703	9.574	1.00	1.00	4.27	75.56	0.000	3.500	40.84	0.00	142.94
3	176.00	4449	3	8.678	9.546	0.50	0.75	3.63	555.42	0.000	1.000	34.64	0.00	34.64
4	176.00	KRY 112 89/4	3	8.678	9.546	0.50	0.75	2.23	112.06	0.000	1.000	21.29	0.00	21.29
5	176.00	KRY 112 489/2	3	8.678	9.546	0.50	0.75	2.23	112.06	0.000	1.000	21.29	0.00	21.29
6	176.00	RMQP-496-HK	1	8.678	9.546	1.00	1.00	89.51	5623.12	0.000	1.000	854.39	0.00	854.39
7	176.00	APXVAARR24_43-U-NA2	3	8.678	9.546	0.52	0.75	35.99	2236.86	0.000	1.000	343.51	0.00	343.51
8	176.00	MHA FE15501P77/75	6	8.678	9.546	0.49	0.75	5.52	202.82	0.000	1.000	52.66	0.00	52.66
9	167.00	RRH2X60-AWS	3	8.572	9.429	0.61	0.80	8.32	508.62	0.000	0.000	78.49	0.00	0.00
10	167.00	RRH2X60-700	3	8.572	9.429	0.61	0.80	8.32	508.62	0.000	0.000	78.49	0.00	0.00
11	167.00	Low Profile	1	8.572	9.429	1.00	1.00	45.80	3264.05	0.000	0.000	431.90	0.00	0.00
12	167.00	DB-T16Z-8AB-0Z	1	8.572	9.429	1.00	1.00	6.01	228.63	0.000	0.000	56.63	0.00	0.00
13	167.00	SBNHH-1D65B	6	8.572	9.429	0.66	0.80	39.66	2041.39	0.000	0.000	373.93	0.00	0.00
14	167.00	LPA-80063-4CF-EDIN-5	4	8.572	9.429	0.74	0.80	25.90	872.61	0.000	0.000	244.19	0.00	0.00
15	167.00	APL868013	2	8.572	9.429	0.84	0.90	6.80	330.32	0.000	0.000	64.10	0.00	0.00
16	157.00	Sitepro PRK-SFS-H-L	1	8.462	9.308	1.00	1.00	16.10	605.12	0.000	0.000	149.83	0.00	0.00
17	157.00	Sitepro HRK14-U	1	8.462	9.308	1.00	1.00	18.77	1145.81	0.000	0.000	174.73	0.00	0.00
18	157.00	Sitepro PRK-1245L	1	8.462	9.308	1.00	1.00	22.82	897.51	0.000	0.000	212.44	0.00	0.00
19	157.00	Commscope	3	8.462	9.308	0.60	0.80	25.60	1228.70	0.000	0.000	238.25	0.00	0.00
20	157.00	RFS APXVTM14-C-I20	3	8.462	9.308	0.62	0.80	14.53	891.79	0.000	0.000	135.26	0.00	0.00
21	157.00	ALU TD-RRH8x20-25	3	8.462	9.308	0.54	0.80	8.31	727.95	0.000	0.000	77.34	0.00	0.00
22	157.00	ALU 800 Mhz	6	8.462	9.308	0.54	0.80	12.93	849.39	0.000	0.000	120.39	0.00	0.00
23	157.00	ALU 1900 Mhz	3	8.462	9.308	0.54	0.80	7.19	479.57	0.000	0.000	66.89	0.00	0.00
24	157.00	Low Profile Platform	1	8.462	9.308	1.00	1.00	45.66	3253.19	0.000	0.000	424.96	0.00	0.00
25	137.00	Handrail Kit	1	8.222	9.044	1.00	1.00	13.56	629.47	0.000	0.000	122.60	0.00	0.00
26	137.00	Ericsson RRUS 8843 B2	3	8.222	9.044	0.74	0.80	5.12	468.03	0.000	0.000	46.35	0.00	0.00
27	137.00	LP Platform-Round	1	8.222	9.044	1.00	1.00	45.34	3229.47	0.000	0.000	410.04	0.00	0.00
28	137.00	Ericsson 4449 B5/B12	3	8.222	9.044	0.69	0.80	7.70	627.22	0.000	0.000	69.67	0.00	0.00
29	137.00	CCI DMP65R-BU6DA	3	8.222	9.044	0.58	0.80	25.76	1479.47	0.000	0.000	233.01	0.00	0.00
30	137.00	KMW HPA-65R-BU6AA	3	8.222	9.044	0.71	0.80	20.48	1038.89	0.000	0.000	185.27	0.00	0.00
31	137.00	Powerwave LGP21903	6	8.222	9.044	0.67	0.80	3.21	79.34	4.341	0.000	29.01	125.91	0.00
32	137.00	Powerwave 7770 Panel	3	8.222	9.044	0.58	0.80	12.15	701.59	0.000	0.000	109.93	0.00	0.00
33	137.00	Powerwave LGP21401	6	8.222	9.044	0.54	0.80	7.70	390.68	0.000	0.000	69.64	0.00	0.00
34	137.00	Raycap DC6-48-60-18-8F	1	8.222	9.044	1.00	1.00	2.39	106.92	0.000	0.000	21.66	0.00	0.00
35	137.00	Powerwave 7020.00 RET	12	8.222	9.044	0.40	0.80	4.99	159.06	0.000	0.000	45.14	0.00	0.00
36	137.00	Smart Bias T 1001940	3	8.222	9.044	0.54	0.80	0.64	8.22	7.041	0.000	5.81	40.94	0.00

Totals: 36,161.98

5,728.39

Total Applied Force Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 28

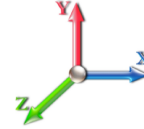


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		171.21	2670.29	0.00	0.00
10.00		169.04	2676.76	0.00	0.00
15.00		166.62	2663.74	0.00	0.00
20.00		174.10	2642.12	0.00	0.00
25.00		179.58	2615.56	0.00	0.00
30.00		183.56	2585.71	0.00	0.00
35.00		186.43	2553.52	0.00	0.00
40.00		188.44	2519.55	0.00	0.00
42.75		103.65	1371.19	0.00	0.00
45.00		86.38	1735.77	0.00	0.00
49.00		154.63	3053.09	0.00	0.00
50.00		38.46	457.08	0.00	0.00
55.00		194.11	2263.23	0.00	0.00
60.00		194.04	2229.07	0.00	0.00
65.00		193.60	2194.21	0.00	0.00
70.00		192.85	2158.75	0.00	0.00
75.00		191.80	2122.74	0.00	0.00
80.00		190.50	2086.26	0.00	0.00
85.00		188.97	2049.36	0.00	0.00
86.50		56.11	608.53	0.00	0.00
90.00		132.82	2100.22	0.00	0.00
91.75		65.93	1039.41	0.00	0.00
95.00		122.02	1198.23	0.00	0.00
100.00		186.37	1813.70	0.00	0.00
105.00		184.11	1779.47	0.00	0.00
110.00		181.69	1744.98	0.00	0.00
115.00		179.13	1710.23	0.00	0.00
120.00		176.43	1675.24	0.00	0.00
125.00		173.60	1640.02	0.00	0.00
130.00		170.64	1604.61	0.00	0.00
131.25		42.05	396.69	0.00	0.00
135.00		126.97	1571.11	0.00	0.00
135.50		16.75	207.67	0.00	0.00
137.00	(45) attachments	1398.23	9312.22	166.85	0.00
140.00		99.47	730.78	0.00	0.00
145.00		163.43	1193.20	0.00	0.00
150.00		160.06	1165.06	0.00	0.00
155.00		156.60	1136.77	0.00	0.00
157.00	(22) attachments	1661.60	10527.27	0.00	0.00
160.00		91.27	653.58	0.00	0.00
165.00		149.41	1063.91	0.00	0.00
167.00	(20) attachments	1386.33	8173.32	0.00	0.00
170.00		86.84	588.82	0.00	0.00
175.00		141.87	955.71	0.00	0.00
176.00	(23) attachments	1480.30	9599.06	0.00	1554.56

Total Applied Force Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 29

Totals:	<u>11,938.00</u>	<u>106,837.7</u>	<u>166.85</u>	<u>1,554.56</u>
		8		

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

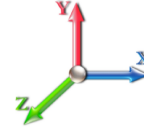


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	1.54	0.00	0.018	0.000	5.168	0.00	20.86
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.64	0.00	0.018	0.000	5.168	0.00	27.18
10.00	Safety Cable	Yes	5.00	0.000	0.38	1.64	0.00	0.018	0.000	5.168	0.00	23.53
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.74	0.00	0.018	0.000	5.168	0.00	29.96
15.00	Safety Cable	Yes	5.00	0.000	0.38	1.70	0.00	0.018	0.000	5.168	0.00	25.26
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.80	0.00	0.018	0.000	5.168	0.00	31.77
20.00	Safety Cable	Yes	5.00	0.000	0.38	1.74	0.00	0.019	0.000	5.483	0.00	26.58
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.85	0.00	0.019	0.000	5.483	0.00	33.13
25.00	Safety Cable	Yes	5.00	0.000	0.38	1.78	0.00	0.019	0.000	5.747	0.00	27.65
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.88	0.00	0.019	0.000	5.747	0.00	34.25
30.00	Safety Cable	Yes	5.00	0.000	0.38	1.81	0.00	0.019	0.000	5.972	0.00	28.56
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.91	0.00	0.019	0.000	5.972	0.00	35.19
35.00	Safety Cable	Yes	5.00	0.000	0.38	1.83	0.00	0.020	0.000	6.169	0.00	29.35
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.94	0.00	0.020	0.000	6.169	0.00	36.02
40.00	Safety Cable	Yes	5.00	0.000	0.38	1.86	0.00	0.020	0.000	6.345	0.00	30.06
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.96	0.00	0.020	0.000	6.345	0.00	36.75
42.75	Safety Cable	Yes	2.75	0.000	0.38	1.03	0.00	0.021	0.000	6.434	0.00	16.73
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	1.09	0.00	0.021	0.000	6.434	0.00	20.42
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.84	0.00	0.021	0.000	6.504	0.00	13.82
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.89	0.00	0.021	0.000	6.504	0.00	16.84
49.00	Safety Cable	Yes	4.00	0.000	0.38	1.51	0.00	0.021	0.000	6.622	0.00	24.94
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	1.60	0.00	0.021	0.000	6.622	0.00	30.32
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.38	0.00	0.021	0.000	6.650	0.00	6.26
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.40	0.00	0.021	0.000	6.650	0.00	7.60
55.00	Safety Cable	Yes	5.00	0.000	0.38	1.91	0.00	0.021	0.000	6.785	0.00	31.83
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.02	0.00	0.021	0.000	6.785	0.00	38.58
60.00	Safety Cable	Yes	5.00	0.000	0.38	1.93	0.00	0.022	0.000	6.910	0.00	32.33
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.03	0.00	0.022	0.000	6.910	0.00	39.10
65.00	Safety Cable	Yes	5.00	0.000	0.38	1.94	0.00	0.022	0.000	7.028	0.00	32.80
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.05	0.00	0.022	0.000	7.028	0.00	39.59
70.00	Safety Cable	Yes	5.00	0.000	0.38	1.96	0.00	0.023	0.000	7.138	0.00	33.24
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.06	0.00	0.023	0.000	7.138	0.00	40.04
75.00	Safety Cable	Yes	5.00	0.000	0.38	1.97	0.00	0.023	0.000	7.243	0.00	33.66
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.07	0.00	0.023	0.000	7.243	0.00	40.47
80.00	Safety Cable	Yes	5.00	0.000	0.38	1.98	0.00	0.024	0.000	7.342	0.00	34.05
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.08	0.00	0.024	0.000	7.342	0.00	40.88
85.00	Safety Cable	Yes	5.00	0.000	0.38	1.99	0.00	0.024	0.000	7.436	0.00	34.43
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.09	0.00	0.024	0.000	7.436	0.00	41.27
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.60	0.00	0.025	0.000	7.464	0.00	10.36
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.63	0.00	0.025	0.000	7.464	0.00	12.42
90.00	Safety Cable	Yes	3.50	0.000	0.38	1.40	0.00	0.025	0.000	7.526	0.00	24.35
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	1.47	0.00	0.025	0.000	7.526	0.00	29.15
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.70	0.00	0.025	0.000	7.557	0.00	12.22
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.74	0.00	0.025	0.000	7.557	0.00	14.62
95.00	Safety Cable	Yes	3.25	0.000	0.38	1.31	0.00	0.025	0.000	7.612	0.00	22.83
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	1.37	0.00	0.025	0.000	7.612	0.00	27.30
100.00	Safety Cable	Yes	5.00	0.000	0.38	2.02	0.00	0.026	0.000	7.695	0.00	35.46

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

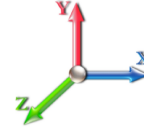


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.12	0.00	0.026	0.000	7.695	0.00	42.33
105.00	Safety Cable	Yes	5.00	0.000	0.38	2.03	0.00	0.026	0.000	7.774	0.00	35.77
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.13	0.00	0.026	0.000	7.774	0.00	42.66
110.00	Safety Cable	Yes	5.00	0.000	0.38	2.04	0.00	0.027	0.000	7.851	0.00	36.07
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.14	0.00	0.027	0.000	7.851	0.00	42.97
115.00	Safety Cable	Yes	5.00	0.000	0.38	2.05	0.00	0.028	0.000	7.925	0.00	36.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.15	0.00	0.028	0.000	7.925	0.00	43.28
120.00	Safety Cable	Yes	5.00	0.000	0.38	2.05	0.00	0.028	0.000	7.996	0.00	36.65
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.16	0.00	0.028	0.000	7.996	0.00	43.57
125.00	Safety Cable	Yes	5.00	0.000	0.38	2.06	0.00	0.029	0.000	8.065	0.00	36.92
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.17	0.00	0.029	0.000	8.065	0.00	43.85
130.00	Safety Cable	Yes	5.00	0.000	0.38	2.07	0.00	0.030	0.000	8.132	0.00	37.19
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.17	0.00	0.030	0.000	8.132	0.00	44.12
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.52	0.00	0.031	0.000	8.148	0.00	9.31
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.54	0.00	0.031	0.000	8.148	0.00	11.05
135.00	Safety Cable	Yes	3.75	0.000	0.38	1.56	0.00	0.031	0.000	8.197	0.00	28.08
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	1.64	0.00	0.031	0.000	8.197	0.00	33.29
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.21	0.00	0.032	0.000	8.203	0.00	3.75
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.22	0.00	0.032	0.000	8.203	0.00	4.44
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.62	0.00	0.031	0.000	8.222	0.00	11.26
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.66	0.00	0.031	0.000	8.222	0.00	13.35
140.00	Safety Cable	Yes	3.00	0.000	0.38	1.25	0.00	0.032	0.000	8.260	0.00	22.61
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	1.31	0.00	0.032	0.000	8.260	0.00	26.79
145.00	Safety Cable	Yes	5.00	0.000	0.38	2.09	0.00	0.033	0.000	8.321	0.00	37.93
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.20	0.00	0.033	0.000	8.321	0.00	44.89
150.00	Safety Cable	Yes	5.00	0.000	0.38	2.10	0.00	0.034	0.000	8.381	0.00	38.17
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.20	0.00	0.034	0.000	8.381	0.00	45.14
155.00	Safety Cable	Yes	5.00	0.000	0.38	2.10	0.00	0.035	0.000	8.439	0.00	38.40
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.21	0.00	0.035	0.000	8.439	0.00	45.37
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.84	0.00	0.036	0.000	8.462	0.00	15.39
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.88	0.00	0.036	0.000	8.462	0.00	18.19
160.00	Safety Cable	Yes	3.00	0.000	0.38	1.27	0.00	0.036	0.000	8.495	0.00	23.17
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	1.33	0.00	0.036	0.000	8.495	0.00	27.36
165.00	Safety Cable	Yes	5.00	0.000	0.38	2.12	0.00	0.037	0.000	8.551	0.00	38.84
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.22	0.00	0.037	0.000	8.551	0.00	45.83
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.85	0.00	0.038	0.000	8.572	0.00	15.57
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.89	0.00	0.038	0.000	8.572	0.00	18.37
170.00	Safety Cable	Yes	3.00	0.000	0.38	1.27	0.00	0.039	0.000	8.604	0.00	23.43
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	1.34	0.00	0.039	0.000	8.604	0.00	27.63
175.00	Safety Cable	Yes	5.00	0.000	0.38	2.13	0.00	0.040	0.000	8.657	0.00	39.26
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.23	0.00	0.040	0.000	8.657	0.00	46.26
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.43	0.00	0.041	0.000	8.667	0.00	7.86
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.45	0.00	0.041	0.000	8.667	0.00	9.26
Totals:											0.0	2,606.0

Calculated Forces

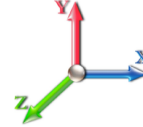
Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-106.8	-12.00	-0.17	-1650.8	0.00	1650.85	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.242
5.00	-104.1	-11.95	-0.17	-1590.8	0.00	1590.85	6292.68	3146.34	14220.7	7120.95	0.03	-0.065	0.000	0.240
10.00	-101.4	-11.89	-0.17	-1531.1	0.00	1531.12	6211.66	3105.83	13784.2	6902.39	0.14	-0.132	0.000	0.238
15.00	-98.78	-11.83	-0.17	-1471.6	0.00	1471.67	6129.50	3064.75	13351.9	6685.89	0.31	-0.199	0.000	0.236
20.00	-96.12	-11.76	-0.17	-1412.5	0.00	1412.50	6046.18	3023.09	12923.8	6471.51	0.56	-0.267	0.000	0.234
25.00	-93.50	-11.69	-0.17	-1353.6	0.00	1353.67	5961.72	2980.86	12500.0	6259.33	0.87	-0.337	0.000	0.232
30.00	-90.90	-11.60	-0.17	-1295.2	0.00	1295.25	5876.11	2938.05	12080.8	6049.42	1.27	-0.407	0.000	0.230
35.00	-88.33	-11.50	-0.17	-1237.2	0.00	1237.26	5789.35	2894.67	11666.3	5841.84	1.73	-0.478	0.000	0.227
40.00	-85.80	-11.38	-0.17	-1179.7	0.00	1179.76	5679.25	2839.63	11212.8	5614.75	2.27	-0.550	0.000	0.225
42.75	-84.42	-11.31	-0.17	-1148.4	0.00	1148.48	5615.38	2807.69	10960.7	5488.51	2.60	-0.591	0.000	0.224
45.00	-82.68	-11.27	-0.17	-1123.0	0.00	1123.03	5563.11	2781.56	10756.6	5386.29	2.88	-0.625	0.000	0.223
49.00	-79.62	-11.14	-0.17	-1077.9	0.00	1077.93	4756.80	2378.40	9239.06	4626.40	3.43	-0.684	0.000	0.250
50.00	-79.16	-11.16	-0.17	-1066.7	0.00	1066.79	4742.51	2371.25	9172.60	4593.12	3.58	-0.699	0.000	0.249
55.00	-76.88	-11.04	-0.17	-1011.0	0.00	1011.00	4670.33	2335.16	8842.49	4427.82	4.35	-0.780	0.000	0.245
60.00	-74.64	-10.92	-0.17	-955.77	0.00	955.77	4597.00	2298.50	8516.13	4264.39	5.21	-0.861	0.000	0.240
65.00	-72.43	-10.80	-0.17	-901.15	0.00	901.15	4522.52	2261.26	8193.68	4102.93	6.16	-0.943	0.000	0.236
70.00	-70.26	-10.67	-0.17	-847.15	0.00	847.15	4446.89	2223.45	7875.26	3943.48	7.19	-1.025	0.000	0.231
75.00	-68.13	-10.54	-0.17	-793.80	0.00	793.80	4354.69	2177.34	7534.33	3772.77	8.31	-1.107	0.000	0.226
80.00	-66.03	-10.40	-0.17	-741.11	0.00	741.11	4253.06	2126.53	7185.02	3597.85	9.51	-1.190	0.000	0.222
85.00	-63.98	-10.23	-0.17	-689.10	0.00	689.10	4151.43	2075.72	6843.99	3427.08	10.80	-1.273	0.000	0.217
86.50	-63.36	-10.21	-0.17	-673.76	0.00	673.76	4120.95	2060.47	6743.30	3376.66	11.21	-1.298	0.000	0.215
90.00	-61.26	-10.07	-0.17	-638.04	0.00	638.04	4049.81	2024.90	6511.26	3260.47	12.18	-1.357	0.000	0.211
91.75	-60.21	-10.02	-0.17	-620.42	0.00	620.42	3441.70	1720.85	5608.94	2808.64	12.68	-1.386	0.000	0.238
95.00	-59.01	-9.95	-0.17	-587.84	0.00	587.84	3401.05	1700.53	5452.51	2730.31	13.65	-1.440	0.000	0.233
100.00	-57.18	-9.80	-0.17	-538.11	0.00	538.11	3337.56	1668.78	5214.58	2611.16	15.20	-1.529	0.000	0.223
105.00	-55.39	-9.65	-0.17	-489.10	0.00	489.10	3272.92	1636.46	4980.08	2493.74	16.85	-1.617	0.000	0.213
110.00	-53.64	-9.50	-0.17	-440.84	0.00	440.84	3194.68	1597.34	4730.71	2368.87	18.59	-1.703	0.000	0.203
115.00	-51.92	-9.34	-0.17	-393.34	0.00	393.34	3107.57	1553.79	4474.96	2240.81	20.42	-1.787	0.000	0.192
120.00	-50.24	-9.18	-0.17	-346.63	0.00	346.63	3020.47	1510.23	4226.32	2116.30	22.34	-1.868	0.000	0.180
125.00	-48.60	-9.02	-0.17	-300.71	0.00	300.71	2933.36	1466.68	3984.78	1995.35	24.33	-1.945	0.000	0.167
130.00	-46.99	-8.83	-0.17	-255.62	0.00	255.62	2846.25	1423.13	3750.35	1877.96	26.41	-2.017	0.000	0.153
131.25	-46.59	-8.80	-0.17	-244.59	0.00	244.59	2824.47	1412.24	3692.86	1849.17	26.94	-2.034	0.000	0.149
135.00	-45.02	-8.64	-0.17	-211.59	0.00	211.59	2759.14	1379.57	3523.03	1764.13	28.56	-2.084	-0.001	0.136
135.50	-44.81	-8.62	-0.17	-207.27	0.00	207.27	1734.08	867.04	2260.78	1132.07	28.78	-2.091	-0.001	0.209
137.00	-35.55	-6.91	0.00	-194.34	0.00	194.34	1723.43	861.72	2225.81	1114.56	29.44	-2.109	-0.001	0.195
140.00	-34.82	-6.82	0.00	-173.62	0.00	173.62	1701.83	850.91	2156.25	1079.73	30.78	-2.160	-0.001	0.181
145.00	-33.63	-6.65	0.00	-139.52	0.00	139.52	1664.90	832.45	2041.54	1022.29	33.08	-2.236	-0.001	0.157
150.00	-32.46	-6.48	0.00	-106.26	0.00	106.26	1626.81	813.41	1928.48	965.67	35.46	-2.301	-0.001	0.130
155.00	-31.33	-6.30	0.00	-73.87	0.00	73.87	1587.58	793.79	1817.22	909.96	37.90	-2.354	-0.001	0.101
157.00	-20.88	-4.21	0.00	-61.28	0.00	61.28	1571.57	785.79	1773.24	887.94	38.89	-2.372	-0.001	0.082
160.00	-20.23	-4.10	0.00	-48.65	0.00	48.65	1547.20	773.60	1707.88	855.21	40.39	-2.394	-0.001	0.070
165.00	-19.17	-3.91	0.00	-28.16	0.00	28.16	1505.67	752.84	1600.62	801.50	42.91	-2.422	-0.001	0.048
167.00	-11.06	-2.18	0.00	-20.34	0.00	20.34	1488.74	744.37	1558.33	780.32	43.93	-2.430	-0.001	0.034
170.00	-10.48	-2.07	0.00	-13.80	0.00	13.80	1462.99	731.50	1495.57	748.90	45.46	-2.439	-0.001	0.026
175.00	-9.53	-1.89	0.00	-3.44	0.00	3.44	1411.70	705.85	1385.55	693.80	48.01	-2.447	-0.001	0.012
176.00	0.00	-1.48	0.00	-1.55	0.00	1.55	1400.09	700.04	1362.73	682.38	48.53	-2.447	-0.001	0.002

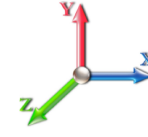
Seismic Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 33

Load Case: 1.2D + 1.0E				Iterations 24
Gust Response Factor	1.10	Sds	0.19	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.29	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1500.0	0.00	0.03	0.02	27.98	
10.00		1473.4	0.01	0.05	0.03	40.10	
15.00		1446.8	0.01	0.06	0.03	45.86	
20.00		1420.2	0.02	0.07	0.04	48.48	
25.00		1393.6	0.04	0.07	0.04	49.53	
30.00		1367.0	0.05	0.07	0.04	49.86	
35.00		1340.4	0.07	0.07	0.04	49.93	
40.00		1313.8	0.10	0.07	0.04	49.96	
42.75	Bot - Section 2	711.29	0.11	0.07	0.04	27.36	
45.00		1089.9	0.12	0.07	0.03	42.31	
49.00	Top - Section 1	1912.7	0.15	0.07	0.03	75.39	
50.00		223.19	0.15	0.07	0.03	8.83	
55.00		1101.9	0.18	0.06	0.03	44.06	
60.00		1078.7	0.22	0.06	0.02	42.93	
65.00		1055.4	0.26	0.05	0.02	40.67	
70.00		1032.1	0.30	0.05	0.01	36.72	
75.00		1008.8	0.34	0.03	0.01	30.57	
80.00		985.61	0.39	0.02	0.01	21.84	
85.00		962.33	0.44	0.00	0.01	10.68	
86.50	Bot - Section 3	284.16	0.46	0.00	0.01	2.07	
90.00		1227.7	0.49	-0.01	0.01	-2.57	
91.75	Top - Section 2	605.94	0.51	-0.02	0.01	-4.19	
95.00		518.65	0.55	-0.03	0.01	-8.15	
100.00		781.47	0.61	-0.06	0.02	-21.71	
105.00		761.52	0.67	-0.08	0.02	-28.00	
110.00		741.57	0.74	-0.10	0.04	-31.09	
115.00		721.62	0.81	-0.11	0.06	-31.09	
120.00		701.67	0.88	-0.12	0.08	-28.33	
125.00		681.73	0.95	-0.12	0.11	-23.13	
130.00		661.78	1.03	-0.10	0.15	-15.81	
131.25	Bot - Section 4	162.33	1.05	-0.09	0.16	-3.38	
135.00		805.50	1.11	-0.06	0.19	-8.30	
135.50	Top - Section 3	105.99	1.12	-0.06	0.20	-0.93	
137.00	Appurtenance(s)	3174.3	1.15	-0.04	0.22	-12.31	
140.00		252.22	1.20	0.00	0.25	1.72	
145.00		409.73	1.28	0.10	0.32	11.26	
150.00		396.43	1.37	0.23	0.40	20.51	
155.00		383.13	1.47	0.42	0.50	30.52	
157.00	Appurtenance(s)	3755.6	1.50	0.51	0.55	345.04	
160.00		220.30	1.56	0.67	0.62	24.53	
165.00		356.53	1.66	0.98	0.76	52.35	
167.00	Appurtenance(s)	2350.3	1.70	1.13	0.82	381.03	
170.00		204.34	1.76	1.38	0.92	38.06	
175.00		329.93	1.87	1.87	1.10	75.76	
176.00	Appurtenance(s)	3341.2	1.89	1.98	1.14	797.89	

Seismic Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 34
	Struct Class: II	



Totals: 46,353.8	2,304.8	Total Wind: 39,771.3
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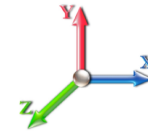
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0E										Iterations 24
Gust Response Factor 1.10					Sds 0.19					Ss 0.18
Dead Load Factor 1.20			Seismic Load Factor 1.00			Sd1 0.10			S1 0.06	
Wind Load Factor 0.00		Structure Frequency (f1) 0.29		SA 0.03		Seismic Importance Factor 1.00				



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-63.17	-2.53	0.00	-352.39	0.00	352.39	6372.54	3186.27	14661.2	7341.49	0.00	0.00	0.00	0.058
5.00	-61.13	-2.52	0.00	-339.74	0.00	339.74	6292.68	3146.34	14220.7	7120.95	0.01	-0.01	0.057	
10.00	-59.13	-2.49	0.00	-327.15	0.00	327.15	6211.66	3105.83	13784.2	6902.39	0.03	-0.03	0.057	
15.00	-57.15	-2.46	0.00	-314.69	0.00	314.69	6129.50	3064.75	13351.9	6685.89	0.07	-0.04	0.056	
20.00	-55.21	-2.42	0.00	-302.39	0.00	302.39	6046.18	3023.09	12923.8	6471.51	0.12	-0.06	0.056	
25.00	-53.30	-2.39	0.00	-290.28	0.00	290.28	5961.72	2980.86	12500.0	6259.33	0.19	-0.07	0.055	
30.00	-51.42	-2.35	0.00	-278.35	0.00	278.35	5876.11	2938.05	12080.8	6049.42	0.27	-0.09	0.055	
35.00	-49.58	-2.31	0.00	-266.62	0.00	266.62	5789.35	2894.67	11666.3	5841.84	0.37	-0.10	0.054	
40.00	-47.76	-2.26	0.00	-255.08	0.00	255.08	5679.25	2839.63	11212.8	5614.75	0.49	-0.12	0.054	
42.75	-46.78	-2.24	0.00	-248.86	0.00	248.86	5615.38	2807.69	10960.7	5488.51	0.56	-0.13	0.054	
45.00	-45.37	-2.20	0.00	-243.81	0.00	243.81	5563.11	2781.56	10756.6	5386.29	0.62	-0.13	0.053	
49.00	-42.88	-2.13	0.00	-235.00	0.00	235.00	4756.80	2378.40	9239.06	4626.40	0.74	-0.15	0.060	
50.00	-42.57	-2.13	0.00	-232.87	0.00	232.87	4742.51	2371.25	9172.60	4593.12	0.77	-0.15	0.060	
55.00	-41.01	-2.09	0.00	-222.24	0.00	222.24	4670.33	2335.16	8842.49	4427.82	0.93	-0.17	0.059	
60.00	-39.48	-2.06	0.00	-211.79	0.00	211.79	4597.00	2298.50	8516.13	4264.39	1.12	-0.19	0.058	
65.00	-37.97	-2.02	0.00	-201.52	0.00	201.52	4522.52	2261.26	8193.68	4102.93	1.32	-0.20	0.058	
70.00	-36.50	-1.99	0.00	-191.41	0.00	191.41	4446.89	2223.45	7875.26	3943.48	1.55	-0.22	0.057	
75.00	-35.05	-1.97	0.00	-181.45	0.00	181.45	4354.69	2177.34	7534.33	3772.77	1.79	-0.24	0.056	
80.00	-33.63	-1.95	0.00	-171.62	0.00	171.62	4253.06	2126.53	7185.02	3597.85	2.05	-0.26	0.056	
85.00	-32.24	-1.94	0.00	-161.87	0.00	161.87	4151.43	2075.72	6843.99	3427.08	2.34	-0.28	0.055	
86.50	-31.83	-1.94	0.00	-158.96	0.00	158.96	4120.95	2060.47	6743.30	3376.66	2.42	-0.29	0.055	
90.00	-30.19	-1.94	0.00	-152.17	0.00	152.17	4049.81	2024.90	6511.26	3260.47	2.64	-0.30	0.054	
91.75	-29.38	-1.94	0.00	-148.78	0.00	148.78	3441.70	1720.85	5608.94	2808.64	2.75	-0.31	0.062	
95.00	-28.60	-1.94	0.00	-142.48	0.00	142.48	3401.05	1700.53	5452.51	2730.31	2.96	-0.32	0.061	
100.00	-27.42	-1.95	0.00	-132.76	0.00	132.76	3337.56	1668.78	5214.58	2611.16	3.31	-0.34	0.059	
105.00	-26.27	-1.95	0.00	-123.03	0.00	123.03	3272.92	1636.46	4980.08	2493.74	3.68	-0.36	0.057	
110.00	-25.15	-1.95	0.00	-113.28	0.00	113.28	3194.68	1597.34	4730.71	2368.87	4.07	-0.39	0.056	
115.00	-24.04	-1.95	0.00	-103.52	0.00	103.52	3107.57	1553.79	4474.96	2240.81	4.49	-0.41	0.054	
120.00	-22.96	-1.95	0.00	-93.75	0.00	93.75	3020.47	1510.23	4226.32	2116.30	4.92	-0.43	0.052	
125.00	-21.91	-1.95	0.00	-83.98	0.00	83.98	2933.36	1466.68	3984.78	1995.35	5.38	-0.45	0.050	
130.00	-20.88	-1.95	0.00	-74.21	0.00	74.21	2846.25	1423.13	3750.35	1877.96	5.87	-0.47	0.047	
131.25	-20.62	-1.95	0.00	-71.77	0.00	71.77	2824.47	1412.24	3692.86	1849.17	5.99	-0.48	0.046	
135.00	-19.48	-1.95	0.00	-64.45	0.00	64.45	2759.14	1379.57	3523.03	1764.13	6.37	-0.49	0.044	
135.50	-19.33	-1.95	0.00	-63.47	0.00	63.47	1734.08	867.04	2260.78	1132.07	6.42	-0.49	0.067	
137.00	-15.45	-1.91	0.00	-60.56	0.00	60.56	1723.43	861.72	2225.81	1114.56	6.58	-0.50	0.063	
140.00	-15.05	-1.92	0.00	-54.81	0.00	54.81	1701.83	850.91	2156.25	1079.73	6.89	-0.51	0.060	
145.00	-14.40	-1.90	0.00	-45.24	0.00	45.24	1664.90	832.45	2041.54	1022.29	7.44	-0.54	0.053	
150.00	-13.77	-1.88	0.00	-35.72	0.00	35.72	1626.81	813.41	1928.48	965.67	8.02	-0.56	0.045	
155.00	-13.16	-1.85	0.00	-26.31	0.00	26.31	1587.58	793.79	1817.22	909.96	8.62	-0.58	0.037	
157.00	-8.59	-1.46	0.00	-22.61	0.00	22.61	1571.57	785.79	1773.24	887.94	8.86	-0.58	0.031	
160.00	-8.24	-1.43	0.00	-18.24	0.00	18.24	1547.20	773.60	1707.88	855.21	9.23	-0.59	0.027	
165.00	-7.67	-1.37	0.00	-11.08	0.00	11.08	1505.67	752.84	1600.62	801.50	9.86	-0.60	0.019	
167.00	-4.80	-0.96	0.00	-8.34	0.00	8.34	1488.74	744.37	1558.33	780.32	10.11	-0.61	0.014	
170.00	-4.50	-0.92	0.00	-5.45	0.00	5.45	1462.99	731.50	1495.57	748.90	10.49	-0.61	0.010	
175.00	-4.02	-0.84	0.00	-0.84	0.00	0.84	1411.70	705.85	1385.55	693.80	11.13	-0.61	0.004	
176.00	0.00	-0.80	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	11.26	-0.61	0.000	

Calculated Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

Page: 36



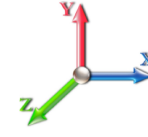
Seismic Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 37

Load Case: 0.9D + 1.0E				Iterations 23
Gust Response Factor	1.10	Sds	0.19	Ss 0.18
Dead Load Factor	0.90	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.29	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1500.0	0.00	0.03	0.02	27.98	
10.00		1473.4	0.01	0.05	0.03	40.10	
15.00		1446.8	0.01	0.06	0.03	45.86	
20.00		1420.2	0.02	0.07	0.04	48.48	
25.00		1393.6	0.04	0.07	0.04	49.53	
30.00		1367.0	0.05	0.07	0.04	49.86	
35.00		1340.4	0.07	0.07	0.04	49.93	
40.00		1313.8	0.10	0.07	0.04	49.96	
42.75	Bot - Section 2	711.29	0.11	0.07	0.04	27.36	
45.00		1089.9	0.12	0.07	0.03	42.31	
49.00	Top - Section 1	1912.7	0.15	0.07	0.03	75.39	
50.00		223.19	0.15	0.07	0.03	8.83	
55.00		1101.9	0.18	0.06	0.03	44.06	
60.00		1078.7	0.22	0.06	0.02	42.93	
65.00		1055.4	0.26	0.05	0.02	40.67	
70.00		1032.1	0.30	0.05	0.01	36.72	
75.00		1008.8	0.34	0.03	0.01	30.57	
80.00		985.61	0.39	0.02	0.01	21.84	
85.00		962.33	0.44	0.00	0.01	10.68	
86.50	Bot - Section 3	284.16	0.46	0.00	0.01	2.07	
90.00		1227.7	0.49	-0.01	0.01	-2.57	
91.75	Top - Section 2	605.94	0.51	-0.02	0.01	-4.19	
95.00		518.65	0.55	-0.03	0.01	-8.15	
100.00		781.47	0.61	-0.06	0.02	-21.71	
105.00		761.52	0.67	-0.08	0.02	-28.00	
110.00		741.57	0.74	-0.10	0.04	-31.09	
115.00		721.62	0.81	-0.11	0.06	-31.09	
120.00		701.67	0.88	-0.12	0.08	-28.33	
125.00		681.73	0.95	-0.12	0.11	-23.13	
130.00		661.78	1.03	-0.10	0.15	-15.81	
131.25	Bot - Section 4	162.33	1.05	-0.09	0.16	-3.38	
135.00		805.50	1.11	-0.06	0.19	-8.30	
135.50	Top - Section 3	105.99	1.12	-0.06	0.20	-0.93	
137.00	Appurtenance(s)	3174.3	1.15	-0.04	0.22	-12.31	
140.00		252.22	1.20	0.00	0.25	1.72	
145.00		409.73	1.28	0.10	0.32	11.26	
150.00		396.43	1.37	0.23	0.40	20.51	
155.00		383.13	1.47	0.42	0.50	30.52	
157.00	Appurtenance(s)	3755.6	1.50	0.51	0.55	345.04	
160.00		220.30	1.56	0.67	0.62	24.53	
165.00		356.53	1.66	0.98	0.76	52.35	
167.00	Appurtenance(s)	2350.3	1.70	1.13	0.82	381.03	
170.00		204.34	1.76	1.38	0.92	38.06	
175.00		329.93	1.87	1.87	1.10	75.76	
176.00	Appurtenance(s)	3341.2	1.89	1.98	1.14	797.89	

Seismic Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 38
	Struct Class: II	



Totals: 46,353.8	2,304.8	Total Wind: 39,771.3
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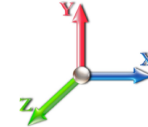
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0E		Iterations 23
Gust Response Factor 1.10	Sds 0.19	Ss 0.18
Dead Load Factor 0.90	Seismic Load Factor 1.00	S1 0.06
Wind Load Factor 0.00	Structure Frequency (f1) 0.29	SA 0.03
	Seismic Importance Factor 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.38	-2.53	0.00	-346.70	0.00	346.70	6372.54	3186.27	14661.2	7341.49	0.00	0.00	0.00	0.055
5.00	-45.85	-2.51	0.00	-334.06	0.00	334.06	6292.68	3146.34	14220.7	7120.95	0.01	-0.01	0.054	
10.00	-44.34	-2.48	0.00	-321.51	0.00	321.51	6211.66	3105.83	13784.2	6902.39	0.03	-0.03	0.054	
15.00	-42.86	-2.45	0.00	-309.10	0.00	309.10	6129.50	3064.75	13351.9	6685.89	0.07	-0.04	0.053	
20.00	-41.41	-2.41	0.00	-296.87	0.00	296.87	6046.18	3023.09	12923.8	6471.51	0.12	-0.06	0.053	
25.00	-39.98	-2.37	0.00	-284.85	0.00	284.85	5961.72	2980.86	12500.0	6259.33	0.18	-0.07	0.052	
30.00	-38.57	-2.32	0.00	-273.02	0.00	273.02	5876.11	2938.05	12080.8	6049.42	0.27	-0.09	0.052	
35.00	-37.18	-2.28	0.00	-261.40	0.00	261.40	5789.35	2894.67	11666.3	5841.84	0.36	-0.10	0.051	
40.00	-35.82	-2.24	0.00	-250.00	0.00	250.00	5679.25	2839.63	11212.8	5614.75	0.48	-0.12	0.051	
42.75	-35.08	-2.21	0.00	-243.85	0.00	243.85	5615.38	2807.69	10960.7	5488.51	0.55	-0.12	0.051	
45.00	-34.02	-2.17	0.00	-238.87	0.00	238.87	5563.11	2781.56	10756.6	5386.29	0.61	-0.13	0.050	
49.00	-32.16	-2.10	0.00	-230.18	0.00	230.18	4756.80	2378.40	9239.06	4626.40	0.72	-0.14	0.057	
50.00	-31.92	-2.09	0.00	-228.08	0.00	228.08	4742.51	2371.25	9172.60	4593.12	0.75	-0.15	0.056	
55.00	-30.75	-2.06	0.00	-217.61	0.00	217.61	4670.33	2335.16	8842.49	4427.82	0.92	-0.16	0.056	
60.00	-29.61	-2.02	0.00	-207.33	0.00	207.33	4597.00	2298.50	8516.13	4264.39	1.10	-0.18	0.055	
65.00	-28.48	-1.98	0.00	-197.24	0.00	197.24	4522.52	2261.26	8193.68	4102.93	1.30	-0.20	0.054	
70.00	-27.37	-1.95	0.00	-187.32	0.00	187.32	4446.89	2223.45	7875.26	3943.48	1.52	-0.22	0.054	
75.00	-26.28	-1.92	0.00	-177.57	0.00	177.57	4354.69	2177.34	7534.33	3772.77	1.76	-0.24	0.053	
80.00	-25.22	-1.91	0.00	-167.94	0.00	167.94	4253.06	2126.53	7185.02	3597.85	2.01	-0.26	0.053	
85.00	-24.18	-1.90	0.00	-158.41	0.00	158.41	4151.43	2075.72	6843.99	3427.08	2.29	-0.27	0.052	
86.50	-23.87	-1.90	0.00	-155.57	0.00	155.57	4120.95	2060.47	6743.30	3376.66	2.38	-0.28	0.052	
90.00	-22.64	-1.89	0.00	-148.93	0.00	148.93	4049.81	2024.90	6511.26	3260.47	2.59	-0.29	0.051	
91.75	-22.03	-1.90	0.00	-145.61	0.00	145.61	3441.70	1720.85	5608.94	2808.64	2.70	-0.30	0.058	
95.00	-21.45	-1.90	0.00	-139.45	0.00	139.45	3401.05	1700.53	5452.51	2730.31	2.91	-0.31	0.057	
100.00	-20.57	-1.90	0.00	-129.96	0.00	129.96	3337.56	1668.78	5214.58	2611.16	3.25	-0.33	0.056	
105.00	-19.70	-1.90	0.00	-120.45	0.00	120.45	3272.92	1636.46	4980.08	2493.74	3.61	-0.36	0.054	
110.00	-18.86	-1.91	0.00	-110.93	0.00	110.93	3194.68	1597.34	4730.71	2368.87	3.99	-0.38	0.053	
115.00	-18.03	-1.91	0.00	-101.40	0.00	101.40	3107.57	1553.79	4474.96	2240.81	4.40	-0.40	0.051	
120.00	-17.22	-1.91	0.00	-91.87	0.00	91.87	3020.47	1510.23	4226.32	2116.30	4.83	-0.42	0.049	
125.00	-16.43	-1.91	0.00	-82.34	0.00	82.34	2933.36	1466.68	3984.78	1995.35	5.28	-0.44	0.047	
130.00	-15.65	-1.90	0.00	-72.80	0.00	72.80	2846.25	1423.13	3750.35	1877.96	5.75	-0.46	0.044	
131.25	-15.46	-1.91	0.00	-70.42	0.00	70.42	2824.47	1412.24	3692.86	1849.17	5.87	-0.47	0.044	
135.00	-14.61	-1.90	0.00	-63.28	0.00	63.28	2759.14	1379.57	3523.03	1764.13	6.24	-0.48	0.041	
135.50	-14.49	-1.90	0.00	-62.33	0.00	62.33	1734.08	867.04	2260.78	1132.07	6.29	-0.48	0.063	
137.00	-11.58	-1.88	0.00	-59.47	0.00	59.47	1723.43	861.72	2225.81	1114.56	6.45	-0.49	0.060	
140.00	-11.28	-1.88	0.00	-53.84	0.00	53.84	1701.83	850.91	2156.25	1079.73	6.76	-0.50	0.057	
145.00	-10.80	-1.87	0.00	-44.45	0.00	44.45	1664.90	832.45	2041.54	1022.29	7.30	-0.53	0.050	
150.00	-10.32	-1.85	0.00	-35.12	0.00	35.12	1626.81	813.41	1928.48	965.67	7.86	-0.55	0.043	
155.00	-9.86	-1.81	0.00	-25.89	0.00	25.89	1587.58	793.79	1817.22	909.96	8.45	-0.57	0.035	
157.00	-6.44	-1.43	0.00	-22.27	0.00	22.27	1571.57	785.79	1773.24	887.94	8.68	-0.57	0.029	
160.00	-6.18	-1.41	0.00	-17.96	0.00	17.96	1547.20	773.60	1707.88	855.21	9.05	-0.58	0.025	
165.00	-5.75	-1.35	0.00	-10.92	0.00	10.92	1505.67	752.84	1600.62	801.50	9.66	-0.59	0.017	
167.00	-3.60	-0.95	0.00	-8.22	0.00	8.22	1488.74	744.37	1558.33	780.32	9.91	-0.59	0.013	
170.00	-3.38	-0.91	0.00	-5.37	0.00	5.37	1462.99	731.50	1495.57	748.90	10.28	-0.60	0.009	
175.00	-3.01	-0.83	0.00	-0.83	0.00	0.83	1411.70	705.85	1385.55	693.80	10.91	-0.60	0.003	
176.00	0.00	-0.80	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	11.04	-0.60	0.000	

Calculated Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 40



Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



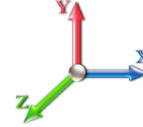
Page: 41

Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	264.70	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	260.09	0.650	0.000	5.00	23.718	15.42	126.2	0.0	1500.1
10.00		1.00	0.85	7.442	8.19	255.48	0.650	0.000	5.00	23.301	15.15	124.0	0.0	1473.5
15.00		1.00	0.85	7.442	8.19	250.87	0.650	0.000	5.00	22.884	14.87	121.8	0.0	1446.9
20.00		1.00	0.90	7.896	8.69	253.66	0.650	0.000	5.00	22.467	14.60	126.8	0.0	1420.3
25.00		1.00	0.95	8.276	9.10	254.83	0.650	0.000	5.00	22.050	14.33	130.5	0.0	1393.7
30.00		1.00	0.98	8.600	9.46	254.81	0.650	0.000	5.00	21.634	14.06	133.0	0.0	1367.1
35.00		1.00	1.01	8.883	9.77	253.94	0.650	0.000	5.00	21.217	13.79	134.8	0.0	1340.5
40.00		1.00	1.04	9.137	10.05	252.43	0.650	0.000	5.00	20.800	13.52	135.9	0.0	1313.9
42.75	Bot - Section 2	1.00	1.06	9.266	10.19	251.37	0.650	0.000	2.75	11.262	7.32	74.6	0.0	711.3
45.00		1.00	1.07	9.366	10.30	250.40	0.650	0.000	2.25	9.288	6.04	62.2	0.0	1089.9
49.00	Top - Section 1	1.00	1.09	9.536	10.49	248.48	0.650	0.000	4.00	16.303	10.60	111.2	0.0	1912.7
50.00		1.00	1.09	9.576	10.53	252.61	0.650	0.000	1.00	4.034	2.62	27.6	0.0	223.2
55.00		1.00	1.12	9.770	10.75	249.88	0.650	0.000	5.00	19.920	12.95	139.2	0.0	1102.0
60.00		1.00	1.14	9.951	10.95	246.84	0.650	0.000	5.00	19.503	12.68	138.8	0.0	1078.7
65.00		1.00	1.16	10.120	11.13	243.55	0.650	0.000	5.00	19.086	12.41	138.1	0.0	1055.4
70.00		1.00	1.17	10.279	11.31	240.04	0.650	0.000	5.00	18.670	12.14	137.2	0.0	1032.2
75.00		1.00	1.19	10.430	11.47	236.33	0.650	0.000	5.00	18.253	11.86	136.1	0.0	1008.9
80.00		1.00	1.21	10.572	11.63	232.45	0.650	0.000	5.00	17.836	11.59	134.8	0.0	985.6
85.00		1.00	1.22	10.708	11.78	228.41	0.650	0.000	5.00	17.419	11.32	133.4	0.0	962.3
86.50	Bot - Section 3	1.00	1.23	10.748	11.82	227.16	0.650	0.000	1.50	5.145	3.34	39.5	0.0	284.2
90.00		1.00	1.24	10.838	11.92	224.22	0.650	0.000	3.50	12.080	7.85	93.6	0.0	1227.8
91.75	Top - Section 2	1.00	1.24	10.882	11.97	222.72	0.650	0.000	1.75	5.963	3.88	46.4	0.0	605.9
95.00		1.00	1.25	10.962	12.06	224.16	0.650	0.000	3.25	10.940	7.11	85.7	0.0	518.7
100.00		1.00	1.27	11.081	12.19	219.75	0.650	0.000	5.00	16.486	10.72	130.6	0.0	781.5
105.00		1.00	1.28	11.195	12.31	215.23	0.650	0.000	5.00	16.069	10.45	128.6	0.0	761.5
110.00		1.00	1.29	11.305	12.44	210.60	0.650	0.000	5.00	15.653	10.17	126.5	0.0	741.6
115.00		1.00	1.30	11.412	12.55	205.88	0.650	0.000	5.00	15.236	9.90	124.3	0.0	721.6
120.00		1.00	1.32	11.514	12.67	201.07	0.650	0.000	5.00	14.819	9.63	122.0	0.0	701.7
125.00		1.00	1.33	11.614	12.78	196.17	0.650	0.000	5.00	14.402	9.36	119.6	0.0	681.7
130.00		1.00	1.34	11.710	12.88	191.20	0.650	0.000	5.00	13.986	9.09	117.1	0.0	661.8
131.25	Bot - Section 4	1.00	1.34	11.734	12.91	189.94	0.650	0.000	1.25	3.431	2.23	28.8	0.0	162.3
135.00		1.00	1.35	11.803	12.98	186.15	0.650	0.000	3.75	10.296	6.69	86.9	0.0	805.5
135.50	Top - Section 3	1.00	1.35	11.813	12.99	185.64	0.650	0.000	0.50	1.355	0.88	11.4	0.0	106.0
137.00	Appurtenance(s)	1.00	1.35	11.840	13.02	187.07	0.650	0.000	1.50	4.040	2.63	34.2	0.0	127.9
140.00		1.00	1.36	11.894	13.08	184.00	0.650	0.000	3.00	7.968	5.18	67.8	0.0	252.2
145.00		1.00	1.37	11.982	13.18	178.83	0.650	0.000	5.00	12.947	8.42	110.9	0.0	409.7
150.00		1.00	1.38	12.068	13.27	173.59	0.650	0.000	5.00	12.530	8.14	108.1	0.0	396.4
155.00		1.00	1.39	12.152	13.37	168.30	0.650	0.000	5.00	12.113	7.87	105.2	0.0	383.1
157.00	Appurtenance(s)	1.00	1.39	12.185	13.40	166.17	0.650	0.000	2.00	4.729	3.07	41.2	0.0	149.5
160.00		1.00	1.40	12.233	13.46	162.95	0.650	0.000	3.00	6.968	4.53	60.9	0.0	220.3
165.00		1.00	1.41	12.313	13.54	157.55	0.650	0.000	5.00	11.280	7.33	99.3	0.0	356.5
167.00	Appurtenance(s)	1.00	1.41	12.344	13.58	155.38	0.650	0.000	2.00	4.395	2.86	38.8	0.0	138.9
170.00		1.00	1.42	12.390	13.63	152.10	0.650	0.000	3.00	6.468	4.20	57.3	0.0	204.3
175.00		1.00	1.42	12.466	13.71	146.59	0.650	0.000	5.00	10.446	6.79	93.1	0.0	329.9
176.00	Appurtenance(s)	1.00	1.43	12.481	13.73	145.49	0.650	0.000	1.00	2.039	1.33	18.2	0.0	64.4

Wind Loading - Shaft

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 42



Totals:	176.00	4,362.3	34,212.9
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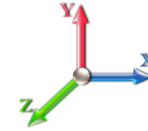
Discrete Appurtenance Forces

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 43



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	
1	176.00	RR90-17-02DP	3	12.496	13.746	0.51	0.75	6.67	40.50	0.000	1.000	91.69	0.00	91.69	
2	176.00	Lightning Rod	1	12.533	13.786	1.00	1.00	1.05	35.00	0.000	3.500	14.48	0.00	50.66	
3	176.00	4449	3	12.496	13.746	0.50	0.75	2.49	210.00	0.000	1.000	34.19	0.00	34.19	
4	176.00	KRY 112 89/4	3	12.496	13.746	0.50	0.75	0.98	46.20	0.000	1.000	13.47	0.00	13.47	
5	176.00	KRY 112 489/2	3	12.496	13.746	0.50	0.75	0.98	46.20	0.000	1.000	13.47	0.00	13.47	
6	176.00	RMQP-496-HK	1	12.496	13.746	1.00	1.00	46.00	2449.00	0.000	1.000	632.30	0.00	632.30	
7	176.00	APXVAARR24_43-U-NA2	3	12.496	13.746	0.52	0.75	31.88	384.00	0.000	1.000	438.19	0.00	438.19	
8	176.00	MHA FE15501P77/75	6	12.496	13.746	0.49	0.75	2.72	66.00	0.000	1.000	37.39	0.00	37.39	
9	167.00	RRH2X60-AWS	3	12.344	13.578	0.61	0.80	6.38	180.00	0.000	0.000	86.68	0.00	0.00	
10	167.00	RRH2X60-700	3	12.344	13.578	0.61	0.80	6.38	180.00	0.000	0.000	86.68	0.00	0.00	
11	167.00	Low Profile	1	12.344	13.578	1.00	1.00	22.00	1500.00	0.000	0.000	298.73	0.00	0.00	
12	167.00	DB-T16Z-8AB-0Z	1	12.344	13.578	1.00	1.00	4.80	18.90	0.000	0.000	65.18	0.00	0.00	
13	167.00	SBNHH-1D65B	6	12.344	13.578	0.66	0.80	32.51	240.00	0.000	0.000	441.43	0.00	0.00	
14	167.00	LPA-80063-4CF-EDIN-5	4	12.344	13.578	0.74	0.80	18.30	80.00	0.000	0.000	248.52	0.00	0.00	
15	167.00	APL868013	2	12.344	13.578	0.84	0.90	4.79	12.60	0.000	0.000	65.01	0.00	0.00	
16	157.00	Sitepro PRK-SFS-H-L	1	12.185	13.403	1.00	1.00	6.70	230.00	0.000	0.000	89.80	0.00	0.00	
17	157.00	Sitepro HRK14-U	1	12.185	13.403	1.00	1.00	8.13	302.36	0.000	0.000	108.97	0.00	0.00	
18	157.00	Sitepro PRK-1245L	1	12.185	13.403	1.00	1.00	9.50	464.91	0.000	0.000	127.33	0.00	0.00	
19	157.00	Commscope	3	12.185	13.403	0.60	0.80	22.09	232.20	0.000	0.000	296.02	0.00	0.00	
20	157.00	RFS APXVTM14-C-I20	3	12.185	13.403	0.62	0.80	11.72	168.60	0.000	0.000	157.03	0.00	0.00	
21	157.00	ALU TD-RRH8x20-25	3	12.185	13.403	0.54	0.80	6.51	210.00	0.000	0.000	87.29	0.00	0.00	
22	157.00	ALU 800 Mhz	6	12.185	13.403	0.54	0.80	8.01	318.00	0.000	0.000	107.33	0.00	0.00	
23	157.00	ALU 1900 Mhz	3	12.185	13.403	0.54	0.80	4.45	180.00	0.000	0.000	59.70	0.00	0.00	
24	157.00	Low Profile Platform	1	12.185	13.403	1.00	1.00	22.00	1500.00	0.000	0.000	294.87	0.00	0.00	
25	137.00	Handrail Kit	1	11.840	13.024	1.00	1.00	9.02	436.00	0.000	0.000	117.48	0.00	0.00	
26	137.00	Ericsson RRUS 8843 B2	3	11.840	13.024	0.74	0.80	3.62	216.00	0.000	0.000	47.16	0.00	0.00	
27	137.00	LP Platform-Round	1	11.840	13.024	1.00	1.00	22.00	1500.00	0.000	0.000	286.53	0.00	0.00	
28	137.00	Ericsson 4449 B5/B12	3	11.840	13.024	0.69	0.80	4.07	213.00	0.000	0.000	52.96	0.00	0.00	
29	137.00	CCI DMP65R-BU6DA	3	11.840	13.024	0.58	0.80	22.27	238.20	0.000	0.000	290.02	0.00	0.00	
30	137.00	KMW HPA-65R-BU6AA	3	11.840	13.024	0.71	0.80	16.79	129.00	0.000	0.000	218.66	0.00	0.00	
31	137.00	Powerwave LGP21903	6	11.840	13.024	0.67	0.80	1.09	30.00	4.341	0.000	14.18	61.54	0.00	
32	137.00	Powerwave 7770 Panel	3	11.840	13.024	0.58	0.80	9.64	105.00	0.000	0.000	125.50	0.00	0.00	
33	137.00	Powerwave LGP21401	6	11.840	13.024	0.54	0.80	4.15	114.00	0.000	0.000	54.03	0.00	0.00	
34	137.00	Raycap DC6-48-60-18-8F	1	11.840	13.024	1.00	1.00	1.47	32.80	0.000	0.000	19.15	0.00	0.00	
35	137.00	Powerwave 7020.00 RET	12	11.840	13.024	0.40	0.80	1.92	26.40	0.000	0.000	25.01	0.00	0.00	
36	137.00	Smart Bias T 1001940	3	11.840	13.024	0.54	0.80	0.14	6.00	7.041	0.000	1.88	13.27	0.00	
Totals:								12,140.87							5,148.28

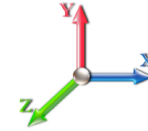
Total Applied Force Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 44



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		126.20	1697.12	0.00	0.00
10.00		123.98	1670.52	0.00	0.00
15.00		121.77	1643.93	0.00	0.00
20.00		126.84	1617.33	0.00	0.00
25.00		130.48	1590.73	0.00	0.00
30.00		133.02	1564.13	0.00	0.00
35.00		134.76	1537.54	0.00	0.00
40.00		135.88	1510.94	0.00	0.00
42.75		74.61	819.68	0.00	0.00
45.00		62.20	1178.61	0.00	0.00
49.00		111.15	2070.38	0.00	0.00
50.00		27.62	262.60	0.00	0.00
55.00		139.16	1299.03	0.00	0.00
60.00		138.76	1275.76	0.00	0.00
65.00		138.11	1252.49	0.00	0.00
70.00		137.21	1229.22	0.00	0.00
75.00		136.11	1205.94	0.00	0.00
80.00		134.83	1182.67	0.00	0.00
85.00		133.37	1159.40	0.00	0.00
86.50		39.53	343.28	0.00	0.00
90.00		93.61	1365.70	0.00	0.00
91.75		46.40	674.91	0.00	0.00
95.00		85.74	646.74	0.00	0.00
100.00		130.62	978.53	0.00	0.00
105.00		128.63	958.58	0.00	0.00
110.00		126.53	938.64	0.00	0.00
115.00		124.31	918.69	0.00	0.00
120.00		122.00	898.74	0.00	0.00
125.00		119.59	878.79	0.00	0.00
130.00		117.10	858.84	0.00	0.00
131.25		28.79	211.59	0.00	0.00
135.00		86.89	953.30	0.00	0.00
135.50		11.45	125.69	0.00	0.00
137.00	(45) attachments	1286.75	3233.42	74.81	0.00
140.00		67.76	330.14	0.00	0.00
145.00		110.92	539.59	0.00	0.00
150.00		108.12	526.29	0.00	0.00
155.00		105.25	512.99	0.00	0.00
157.00	(22) attachments	1369.53	3807.54	0.00	0.00
160.00		60.95	290.30	0.00	0.00
165.00		99.30	473.20	0.00	0.00
167.00	(20) attachments	1331.02	2397.06	0.00	0.00
170.00		57.30	249.02	0.00	0.00
175.00		93.11	404.40	0.00	0.00
176.00	(23) attachments	1293.38	3356.18	0.00	1311.37

Total Applied Force Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 45

Totals:	9,510.62	52,640.21	74.81	1,311.37
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Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

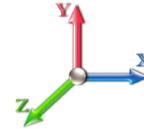


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	7.442	0.00	1.37
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	7.442	0.00	5.20
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	7.442	0.00	1.37
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	7.442	0.00	5.20
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	7.442	0.00	1.37
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	7.442	0.00	5.20
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	7.896	0.00	1.37
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	7.896	0.00	5.20
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	8.276	0.00	1.37
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	8.276	0.00	5.20
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	8.600	0.00	1.37
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	8.600	0.00	5.20
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	8.883	0.00	1.37
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	8.883	0.00	5.20
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	9.137	0.00	1.37
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	9.137	0.00	5.20
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.021	0.000	9.266	0.00	0.75
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	0.14	0.00	0.021	0.000	9.266	0.00	2.86
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.021	0.000	9.366	0.00	0.61
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.12	0.00	0.021	0.000	9.366	0.00	2.34
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.021	0.000	9.536	0.00	1.09
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.021	0.000	9.536	0.00	4.16
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.021	0.000	9.576	0.00	0.27
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.021	0.000	9.576	0.00	1.04
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	9.770	0.00	1.37
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	9.770	0.00	5.20
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	9.951	0.00	1.37
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	9.951	0.00	5.20
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	10.120	0.00	1.37
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	10.120	0.00	5.20
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	10.279	0.00	1.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	10.279	0.00	5.20
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	10.430	0.00	1.37
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	10.430	0.00	5.20
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	10.572	0.00	1.37
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	10.572	0.00	5.20
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	10.708	0.00	1.37
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	10.708	0.00	5.20
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.025	0.000	10.748	0.00	0.41
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.025	0.000	10.748	0.00	1.56
90.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.025	0.000	10.838	0.00	0.96
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	0.18	0.00	0.025	0.000	10.838	0.00	3.64
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.025	0.000	10.882	0.00	0.48
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.025	0.000	10.882	0.00	1.82
95.00	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.025	0.000	10.962	0.00	0.89
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.025	0.000	10.962	0.00	3.38
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	11.081	0.00	1.37

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



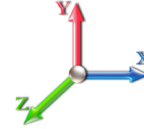
Page: 47

Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	11.081	0.00	5.20
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	11.195	0.00	1.37
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	11.195	0.00	5.20
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.027	0.000	11.305	0.00	1.37
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.027	0.000	11.305	0.00	5.20
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	11.412	0.00	1.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	11.412	0.00	5.20
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	11.514	0.00	1.37
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	11.514	0.00	5.20
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	11.614	0.00	1.37
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	11.614	0.00	5.20
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.030	0.000	11.710	0.00	1.37
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.030	0.000	11.710	0.00	5.20
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.031	0.000	11.734	0.00	0.34
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.031	0.000	11.734	0.00	1.30
135.00	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.031	0.000	11.803	0.00	1.02
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.031	0.000	11.803	0.00	3.90
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.032	0.000	11.813	0.00	0.14
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.032	0.000	11.813	0.00	0.52
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.031	0.000	11.840	0.00	0.41
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.031	0.000	11.840	0.00	1.56
140.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.032	0.000	11.894	0.00	0.82
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.032	0.000	11.894	0.00	3.12
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.033	0.000	11.982	0.00	1.37
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.033	0.000	11.982	0.00	5.20
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.034	0.000	12.068	0.00	1.37
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.034	0.000	12.068	0.00	5.20
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	12.152	0.00	1.37
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	12.152	0.00	5.20
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.036	0.000	12.185	0.00	0.55
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.036	0.000	12.185	0.00	2.08
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	12.233	0.00	0.82
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	12.233	0.00	3.12
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	12.313	0.00	1.37
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	12.313	0.00	5.20
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.038	0.000	12.344	0.00	0.55
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.038	0.000	12.344	0.00	2.08
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.039	0.000	12.390	0.00	0.82
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.039	0.000	12.390	0.00	3.12
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	12.466	0.00	1.37
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	12.466	0.00	5.20
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.041	0.000	12.481	0.00	0.27
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.041	0.000	12.481	0.00	1.04
Totals:											0.0	231.1

Calculated Forces

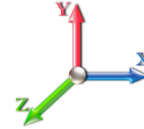
Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-52.64	-9.53	-0.07	-1255.1	0.00	1255.15	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.179
5.00	-50.93	-9.45	-0.07	-1207.4	0.00	1207.48	6292.68	3146.34	14220.7	7120.95	0.03	-0.050	0.000	0.178
10.00	-49.25	-9.37	-0.07	-1160.2	0.00	1160.23	6211.66	3105.83	13784.2	6902.39	0.11	-0.100	0.000	0.176
15.00	-47.60	-9.29	-0.07	-1113.3	0.00	1113.39	6129.50	3064.75	13351.9	6685.89	0.24	-0.151	0.000	0.174
20.00	-45.97	-9.20	-0.07	-1066.9	0.00	1066.96	6046.18	3023.09	12923.8	6471.51	0.42	-0.203	0.000	0.172
25.00	-44.38	-9.10	-0.07	-1020.9	0.00	1020.99	5961.72	2980.86	12500.0	6259.33	0.66	-0.255	0.000	0.171
30.00	-42.80	-9.00	-0.07	-975.49	0.00	975.49	5876.11	2938.05	12080.8	6049.42	0.96	-0.308	0.000	0.169
35.00	-41.26	-8.89	-0.07	-930.50	0.00	930.50	5789.35	2894.67	11666.3	5841.84	1.31	-0.362	0.000	0.166
40.00	-39.74	-8.78	-0.07	-886.03	0.00	886.03	5679.25	2839.63	11212.8	5614.75	1.72	-0.416	0.000	0.165
42.75	-38.92	-8.71	-0.07	-861.89	0.00	861.89	5615.38	2807.69	10960.7	5488.51	1.97	-0.446	0.000	0.164
45.00	-37.74	-8.67	-0.07	-842.29	0.00	842.29	5563.11	2781.56	10756.6	5386.29	2.18	-0.472	0.000	0.163
49.00	-35.66	-8.55	-0.07	-807.62	0.00	807.62	4756.80	2378.40	9239.06	4626.40	2.60	-0.516	0.000	0.182
50.00	-35.40	-8.55	-0.07	-799.07	0.00	799.07	4742.51	2371.25	9172.60	4593.12	2.71	-0.528	0.000	0.181
55.00	-34.09	-8.43	-0.07	-756.33	0.00	756.33	4670.33	2335.16	8842.49	4427.82	3.29	-0.588	0.000	0.178
60.00	-32.81	-8.31	-0.07	-714.18	0.00	714.18	4597.00	2298.50	8516.13	4264.39	3.94	-0.648	0.000	0.175
65.00	-31.55	-8.19	-0.07	-672.61	0.00	672.61	4522.52	2261.26	8193.68	4102.93	4.65	-0.709	0.000	0.171
70.00	-30.31	-8.07	-0.07	-631.64	0.00	631.64	4446.89	2223.45	7875.26	3943.48	5.43	-0.771	0.000	0.167
75.00	-29.10	-7.95	-0.07	-591.27	0.00	591.27	4354.69	2177.34	7534.33	3772.77	6.27	-0.832	0.000	0.163
80.00	-27.91	-7.83	-0.07	-551.51	0.00	551.51	4253.06	2126.53	7185.02	3597.85	7.17	-0.894	0.000	0.160
85.00	-26.75	-7.70	-0.07	-512.37	0.00	512.37	4151.43	2075.72	6843.99	3427.08	8.14	-0.955	0.000	0.156
86.50	-26.40	-7.67	-0.07	-500.82	0.00	500.82	4120.95	2060.47	6743.30	3376.66	8.44	-0.974	0.000	0.155
90.00	-25.03	-7.56	-0.07	-474.00	0.00	474.00	4049.81	2024.90	6511.26	3260.47	9.17	-1.018	0.000	0.152
91.75	-24.35	-7.52	-0.07	-460.76	0.00	460.76	3441.70	1720.85	5608.94	2808.64	9.55	-1.040	0.000	0.171
95.00	-23.70	-7.44	-0.07	-436.34	0.00	436.34	3401.05	1700.53	5452.51	2730.31	10.27	-1.080	0.000	0.167
100.00	-22.72	-7.32	-0.07	-399.13	0.00	399.13	3337.56	1668.78	5214.58	2611.16	11.44	-1.146	0.000	0.160
105.00	-21.75	-7.19	-0.07	-362.54	0.00	362.54	3272.92	1636.46	4980.08	2493.74	12.68	-1.211	0.000	0.152
110.00	-20.81	-7.07	-0.07	-326.58	0.00	326.58	3194.68	1597.34	4730.71	2368.87	13.98	-1.275	0.000	0.144
115.00	-19.89	-6.95	-0.07	-291.23	0.00	291.23	3107.57	1553.79	4474.96	2240.81	15.35	-1.337	0.000	0.136
120.00	-18.98	-6.82	-0.07	-256.50	0.00	256.50	3020.47	1510.23	4226.32	2116.30	16.78	-1.397	0.000	0.128
125.00	-18.10	-6.70	-0.07	-222.39	0.00	222.39	2933.36	1466.68	3984.78	1995.35	18.27	-1.453	0.000	0.118
130.00	-17.24	-6.57	-0.07	-188.91	0.00	188.91	2846.25	1423.13	3750.35	1877.96	19.82	-1.507	0.000	0.107
131.25	-17.03	-6.54	-0.07	-180.70	0.00	180.70	2824.47	1412.24	3692.86	1849.17	20.22	-1.520	0.000	0.104
135.00	-16.08	-6.43	-0.07	-156.17	0.00	156.17	2759.14	1379.57	3523.03	1764.13	21.43	-1.556	0.000	0.094
135.50	-15.95	-6.42	-0.07	-152.95	0.00	152.95	1734.08	867.04	2260.78	1132.07	21.59	-1.561	0.000	0.144
137.00	-12.75	-5.05	0.00	-143.32	0.00	143.32	1723.43	861.72	2225.81	1114.56	22.08	-1.575	0.000	0.136
140.00	-12.42	-4.99	0.00	-128.16	0.00	128.16	1701.83	850.91	2156.25	1079.73	23.09	-1.612	0.000	0.126
145.00	-11.88	-4.87	0.00	-103.23	0.00	103.23	1664.90	832.45	2041.54	1022.29	24.81	-1.668	0.000	0.108
150.00	-11.35	-4.76	0.00	-78.87	0.00	78.87	1626.81	813.41	1928.48	965.67	26.58	-1.717	0.000	0.089
155.00	-10.84	-4.64	0.00	-55.09	0.00	55.09	1587.58	793.79	1817.22	909.96	28.40	-1.756	0.000	0.067
157.00	-7.08	-3.16	0.00	-45.81	0.00	45.81	1571.57	785.79	1773.24	887.94	29.14	-1.770	0.000	0.056
160.00	-6.79	-3.09	0.00	-36.34	0.00	36.34	1547.20	773.60	1707.88	855.21	30.26	-1.786	0.000	0.047
165.00	-6.32	-2.98	0.00	-20.90	0.00	20.90	1505.67	752.84	1600.62	801.50	32.14	-1.807	0.000	0.030
167.00	-3.96	-1.57	0.00	-14.95	0.00	14.95	1488.74	744.37	1558.33	780.32	32.90	-1.813	0.000	0.022
170.00	-3.71	-1.51	0.00	-10.24	0.00	10.24	1462.99	731.50	1495.57	748.90	34.04	-1.820	0.000	0.016
175.00	-3.31	-1.40	0.00	-2.71	0.00	2.71	1411.70	705.85	1385.55	693.80	35.95	-1.825	0.000	0.006
176.00	0.00	-1.29	0.00	-1.31	0.00	1.31	1400.09	700.04	1362.73	682.38	36.33	-1.826	0.000	0.002

Final Analysis Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 49



Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	39.9	0.00	63.09	0.00	0.19	5287.66
0.9D + 1.6W 97 mph Wind	39.9	0.00	47.30	0.00	0.19	5210.31
1.2D + 1.0Di + 1.0Wi 50 mph Wind	12.0	0.00	106.83	0.00	0.17	1650.85
1.2D + 1.0E	2.5	0.00	63.17	0.00	0.00	352.39
0.9D + 1.0E	2.5	0.00	47.38	0.00	0.00	346.70
1.0D + 1.0W 60 mph Wind	9.5	0.00	52.64	0.00	0.07	1255.15

Max Stresses


Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-41.53	-36.04	-0.19	-3408.4	-0.01	-3408.4	4756.80	2378.4	9239.06	4626.40	49.00	0.746
0.9D + 1.6W 97 mph Wind	-30.84	-35.60	-0.19	-3343.3	0.00	-3343.3	4756.80	2378.4	9239.06	4626.40	49.00	0.729
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-79.62	-11.14	-0.17	-1077.9	0.00	-1077.9	4756.80	2378.4	9239.06	4626.40	49.00	0.250
1.2D + 1.0E	-19.33	-1.95	0.00	-63.47	0.00	-63.47	1734.08	867.04	2260.78	1132.07	135.50	0.067
0.9D + 1.0E	-14.49	-1.90	0.00	-62.33	0.00	-62.33	1734.08	867.04	2260.78	1132.07	135.50	0.063
1.0D + 1.0W 60 mph Wind	-35.66	-8.55	-0.07	-807.62	0.00	-807.62	4756.80	2378.4	9239.06	4626.40	49.00	0.182

Base Plate Summary

Structure: CT02216-S	Code: EIA/TIA-222-G	12/2/2020
Site Name: Glastonbury	Exposure: C	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 50



Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 50.00	Bolt Circle: 64.00
Moment (kip-ft): 5100.00	Width (in): 66.00	Number Bolts: 24.00
Axial (kip): 47.00	Style: Clipped	Bolt Type: 2.25" 18J
Shear (kip): 38.00	Polygon Sides: 0.00	Bolt Diameter (in): 2.25
Analysis	Clip Length (in): 16.00	Yield (ksi): 75.00
Moment (kip-ft): 5287.66	Effective Len (in): 7.55	Ultimate (ksi): 100.00
Axial (kip): 63.09	Moment (kip-in): 632.10	Arrangement: Clustered
Shear (kip): 39.89	Allow Stress (ksi): 67.50	Cluster Dist (in): 6.00
	Applied Stress (ksi): 56.02	Start Angle (deg): 45.00
Moment Design %: 103.68	Stress Ratio: 0.83	Compression
		Force (kip): 169.69
		Allowable (kip): 260.00
		Ratio: 0.67
		Tension
		Force (kip): 160.79
		Allowable (kip): 260.00
		Ratio: 0.63

	Pier Foundation Design For Monopole			Date
				12/2/2020
	Customer Name:	AT&T	EIA/TIA Standard:	EIA-222-G
	Site Name:	Glastonbury	Structure Height (Ft.):	176
	Site Number:	CT02216-S	Engineer Name:	S. Berthomieux
Engr. Number:		Engineer Login ID:		

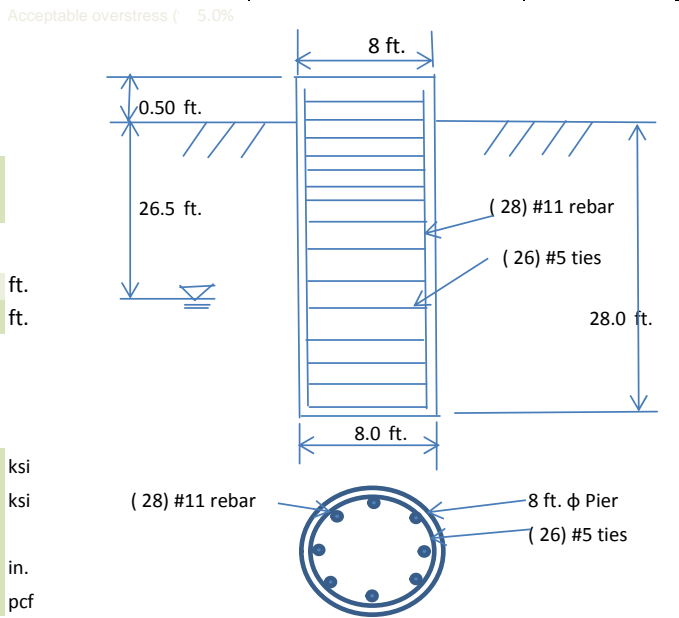
Foundation Info Obtained from: Drawings/Calculations
Structure Type: Monopole
Analysis or Design? Analysis

Base Reactions (Factored):
 Axial Load (Kips): 63.1 Shear Force (Kips): 39.9
 Uplift Force (Kips): 0.0 Moment (Kips-ft): 5287.7

Foundation Geometries:
 Mods required -Yes/No?: No ft.
 Diameter of Pier (ft.): 8.0 Depth of Base B. G. S. : 28.0 ft.
 Pier Height A. G. (ft.): 0.50

Material Properties and Reabr Info:
 Concrete Strength (psi): 4000 Steel Elastic Modulus: 29000 ksi
 Vertical bar yield (ksi): 60 Tie steel yield strength: 60 ksi
 Vertical Rebar Size #: 11 Tie / Stirrup Size #: 5
 Qty. of Vertical Rebars: 28 Tie Spacing: 18.0 in.
 Concrete Cover (in.): 4 Concrete unit weight: 150.0 pcf

Soil Design Parameters:
 Water Table B.G.S. (ft): 26.5 Unit weight of water: 62.4 psf
 Ratio of Uplift/Axial Skin Friction: 1.0 Pullout failure Angle: 30 (°)
 Skin Frictions are to be obtained from: Soil Report



Monopole Pier Foundation

Depth of Layers (ft)		γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types				
Top	Bottom										
0.0	4.0	100	20			0	Sand				
4.0	9.0	120	33			0	Sand				
9.0	19.0	120	34			0	Sand				
19.0	26.5	125	36			0	Sand				
26.5	29.0	125	36			19800	Sand				
29.0	34.0										

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75
Total Dry Soil Volume from Conical Failure (cu. Ft.):	13308	Dry Soil Weight from Conical Failure:	1576 Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	18	Buoyant Soil Weight from Conical Failure (Kips):	0 Kips
Total Dry Concrete Volume (cu. Ft.):	1357	Total Dry Concrete Weight:	203.6 Kips
Total Buoyant Concrete Volume (cu. Ft.):	75.4	Total Buoyant Concrete Weight:	6.60 Kips
Total Effective Concrete Weight (Kips):	210.2	Total Effective Soil Weight:	1575.4 Kips
Total Effective Vertical Load on Base (Kips):	116.7		

Check Soil Capacities:

Allowable Foundation Overturning Resistance (kips-ft.):	13138.4	>	Design Factored Moment (kips-ft):	6086	Usage	0.46	OK!
Factor of Safety of Passive Soil Resistance against Moment:	2.16						OK!

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75			
Strength reduction factor (Axial compression):	0.65		Wind Load Factor on Concrete Design:	1.00			

Reinforcing Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	1.56		Tie / Stirrup Area (sq. in./each):	0.31	Usage		
Calculated Moment Capacity (Mn, Kips-Ft):	8441.6	>	Design Factored Moment (Mu, K-Ft):	5471.7		0.65	OK!
Calculated Shear Capacity (Kips):	1471.3	>	Design Factored Shear (Kips):	453.0		0.31	OK!
Calculated Tension Capacity (Tn, Kips):	2358.7	>	Design Factored Tension (Tu Kips):	0.0		0.00	OK!
Calculated Compression Capacity (Pn, Kips):	12720	>	Design Factored Axial Load (Pu Kips):	63.1		0.00	OK!
Moment & Axial Strength Combination:	0.65	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00			in.
Pier Reinforcement Ratio:	0.006		Reinforcement Ratio is satisfied per ACI				

October 9, 2020



SAI Communications
12 Industrial Way
Salem NH, 03079

RE: Site Number: CT1124 (LTE 3C/4C/5G)
 FA Number: 10042319
 PACE Number: MRCTB048879
 PT Number: 2051A0WKHF
 Site Name: GLASTONBURY SOUTH
 Site Address: 175 Dickinson Road
 South Glastonbury, CT 06073

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by SAI Communications to perform a mount analysis on the existing AT&T antenna/RRH mounts to determine their capability of supporting the following additional loading:

- (3) 7770 Antennas (55.0"x11.0"x5.0" - Wt. = 35 lbs. /each)
- (3) HPA-65R-BU6AA Antennas (71.2"x11.7"x8.4" - Wt. = 43 lbs. /each)
- (6) LGP21401 TMA's (14.4"x9.0"x2.7" - Wt. = 19 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7" Φ - Wt. = 33 lbs. /each)
- **(3) DMP65R-BU6DA Antennas (71.2"x20.7"x7.7" - Wt. = 80 lbs. /each)**
- **(3) 4449 B5/B12 RRH's (17.9"x13.2"x9.5" - Wt. = 71 lbs. /each)**
- **(3) B2/B66A 8843 RRH's (14.9"x13.2"x10.9" - Wt. = 72 lbs. /each)**

**Proposed equipment shown in bold*

No original structural design documents or fabrication drawings were available for the existing mounts. HDG conducted an on-site visual survey of the existing AT&T antenna mounts on September 11, 2020.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R13.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 125 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.5 in. An escalated ice thickness of 1.73 in was used for this analysis.
- HDG considers this site to be exposure category C; tower is located near large, flat, open, terrain/grasslands.
- HDG considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- HDG considers this site to have a spectral response acceleration parameter at short periods, S_s , of 0.180 and a spectral response acceleration parameter at a period of 1 second, S_1 , of 0.063.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 2.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the existing monopole with a ring mount. The connection is considered OK by visual inspection.

Based on our evaluation, we have determined that the existing mounts **ARE NOT CAPABLE** of supporting the proposed installation. HDG recommends the following modifications:

- **Install new handrail kit, SitePro1 P/N HRK14 (or approved equal).**

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing (LTE 3C/4C/5G) Mount Rating	36	LC1	113%	FAIL
Modified (LTE 3C/4C/5G) Mount Rating	63	LC2	97%	PASS

Reference Documents:

- Mount mapping report prepared by Trylon dated February 6, 2017.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. 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.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC

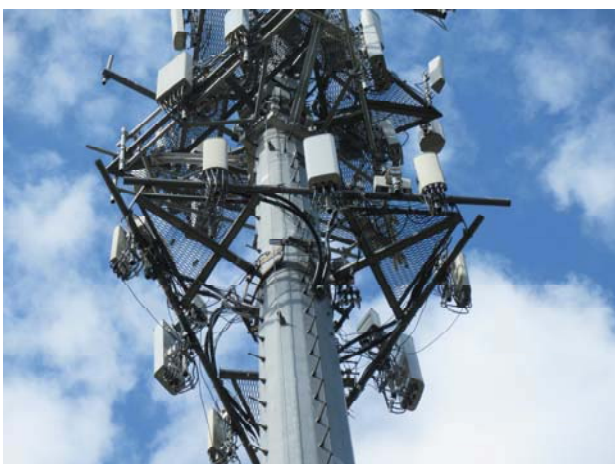


Michael Cabral
Vice President



Daniel P. Hamm, PE
Principal

FIELD PHOTOS:







HUDSON
Design Group LLC

Wind & Ice
Calculations

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

$$K_z = 2.01 (z/z_g)^{2/\alpha}$$

$K_z =$ **1.352**

$z =$ 137 (ft)
 $z_g =$ 900 (ft)
 $\alpha =$ 9.5

$K_{zmin} \leq K_z \leq 2.01$

Table 2-4

Exposure	Z _g	α	K _{zmin}	K _c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K _t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$$K_{zt} = [1 + (K_c K_t / K_h)]^2$$

$$K_h = e^{(fz/H)}$$

$K_{zt} =$ #DIV/0!

$K_h =$ #DIV/0!

(If Category 1 then K_{zt} = 1.0)

$K_c =$ 1 (from Table 2-4)

$K_t =$ (from Table 2-5)

$f =$ (from Table 2-5)

$z =$ 137

$z_s =$ 480 (Mean elevation of base of structure above sea level)

$H =$ (Ht. of the crest above surrounding terrain)

$K_{zt} =$ 1.00 (from 2.6.6.2.1)

$K_e =$ 0.98 (from 2.6.8)

Category = 1

2.6.10 Design Ice Thickness

Max Ice Thickness =

$t_i =$ 1.50 in

Importance Factor =

$I =$ 1.0 (from Table 2-3)

$K_{iz} =$ 1.15 (from Sec. 2.6.10)

$$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$$

$t_{iz} =$ 1.73 in

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

$G_h = 0.85 + 0.15 [h/150 - 3.0]$

$h =$ ht. of structure

$h =$ 188

$G_h =$ 0.85

2.6.9.2 Guyed Masts

$G_h =$ 0.85

2.6.9.3 Pole Structures

$G_h =$ 1.1

2.6.9 Appurtenances

$G_h =$ 1.0

2.6.9.4 Structures Supported on Other Structures

(Cantilevered tubular or latticed spines, pole, structures on buildings ($ht. : width$ ratio > 5))

$G_h =$ 1.35

$G_h =$ 1.00

2.6.11.2 Design Wind Force on Appurtenances

$F = q_z * G_h * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$

$q_z =$	50.50
$q_z (ice) =$	8.08
$q_z (30) =$	2.91

$K_z =$	1.352 (from 2.6.5.2)
$K_{zt} =$	1.0 (from 2.6.6.2.1)
$K_s =$	1.0 (from 2.6.7)
$K_e =$	0.98 (from 2.6.8)
$K_d =$	0.95 (from Table 2-2)
$V_{max} =$	125 mph (Ultimate Wind Speed)
$V_{max (ice)} =$	50 mph
$V_{30} =$	30 mph

Table 2-2

Structure Type	Wind Direction Probability Factor, K_d
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



Determine Ca:

Table 2-9

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Square/Rectangular HSS		1.2 - 2.8(r _s) ≥ 0.85	1.4 - 4.0(r _s) ≥ 0.90	2.0 - 6.0(r _s) ≥ 1.25
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	39 ≤ C ≤ 78 (Transitional)	4.14/(C ^{0.485})	3.66/(C ^{0.415})	46.8/(C ^{1.0})
	C > 78 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance,
 Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = **1.73 in** Angle = **0 (deg)** Equivalent Angle = **180 (deg)**

<u>Appurtenances</u>	<u>Height</u>	<u>Width</u>	<u>Depth</u>	<u>Flat Area</u>	<u>Aspect Ratio</u>	<u>Ca</u>	<u>Force (lbs)</u>	<u>Force (lbs) (w/ Ice)</u>	<u>Force (lbs) (30 mph)</u>
7770 Antenna	55.0	11.0	5.0	4.20	5.00	1.31	278	62	16
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	6.09	1.36	397	86	23
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.44	1.24	642	126	37
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.88	1.20	72	19	4
4449 B5/B12 RRH (Shielded)	17.9	4.8	13.2	0.59	3.77	1.26	37	12	2
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.20	68	18	4
B2/B66A 8843 RRH (Shielded)	14.9	5.5	13.2	0.56	2.73	1.21	34	11	2
LGP21401 TMA	14.4	2.7	9.0	0.27	5.33	1.33	18	8	1
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	57	14	3
2" Pipe	2.4	12.0		0.20	0.20	1.20	12	6	1
3" Pipe	3.5	12.0		0.29	0.29	1.20	18	7	1
2x2 Angle	2.0	12.0		0.17	0.17	2.00	17	9	1
HSS 4x4	3.0	12.0		0.25	0.25	1.25	16	7	1
PL 6x3/8	6.0	12.0		0.50	0.50	2.00	51	16	3

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



WIND LOADS

Angle = 30 (deg) Ice Thickness = 1.73 in. Equivalent Angle = 210 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	278	148	246
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	397	304	374
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	642	284	552
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	72	99	79
4449 B5/B12 RRH (Shielded)	17.9	4.8	13.2	0.59	1.64	3.77	1.36	1.26	1.20	37	99	53
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	68	83	72
B2/B66A 8843 RRH (Shielded)	14.9	5.5	13.2	0.56	1.37	2.73	1.13	1.21	1.20	34	83	47
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	18	55	27

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.43	4.04	6.91	1.27	1.40	60	39	55
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.86	6.15	4.93	6.30	1.31	1.37	83	68	79
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	124	65	109
4449 B5/B12 RRH	21.4	13.0	16.7	1.92	2.47	1.65	1.28	1.20	1.20	19	24	20
4449 B5/B12 RRH (Shielded)	21.4	6.5	16.7	0.96	2.47	3.30	1.28	1.24	1.20	10	24	13
B2/B66A 8843 RRH	18.4	14.4	16.7	1.83	2.12	1.28	1.10	1.20	1.20	18	21	18
B2/B66A 8843 RRH (Shielded)	18.4	7.2	16.7	0.92	2.12	2.56	1.10	1.20	1.20	9	21	12
LGP21401 TMA	17.9	6.2	12.5	0.76	1.55	2.90	1.43	1.22	1.20	8	15	9

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	14
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	23	18	22
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	32
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	4	6	5
4449 B5/B12 RRH (Shielded)	17.9	4.8	13.2	0.59	1.64	3.77	1.36	1.26	1.20	2	6	3
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	4	5	4
B2/B66A 8843 RRH (Shielded)	14.9	5.5	13.2	0.56	1.37	2.73	1.13	1.21	1.20	2	5	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



WIND LOADS

Angle = 60 (deg) Ice Thickness = 1.73 in. Equivalent Angle = 240 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	278	148	180
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	397	304	327
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	642	284	373
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	72	99	92
4449 B5/B12 RRH (Shielded)	17.9	7.1	13.2	0.89	1.64	2.51	1.36	1.20	1.20	54	99	88
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	68	83	79
B2/B66A 8843 RRH (Shielded)	14.9	8.2	13.2	0.85	1.37	1.82	1.13	1.20	1.20	51	83	75
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	18	55	45

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.43	4.04	6.91	1.27	1.40	60	39	44
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.86	6.15	4.93	6.30	1.31	1.37	83	68	72
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	124	65	80
4449 B5/B12 RRH	21.4	13.0	16.7	1.92	2.47	1.65	1.28	1.20	1.20	19	24	23
4449 B5/B12 RRH (Shielded)	21.4	9.7	16.7	1.44	2.47	2.20	1.28	1.20	1.20	14	24	21
B2/B66A 8843 RRH	18.4	14.4	16.7	1.83	2.12	1.28	1.10	1.20	1.20	18	21	20
B2/B66A 8843 RRH (Shielded)	18.4	10.8	16.7	1.37	2.12	1.70	1.10	1.20	1.20	13	21	19
LGP21401 TMA	17.9	6.2	12.5	0.76	1.55	2.90	1.43	1.22	1.20	8	15	13

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	10
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	23	18	19
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	21
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	4	6	5
4449 B5/B12 RRH (Shielded)	17.9	7.1	13.2	0.89	1.64	2.51	1.36	1.20	1.20	3	6	5
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	4	5	5
B2/B66A 8843 RRH (Shielded)	14.9	8.2	13.2	0.85	1.37	1.82	1.13	1.20	1.20	3	5	4
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



WIND LOADS

Angle = 90 (deg)

Ice Thickness = 1.73 in.

Equivalent Angle = 270 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	278	148	148
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	397	304	304
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	642	284	284
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	72	99	99
4449 B5/B12 RRH (Shielded)	17.9	4.8	13.2	0.59	1.64	3.77	1.36	1.26	1.20	37	99	99
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	68	83	83
B2/B66A 8843 RRH (Shielded)	14.9	5.5	13.2	0.56	1.37	2.73	1.13	1.21	1.20	34	83	83
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	18	55	55

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.43	4.04	6.91	1.27	1.40	60	39	39
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.86	6.15	4.93	6.30	1.31	1.37	83	68	68
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	124	65	65
4449 B5/B12 RRH	21.4	13.0	16.7	1.92	2.47	1.65	1.28	1.20	1.20	19	24	24
4449 B5/B12 RRH (Shielded)	21.4	8.2	16.7	1.22	2.47	2.60	1.28	1.20	1.20	12	24	24
B2/B66A 8843 RRH	18.4	14.4	16.7	1.83	2.12	1.28	1.10	1.20	1.20	18	21	21
B2/B66A 8843 RRH (Shielded)	18.4	8.9	16.7	1.14	2.12	2.06	1.10	1.20	1.20	11	21	21
LGP21401 TMA	17.9	6.2	12.5	0.76	1.55	2.90	1.43	1.22	1.20	8	15	15

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	9
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	23	18	18
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	16
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	4	6	6
4449 B5/B12 RRH (Shielded)	17.9	4.8	13.2	0.59	1.64	3.77	1.36	1.26	1.20	2	6	6
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	4	5	5
B2/B66A 8843 RRH (Shielded)	14.9	5.5	13.2	0.56	1.37	2.73	1.13	1.21	1.20	2	5	5
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



WIND LOADS

Angle = **120** (deg) Ice Thickness = **1.73** in. Equivalent Angle = **300** (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	278	148	180
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	397	304	327
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	642	284	373
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	72	99	92
4449 B5/B12 RRH (Shielded)	17.9	7.1	13.2	0.89	1.64	2.51	1.36	1.20	1.20	54	99	88
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	68	83	79
B2/B66A 8843 RRH (Shielded)	14.9	8.2	13.2	0.85	1.37	1.82	1.13	1.20	1.20	51	83	75
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	18	55	45

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.43	4.04	6.91	1.27	1.40	60	39	44
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.86	6.15	4.93	6.30	1.31	1.37	83	68	72
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	124	65	80
4449 B5/B12 RRH	21.4	13.0	16.7	1.92	2.47	1.65	1.28	1.20	1.20	19	24	23
4449 B5/B12 RRH (Shielded)	21.4	9.7	16.7	1.44	2.47	2.20	1.28	1.20	1.20	14	24	21
B2/B66A 8843 RRH	18.4	14.4	16.7	1.83	2.12	1.28	1.10	1.20	1.20	18	21	20
B2/B66A 8843 RRH (Shielded)	18.4	10.8	16.7	1.37	2.12	1.70	1.10	1.20	1.20	13	21	19
LGP21401 TMA	17.9	6.2	12.5	0.76	1.55	2.90	1.43	1.22	1.20	8	15	13

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	10
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	23	18	19
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	21
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	4	6	5
4449 B5/B12 RRH (Shielded)	17.9	7.1	13.2	0.89	1.64	2.51	1.36	1.20	1.20	3	6	5
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	4	5	5
B2/B66A 8843 RRH (Shielded)	14.9	8.2	13.2	0.85	1.37	1.82	1.13	1.20	1.20	3	5	4
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



WIND LOADS

Angle = **150** (deg) Ice Thickness = **1.73** in. Equivalent Angle = **330** (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	278	148	246
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	397	304	374
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	642	284	552
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	72	99	79
4449 B5/B12 RRH (Shielded)	17.9	4.8	13.2	0.59	1.64	3.77	1.36	1.26	1.20	37	99	53
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	68	83	72
B2/B66A 8843 RRH (Shielded)	14.9	5.5	13.2	0.56	1.37	2.73	1.13	1.21	1.20	34	83	47
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	18	55	27

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.43	4.04	6.91	1.27	1.40	60	39	55
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.86	6.15	4.93	6.30	1.31	1.37	83	68	79
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	124	65	109
4449 B5/B12 RRH	21.4	13.0	16.7	1.92	2.47	1.65	1.28	1.20	1.20	19	24	20
4449 B5/B12 RRH (Shielded)	21.4	6.5	16.7	0.96	2.47	3.30	1.28	1.24	1.20	10	24	13
B2/B66A 8843 RRH	18.4	14.4	16.7	1.83	2.12	1.28	1.10	1.20	1.20	18	21	18
B2/B66A 8843 RRH (Shielded)	18.4	7.2	16.7	0.92	2.12	2.56	1.10	1.20	1.20	9	21	12
LGP21401 TMA	17.9	6.2	12.5	0.76	1.55	2.90	1.43	1.22	1.20	8	15	9

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	14
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	23	18	22
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	32
4449 B5/B12 RRH	17.9	9.5	13.2	1.18	1.64	1.88	1.36	1.20	1.20	4	6	5
4449 B5/B12 RRH (Shielded)	17.9	4.8	13.2	0.59	1.64	3.77	1.36	1.26	1.20	2	6	3
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	4	5	4
B2/B66A 8843 RRH (Shielded)	14.9	5.5	13.2	0.56	1.37	2.73	1.13	1.21	1.20	2	5	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2

Date: 10/9/2020
 Project Name: GLASTONBURY SOUTH
 Project No.: CT1124
 Designed By: ID Checked By: MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 1.73 in.
 Density of ice: 56 pcf

7770 Antenna

Weight of ice based on total radial SF area:
 Height (in): 55.0
 Width (in): 11.0
 Depth (in): 5.0
 Total weight of ice on object: 134 lbs
 Weight of object: 35.0 lbs
Combined weight of ice and object: 169 lbs

HPA-65R-BU6AA Antenna

Weight of ice based on total radial SF area:
 Height (in): 71.2
 Width (in): 11.7
 Depth (in): 8.4
 Total weight of ice on object: 202 lbs
 Weight of object: 43.0 lbs
Combined weight of ice and object: 245 lbs

DMP65R-BU6DA Antenna

Weight of ice based on total radial SF area:
 Height (in): 71.2
 Width (in): 20.7
 Depth (in): 7.7
 Total weight of ice on object: 299 lbs
 Weight of object: 80.0 lbs
Combined weight of ice and object: 379 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:
 Height (in): 17.9
 Width (in): 13.2
 Depth (in): 9.5
 Total weight of ice on object: 57 lbs
 Weight of object: 71.0 lbs
Combined weight of ice and object: 128 lbs

B2/B66A 8843 RRH

Weight of ice based on total radial SF area:
 Height (in): 14.9
 Width (in): 13.2
 Depth (in): 10.9
 Total weight of ice on object: 49 lbs
 Weight of object: 72.0 lbs
Combined weight of ice and object: 121 lbs

LGP21401 TMA

Weight of ice based on total radial SF area:
 Height (in): 14.4
 Width (in): 2.7
 Depth (in): 9.0
 Total weight of ice on object: 28 lbs
 Weight of object: 19.0 lbs
Combined weight of ice and object: 47 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:
 Depth (in): 24.0
 Diameter(in): 9.7
 Total weight of ice on object: 48 lbs
 Weight of object: 33 lbs
Combined weight of ice and object: 81 lbs

L 2x2 Angles

Weight of ice based on total radial SF area:
 Height (in): 2
 Width (in): 2
Per foot weight of ice on object: 10 plf

2" pipe

Per foot weight of ice:
 diameter (in): 2.38
Per foot weight of ice on object: 9 plf

PL 6x3/8

Weight of ice based on total radial SF area:
 Height (in): 6
 Width (in): 0.375
Per foot weight of ice on object: 16 plf

HSS 4x4

Weight of ice based on total radial SF area:
 Height (in): 4
 Width (in): 4
Per foot weight of ice on object: 16 plf

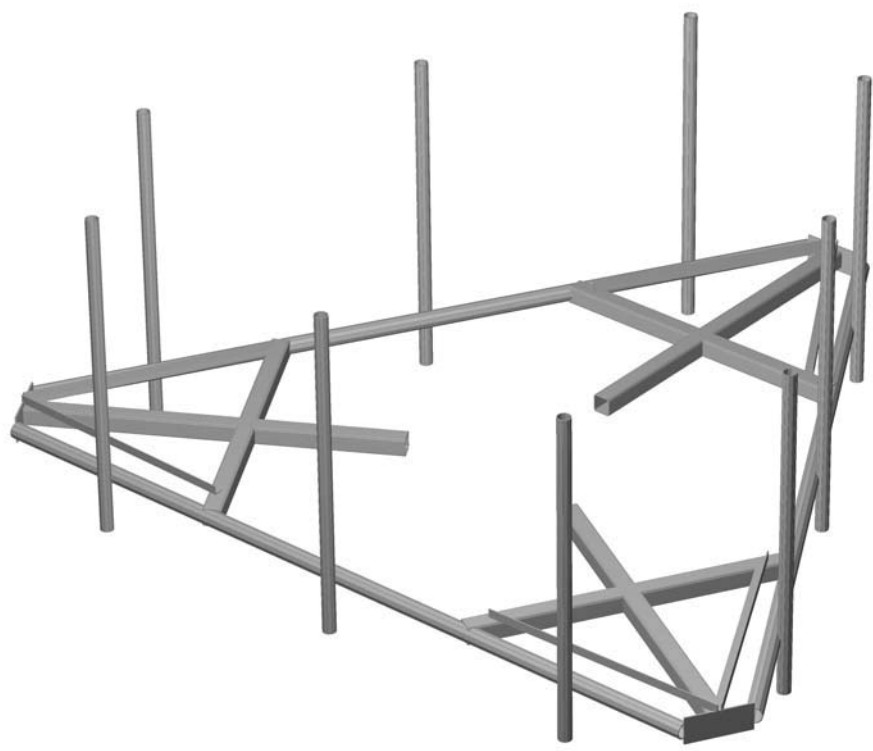
3" Pipe

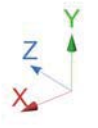
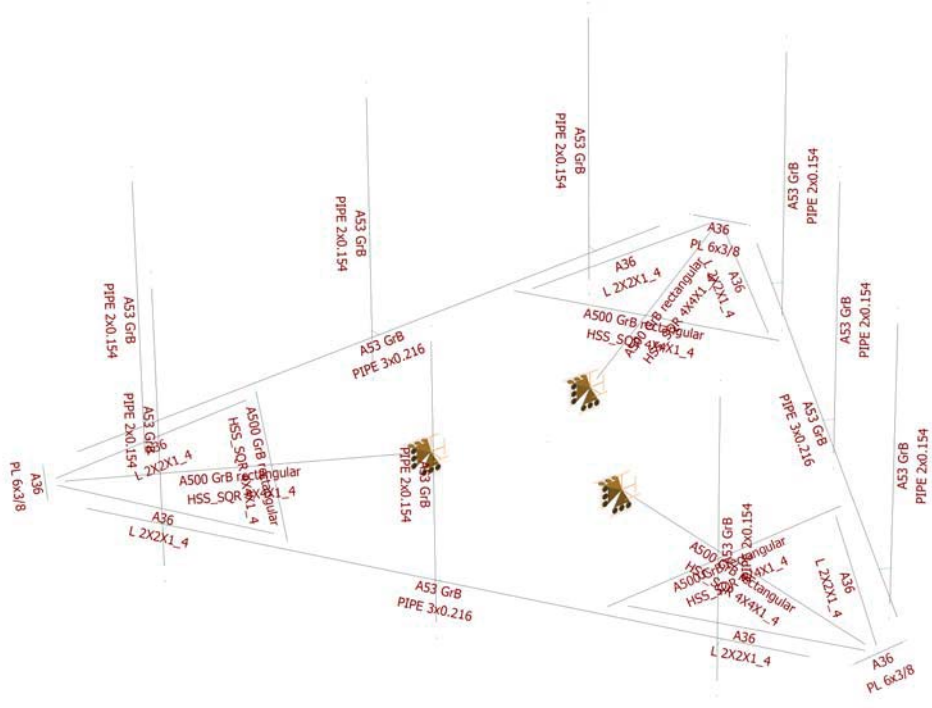
Per foot weight of ice:
 diameter (in): 3.5
Per foot weight of ice on object: 11 plf

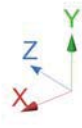
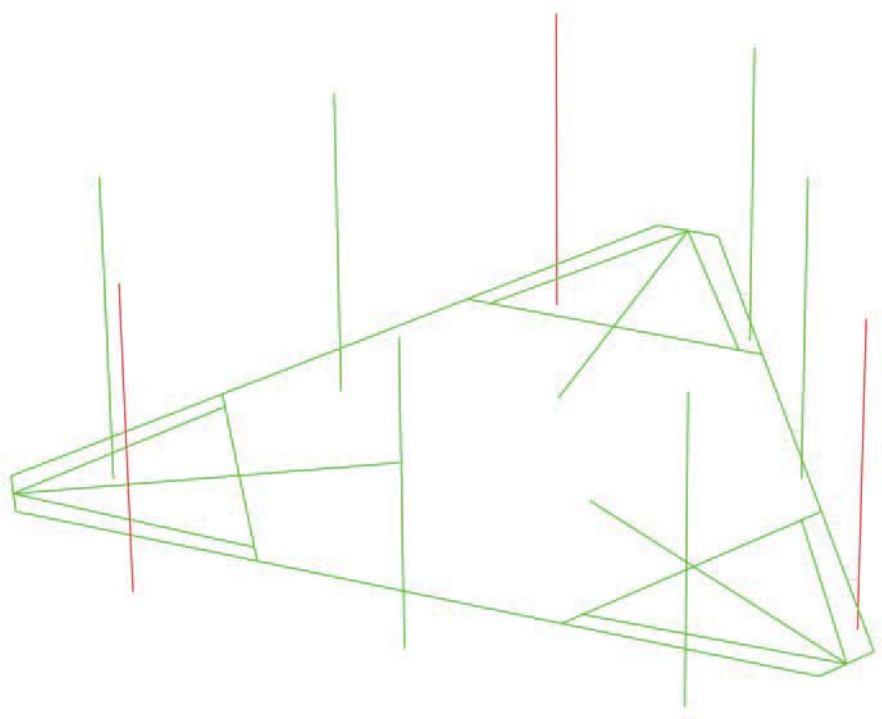


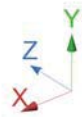
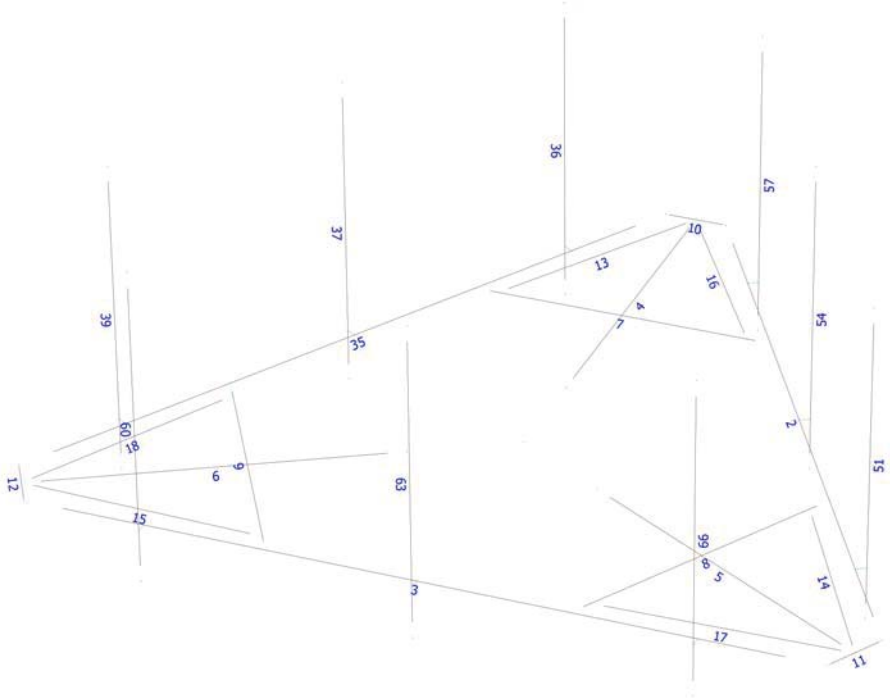
HUDSON
Design Group LLC

**Mount Calculations
(Existing Conditions)**









Load data

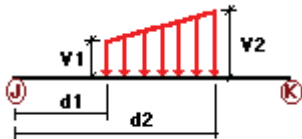
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
W0	Wind Load 0/60/120 deg	No	WIND
W30	Wind Load 30/90/150 deg	No	WIND
Di	Ice Load	No	LL
Wi0	Ice Wind Load 0/60/120 deg	No	WIND
Wi30	Ice Wind Load 30/90/150 deg	No	WIND
WL0	WL 30 mph 0/60/120 deg	No	WIND
WL30	WL 30 mph 30/90/150 deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
LLa4	250 lb Live Load Antenna 4	No	LL

Distributed force on members

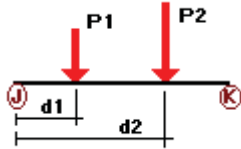


Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%	
DL	4	y	-0.01	-0.01	0.00	No	3.90	No	
	5	y	-0.01	-0.01	0.00	No	3.90	No	
	6	y	-0.01	-0.01	0.00	No	3.90	No	
	7	y	-0.01	0.00	0.00	No	0.00	No	
	8	y	-0.01	0.00	0.00	No	0.00	No	
	9	y	-0.01	0.00	0.00	No	0.00	No	
	13	y	-0.01	0.00	0.00	No	0.00	No	
	14	y	-0.01	0.00	0.00	No	0.00	No	
	15	y	-0.01	0.00	0.00	No	0.00	No	
	16	y	-0.01	0.00	0.00	No	0.00	No	
	17	y	-0.01	0.00	0.00	No	0.00	No	
	18	y	-0.01	0.00	0.00	No	0.00	No	
	W0	2	z	-0.018	0.00	0.00	No	0.00	No
		3	z	-0.018	0.00	0.00	No	0.00	No
		4	z	-0.016	0.00	0.00	No	0.00	No

	6	z	-0.016	0.00	0.00	No	0.00	No
	7	z	-0.016	0.00	0.00	No	0.00	No
	8	z	-0.016	0.00	0.00	No	0.00	No
	9	z	-0.016	0.00	0.00	No	0.00	No
	10	z	-0.051	0.00	0.00	No	0.00	No
	11	z	-0.051	0.00	0.00	No	0.00	No
	12	z	-0.051	0.00	0.00	No	0.00	No
	13	z	-0.017	0.00	0.00	No	0.00	No
	14	z	-0.017	0.00	0.00	No	0.00	No
	15	z	-0.017	0.00	0.00	No	0.00	No
	16	z	-0.017	0.00	0.00	No	0.00	No
	17	z	-0.017	0.00	0.00	No	0.00	No
	18	z	-0.017	0.00	0.00	No	0.00	No
	35	z	-0.018	0.00	0.00	No	0.00	No
	51	z	-0.012	0.00	0.00	No	0.00	No
	54	z	-0.012	0.00	0.00	No	0.00	No
	57	z	-0.012	0.00	0.00	No	0.00	No
	60	z	-0.012	0.00	0.00	No	0.00	No
	63	z	-0.012	0.00	0.00	No	0.00	No
	66	z	-0.012	0.00	0.00	No	0.00	No
W30	2	x	-0.018	0.00	0.00	No	0.00	No
	3	x	-0.018	0.00	0.00	No	0.00	No
	4	x	-0.016	0.00	0.00	No	0.00	No
	5	x	-0.016	0.00	0.00	No	0.00	No
	6	x	-0.016	0.00	0.00	No	0.00	No
	7	x	-0.016	0.00	0.00	No	0.00	No
	8	x	-0.016	0.00	0.00	No	0.00	No
	9	x	-0.016	0.00	0.00	No	0.00	No
	10	x	-0.051	0.00	0.00	No	0.00	No
	11	x	-0.051	0.00	0.00	No	0.00	No
	12	x	-0.051	0.00	0.00	No	0.00	No
	14	x	-0.017	0.00	0.00	No	0.00	No
	15	x	-0.017	0.00	0.00	No	0.00	No
	16	x	-0.017	0.00	0.00	No	0.00	No
	17	x	-0.017	0.00	0.00	No	0.00	No
	36	x	-0.012	0.00	0.00	No	0.00	No
	37	x	-0.012	0.00	0.00	No	0.00	No
	39	x	-0.012	0.00	0.00	No	0.00	No
	51	x	-0.012	0.00	0.00	No	0.00	No
	54	x	-0.012	0.00	0.00	No	0.00	No
	57	x	-0.012	0.00	0.00	No	0.00	No
	60	x	-0.012	0.00	0.00	No	0.00	No
	63	x	-0.012	0.00	0.00	No	0.00	No
	66	x	-0.012	0.00	0.00	No	0.00	No
Di	2	y	-0.011	0.00	0.00	No	0.00	No
	3	y	-0.011	0.00	0.00	No	0.00	No
	4	y	-0.016	0.00	0.00	No	0.00	No
	5	y	-0.016	0.00	0.00	No	0.00	No
	6	y	-0.016	0.00	0.00	No	0.00	No
	7	y	-0.016	0.00	0.00	No	0.00	No
	8	y	-0.016	0.00	0.00	No	0.00	No
	9	y	-0.016	0.00	0.00	No	0.00	No
	10	y	-0.016	0.00	0.00	No	0.00	No
	11	y	-0.016	0.00	0.00	No	0.00	No
	12	y	-0.016	0.00	0.00	No	0.00	No
	13	y	-0.01	0.00	0.00	No	0.00	No
	14	y	-0.01	0.00	0.00	No	0.00	No
	15	y	-0.01	0.00	0.00	No	0.00	No
	16	y	-0.01	0.00	0.00	No	0.00	No
	17	y	-0.01	0.00	0.00	No	0.00	No

18	y	-0.01	0.00	0.00	No	0.00	No
35	y	-0.011	0.00	0.00	No	0.00	No
36	y	-0.009	0.00	0.00	No	0.00	No
37	y	-0.009	0.00	0.00	No	0.00	No
39	y	-0.009	0.00	0.00	No	0.00	No
51	y	-0.009	0.00	0.00	No	0.00	No
54	y	-0.009	0.00	0.00	No	0.00	No
57	y	-0.009	0.00	0.00	No	0.00	No
60	y	-0.009	0.00	0.00	No	0.00	No
63	y	-0.009	0.00	0.00	No	0.00	No
66	y	-0.009	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	36	y	-0.04	0.50	No
		y	-0.04	5.50	No
	37	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.071	3.00	No
		y	-0.072	3.00	No
		y	-0.072	3.00	No
	39	y	-0.018	0.50	No
		y	-0.018	4.50	No
		y	-0.038	2.00	No
	51	y	-0.04	0.50	No
		y	-0.04	5.50	No
	54	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.071	3.00	No
		y	-0.072	3.00	No
		y	-0.072	3.00	No
	57	y	-0.018	0.50	No
		y	-0.018	4.50	No
		y	-0.038	2.00	No
	60	y	-0.04	0.50	No
		y	-0.04	5.50	No
	63	y	-0.022	0.50	No
		y	-0.022	5.50	No
y		-0.071	3.00	No	
y		-0.072	3.00	No	
y		-0.072	3.00	No	
66	y	-0.018	0.50	No	
	y	-0.018	4.50	No	
	y	-0.038	2.00	No	
W0	36	z	-0.321	0.50	No
		z	-0.321	5.50	No
	37	z	-0.199	0.50	No
		z	-0.199	5.50	No
		z	-0.037	3.00	No
	39	z	-0.034	3.00	No
		z	-0.14	0.50	No

		z	-0.14	4.50	No
	51	z	-0.187	0.50	No
		z	-0.187	5.50	No
	54	z	-0.164	0.50	No
		z	-0.164	5.50	No
		z	-0.088	3.00	No
	57	z	-0.091	0.50	No
		z	-0.091	4.50	No
		z	-0.045	2.00	No
	60	z	-0.187	0.50	No
		z	-0.187	5.50	No
	63	z	-0.164	0.50	No
		z	-0.164	5.50	No
		z	-0.088	3.00	No
	66	z	-0.091	0.50	No
		z	-0.091	4.50	No
		z	-0.045	2.00	No
W30	36	x	-0.142	0.50	No
		x	-0.142	5.50	No
	37	x	-0.152	0.50	No
		x	-0.152	5.50	No
		x	-0.099	3.00	No
	39	x	-0.074	0.50	No
		x	-0.074	4.50	No
		x	-0.055	2.00	No
	51	x	-0.277	0.50	No
		x	-0.277	5.50	No
	54	x	-0.187	0.50	No
		x	-0.187	5.50	No
		x	-0.053	3.00	No
		x	-0.047	3.00	No
	57	x	-0.123	0.50	No
		x	-0.123	4.50	No
		x	-0.027	2.00	No
	60	x	-0.277	0.50	No
		x	-0.277	5.50	No
	63	x	-0.187	0.50	No
		x	-0.187	5.50	No
		x	-0.053	3.00	No
		x	-0.047	3.00	No
	66	x	-0.123	0.50	No
		x	-0.123	4.50	No
		x	-0.027	2.00	No
Di	36	y	-0.15	0.50	No
		y	-0.15	5.50	No
	37	y	-0.101	0.50	No
		y	-0.101	5.50	No
		y	-0.057	3.00	No
		y	-0.049	3.00	No
	39	y	-0.067	0.50	No
		y	-0.067	4.50	No
		y	-0.056	2.00	No
	51	y	-0.15	0.50	No
		y	-0.15	5.50	No
	54	y	-0.101	0.50	No
		y	-0.101	5.50	No
		y	-0.057	3.00	No
		y	-0.049	3.00	No
	57	y	-0.067	0.50	No
		y	-0.067	4.50	No

		y	-0.056	2.00	No
	60	y	-0.15	0.50	No
		y	-0.15	5.50	No
	63	y	-0.101	0.50	No
		y	-0.101	5.50	No
		y	-0.057	3.00	No
		y	-0.049	3.00	No
	66	y	-0.067	0.50	No
		y	-0.067	4.50	No
		y	-0.056	2.00	No
Wi0	36	z	-0.063	0.50	No
		z	-0.063	5.50	No
	37	z	-0.044	0.50	No
		z	-0.044	5.50	No
		z	-0.012	3.00	No
		z	-0.011	3.00	No
	39	z	-0.032	0.50	No
		z	-0.032	4.50	No
	51	z	-0.04	0.50	No
		z	-0.04	5.50	No
	54	z	-0.036	0.50	No
		z	-0.036	5.50	No
		z	-0.021	3.00	No
	57	z	-0.023	0.50	No
		z	-0.023	4.50	No
		z	-0.013	2.00	No
	60	z	-0.04	0.50	No
		z	-0.04	5.50	No
	63	z	-0.036	0.50	No
		z	-0.036	5.50	No
		z	-0.021	3.00	No
	66	z	-0.023	0.50	No
		z	-0.023	4.50	No
		z	-0.013	2.00	No
Wi30	36	x	-0.033	0.50	No
		x	-0.033	5.50	No
	37	x	-0.035	0.50	No
		x	-0.035	5.50	No
		x	-0.024	3.00	No
	39	x	-0.02	0.50	No
		x	-0.02	4.50	No
		x	-0.055	2.00	No
	51	x	-0.055	0.50	No
		x	-0.055	5.50	No
	54	x	-0.04	0.50	No
		x	-0.04	5.50	No
		x	-0.013	3.00	No
		x	-0.012	3.00	No
	57	x	-0.028	0.50	No
		x	-0.028	4.50	No
		x	-0.009	2.00	No
	60	x	-0.055	0.50	No
		x	-0.055	5.50	No
	63	x	-0.04	0.50	No
		x	-0.04	5.50	No
		x	-0.013	3.00	No
		x	-0.012	3.00	No
	66	x	-0.028	0.50	No
		x	-0.028	4.50	No
		x	-0.009	2.00	No

WL0	36	z	-0.019	0.50	No
		z	-0.019	5.50	No
	37	z	-0.012	0.50	No
		z	-0.012	5.50	No
		z	-0.002	3.00	No
		z	-0.002	3.00	No
	39	z	-0.009	0.50	No
		z	-0.009	4.50	No
	51	z	-0.011	0.50	No
		z	-0.011	5.50	No
	54	z	-0.01	0.50	No
		z	-0.01	5.50	No
		z	-0.005	3.00	No
		z	-0.006	0.50	No
	57	z	-0.006	4.50	No
		z	-0.003	2.00	No
	60	z	-0.011	0.50	No
		z	-0.011	5.50	No
	63	z	-0.01	0.50	No
		z	-0.01	5.50	No
	z	-0.005	3.00	No	
	z	-0.006	0.50	No	
66	z	-0.006	4.50	No	
	z	-0.003	2.00	No	
WL30	36	x	-0.009	0.50	No
		x	-0.009	5.50	No
	37	x	-0.009	0.50	No
		x	-0.009	5.50	No
		x	-0.006	3.00	No
		x	-0.006	0.50	No
	39	x	-0.005	4.50	No
		x	-0.005	2.00	No
	51	x	-0.016	0.50	No
		x	-0.016	5.50	No
	54	x	-0.011	0.50	No
		x	-0.011	5.50	No
		x	-0.003	3.00	No
		x	-0.003	3.00	No
	57	x	-0.008	0.50	No
		x	-0.008	4.50	No
		x	-0.002	2.00	No
		x	-0.016	0.50	No
	60	x	-0.016	5.50	No
		x	-0.011	0.50	No
63	x	-0.011	5.50	No	
	x	-0.003	3.00	No	
	x	-0.003	3.00	No	
	x	-0.008	0.50	No	
66	x	-0.008	4.50	No	
	x	-0.002	2.00	No	
LL1	35	y	-0.25	50.00	Yes
LL2	35	y	-0.25	100.00	Yes
LLa1	39	y	-0.25	50.00	Yes
LLa2	37	y	-0.25	50.00	Yes
LLa3	36	y	-0.25	50.00	Yes

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
W0	Wind Load 0/60/120 deg	No	0.00	0.00	0.00
W30	Wind Load 30/90/150 deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
Wi0	Ice Wind Load 0/60/120 deg	No	0.00	0.00	0.00
Wi30	Ice Wind Load 30/90/150 deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0/60/120 deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30/90/150 deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
DL	0.00	0.00	0.00
W0	0.00	0.00	0.00
W30	0.00	0.00	0.00
Di	0.00	0.00	0.00
Wi0	0.00	0.00	0.00
Wi30	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00
LLa4	0.00	0.00	0.00

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

- LC1=1.2DL+W0
- LC2=1.2DL+W30
- LC3=1.2DL-W0
- LC4=1.2DL-W30
- LC5=0.9DL+W0
- LC6=0.9DL+W30
- LC7=0.9DL-W0
- LC8=0.9DL-W30
- LC9=1.2DL+Di+W0
- LC10=1.2DL+Di+W30
- LC11=1.2DL+Di-W0
- LC12=1.2DL+Di-W30
- LC13=1.2DL
- LC15=1.2DL+1.5LL1
- LC16=1.2DL+1.5LL2
- LC17=1.2DL+W0+1.5LLa1
- LC18=1.2DL+W30+1.5LLa1
- LC19=1.2DL-W0+1.5LLa1
- LC20=1.2DL-W30+1.5LLa1
- LC21=1.2DL+W0+1.5LLa2
- LC22=1.2DL+W30+1.5LLa2
- LC23=1.2DL-W0+1.5LLa2
- LC24=1.2DL-W30+1.5LLa2
- LC25=1.2DL+W0+1.5LLa3
- LC26=1.2DL+W30+1.5LLa3
- LC27=1.2DL-W0+1.5LLa3
- LC28=1.2DL-W30+1.5LLa3
- LC29=1.2DL+W0+1.5LLa4
- LC30=1.2DL+W30+1.5LLa4
- LC31=1.2DL-W0+1.5LLa4
- LC32=1.2DL-W30+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	<i>HSS_SQR 4X4X1_4</i>	4	LC11 at 100.00%	0.70	OK	Eq. H1-1b
		5	LC9 at 100.00%	0.70	OK	Eq. H1-1b
		6	LC12 at 100.00%	0.71	OK	Eq. H1-1b
		7	LC2 at 50.00%	0.32	OK	Eq. H1-1b
		8	LC1 at 50.00%	0.29	OK	Eq. H1-1b
		9	LC4 at 48.44%	0.31	OK	Eq. H1-1b
	<i>L 2X2X1_4</i>	13	LC10 at 0.00%	0.26	OK	Eq. H2-1
		14	LC9 at 0.00%	0.25	OK	Eq. H2-1
		15	LC11 at 0.00%	0.26	OK	Eq. H2-1
		16	LC11 at 100.00%	0.27	OK	Eq. H2-1
		17	LC9 at 100.00%	0.27	OK	Eq. H2-1
		18	LC12 at 100.00%	0.28	OK	Eq. H2-1
	<i>PIPE 2x0.154</i>	36	LC1 at 81.25%	1.13	N.G.	Eq. H1-1b
		37	LC1 at 81.25%	0.81	OK	Eq. H1-1b
		39	LC1 at 81.25%	0.54	OK	Eq. H1-1b
		51	LC2 at 81.25%	1.09	N.G.	Eq. H1-1b

	54	LC2 at 81.25%	0.93	OK	Eq. H1-1b
	57	LC2 at 81.25%	0.65	OK	Eq. H1-1b
	60	LC2 at 81.25%	1.09	N.G.	Eq. H1-1b
	63	LC4 at 81.25%	0.93	OK	Eq. H1-1b
	66	LC2 at 81.25%	0.65	OK	Eq. H1-1b
<hr/>					
PIPE 3x0.216	2	LC11 at 31.25%	0.40	OK	Eq. H1-1b
	3	LC9 at 31.25%	0.39	OK	Eq. H1-1b
	35	LC12 at 31.25%	0.40	OK	Eq. H1-1b
<hr/>					
PL 6x3/8	10	LC2 at 0.00%	0.30	OK	Eq. H1-1b
	11	LC1 at 50.00%	0.34	OK	Eq. H1-1b
	12	LC4 at 0.00%	0.33	OK	Eq. H1-1b

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	0.00	-4.00	0.00	0
3	0.596	-4.00	-8.7157	0
4	7.846	-4.00	3.8417	0
9	-7.846	-4.00	3.8417	0
10	-0.596	-4.00	-8.7157	0
12	7.25	-4.00	4.874	0
13	-7.25	-4.00	4.874	0
14	7.548	-4.00	4.3578	0
15	1.7716	-4.00	1.0228	0
18	-7.548	-4.00	4.3578	0
19	-1.7716	-4.00	1.0228	0
20	0.00	-4.00	-8.7157	0
21	0.00	-4.00	-2.0457	0
22	2.846	-4.00	-4.8186	0
23	5.596	-4.00	-0.0554	0
26	-2.846	-4.00	-4.8186	0
27	-5.596	-4.00	-0.0554	0
28	-2.75	-4.00	4.874	0
29	2.75	-4.00	4.874	0
30	5.3725	-4.00	0.3317	0
31	2.9735	-4.00	4.4869	0
34	-2.9735	-4.00	4.4869	0

35	-5.3725	-4.00	0.3317	0
36	-2.399	-4.00	-4.8186	0
37	2.399	-4.00	-4.8186	0
86	5.00	-4.00	4.874	0
87	5.00	-4.00	5.074	0
94	0.00	-4.00	4.874	0
95	0.00	-4.00	5.074	0
98	-5.00	-4.00	4.874	0
99	-5.00	-4.00	5.074	0
100	5.00	1.00	5.074	0
102	0.00	1.00	5.074	0
103	-5.00	1.00	5.074	0
104	5.00	-5.00	5.074	0
106	0.00	-5.00	5.074	0
107	-5.00	-5.00	5.074	0
125	-1.721	-4.00	-6.7671	0
126	-1.8942	-4.00	-6.8671	0
127	-1.8942	1.00	-6.8671	0
128	-1.8942	-5.00	-6.8671	0
131	-4.221	-4.00	-2.437	0
132	-4.3942	-4.00	-2.537	0
133	-4.3942	1.00	-2.537	0
134	-4.3942	-5.00	-2.537	0
137	-6.721	-4.00	1.8931	0
138	-6.8942	-4.00	1.7931	0
139	-6.8942	1.00	1.7931	0
140	-6.8942	-5.00	1.7931	0
143	6.721	-4.00	1.8931	0
144	6.8942	-4.00	1.7931	0
145	6.8942	1.00	1.7931	0
146	6.8942	-5.00	1.7931	0
149	4.221	-4.00	-2.437	0
150	4.3942	-4.00	-2.537	0
151	4.3942	1.00	-2.537	0
152	4.3942	-5.00	-2.537	0
155	1.721	-4.00	-6.7671	0
156	1.8942	-4.00	-6.8671	0
157	1.8942	1.00	-6.8671	0
158	1.8942	-5.00	-6.8671	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
15	1	1	1	1	1	1
19	1	1	1	1	1	1
21	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
2	9	10		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
3	3	4		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
4	18	19		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
5	20	21		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
6	14	15		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
7	28	27		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
8	26	22		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
9	23	29		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
10	13	9		PL 6x3/8	A36	0.00	0.00	0.00
11	10	3		PL 6x3/8	A36	0.00	0.00	0.00
12	12	4		PL 6x3/8	A36	0.00	0.00	0.00
13	34	18		L 2X2X1_4	A36	0.00	0.00	0.00
14	36	20		L 2X2X1_4	A36	0.00	0.00	0.00
15	30	14		L 2X2X1_4	A36	0.00	0.00	0.00
16	18	35		L 2X2X1_4	A36	0.00	0.00	0.00
17	20	37		L 2X2X1_4	A36	0.00	0.00	0.00
18	14	31		L 2X2X1_4	A36	0.00	0.00	0.00
35	12	13		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
36	103	107		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
37	102	106		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
39	100	104		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
51	127	128		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
54	133	134		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
57	139	140		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
60	145	146		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
63	151	152		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
66	157	158		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Rigid end offsets

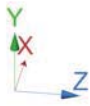
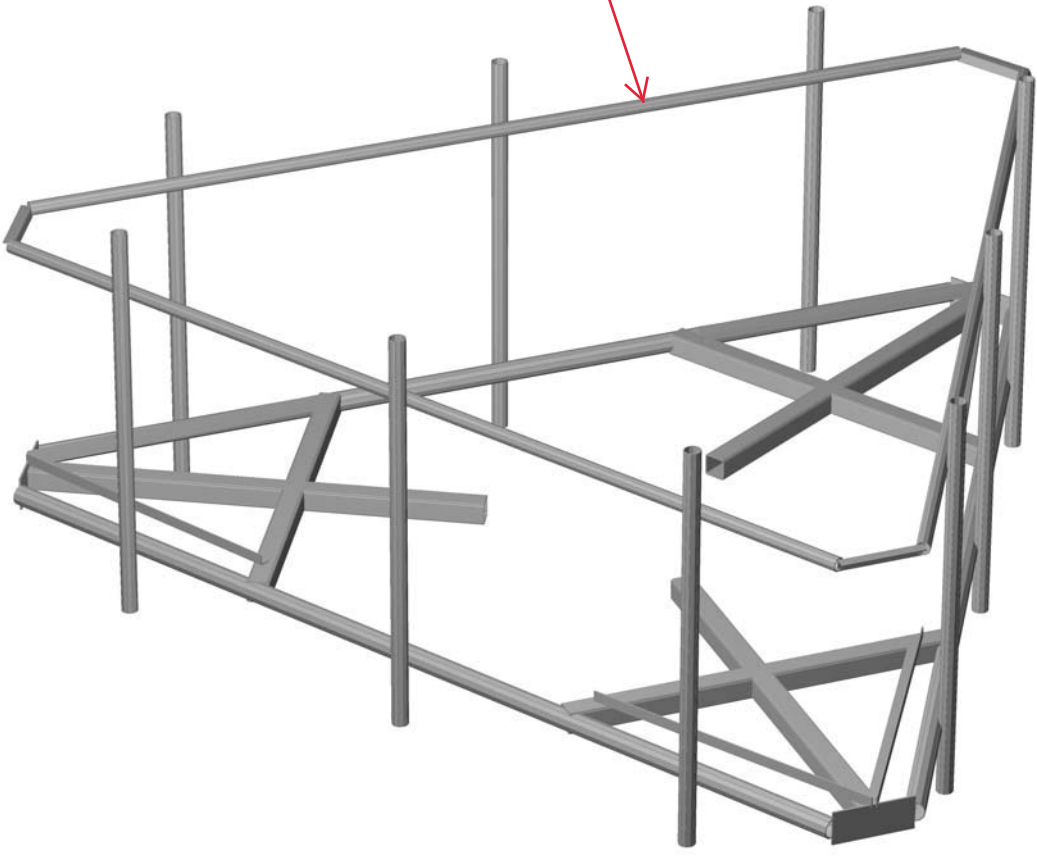
Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
13	0.00	3.00	0.00	0.00	3.00	0.00
14	0.00	3.00	0.00	0.00	3.00	0.00
15	0.00	3.00	0.00	0.00	3.00	0.00
16	0.00	3.00	0.00	0.00	3.00	0.00
17	0.00	3.00	0.00	0.00	3.00	0.00
18	0.00	3.00	0.00	0.00	3.00	0.00

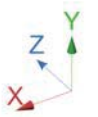
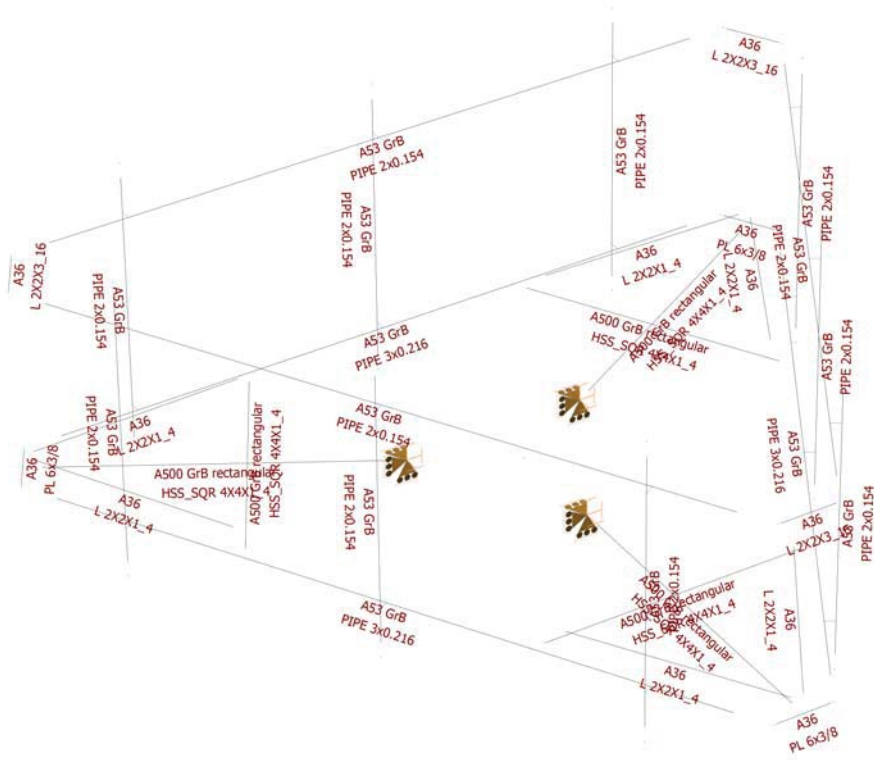


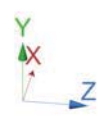
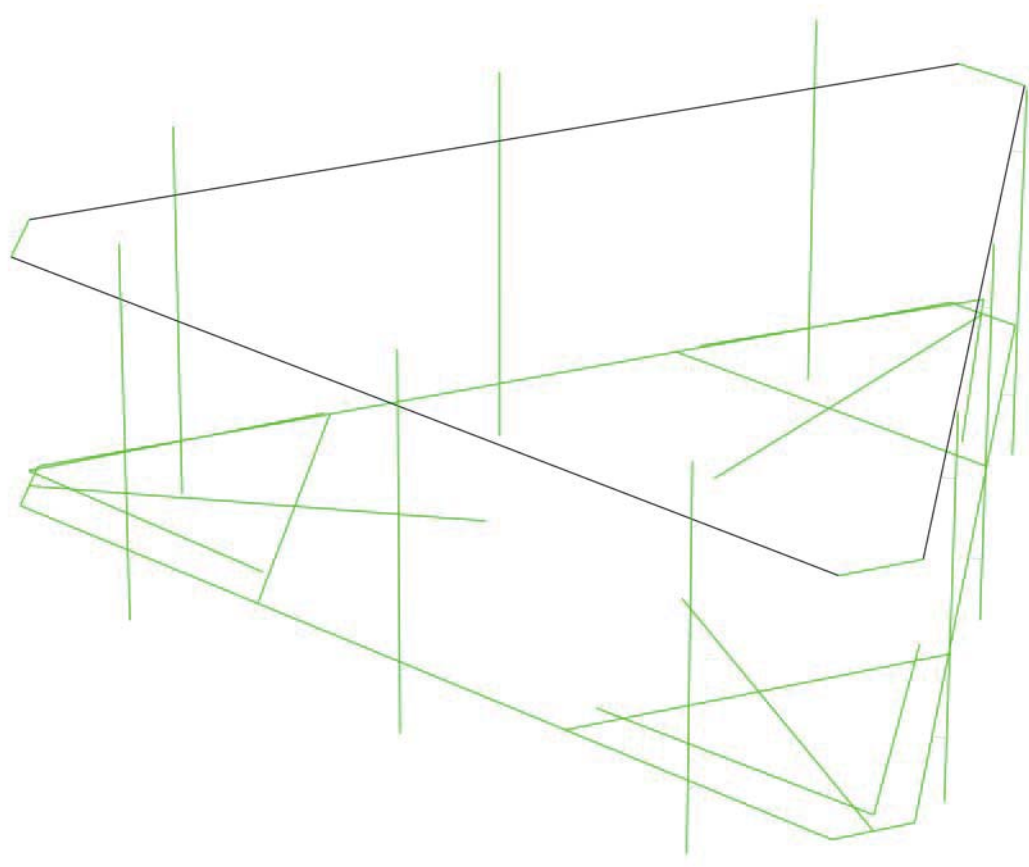
HUDSON
Design Group LLC

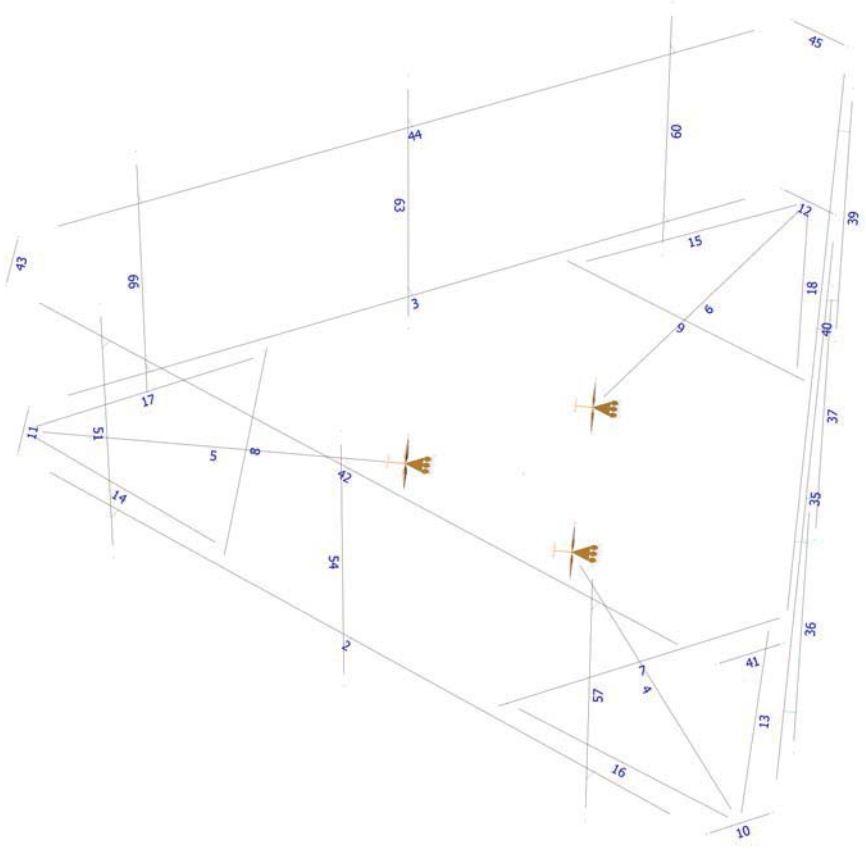
**Mount Calculations
(Modified Conditions)**

Install new handrail kit,
SitePro1 P/N HRK14 (or
approved equal).









Load data

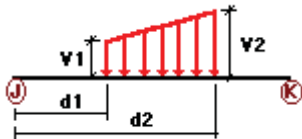
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
W0	Wind Load 0/60/120 deg	No	WIND
W30	Wind Load 30/90/150 deg	No	WIND
Di	Ice Load	No	LL
Wi0	Ice Wind Load 0/60/120 deg	No	WIND
Wi30	Ice Wind Load 30/90/150 deg	No	WIND
WL0	WL 30 mph 0/60/120 deg	No	WIND
WL30	WL 30 mph 30/90/150 deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
LLa4	250 lb Live Load Antenna 4	No	LL

Distributed force on members

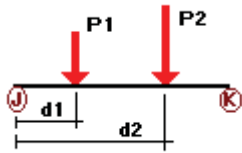


Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%	
DL	4	y	-0.01	-0.01	0.00	No	3.90	No	
	5	y	-0.01	-0.01	0.00	No	3.90	No	
	6	y	-0.01	-0.01	0.00	No	3.90	No	
	7	y	-0.01	0.00	0.00	No	0.00	No	
	8	y	-0.01	0.00	0.00	No	0.00	No	
	9	y	-0.01	0.00	0.00	No	0.00	No	
	13	y	-0.01	0.00	0.00	No	0.00	No	
	14	y	-0.01	0.00	0.00	No	0.00	No	
	15	y	-0.01	0.00	0.00	No	0.00	No	
	16	y	-0.01	0.00	0.00	No	0.00	No	
	17	y	-0.01	0.00	0.00	No	0.00	No	
	18	y	-0.01	0.00	0.00	No	0.00	No	
	W0	2	z	-0.018	0.00	0.00	No	0.00	No
		3	z	-0.018	0.00	0.00	No	0.00	No
		4	z	-0.016	0.00	0.00	No	0.00	No

	6	z	-0.016	0.00	0.00	No	0.00	No
	7	z	-0.016	0.00	0.00	No	0.00	No
	8	z	-0.016	0.00	0.00	No	0.00	No
	9	z	-0.016	0.00	0.00	No	0.00	No
	10	z	-0.051	0.00	0.00	No	0.00	No
	11	z	-0.051	0.00	0.00	No	0.00	No
	12	z	-0.051	0.00	0.00	No	0.00	No
	13	z	-0.017	0.00	0.00	No	0.00	No
	14	z	-0.017	0.00	0.00	No	0.00	No
	15	z	-0.017	0.00	0.00	No	0.00	No
	16	z	-0.017	0.00	0.00	No	0.00	No
	17	z	-0.017	0.00	0.00	No	0.00	No
	18	z	-0.017	0.00	0.00	No	0.00	No
	35	z	-0.018	0.00	0.00	No	0.00	No
	40	z	-0.012	0.00	0.00	No	0.00	No
	41	z	-0.017	0.00	0.00	No	0.00	No
	42	z	-0.012	0.00	0.00	No	0.00	No
	43	z	-0.017	0.00	0.00	No	0.00	No
	44	z	-0.012	0.00	0.00	No	0.00	No
	45	z	-0.017	0.00	0.00	No	0.00	No
	51	z	-0.012	0.00	0.00	No	0.00	No
	54	z	-0.012	0.00	0.00	No	0.00	No
	57	z	-0.012	0.00	0.00	No	0.00	No
	60	z	-0.012	0.00	0.00	No	0.00	No
	63	z	-0.012	0.00	0.00	No	0.00	No
W30	66	z	-0.012	0.00	0.00	No	0.00	No
	2	x	-0.018	0.00	0.00	No	0.00	No
	3	x	-0.018	0.00	0.00	No	0.00	No
	4	x	-0.016	0.00	0.00	No	0.00	No
	5	x	-0.016	0.00	0.00	No	0.00	No
	6	x	-0.016	0.00	0.00	No	0.00	No
	7	x	-0.016	0.00	0.00	No	0.00	No
	8	x	-0.016	0.00	0.00	No	0.00	No
	9	x	-0.016	0.00	0.00	No	0.00	No
	10	x	-0.051	0.00	0.00	No	0.00	No
	11	x	-0.051	0.00	0.00	No	0.00	No
	12	x	-0.051	0.00	0.00	No	0.00	No
	14	x	-0.017	0.00	0.00	No	0.00	No
	15	x	-0.017	0.00	0.00	No	0.00	No
	16	x	-0.017	0.00	0.00	No	0.00	No
	17	x	-0.017	0.00	0.00	No	0.00	No
	36	x	-0.012	0.00	0.00	No	0.00	No
	37	x	-0.012	0.00	0.00	No	0.00	No
	39	x	-0.012	0.00	0.00	No	0.00	No
	41	x	-0.017	0.00	0.00	No	0.00	No
	42	x	-0.012	0.00	0.00	No	0.00	No
	43	x	-0.017	0.00	0.00	No	0.00	No
	44	x	-0.012	0.00	0.00	No	0.00	No
	45	x	-0.017	0.00	0.00	No	0.00	No
	51	x	-0.012	0.00	0.00	No	0.00	No
	54	x	-0.012	0.00	0.00	No	0.00	No
	57	x	-0.012	0.00	0.00	No	0.00	No
	60	x	-0.012	0.00	0.00	No	0.00	No
	63	x	-0.012	0.00	0.00	No	0.00	No
	66	x	-0.012	0.00	0.00	No	0.00	No
Di	2	y	-0.011	0.00	0.00	No	0.00	No
	3	y	-0.011	0.00	0.00	No	0.00	No
	4	y	-0.016	0.00	0.00	No	0.00	No
	5	y	-0.016	0.00	0.00	No	0.00	No
	6	y	-0.016	0.00	0.00	No	0.00	No

7	y	-0.016	0.00	0.00	No	0.00	No
8	y	-0.016	0.00	0.00	No	0.00	No
9	y	-0.016	0.00	0.00	No	0.00	No
10	y	-0.016	0.00	0.00	No	0.00	No
11	y	-0.016	0.00	0.00	No	0.00	No
12	y	-0.016	0.00	0.00	No	0.00	No
13	y	-0.01	0.00	0.00	No	0.00	No
14	y	-0.01	0.00	0.00	No	0.00	No
15	y	-0.01	0.00	0.00	No	0.00	No
16	y	-0.01	0.00	0.00	No	0.00	No
17	y	-0.01	0.00	0.00	No	0.00	No
18	y	-0.01	0.00	0.00	No	0.00	No
35	y	-0.011	0.00	0.00	No	0.00	No
36	y	-0.009	0.00	0.00	No	0.00	No
37	y	-0.009	0.00	0.00	No	0.00	No
39	y	-0.009	0.00	0.00	No	0.00	No
40	y	-0.009	0.00	0.00	No	0.00	No
41	y	-0.01	0.00	0.00	No	0.00	No
42	y	-0.009	0.00	0.00	No	0.00	No
43	y	-0.01	0.00	0.00	No	0.00	No
44	y	-0.009	0.00	0.00	No	0.00	No
45	y	-0.01	0.00	0.00	No	0.00	No
51	y	-0.009	0.00	0.00	No	0.00	No
54	y	-0.009	0.00	0.00	No	0.00	No
57	y	-0.009	0.00	0.00	No	0.00	No
60	y	-0.009	0.00	0.00	No	0.00	No
63	y	-0.009	0.00	0.00	No	0.00	No
66	y	-0.009	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	36	y	-0.04	0.50	No
		y	-0.04	5.50	No
	37	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.071	3.00	No
		y	-0.072	3.00	No
	39	y	-0.018	0.50	No
		y	-0.018	4.50	No
		y	-0.038	2.00	No
	51	y	-0.04	0.50	No
		y	-0.04	5.50	No
	54	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.071	3.00	No
		y	-0.072	3.00	No
	57	y	-0.018	0.50	No
		y	-0.018	4.50	No

		y	-0.038	2.00	No
	60	y	-0.04	0.50	No
		y	-0.04	5.50	No
	63	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.071	3.00	No
		y	-0.072	3.00	No
	66	y	-0.018	0.50	No
		y	-0.018	4.50	No
		y	-0.038	2.00	No
W0	36	z	-0.321	0.50	No
		z	-0.321	5.50	No
	37	z	-0.199	0.50	No
		z	-0.199	5.50	No
		z	-0.037	3.00	No
		z	-0.034	3.00	No
	39	z	-0.14	0.50	No
		z	-0.14	4.50	No
	51	z	-0.187	0.50	No
		z	-0.187	5.50	No
	54	z	-0.164	0.50	No
		z	-0.164	5.50	No
		z	-0.088	3.00	No
	57	z	-0.091	0.50	No
		z	-0.091	4.50	No
		z	-0.045	2.00	No
	60	z	-0.187	0.50	No
		z	-0.187	5.50	No
	63	z	-0.164	0.50	No
		z	-0.164	5.50	No
		z	-0.088	3.00	No
	66	z	-0.091	0.50	No
		z	-0.091	4.50	No
		z	-0.045	2.00	No
W30	36	x	-0.142	0.50	No
		x	-0.142	5.50	No
	37	x	-0.152	0.50	No
		x	-0.152	5.50	No
		x	-0.099	3.00	No
	39	x	-0.074	0.50	No
		x	-0.074	4.50	No
		x	-0.055	2.00	No
	51	x	-0.277	0.50	No
		x	-0.277	5.50	No
	54	x	-0.187	0.50	No
		x	-0.187	5.50	No
		x	-0.053	3.00	No
		x	-0.047	3.00	No
	57	x	-0.123	0.50	No
		x	-0.123	4.50	No
		x	-0.027	2.00	No
	60	x	-0.277	0.50	No
		x	-0.277	5.50	No
	63	x	-0.187	0.50	No
		x	-0.187	5.50	No
		x	-0.053	3.00	No
		x	-0.047	3.00	No
	66	x	-0.123	0.50	No
		x	-0.123	4.50	No
		x	-0.027	2.00	No

Di	36	y	-0.15	0.50	No
		y	-0.15	5.50	No
	37	y	-0.101	0.50	No
		y	-0.101	5.50	No
		y	-0.057	3.00	No
		y	-0.049	3.00	No
	39	y	-0.067	0.50	No
		y	-0.067	4.50	No
		y	-0.056	2.00	No
		51	y	-0.15	0.50
	54	y	-0.15	5.50	No
		y	-0.101	0.50	No
		y	-0.101	5.50	No
		y	-0.057	3.00	No
		y	-0.049	3.00	No
		57	y	-0.067	0.50
	y		-0.067	4.50	No
		y	-0.056	2.00	No
		60	y	-0.15	0.50
		y	-0.15	5.50	No
63		y	-0.101	0.50	No
	y	-0.101	5.50	No	
	y	-0.057	3.00	No	
	y	-0.049	3.00	No	
66	y	-0.067	0.50	No	
	y	-0.067	4.50	No	
	y	-0.056	2.00	No	
	Wi0	36	z	-0.063	0.50
z		-0.063	5.50	No	
37	z	-0.044	0.50	No	
	z	-0.044	5.50	No	
	z	-0.012	3.00	No	
	z	-0.011	3.00	No	
39	z	-0.032	0.50	No	
	z	-0.032	4.50	No	
51	z	-0.04	0.50	No	
	z	-0.04	5.50	No	
54	z	-0.036	0.50	No	
	z	-0.036	5.50	No	
	z	-0.021	3.00	No	
	57	z	-0.023	0.50	No
z		-0.023	4.50	No	
	z	-0.013	2.00	No	
	60	z	-0.04	0.50	No
z		-0.04	5.50	No	
63	z	-0.036	0.50	No	
	z	-0.036	5.50	No	
	z	-0.021	3.00	No	
	66	z	-0.023	0.50	No
z		-0.023	4.50	No	
	z	-0.013	2.00	No	
	Wi30	36	x	-0.033	0.50
x		-0.033	5.50	No	
37	x	-0.035	0.50	No	
	x	-0.035	5.50	No	
	x	-0.024	3.00	No	
	39	x	-0.02	0.50	No
x		-0.02	4.50	No	
	x	-0.055	2.00	No	
	51	x	-0.055	0.50	No

		x	-0.055	5.50	No
	54	x	-0.04	0.50	No
		x	-0.04	5.50	No
		x	-0.013	3.00	No
		x	-0.012	3.00	No
	57	x	-0.028	0.50	No
		x	-0.028	4.50	No
		x	-0.009	2.00	No
	60	x	-0.055	0.50	No
		x	-0.055	5.50	No
	63	x	-0.04	0.50	No
		x	-0.04	5.50	No
		x	-0.013	3.00	No
		x	-0.012	3.00	No
	66	x	-0.028	0.50	No
		x	-0.028	4.50	No
		x	-0.009	2.00	No
WLO	36	z	-0.019	0.50	No
		z	-0.019	5.50	No
	37	z	-0.012	0.50	No
		z	-0.012	5.50	No
		z	-0.002	3.00	No
		z	-0.002	3.00	No
	39	z	-0.009	0.50	No
		z	-0.009	4.50	No
	51	z	-0.011	0.50	No
		z	-0.011	5.50	No
	54	z	-0.01	0.50	No
		z	-0.01	5.50	No
		z	-0.005	3.00	No
	57	z	-0.006	0.50	No
		z	-0.006	4.50	No
		z	-0.003	2.00	No
	60	z	-0.011	0.50	No
		z	-0.011	5.50	No
	63	z	-0.01	0.50	No
		z	-0.01	5.50	No
		z	-0.005	3.00	No
	66	z	-0.006	0.50	No
		z	-0.006	4.50	No
		z	-0.003	2.00	No
WL30	36	x	-0.009	0.50	No
		x	-0.009	5.50	No
	37	x	-0.009	0.50	No
		x	-0.009	5.50	No
		x	-0.006	3.00	No
	39	x	-0.005	0.50	No
		x	-0.005	4.50	No
		x	-0.003	2.00	No
	51	x	-0.016	0.50	No
		x	-0.016	5.50	No
	54	x	-0.011	0.50	No
		x	-0.011	5.50	No
		x	-0.003	3.00	No
		x	-0.003	3.00	No
	57	x	-0.008	0.50	No
		x	-0.008	4.50	No
		x	-0.002	2.00	No
	60	x	-0.016	0.50	No
		x	-0.016	5.50	No

	63	x	-0.011	0.50	No
		x	-0.011	5.50	No
		x	-0.003	3.00	No
		x	-0.003	3.00	No
	66	x	-0.008	0.50	No
		x	-0.008	4.50	No
		x	-0.002	2.00	No
LL1	35	y	-0.25	50.00	Yes
LL2	35	y	-0.25	100.00	Yes
LLa1	39	y	-0.25	50.00	Yes
LLa2	37	y	-0.25	50.00	Yes
LLa3	36	y	-0.25	50.00	Yes

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
W0	Wind Load 0/60/120 deg	No	0.00	0.00	0.00
W30	Wind Load 30/90/150 deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
Wi0	Ice Wind Load 0/60/120 deg	No	0.00	0.00	0.00
Wi30	Ice Wind Load 30/90/150 deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0/60/120 deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30/90/150 deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
DL	0.00	0.00	0.00
W0	0.00	0.00	0.00
W30	0.00	0.00	0.00
Di	0.00	0.00	0.00
Wi0	0.00	0.00	0.00
Wi30	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00
LLa4	0.00	0.00	0.00



Current Date: 10/9/2020 5:23 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1124\CT1124 (MOD).retx

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

- LC1=1.2DL+W0
- LC2=1.2DL+W30
- LC3=1.2DL-W0
- LC4=1.2DL-W30
- LC5=0.9DL+W0
- LC6=0.9DL+W30
- LC7=0.9DL-W0
- LC8=0.9DL-W30
- LC9=1.2DL+Di+W0
- LC10=1.2DL+Di+W30
- LC11=1.2DL+Di-W0
- LC12=1.2DL+Di-W30
- LC13=1.2DL
- LC15=1.2DL+1.5LL1
- LC16=1.2DL+1.5LL2
- LC17=1.2DL+W0+1.5LLa1
- LC18=1.2DL+W30+1.5LLa1
- LC19=1.2DL-W0+1.5LLa1
- LC20=1.2DL-W30+1.5LLa1
- LC21=1.2DL+W0+1.5LLa2
- LC22=1.2DL+W30+1.5LLa2
- LC23=1.2DL-W0+1.5LLa2
- LC24=1.2DL-W30+1.5LLa2
- LC25=1.2DL+W0+1.5LLa3
- LC26=1.2DL+W30+1.5LLa3
- LC27=1.2DL-W0+1.5LLa3
- LC28=1.2DL-W30+1.5LLa3
- LC29=1.2DL+W0+1.5LLa4
- LC30=1.2DL+W30+1.5LLa4
- LC31=1.2DL-W0+1.5LLa4
- LC32=1.2DL-W30+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	<i>HSS_SQR 4X4X1_4</i>	4	LC10 at 100.00%	0.69	OK	Eq. H1-1b
		5	LC9 at 100.00%	0.68	OK	Eq. H1-1b
		6	LC12 at 100.00%	0.69	OK	Eq. H1-1b
		7	LC2 at 50.00%	0.33	OK	Eq. H1-1b
		8	LC1 at 50.00%	0.31	OK	Eq. H1-1b
		9	LC4 at 48.44%	0.33	OK	Eq. H1-1b
	<i>L 2X2X1_4</i>	13	LC10 at 0.00%	0.24	OK	Eq. H2-1
		14	LC12 at 0.00%	0.24	OK	Eq. H2-1
		15	LC11 at 0.00%	0.24	OK	Eq. H2-1
		16	LC11 at 100.00%	0.25	OK	Eq. H2-1
		17	LC10 at 100.00%	0.25	OK	Eq. H2-1
		18	LC12 at 100.00%	0.25	OK	Eq. H2-1
	<i>L 2X2X3_16</i>	41	LC3 at 100.00%	0.62	OK	Eq. H2-1
		43	LC1 at 100.00%	0.48	OK	Eq. H2-1
		45	LC4 at 0.00%	0.74	OK	Eq. H2-1

PIPE 2x0.154	36	LC3 at 81.25%	0.75	OK	Eq. H1-1b
	37	LC1 at 81.25%	0.87	OK	Eq. H1-1b
	39	LC1 at 81.25%	0.64	OK	Eq. H1-1b
	40	LC3 at 85.94%	0.54	With warnings	Eq. H1-1b
	42	LC2 at 85.94%	0.56	With warnings	Eq. H1-1b
	44	LC2 at 84.38%	0.52	With warnings	Eq. H1-1b
	51	LC4 at 81.25%	0.85	OK	Eq. H1-1b
	54	LC4 at 81.25%	0.95	OK	Eq. H1-1b
	57	LC3 at 81.25%	0.70	OK	Eq. H1-1b
	60	LC2 at 81.25%	0.70	OK	Eq. H1-1b
	63	LC2 at 81.25%	0.97	OK	Eq. H1-1b
66	LC2 at 81.25%	0.79	OK	Eq. H1-1b	
<hr/>					
PIPE 3x0.216	2	LC4 at 68.75%	0.38	OK	Eq. H1-1b
	3	LC2 at 31.25%	0.38	OK	Eq. H1-1b
	35	LC12 at 31.25%	0.37	OK	Eq. H1-1b
<hr/>					
PL 6x3/8	10	LC2 at 0.00%	0.31	OK	Eq. H1-1b
	11	LC1 at 50.00%	0.33	OK	Eq. H1-1b
	12	LC4 at 0.00%	0.31	OK	Eq. H1-1b

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	0.00	-4.00	0.00	0
3	0.596	-4.00	-8.7157	0
4	7.846	-4.00	3.8417	0
9	-7.846	-4.00	3.8417	0
10	-0.596	-4.00	-8.7157	0
12	7.25	-4.00	4.874	0
13	-7.25	-4.00	4.874	0
14	7.548	-4.00	4.3578	0
15	1.7716	-4.00	1.0228	0
18	-7.548	-4.00	4.3578	0
19	-1.7716	-4.00	1.0228	0
20	0.00	-4.00	-8.7157	0
21	0.00	-4.00	-2.0457	0
22	2.846	-4.00	-4.8186	0
23	5.596	-4.00	-0.0554	0
26	-2.846	-4.00	-4.8186	0
27	-5.596	-4.00	-0.0554	0
28	-2.75	-4.00	4.874	0
29	2.75	-4.00	4.874	0
30	5.3725	-4.00	0.3317	0
31	2.9735	-4.00	4.4869	0
34	-2.9735	-4.00	4.4869	0

35	-5.3725	-4.00	0.3317	0
36	-2.399	-4.00	-4.8186	0
37	2.399	-4.00	-4.8186	0
86	5.00	-4.00	4.874	0
87	5.00	-4.00	5.074	0
94	0.00	-4.00	4.874	0
95	0.00	-4.00	5.074	0
98	-5.00	-4.00	4.874	0
99	-5.00	-4.00	5.074	0
100	5.00	1.00	5.074	0
102	0.00	1.00	5.074	0
103	-5.00	1.00	5.074	0
104	5.00	-5.00	5.074	0
106	0.00	-5.00	5.074	0
107	-5.00	-5.00	5.074	0
108	-7.25	0.00	4.874	0
109	-7.846	0.00	3.8417	0
110	-0.596	0.00	-8.7157	0
111	0.596	0.00	-8.7157	0
112	7.25	0.00	4.874	0
113	7.846	0.00	3.8417	0
117	-5.00	0.00	4.874	0
118	-5.00	0.00	5.074	0
119	0.00	0.00	4.874	0
120	0.00	0.00	5.074	0
123	5.00	0.00	4.874	0
124	5.00	0.00	5.074	0
125	-1.721	-4.00	-6.7671	0
126	-1.8942	-4.00	-6.8671	0
127	-1.8942	1.00	-6.8671	0
128	-1.8942	-5.00	-6.8671	0
129	-1.721	0.00	-6.7671	0
130	-1.8942	0.00	-6.8671	0
131	-4.221	-4.00	-2.437	0
132	-4.3942	-4.00	-2.537	0
133	-4.3942	1.00	-2.537	0
134	-4.3942	-5.00	-2.537	0
135	-4.221	0.00	-2.437	0
136	-4.3942	0.00	-2.537	0
137	-6.721	-4.00	1.8931	0
138	-6.8942	-4.00	1.7931	0
139	-6.8942	1.00	1.7931	0
140	-6.8942	-5.00	1.7931	0
141	-6.721	0.00	1.8931	0
142	-6.8942	0.00	1.7931	0
143	6.721	-4.00	1.8931	0
144	6.8942	-4.00	1.7931	0
145	6.8942	1.00	1.7931	0
146	6.8942	-5.00	1.7931	0
147	6.721	0.00	1.8931	0
148	6.8942	0.00	1.7931	0
149	4.221	-4.00	-2.437	0
150	4.3942	-4.00	-2.537	0
151	4.3942	1.00	-2.537	0
152	4.3942	-5.00	-2.537	0
153	4.221	0.00	-2.437	0
154	4.3942	0.00	-2.537	0
155	1.721	-4.00	-6.7671	0
156	1.8942	-4.00	-6.8671	0
157	1.8942	1.00	-6.8671	0

158	1.8942	-5.00	-6.8671	0
159	1.721	0.00	-6.7671	0
160	1.8942	0.00	-6.8671	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
15	1	1	1	1	1	1
19	1	1	1	1	1	1
21	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
2	9	10		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
3	3	4		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
4	18	19		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
5	20	21		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
6	14	15		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
7	28	27		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
8	26	22		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
9	23	29		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
10	13	9		PL 6x3/8	A36	0.00	0.00	0.00
11	10	3		PL 6x3/8	A36	0.00	0.00	0.00
12	12	4		PL 6x3/8	A36	0.00	0.00	0.00
13	34	18		L 2X2X1_4	A36	0.00	0.00	0.00
14	36	20		L 2X2X1_4	A36	0.00	0.00	0.00
15	30	14		L 2X2X1_4	A36	0.00	0.00	0.00
16	18	35		L 2X2X1_4	A36	0.00	0.00	0.00
17	20	37		L 2X2X1_4	A36	0.00	0.00	0.00
18	14	31		L 2X2X1_4	A36	0.00	0.00	0.00
35	12	13		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
36	103	107		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
37	102	106		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
39	100	104		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
40	112	108		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
41	108	109		L 2X2X3_16	A36	0.00	0.00	0.00
42	109	110		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
43	110	111		L 2X2X3_16	A36	0.00	0.00	0.00
44	111	113		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
45	112	113		L 2X2X3_16	A36	0.00	0.00	0.00
51	127	128		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
54	133	134		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
57	139	140		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
60	145	146		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
63	151	152		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
66	157	158		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
41	180.00	0	0.00	0.00	0.00
43	180.00	0	0.00	0.00	0.00
45	90.00	0	0.00	0.00	0.00

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
13	0.00	3.00	0.00	0.00	3.00	0.00
14	0.00	3.00	0.00	0.00	3.00	0.00
15	0.00	3.00	0.00	0.00	3.00	0.00
16	0.00	3.00	0.00	0.00	3.00	0.00
17	0.00	3.00	0.00	0.00	3.00	0.00
18	0.00	3.00	0.00	0.00	3.00	0.00

STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
- STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
- UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS, AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
- EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
- WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
- ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
- NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
- SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

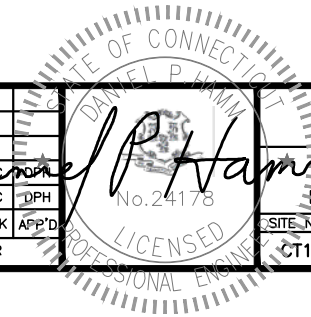
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1124
SITE NAME: GLASTONBURY SOUTH
SBA SITE # ID: 1222500
175 DICKINSON ROAD
MARLBOROUGH, CT 06073
HARTFORD COUNTY

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

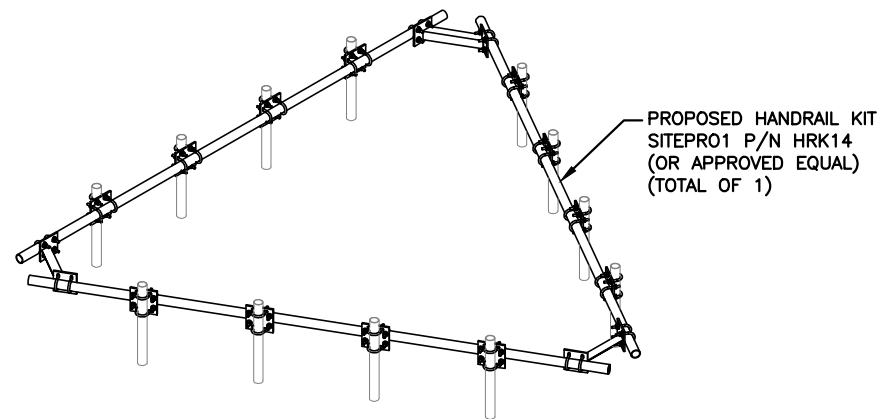
NO.		DATE	REVISIONS	BY	CHK	APP'D	AT&T	
0	12/15/20	ISSUED FOR REVIEW					STRUCTURAL NOTES	
A	10/13/20	ISSUED FOR REVIEW					LTE 3C_4C_4TX4RX_5G 2020 UPGRADE	
SCALE: AS SHOWN		DESIGNED BY: HC		DRAWN BY: AR		SITE NUMBER: CT1124		REV: 0



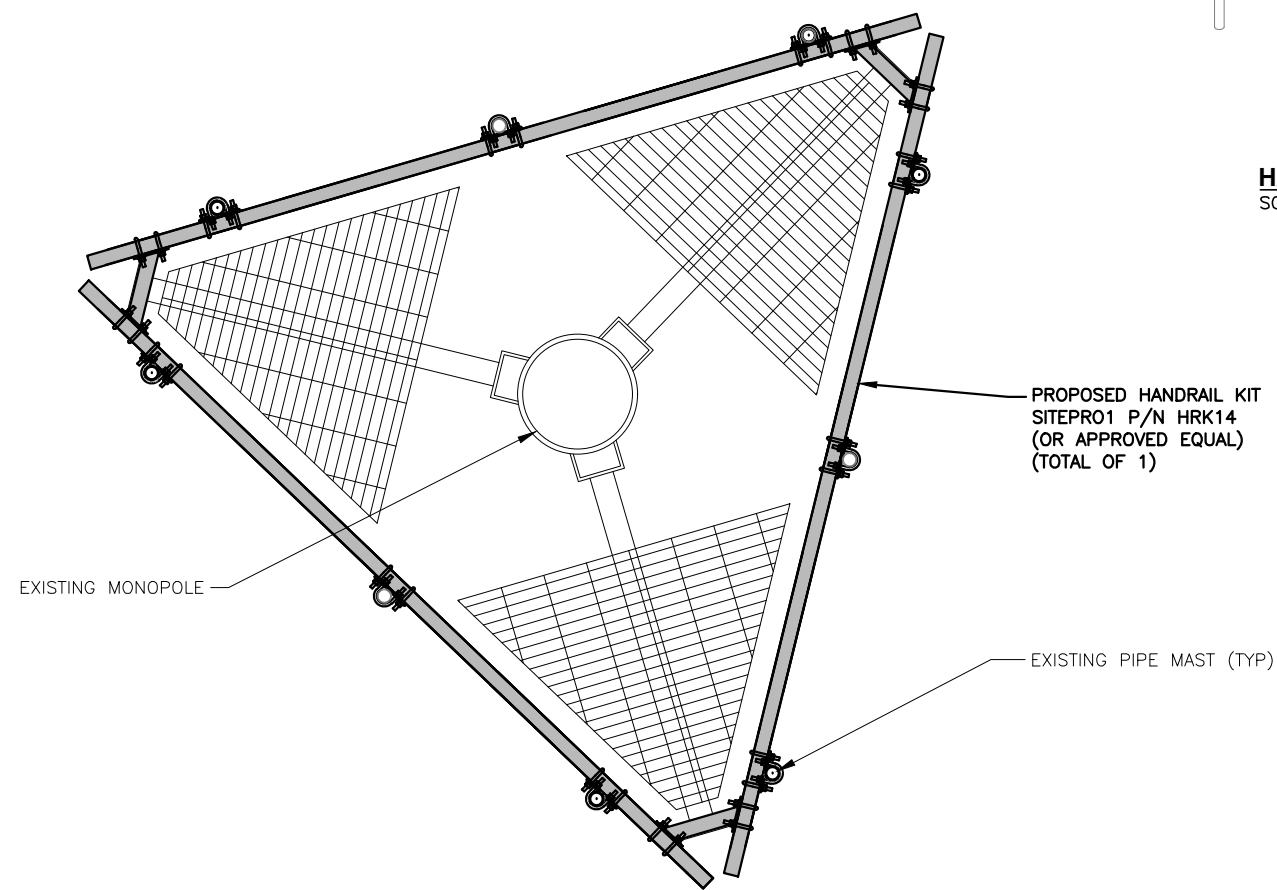
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY:
HUDSON DESIGN GROUP, LLC.
DATED: OCTOBER 09, 2020

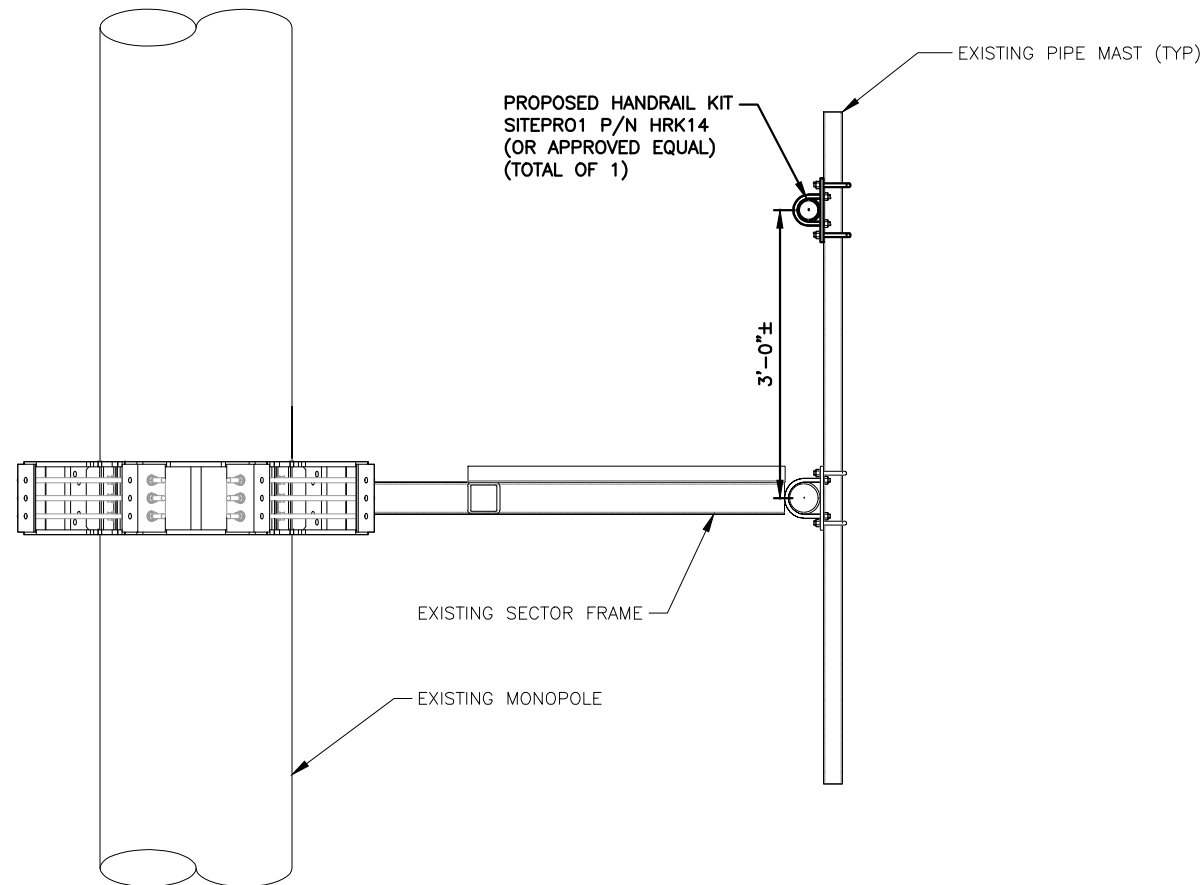
NOTE:
REFER TO **STRUCTURAL ANALYSIS** BY: SBA DATED: DECEMBER 2, 2020 FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



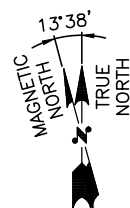
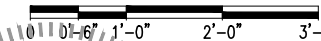
HANDRAIL DETAIL 2
SCALE: N.T.S S-1



PROPOSED MOUNT MODIFICATIONS PLAN 1
22x34 SCALE: 3/4"=1'-0" S-1
11x17 SCALE: 3/8"=1'-0"



PROPOSED MOUNT MODIFICATIONS DETAIL 3
22x34 SCALE: 1"=1'-0" S-1
11x17 SCALE: 1/2"=1'-0"



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



12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1124
SITE NAME: GLASTONBURY SOUTH
SBA SITE # ID: 1222500

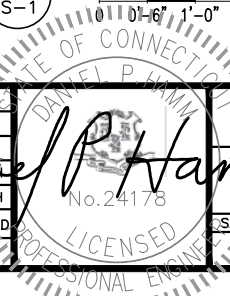
175 DICKINSON ROAD
MARLBOROUGH, CT 06073
HARTFORD COUNTY



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

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	12/15/20	ISSUED FOR REVIEW	CA	OPH	
A	10/13/20	ISSUED FOR REVIEW	AR	HC	OPH

SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: AR



AT&T

MOUNT MODIFICATION DESIGN
LTE 3C_4C_4TX4RX_5G 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1124	S-1	0

175 DICKINSON RD

Location 175 DICKINSON RD

Mblu J12/ 1860/ N0003/ /

Acct# 18600175

Owner CHAPMAN RANDALL S+

Assessment \$808,700

Appraisal \$1,155,200

PID 1492

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$0	\$1,155,200	\$1,155,200

Assessment			
Valuation Year	Improvements	Land	Total
2019	\$0	\$808,700	\$808,700

Owner of Record

Owner CHAPMAN RANDALL S+
Co-Owner BRONZI KARRIE-LYNNE
Address PO BOX 7
TROY, ME 04987-0007

Sale Price \$0
Certificate
Book & Page 3456/0161

Sale Date 11/07/2017

Instrument 64

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
CHAPMAN RANDALL S+	\$0		3379/0090	78	10/20/2016
CHAPMAN RANDALL S+	\$0		3057/0041	79	01/11/2013
CHAPMAN RANDALL S+	\$0		3057/0039	79	01/11/2013
CHAPMAN RANDALL S+	\$0		2684/0333	79	08/03/2009

Building Information

Building 1 : Section 1

Year Built:

Living Area: 0

Replacement Cost: \$0

Replacement Cost

Less Depreciation: \$0

Building Attributes	
Field	Description
Style	Outbuildings
Model	
Occupancy	
Exterior Wall 1	
Roof Structure:	

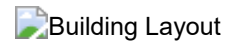
Roof Cover	
Interior Wall 1	
Floor/Cover 1	
Floor/Cover 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Rooms:	
Extra Kitchens	
Style Sub Class	
Bsmt Garages	
Fireplaces	

Building Photo



(<http://images.vgsi.com/photos/GlastonburyCTPhotos/\02\01\22\94.jpg>)

Building Layout



Building Layout
(http://images.vgsi.com/photos/GlastonburyCTPhotos//Sketches/1492_149)

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



Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 400
Description Utility
Zone RR
Category

Land Line Valuation

Size (Acres) 30.35
Assessed Value \$808,700
Appraised Value \$1,155,200

Outbuildings

Outbuildings

[Legend](#)

No Data for Outbuildings

Valuation History

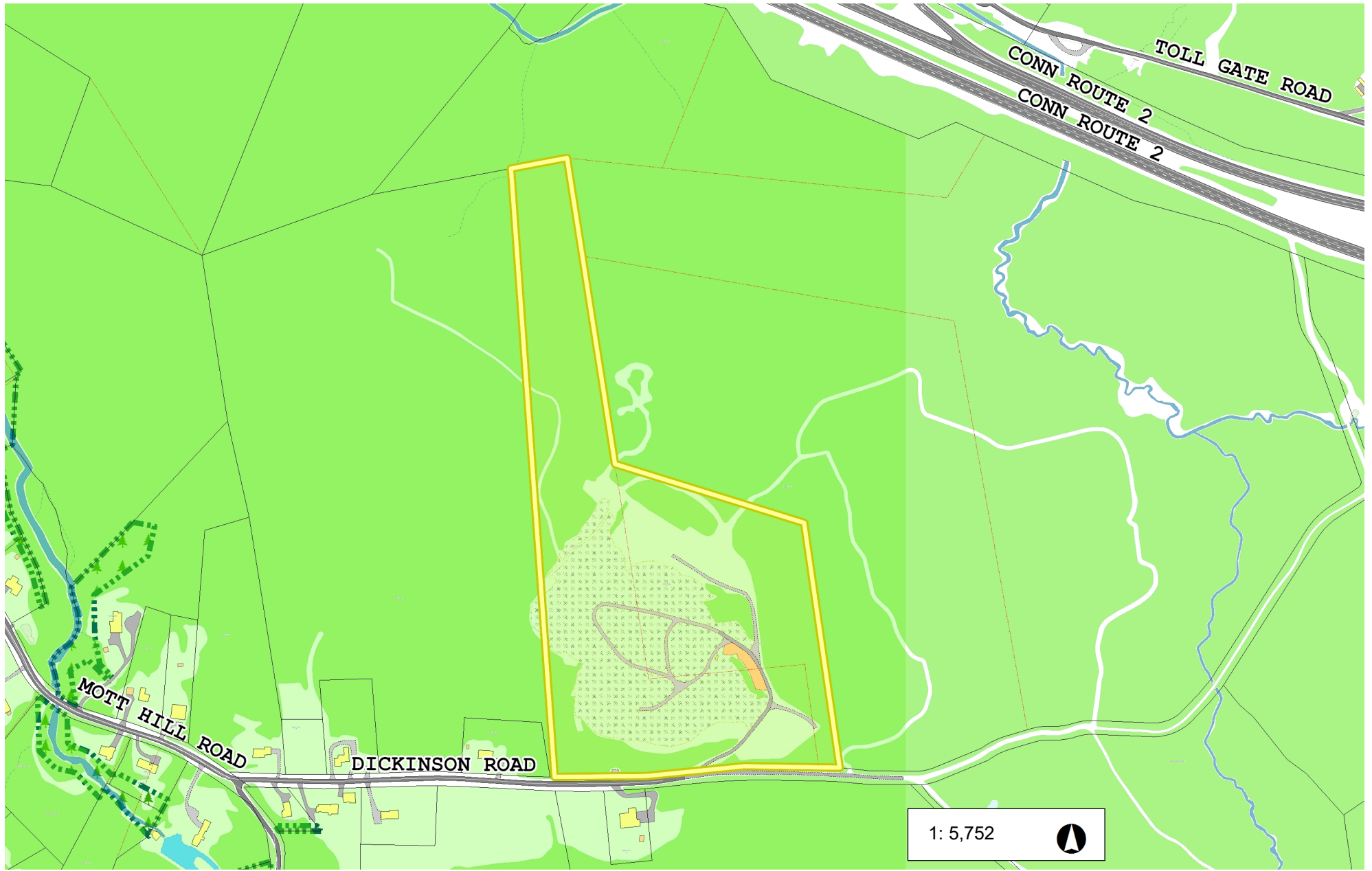
Appraisal

Valuation Year	Improvements	Land	Total
2019	\$0	\$1,155,200	\$1,155,200

Assessment

Valuation Year	Improvements	Land	Total
2019	\$0	\$808,700	\$808,700

Town of Glastonbury GIS 175 Dickinson Road



959 0 479 959 Feet

Town of Glastonbury



2155 MAIN STREET • P.O. BOX 6523 • GLASTONBURY, CONNECTICUT 06033-6523

DATE: August 15, 2000
RE: Assessors Lot N3 Dickenson Road
OWNER: Donald Chapman, Ronald Bronzi and Beverly Bronzi
ZONE: RR

SBA, Inc., and Sprint PCS
80 Eastern Boulevard
Glastonbury, CT 06033

Dear Applicant(s):

Following a Public Hearing of your application on August 9, 2000, the following resolution was passed by the Zoning Board of Appeals:

The Board granted a special exception as provided for in Section 4.2.1 to construct a 180' monopole tower and the installation and operation of antennas and associated equipment for wireless communication system at assessors Lot N3 Dickenson Road as it meets all the requirements of Section 13.9.

The approval will become effective when it is recorded by the property owner in the Town Clerk's Office but to satisfy the provisions of Section 13.10 of the Glastonbury Building Zone Regulations concerning expiration, this approval shall become null and void two years from August 10, 2000, unless substantial construction on a building or structure or use is established on a lot.

This decision is based upon and subject to the representations made and evidence produced by the applicant(s) at the Public Hearing.

Glastonbury Zoning Board of Appeals
For the Secretary
Edward P. Pietrycha
Edward P. Pietrycha
Building Official and Zoning Enforcement Officer

dml

cc: Wendell G. Davis, Jr., Cranmore, FitzGerald & Meaney, 49 Wethersfield Avenue, Hartford, CT.

GLASTONBURY, CT
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VOL. _____ PAGE _____
E. J. FRIEDBERG, TOWN CLERK

E. J. Friedberg

TOWN OF GLASTONBURY
ZONING BOARD OF APPEALS
APPLICATION FOR SPECIAL EXCEPTION

Applicant: SBA, Inc.
80 Eastern Boulevard
Glastonbury, CT 06033

Sprint PCS
9 Barnes Industrial Road
Wallingford, CT 06492

Omnipoint Communications
100 Filley Street
Bloomfield, CT 06002

Contact: Wendell Davis, Jr.
Cranmore, FitzGerald & Meaney
(860)522-9100

Project: Wireless Telecommunications Facility
Redwood Lane
Map 133, Lot E6

**SBA, Inc/ Sprint PCS/ Omnipoint Communications' Application for a Special Exception
(Wireless Telecommunication Facility)**

Introduction:

SBA, Inc., Sprint PCS, and Omnipoint Communications hereby petition the Zoning Board of Appeals of the Town of Glastonbury for a special exception to construct a wireless telecommunications facility at Redwood Lane, Glastonbury (Map 133, Lot E6). The Redwood Lane site is located in a Rural Residence Zone as permitted under Section 5 and Section 4.2.1 of the Glastonbury Zoning Regulations.

The details of SBA, Inc., Sprint PCS, and Omnipoint Communications' request are fully set forth in the application, attachments and drawings submitted to the Zoning Board of Appeals. This information provides you with background information on SBA, Inc., Sprint PCS, and Omnipoint Communications, PCS (Personal Communications Services), and the proposed use and necessity for the Redwood Lane site.

Background:

SBA, Inc.:

SBA Communications Corporation began in 1989 and has grown to become the premier wireless antenna site development services provider for the Wireless Telecommunications Industry. Since its beginning, SBA has worked in partnership with the leading wireless carriers to build out networks across the country and around the globe. The compilation of our Build-to-Suit program, Site Development Services, and Construction Services provides for the best solutions to the many challenges faced today in the industry. We offer our clients the freedom to choose how to best meet their antenna site build-out objectives. Our strong financial stability, capital resources and industry leadership serve to support the needs of our clients and the Wireless Telecommunications Industry.

Sprint PCS:

Based out of Kansas City, Missouri, Sprint PCS is comprised of four major corporations: Sprint Corporation, Telecommunications Incorporated (TCI), Cox Communications, and Comcast Corporation. This strong alliance provides Sprint PCS with the financial resources to create a nationwide telecommunications company that will provide customers with a variety of telecommunications services.

Sprint is a participant in the Personal Communications Service (PCS) market. In early 1995, the Federal Communications Commission (FCC) auctioned licenses in fifty-one Metropolitan Trading Areas (MTA's). With these licences and agreements with other providers, Sprint will be able to offer seamless Personal Communications Services virtually anywhere in the country.

Omnipoint Communications:

Founded in 1987, Omnipoint is a leader in wireless technology development and PCS provision. The company was started by Douglas G. Smith to develop commercial uses for a military wireless technology based on spread spectrum modulation. The company's success in developing its technology for the first digital PCS system at 190 MHz during 1991 and 1992 was instrumental in the FCC awarding the company one of the three Pioneer's Preference licenses issued for broadband PCS, specifically the "A - band" license for New York. Omnipoint holds licences covering more than 96.5 million people or "pops". The company has continuous license coverage throughout the Northeastern United States from Maine to Virginia, including Boston, New York, Philadelphia, Portland, Providence, Washington, D.C., and Norfolk. Omnipoint also has won licenses that cover areas in Michigan, Kansas, Texas, and South Florida.

PCS (Personal Communications Services):

PCS is a family of products offering services such as portable phones, pagers, and fax transmission. PCS was made available by the FCC with the allocation of 140 MHz of radio spectrum in the frequency range of 1850-1990 MHz which will allow for new wireless communications services. There are three main advantages of PCS over traditional cellular: Clarity, Privacy and All-In-One Communications.

Specific PCS services include:

Wireless PBX - A service that simply works as a wireless phone. Wireless PBX will provide the same features that desktop business telephones currently provide such as voice mail and three-way conferencing.

Telepoint - A service that can provide either one or two-way voice and data communications through hand-held phones and electronic notebooks.

Paging - A service that provides primarily one way voice and data communications such as a voice or electronic message, or data transfer to a pager, electronic notebook, or laptop computer with a built-in pager.

Site Necessity:

The goal of a wireless service provider's radio frequency engineering group is to maximize the area which their communications system will service while minimizing the number of sites required. The goal of SBA is to develop facilities which will accommodate the engineering needs of a number of wireless communications providers in one given site. This partnership benefits all. The carriers benefit from less capital cost, SBA benefits with long terms site ownership and management, and the community benefits from the variety of wireless services provided in their area as well as the reduction in the number of towers in their neighborhoods.

Once the need for a new site in a particular geographic area has been established, system engineers identify a target area in which to locate the facility. The need for a new site is dictated by capacity and coverage requirements for a particular geographic area. Within the general target area, the selection of a specific site location is determined by local topographic and geographic factors, mitigation of the antenna mounting structure's visual impact, compatibility with existing land use and the ability to negotiate a mutually beneficial lease with a landlord.

To accomplish this goal, the site must be placed at specific locations. Because these sites function as a network, the location of one site effects the service area of all the surrounding sites. In order to use mobile communications services, a user must be "handed-off" from one site to the next as they travel.

The proposed facility will be an essential part of Sprint and Omnipoint's network. There is currently a large gap in service for Sprint and Omnipoint in the southern portion of Glastonbury, most especially along Route 2. The proposed facility will allow Sprint and Omnipoint to provide continuous coverage in this area and specifically along Route 2 as it approaches the Town of Marlborough.

Co-Location

The tower has been designed to accommodate the typical antenna array of five cellular/PCS providers. Also, two additional ports have been designed to accommodate the needs of paging, two-way radio, and the emergency communications needs of the Town of Glastonbury. (See tower design drawings for further details).

Site Information

This particular site will be located within a 70' x 70' fenced compound on a 25.13 acre parcel owned by Donald A. Chapman. The property address is Redwood Lane (Map 133, Lot E6). The site will be accessed off of Redwood Lane via an existing 20' right-of-way which extends from Redwood Lane to the parcel.

This parcel is an undeveloped wooded lot. The woods provide a natural screening around the compound area. The State of Connecticut owns a significant portion of the property located to the east and south of the property and this property consists of primarily dense forest.

The project consists of the construction of a 180' monopole and the installation and operation of antennas and associated equipment as part of Sprint and Omnipoint's PCS system. The proposed compound area is 70' x 70'. This area will contain the tower and the Base Transceiver Stations for each carrier. The compound area will be enclosed by a chain link fence measuring 6' in height with 3 strands of barbed wire on top of the fence. This application also includes mounting of no more than 12 antennas per carrier at each platform level (please see site plan and equipment specification sheets and the attached Antenna Specification Sheet).

The power and telco utilities needed for the operation of this facility will be installed underground to the compound area. No water or sewer services are required. Access will be gained by upgrading the existing logging road on the property to the site location.



SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561.995.7670
F + 561.995.7626

sbasite.com

LETTER OF AUTHORIZATION

SBA Site ID: CT02216-S, Glastonbury

Property Located at: 175 Dickenson Road, Glastonbury, CT, 06073

THE CITY/COUNTY OF: Glastonbury / Hartford

APPLICATION FOR ZONING/USE/BUILDING PERMIT

This letter authorizes AT&T and its authorized agents to file for all necessary zoning, planning and building permits (local, state and federal) for the purposes of installing, operating and maintaining a telecommunications facility on the existing tower on the property referenced above on behalf of Karrie-Lynne Bronzi.

All approval conditions that may be granted to AT&T in connection with above referenced facility relating to this specific application are the sole responsibility of AT&T.

SBA Properties, LLC

A handwritten signature in black ink, appearing to read "Jason Silberstein", written in a cursive style.

Jason Silberstein

Executive VP, Site Leasing

Date: 12/22/2020



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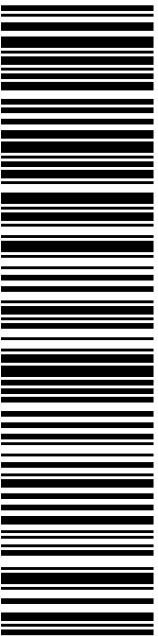
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SHIP

TO: MELANIE BACHMAN EXECUTIVE DIRECTOR
CT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN CT 06051-2655

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39 WESTVIEW DR
MERIDEN CT 06450-4723

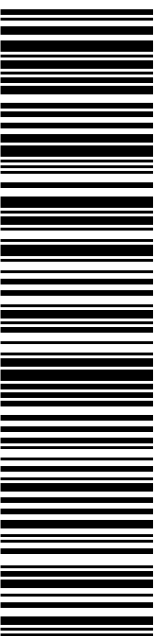
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C002

SHIP

TO: RICHARD JOHNSON PETER CAREY
TOWN OF GLASTONBURY
2155 MAIN ST
GLASTONBURY CT 06033-2282

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SAI GROUP

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MERIDEN CT 06450-4723

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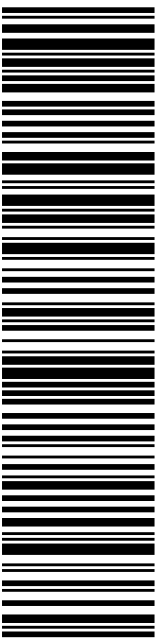
TO:

KARRIE-LYNNE BRONZI RANDALL CHAPMAN

PO BOX 7

TROY ME 04987-0007

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Electronic Rate Approved #038555749

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Hollis Redding

To: Michael McNamara
Subject: AT&T Wireless CSC Exempt Mod 175 Dickinson Rd, Glastonbury CT CT02216-S

Mike-

Attached please find an Exempt Modification which will be filed with the CT Siting Council today, December 22, 2020.

Thank you. Hollis

Hollis M. Redding



SAI Communications LLC
Mobile: 860-834-6964
hredding@saigrp.com