

May 23, 2022

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

Regarding: Notice of Exempt Modification – AT&T Site CT2312 / FA# 12676398
Address: 52 Stadley Rough Road, Danbury, CT 06811

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains a wireless telecommunications facility on an existing +/- 140’ monopole at the above-referenced address, latitude 41.4331028, longitude -73.4319167. Said monopole is operated by SBA Towers II, LLC.

AT&T desires to modify its existing telecommunications facility by swapping three (3) antennas, adding six (6) antennas, swapping six (6) remote radio units (RRUS), adding one (1) surge arrestor and accompanying feedlines, and swapping mounts as more particularly detailed and described on the enclosed Construction Drawings prepared by Hudson Design Group, LLC last revised May 19, 2022. The centerline height of the existing antennas is and will remain at 107 feet. This modification may include B2, B5, B17, B14, B29, B30, B66, & n77 hardware that is 4G(LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned off at various times.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the following individuals: The Honorable Dean Esposito, Mayor of the City of Danbury, as elected official, Sean Hearty, Zoning Enforcement Officer of the City of Danbury, Sharon B. Calitro, City Planner of the City of Danbury, SBA Towers II, LLC., as tower operator, and Christ the Shepherd Church PCA as property owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require an extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*

5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated May 10, 2022, and prepared by Tower Engineering Solutions, enclosed herewith.*

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

Sincerely,

Evan Renwick

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

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

cc: The Honorable Dean Esposito, Mayor, City of Danbury, as elected official
Sean Hearty, Zoning Enforcement Officer, City of Danbury
Sharon B. Calitro, City Planner, City of Danbury
SBA Towers II, LLC, as tower operator
Christ the Shepherd Church PCA, as property owner

EXHIBIT 1

PROJECT INFORMATION

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

- NEW AT&T ANTENNAS: AIR6419 B77G (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T ANTENNAS: AIR6449 B77D (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T ANTENNAS: DMP65R-BU6DA (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T ANTENNAS: EPBQ-654L8H6-L2 (TYP. OF 1 PER SECTOR, TOTAL OF 3) (TO BE RELOCATED TO POS. 2).
- NEW AT&T RRU'S: RRUS-4478 B14 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRU'S: RRUS-4415 B25 (1900) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRU'S: RRUS-4426 B66 (AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3) (TO BE RELOCATED TO POS. 2).
- EXISTING AT&T RRU'S: RRUS-4449 B5/B12 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3) (TO BE RELOCATED TO POS. 4).
- NEW AT&T SURGE ARRESTOR: DC9-48-60-24-8C-EV (TOTAL OF 1).
- ADD (3) Y-CABLES.
- ADD (1) #6 AWG DC POWER CABLES.
- ADD (1) 24 PAIR FIBER.
- NEW MOUNT LOW PROFILE PLATFORM MOUNT SITEPRO-1 PART # RMQLP-4210-H10

ITEMS TO BE MOUNTED IN EQUIPMENT LOCATION:

- ADD 6648 + XCEDE CABLE IN LTE RACK.
FINAL=1x6601, 1x5216, 1xXMU03, 1x6630 MIXED-MODEL + 1x6648+IDLE XCEDE.
- ADD (3) RECTIFIERS (TOTAL OF 9)
- ADD (3) STRINGS TO EXISTING BATTERY RACK (TOTAL OF 5)
- INSTALL (1) FIBER BOX.
- INSTALL (1) FIBER TRAY.

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNA: OPA-65R-LCUU-H6 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRU'S: RRUS-12 B2 + RRUS-A2 B25 (1900) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRU'S: RRUS-11 B12 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T TMA'S: TMABPD7823VG12A (TYP. OF 1 PER SECTOR, TOTAL OF 2).
- EXISTING AT&T DIPLEXERS: TPX-070821 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T SURGE ARRESTOR: DC ONLY SQUID (TOTAL OF 1).

ITEMS TO REMAIN:

- (3) ANTENNAS, (9) RRU'S, (2) SURGE ARRESTOR, (6) COAX CABLES, (6) DC POWER & (2) FIBER.

SITE ADDRESS: 52 STADLEY ROUGH ROAD
DANBURY, CT 06811

LATITUDE: 41.4331028° N, 41° 25' 59.17" N

LONGITUDE: -73.4319167° W, 73° 25' 54.90" W

TYPE OF SITE: MONOPOLE / INDOOR EQUIPMENT

STRUCTURE HEIGHT: 140-0"±

RAD CENTER: 107'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY

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 LAYOUT PLANS & ELEVATION	0
A-3	DETAILS	0
A-4	DETAILS	0
G-1	GROUNDING DETAILS	0
RF-1	RF PLUMBING DIAGRAM	0

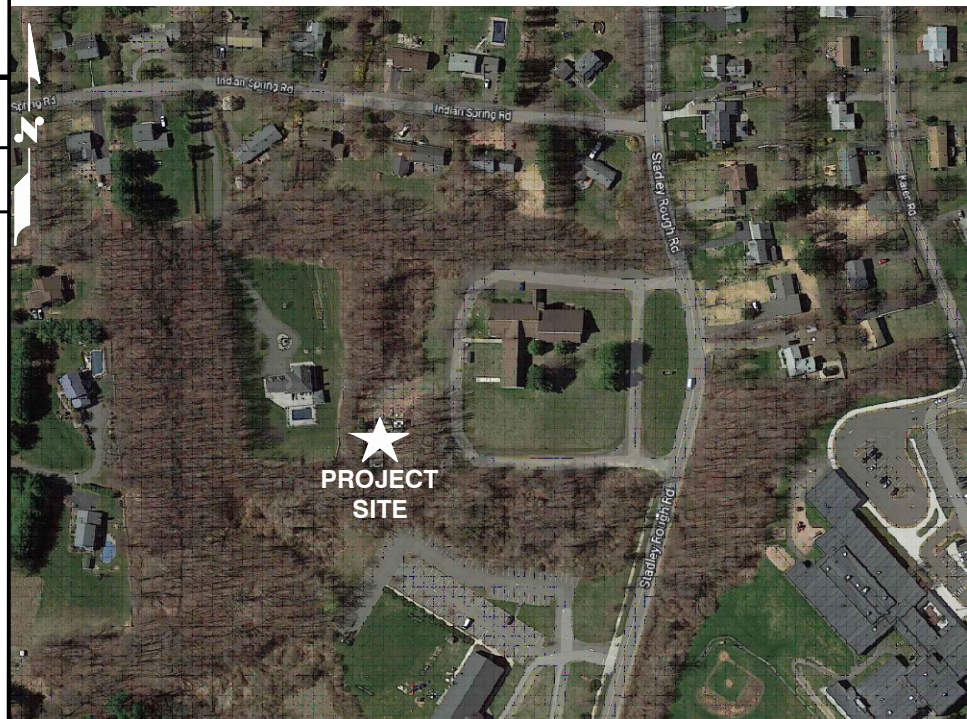


SITE NUMBER: CT2312
SITE NAME: DANBURY STADLEY ROUGH ROAD
FA CODE: 12676398

PACE ID:
MRCTB054820, MRCTB055214, MRCTB055425, MRCTB055829,
MRCTB061000
PROJECT: 5G NR 1SR CBAND, CELL SITE RF MODIFICATION, LTE
6C, LTE NEXT CARRIER, 5G NR RADIO, 2021 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:
 TURN LEFT TO MERGE ONTO I-91 S. TAKE EXIT 18 TO MERGE ONTO I-691 W TOWARD MERIDEN/WATERBURY. TAKE EXIT 1 ON THE LEFT FOR I-84 W TOWARD WATERBURY/DANBURY. MERGE ONTO I-84. TAKE EXIT 7 TO MERGE ONTO US-202. E/WHITE TURKEY RD EXD. TURN LEFT ONTO US-202 E/WHIT TURKEY RD EXD. CONTINUE ONTO CANDLEWOOD LAKE RD. TURN LEFT ONTO N NABBY RD. TURN LEFT ONTO FORTY ACER MOUNTAIN RD. TURN LEFT ONTO FORTY ACE MOUNTAIN RD. CONTINUE ONTO STADLEY RD. DESTINATION WILL BE ON THE RIGHT.



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.

72 HOURS

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

UNDERGROUND SERVICE ALERT

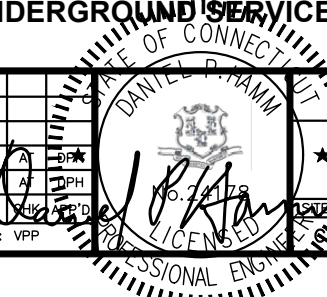
HUDSON Design Group LLC
 45 BEECHWOOD DRIVE
 NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

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

SITE NUMBER: CT2312
SITE NAME: DANBURY STADLEY ROUGH ROAD
 52 STADLEY ROUGH ROAD
 DANBURY, CT 06811
 FAIRFIELD COUNTY

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

NO.	DATE	REVISIONS	DESIGNED BY	DRAWN BY	SCALE	PROJECT NUMBER	DRAWING NUMBER	REV
0	05/19/22	ISSUED FOR PERMITTING	MB	A	AS SHOWN	CT2312	T-1	0
A	03/03/22	ISSUED FOR REVIEW	VPP	AT				



AT&T
 TITLE SHEET
 5G NR 1SR CBAND, CELL SITE RF
 MODIFICATION, LTE 6C, LTE NEXT
 CARRIER, 5G NR RADIO
 PROJECT NUMBER: CT2312
 DRAWING NUMBER: T-1
 REV: 0

ISSUED FOR PERMITTING

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 – CENTERLINE
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

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

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

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

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

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

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

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

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

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

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

SITE NUMBER: CT2312
SITE NAME: DANBURY STADLEY ROUGH ROAD

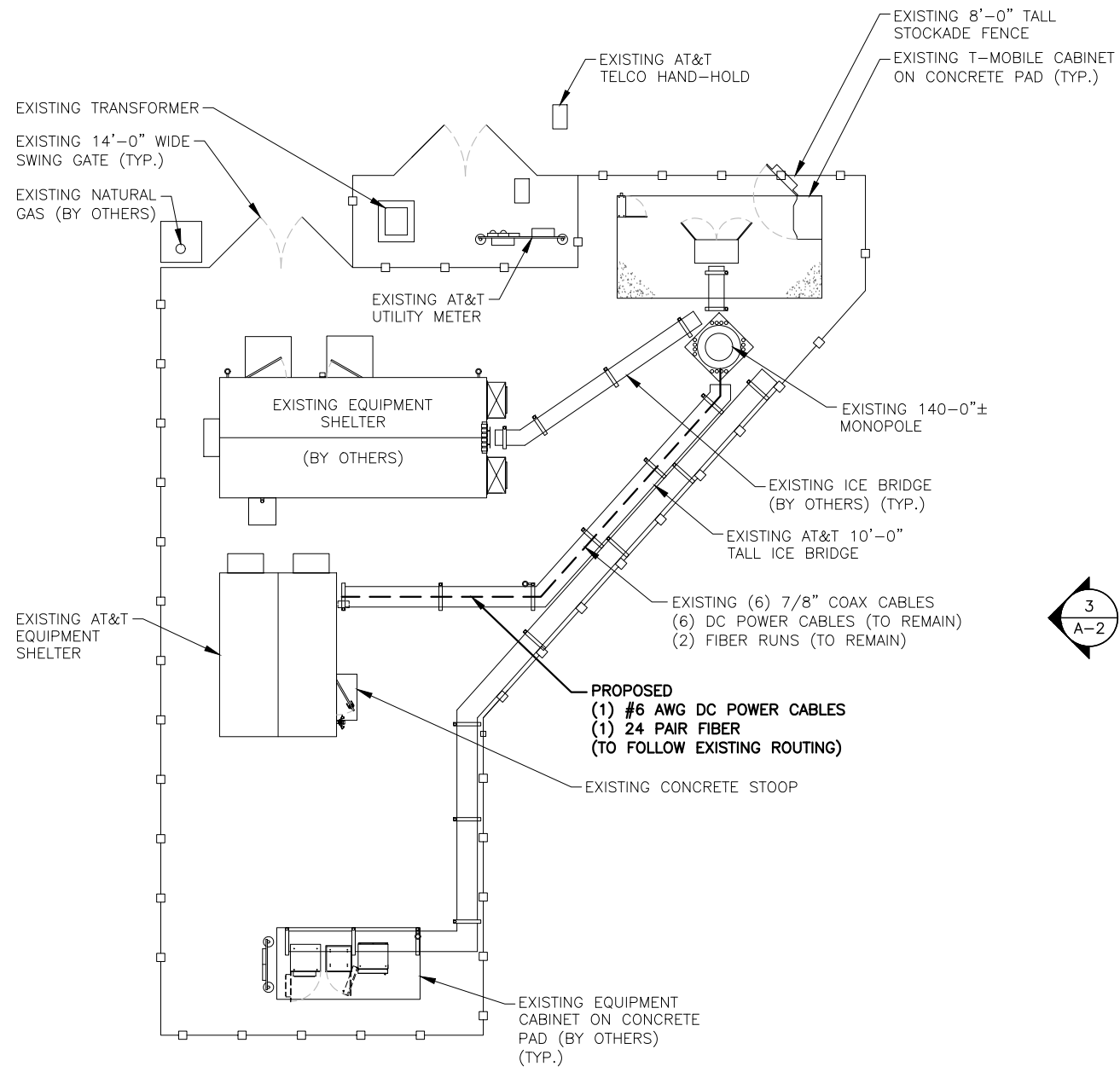
52 STADLEY ROUGH ROAD
DANBURY, CT 06811
FAIRFIELD COUNTY

500 ENTERPRISE DRIVE, SUITE 3A
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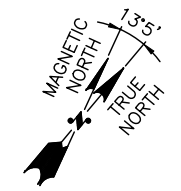
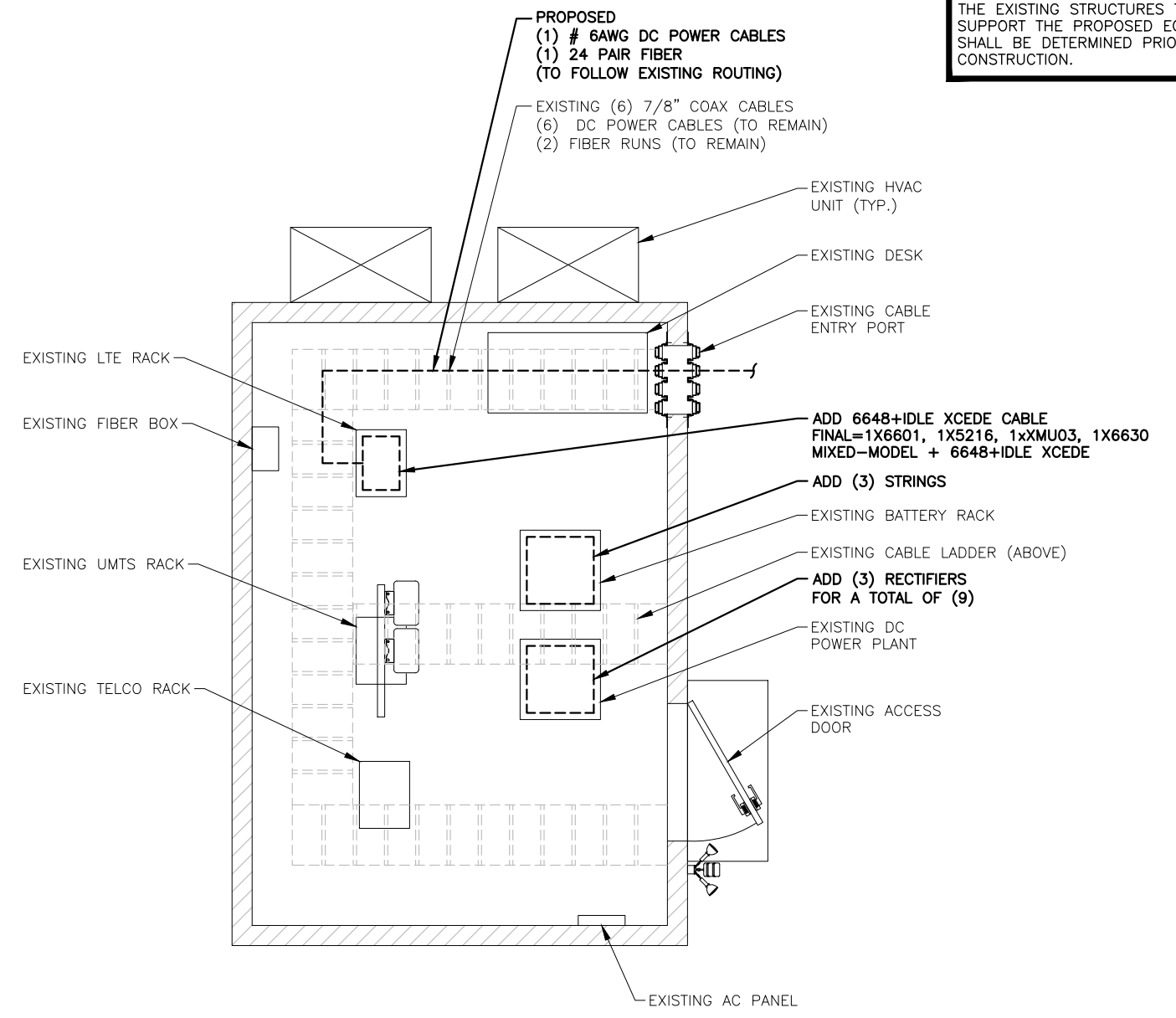
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A	03/03/22		ISSUED FOR REVIEW				DRAWING NUMBER	REV
							CT2312	GN-1
								0

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

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

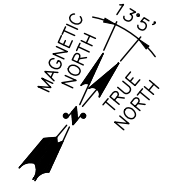
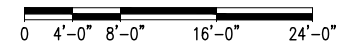


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A-2



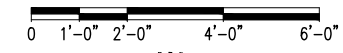
COMPOUND PLAN
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

1
A-1



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

2
A-1



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

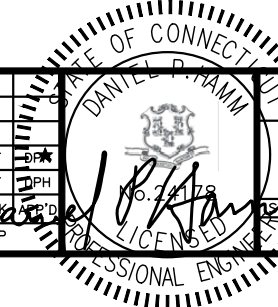
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT2312
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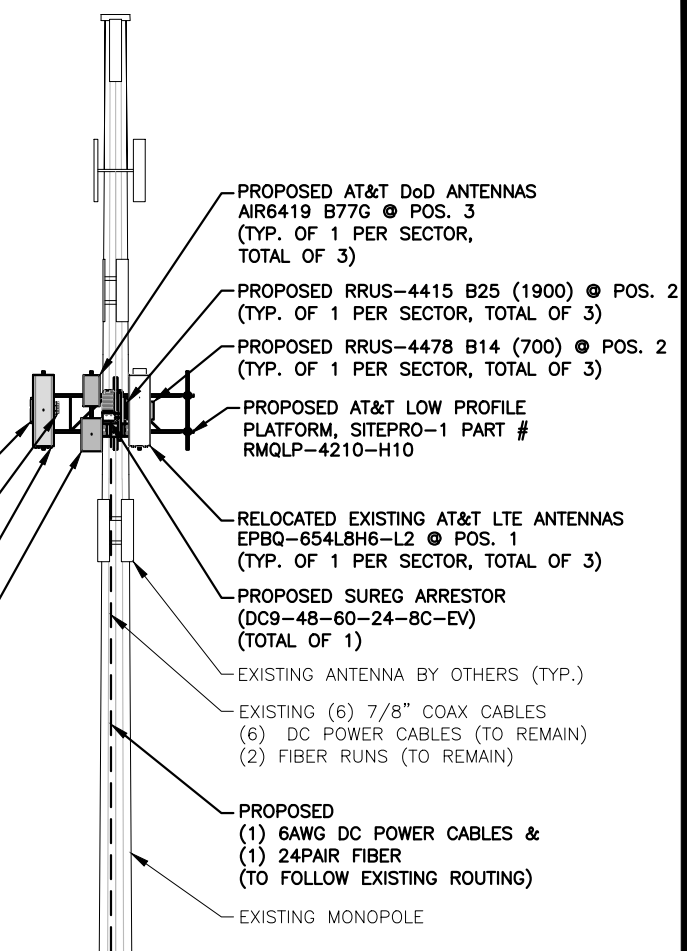
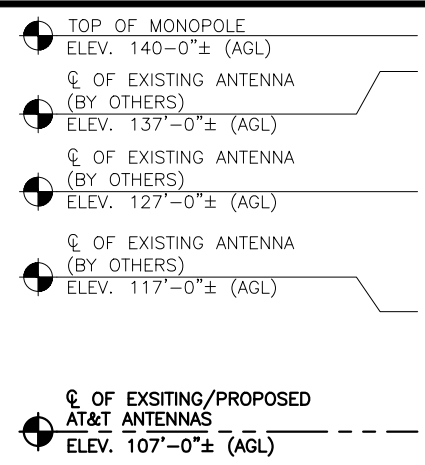
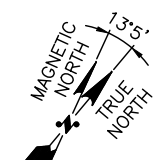
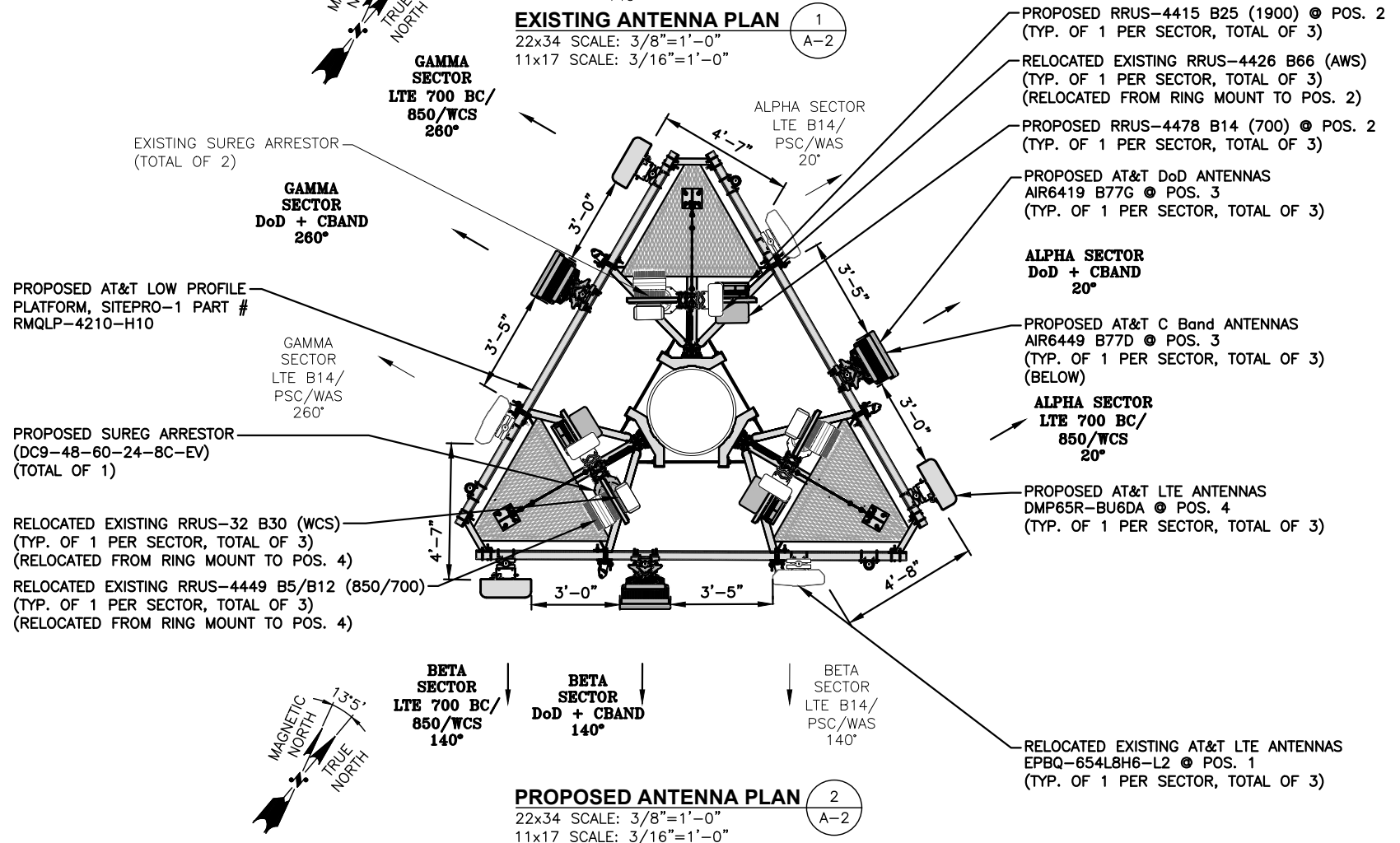
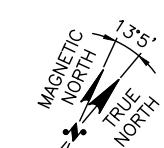
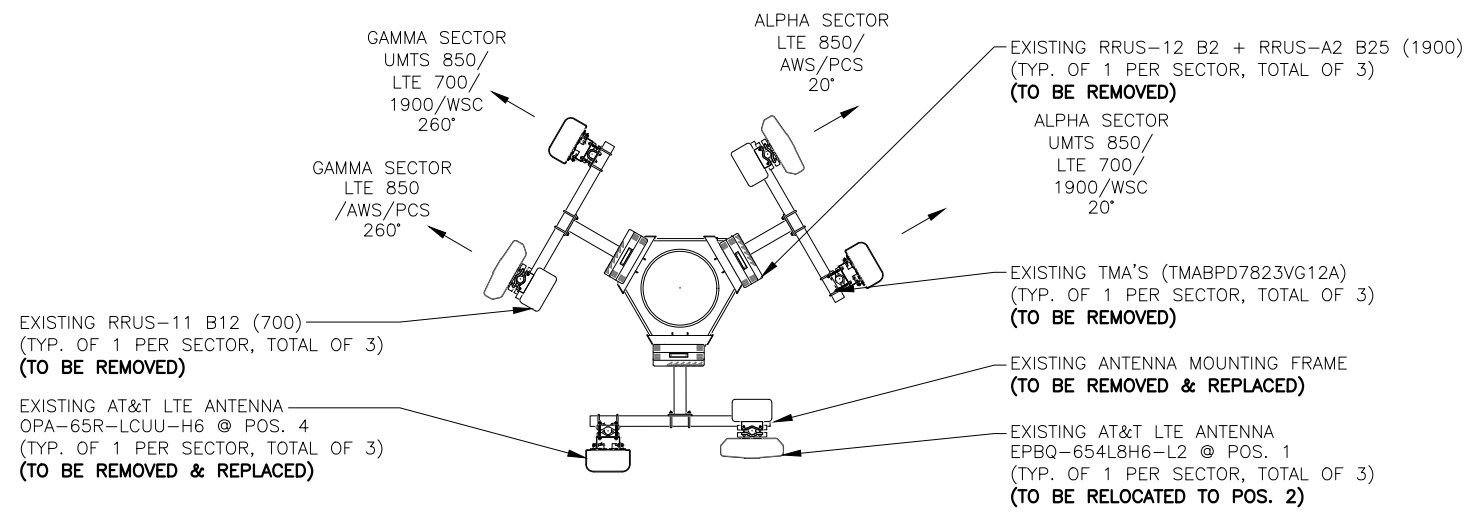
at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	DESIGNED BY: AT	DRAWN BY: VPP
0	05/19/22	ISSUED FOR PERMITTING	MB	A
A	03/03/22	ISSUED FOR REVIEW	VPP	AT

SCALE: AS SHOWN



AT&T
COMPOUND & EQUIPMENT PLANS
5G NR 1SR CBAND, CELL SITE RF
MODIFICATION, LTE 6C, LTE NEXT
CARRIER, 5G NR RADIO
DRAWING NUMBER: A-1
REV: 0

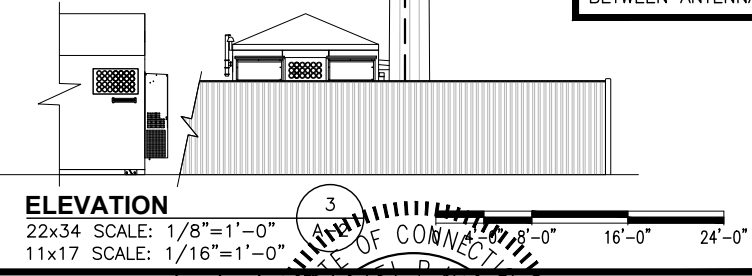


NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

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

NOTE:
 ANTENNAS AND MOUNTS TO BE ADJUSTED AS REQUIRED TO ACHIEVE A 3'-0" MINIMUM SEPARATION BETWEEN ANTENNAS

NOTE:
 EXISTING GROUND EQUIPMENT NOT SHOWN FOR CLARITY.



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

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

SITE NUMBER: CT2312
SITE NAME: DANBURY STADLEY ROUGH ROAD
 52 STADLEY ROUGH ROAD
 DANBURY, CT 06811
 FAIRFIELD COUNTY

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

NO.	DATE	REVISIONS	DESIGNED BY:	DRAWN BY:	SCALE:
0	05/19/22	ISSUED FOR PERMITTING	MB	A	AS SHOWN
A	03/03/22	ISSUED FOR REVIEW	VPE	AT	

AT&T
 ANTENNA LAYOUT PLANS & ELEVATION
 5G NR 1SR CBAND, CELL SITE RF
 MODIFICATION, LTE 6C, LTE NEXT
 CARRIER, 5G NR RADIO

STATE OF CONNECTICUT
 DANIEL P. HAMM
 LICENSED PROFESSIONAL ENGINEER

DRAWING NUMBER: CT2312
 A-2
 REV: 0

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA CL HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	-	-	-	-	-	-	-	-	-	(2) 7/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8F
A2	EXISTING	LTE B14/ PSC/WAS	EPBQ-654L8H6-L2	72"x21"x6.3"	107'-0"±	20°	-	(P)(1)RRUS-4478 B14 (700) (P)(1)RRUS-4415 B25 (1900) (E)(1)RRUS-4426 B66 (AWS)	18.1"x13.4"x8.3" 16.5"x13.4"x5.9"	(E)(2) DC POWER (1) FIBER	(E) (1) RAYCAP DC6-48-60-18-8F
A3	PROPOSED	DoD C-BAND	AIR6419 B77G AIR6449 B77D (STACKED)	31.1"x16.1"x7.3" 30.4"x15.9"x8.1"	107'-0"±	20°	-	-	-	-	(E) (1) RAYCAP DC6-48-60-18-8F
A4	PROPOSED	LTE 700 BC/ 850/WCS	DMP65R-BU6DA	71.2"x20.7"x7.7"	107'-0"±	20°	-	(E)(1)RRUS-4449 B5/B12 (850/700) (E)(1)RRUS-32 B30 (WCS)	-	(P)(1)(Y-CABLE)	(E) (1) RAYCAP DC6-48-60-18-8F
B1	-	-	-	-	-	-	-	-	-	(2) 7/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8F
B2	EXISTING	LTE B14/ PSC/WAS	EPBQ-654L8H6-L2	72"x21"x6.3"	107'-0"±	140°	-	(P)(1)RRUS-4478 B14 (700) (P)(1)RRUS-4415 B25 (1900) (E)(1)RRUS-4426 B66 (AWS)	18.1"x13.4"x8.3" 16.5"x13.4"x5.9"	(E)(2) DC POWER (1) FIBER	(E) (1) RAYCAP DC6-48-60-18-8F
B3	PROPOSED	DoD C-BAND	AIR6419 B77G AIR6449 B77D (STACKED)	31.1"x16.1"x7.3" 30.4"x15.9"x8.1"	107'-0"±	140°	-	-	-	-	(E) (1) RAYCAP DC6-48-60-18-8F
B4	PROPOSED	LTE 700 BC/ 850/WCS	DMP65R-BU6DA	71.2"x20.7"x7.7"	107'-0"±	140°	-	(E)(1)RRUS-4449 B5/B12 (850/700) (E)(1)RRUS-32 B30 (WCS)	-	(P)(1)(Y-CABLE)	(E) (1) RAYCAP DC6-48-60-18-8F
C1	-	-	-	-	-	-	-	-	-	(2) 7/8 COAX	(P) (1) RAYCAP DC9-48-60-24-8C-EV
C2	EXISTING	LTE B14/ PSC/WAS	EPBQ-654L8H6-L2	72"x21"x6.3"	107'-0"±	260°	-	(P)(1)RRUS-4478 B14 (700) (P)(1)RRUS-4415 B25 (1900) (E)(1)RRUS-4426 B66 (AWS)	18.1"x13.4"x8.3" 16.5"x13.4"x5.9"	(E)(2) DC POWER (P)(1) #6 AWG DC POWER (1) FIBER	(P) (1) RAYCAP DC9-48-60-24-8C-EV
C3	PROPOSED	DoD C-BAND	AIR6419 B77G AIR6449 B77D (STACKED)	31.1"x16.1"x7.3" 30.4"x15.9"x8.1"	107'-0"±	260°	-	-	-	-	(P) (1) RAYCAP DC9-48-60-24-8C-EV
C4	PROPOSED	LTE 700 BC/ 850/WCS	DMP65R-BU6DA	71.2"x20.7"x7.7"	107'-0"±	260°	-	(E)(1)RRUS-4449 B5/B12 (850/700) (E)(1)RRUS-32 B30 (WCS)	-	(P)(1)(Y-CABLE)	(P) (1) RAYCAP DC9-48-60-24-8C-EV

RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
P(3)	4478 B14 (700)	18.1"x13.4"x8.3"
P(3)	4415 B25 (1900)	16.5"x13.4"x5.9"
E(3)	4426 B66 (AWS)	14.9"x13.2"x5.8"
E(3)	4449 B5/B12 (850/700)	17.9"x13.2"x10.4"
E(3)	RRUS-32 B30 (WCS)	27.2"x12.1"x7.0"

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

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

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

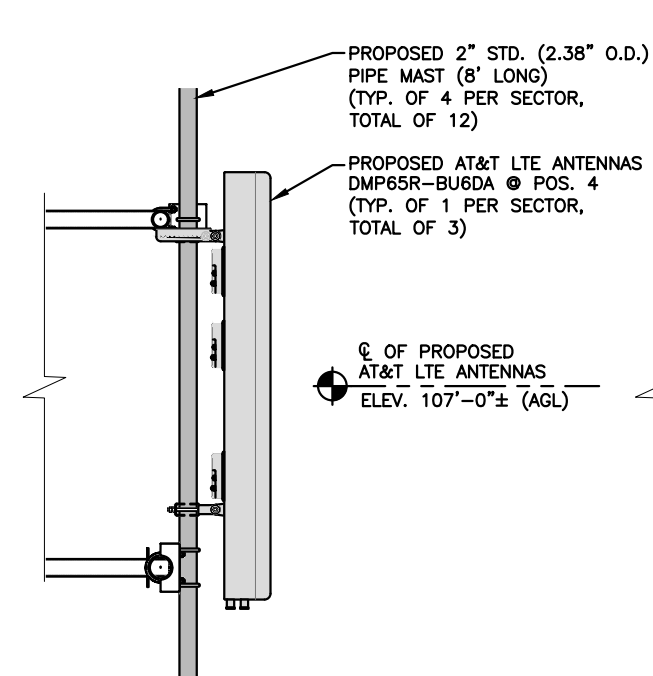


PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

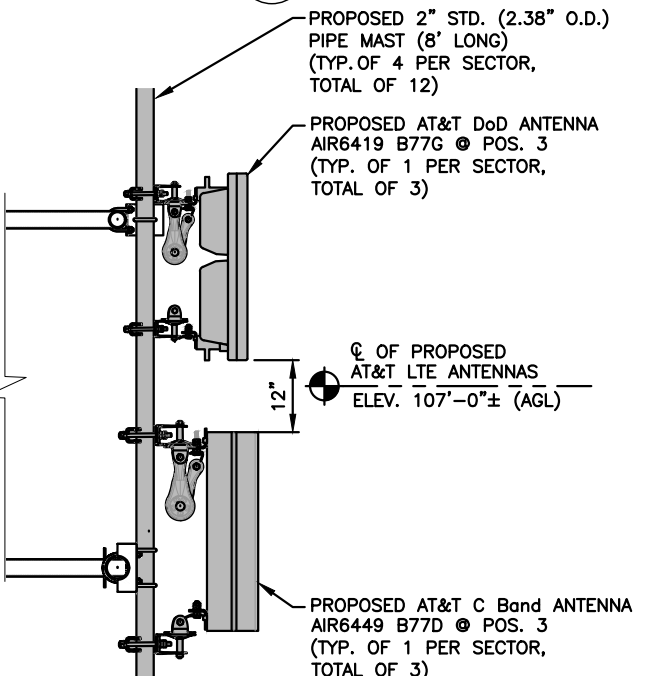
NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL 2
SCALE: N.T.S

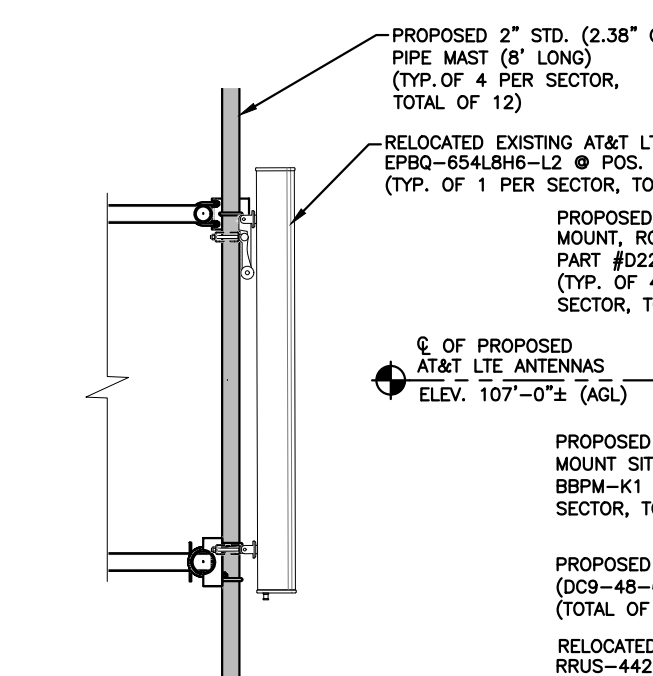
FINAL ANTENNA SCHEDULE
SCALE: N.T.S



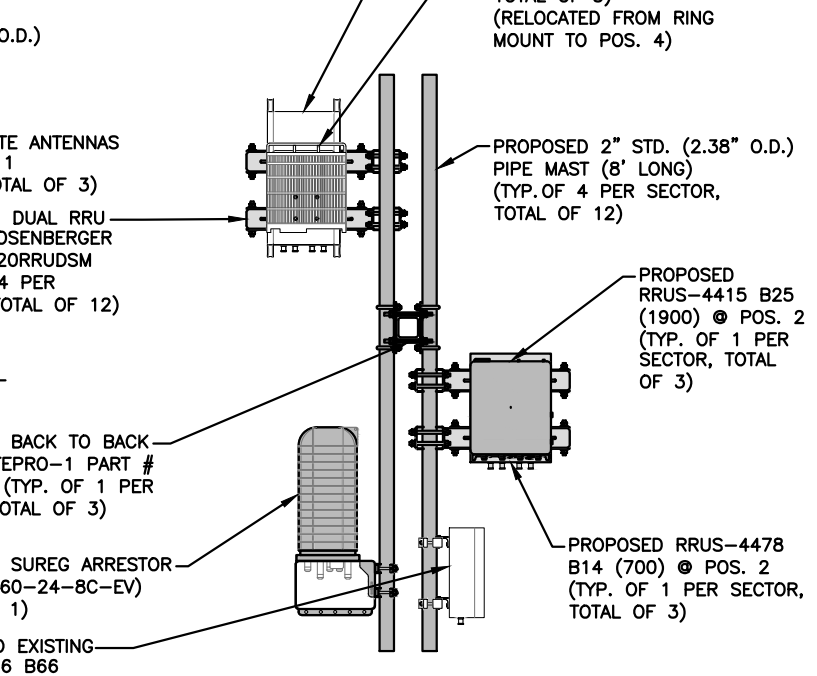
PROPOSED ANTENNA LTE ANTENNA MOUNTING DETAIL 3
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"
0 8" 1'-4" 2'-8" 4'-0"



PROPOSED ANTENNA DoD + C Band ANTENNA MOUNTING DETAIL 4
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"
0 8" 1'-4" 2'-8" 4'-0"



RELOCATED LTE ANTENNA MOUNTING DETAIL 5
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"
0 8" 1'-4" 2'-8" 4'-0"



PROPOSED RRUS MOUNTING DETAIL 6
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"
0 8" 1'-4" 2'-8" 4'-0"

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

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

SITE NUMBER: CT2312
SITE NAME: DANBURY STADLEY ROUGH ROAD
52 STADLEY ROUGH ROAD
DANBURY, CT 06811
FAIRFIELD COUNTY

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

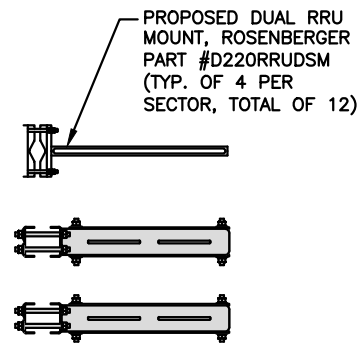
AT&T DETAILS
5G NR 1SR CBAND, CELL SITE RF MODIFICATION, LTE 6C, LTE NEXT CARRIER, 5G NR RADIO

NO.	DATE	REVISIONS	DESIGNED BY: AT	DRAWN BY: VPP
0	05/19/22	ISSUED FOR PERMITTING	MB	A
A	03/03/22	ISSUED FOR REVIEW	VPP	AT

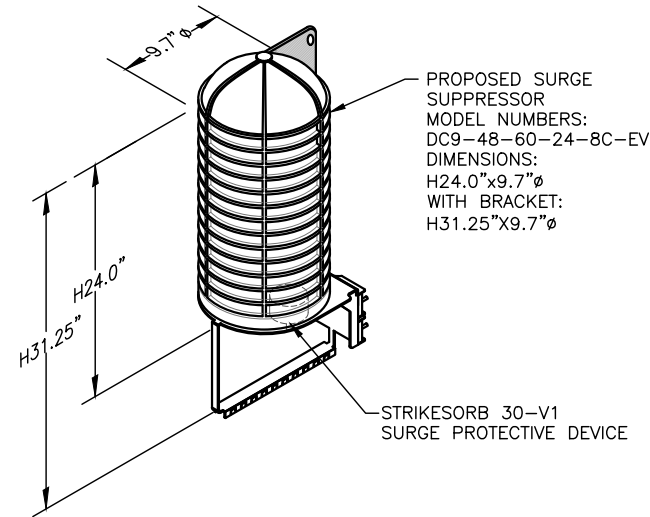
SCALE: AS SHOWN

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

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

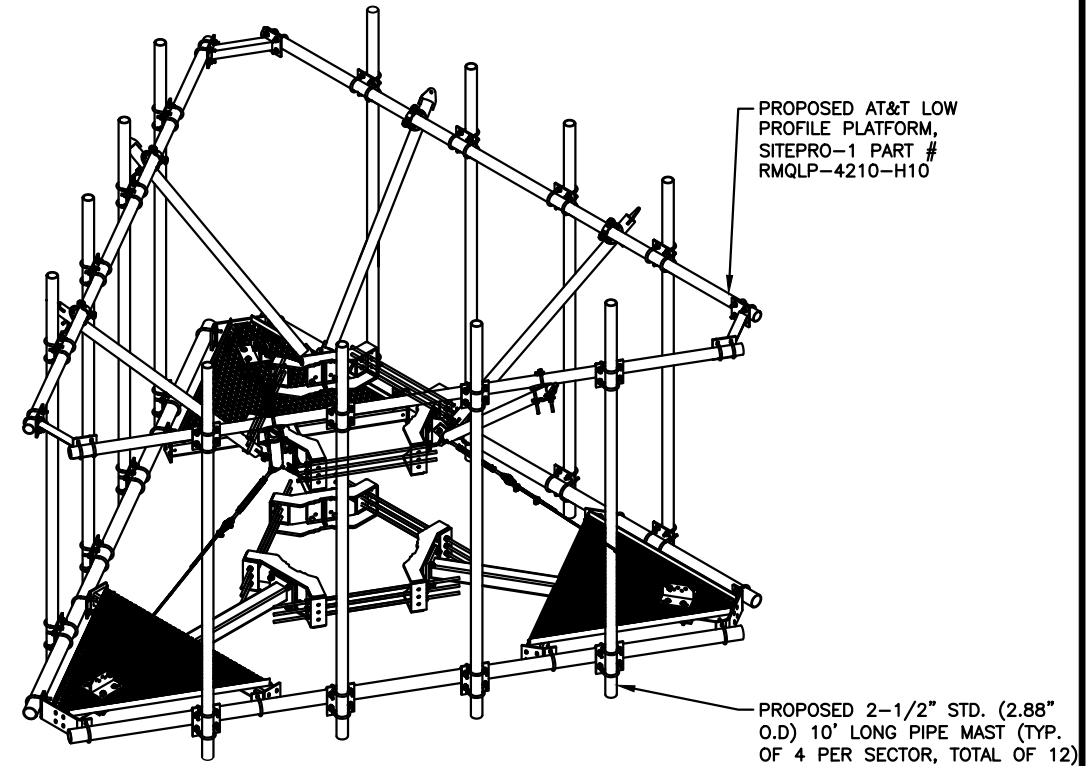


BACK TO BACK RRU MOUNT DETAIL 1
A-4
SCALE: N.T.S

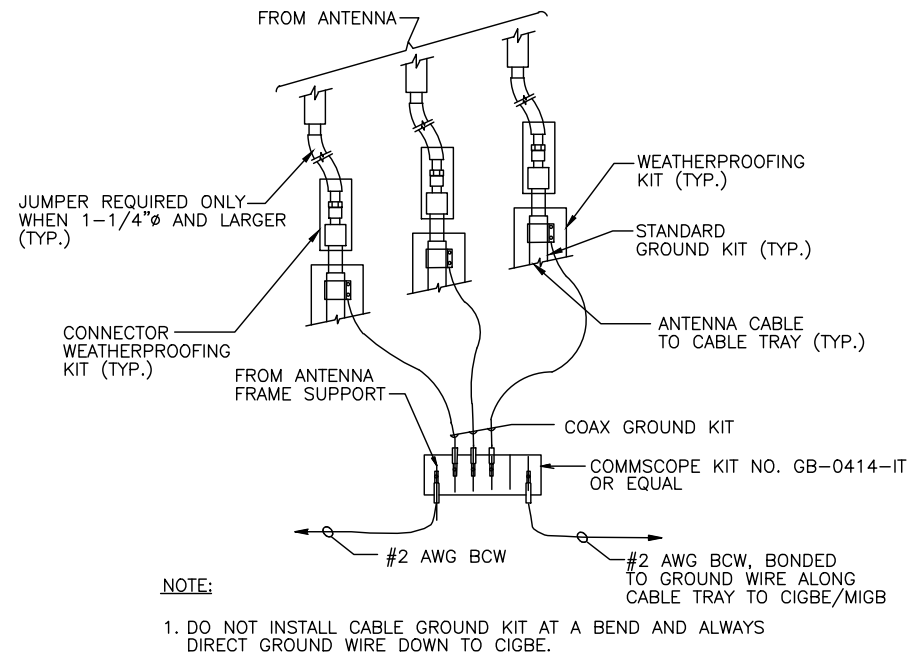


NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

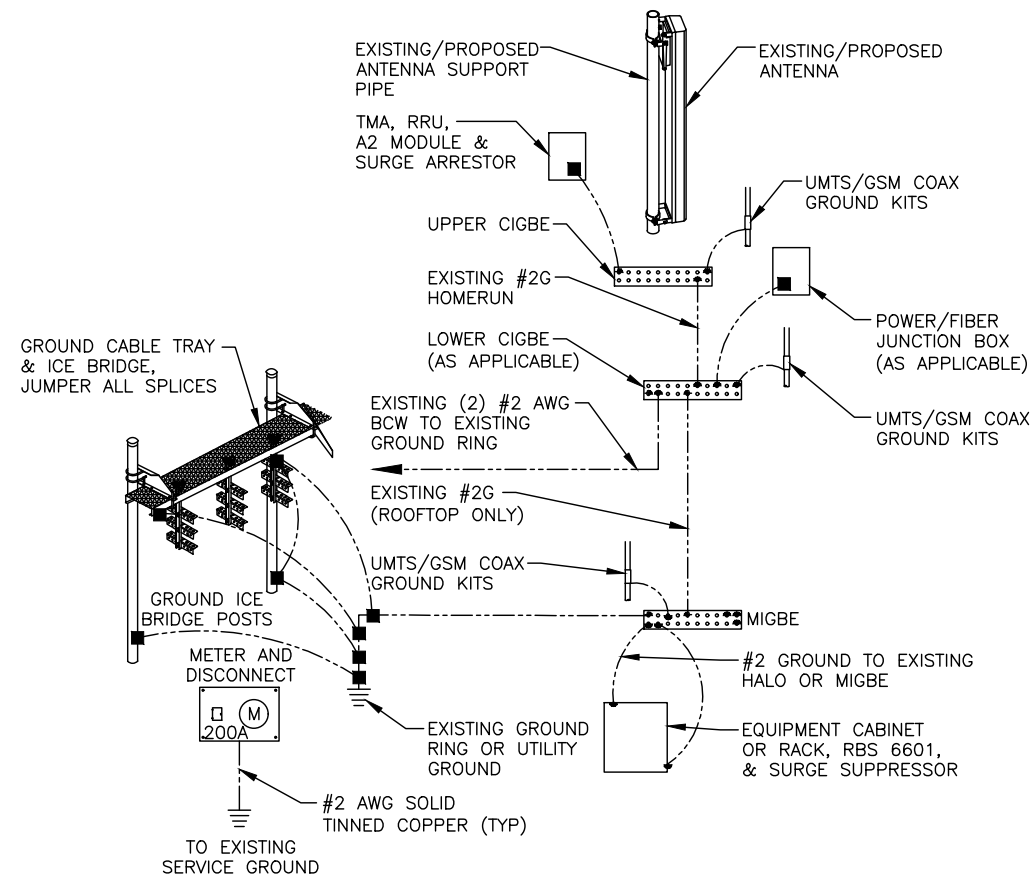
DC SURGE PROTECTOR DETAIL 2
A-4
SCALE: N.T.S



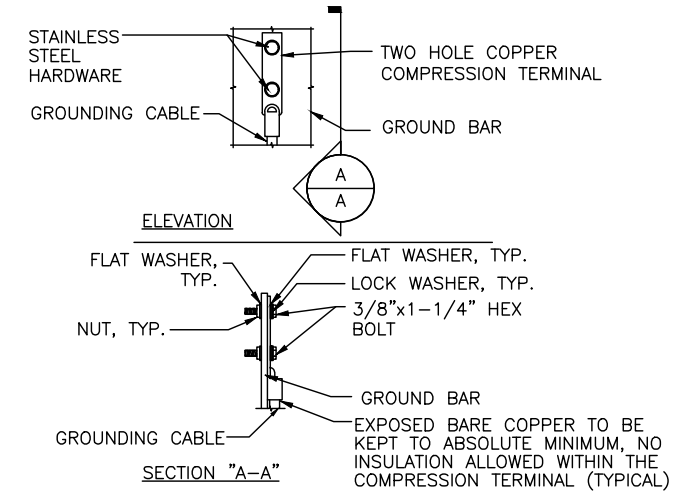
14'-6" LOW PROFILE PLATFORM (RMQLP-4120-H10) 3
A-4
SCALE: N.T.S



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



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



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

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

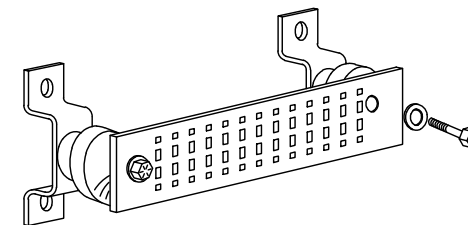
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

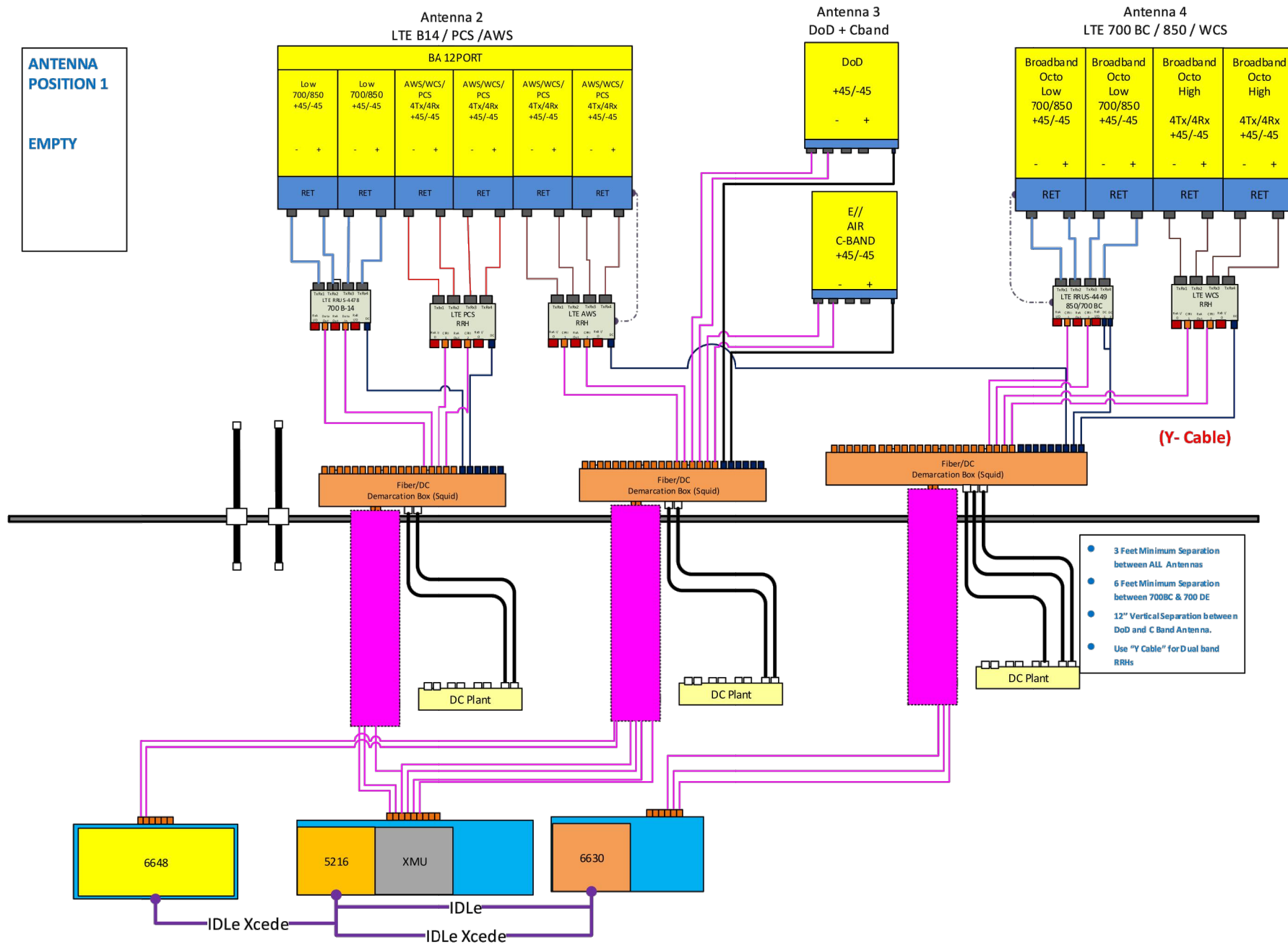
- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

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



GROUND BAR - DETAIL (AS REQUIRED) 4
SCALE: N.T.S.



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	05/19/22	ISSUED FOR PERMITTING	MB	AT	DPH
A	03/03/22	ISSUED FOR REVIEW	VPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: VPP		

AT&T		
RF PLUMBING DIAGRAM		
5G NR 1SR CBAND, CELL SITE NEXT MODIFICATION, LTE 6C, LTE NEXT CARRIER, 5G NR RADIO		
SITE NUMBER	DRAWING NUMBER	REV
CT2312	RF-1	0

EXHIBIT 2

52 STADLEY ROUGH RD

Location 52 STADLEY ROUGH RD

Mblu K07 / 19 /

Acct#

Owner CHRIST THE SHEPHERD
CHURCH PCA

Assessment \$1,400,200

Appraisal \$2,000,200

PID 23658

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$1,482,100	\$518,100	\$2,000,200

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$1,037,500	\$362,700	\$1,400,200

Owner of Record

Owner CHRIST THE SHEPHERD CHURCH PCA
Co-Owner
Address 52 STADLEY ROUGH RD
DANBURY, CT 06811

Sale Price \$450,000
Book & Page 1948/ 939
Sale Date 07/25/2007
Instrument 25

Ownership History

Ownership History				
Owner	Sale Price	Book & Page	Instrument	Sale Date
CHRIST THE SHEPHERD CHURCH PCA	\$450,000	1948/ 939	25	07/25/2007
CANDLEWOOD BAPTIST CHURCH	\$0	0510/0346		01/24/1972

Building Information

Building 1 : Section 1

Year Built: 1997
Living Area: 11,320
Replacement Cost: \$1,540,478
Building Percent Good: 85
Replacement Cost
Less Depreciation: \$1,309,400

Building Attributes

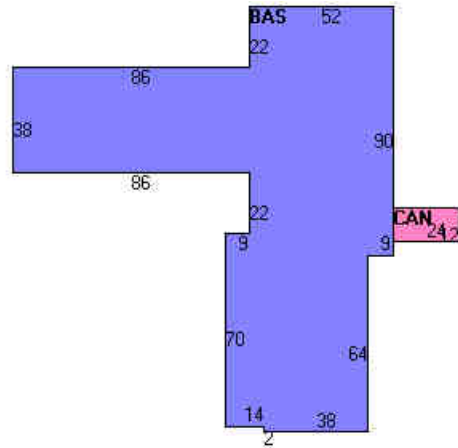
Field	Description
STYLE	Churches
MODEL	Ind/Comm
Grade	Good
Stories:	1
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asphalt Shngl.
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Church
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	200I
Heat/AC	HEAT/AC PKGS
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	12
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos2/DanburyCTPhotos/A00\02\81\21.jpg>)

Building Layout



(http://images.vgsi.com/photos2/DanburyCTPhotos/Sketches/23658_2365)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	11,320	11,320
CAN	Canopy	288	0
		11,608	11,320

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 918

Land Line Valuation

Size (Acres) 4.85

Description	Church	Frontage	0
Zone	RA40	Depth	0
Neighborhood	3000	Assessed Value	\$362,700
Alt Land Appr Category	No	Appraised Value	\$518,100

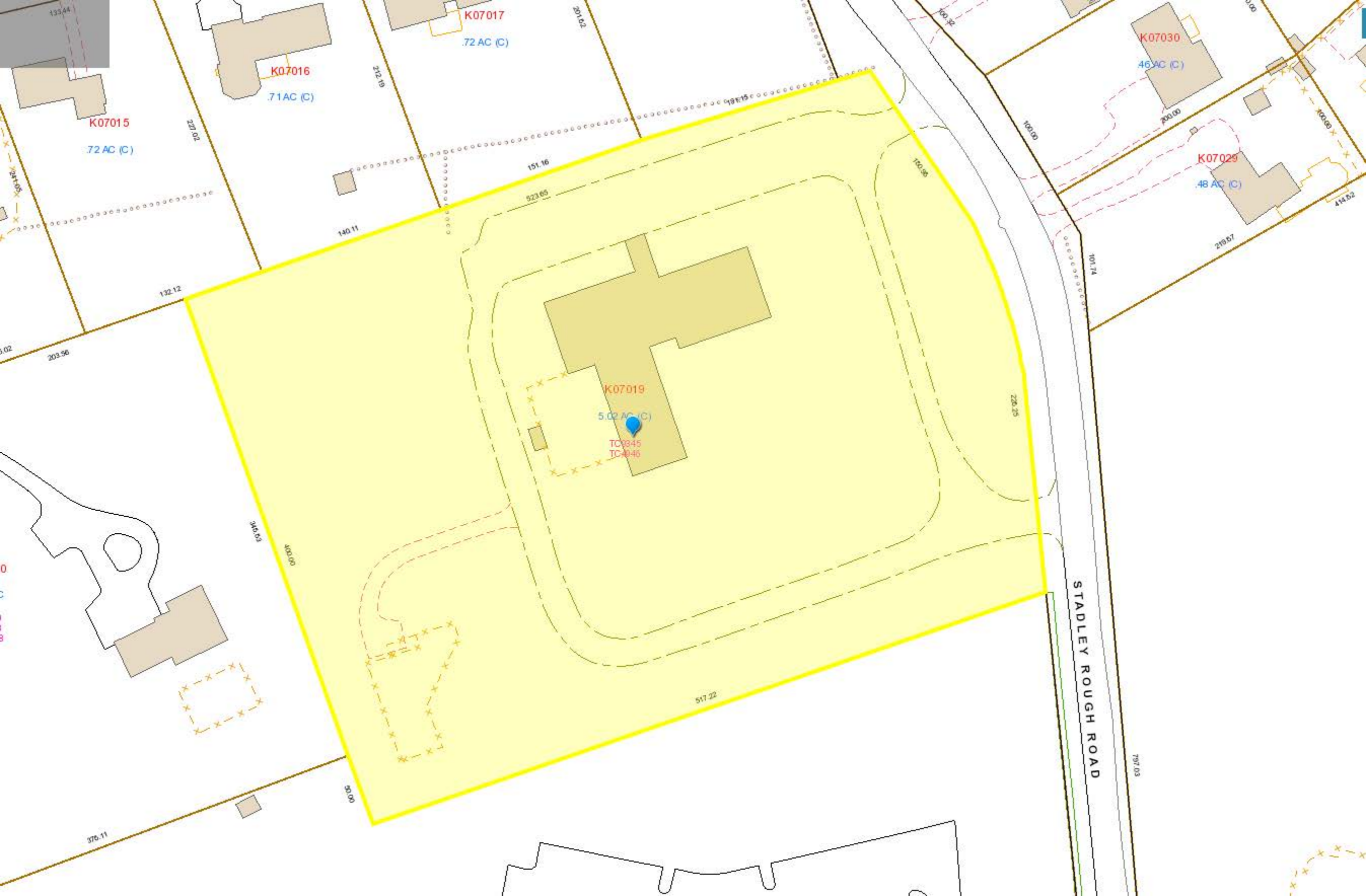
Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	Paving-Asphalt			20000 S.F.	\$21,000	1
SHD1	Shed-Avg			128 S.F.	\$1,100	1
FN3	Fence 3			160 L.F.	\$600	1
CEL	Cell Tower			1 UNITS	\$150,000	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$1,482,100	\$518,100	\$2,000,200
2018	\$1,482,100	\$518,100	\$2,000,200
2017	\$1,482,100	\$518,100	\$2,000,200

Assessment			
Valuation Year	Improvements	Land	Total
2019	\$1,037,500	\$362,700	\$1,400,200
2018	\$1,037,500	\$362,700	\$1,400,200
2017	\$1,037,500	\$362,700	\$1,400,200



K07015

72 AC (C)

K07016

71 AC (C)

K07017

72 AC (C)

K07030

46 AC (C)

K07029

48 AC (C)

K07019

5.02 AC (C)

TC0845

TC0846

STADLEY ROUGH ROAD

132.12

227.04

212.19

140.11

151.16

523.65

750.38

220.25

345.93

500.00

517.22

101.74

797.03

376.11

50.00

EXHIBIT 3



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 140 ft SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13549-S

Customer Site Name: Danbury 1

Carrier Name: AT&T (App#: 195389, V2)

Carrier Site ID / Name: CT2312 / Danbury Stadley Rough Road

Site Location: 52 Stadley Rough Road

Danbury, Connecticut

Fairfield County

Latitude: 41.433102

Longitude: -73.431916

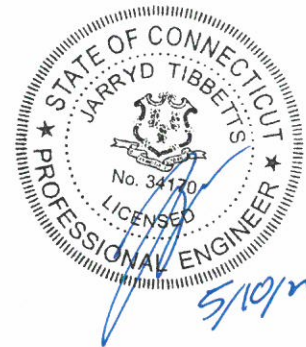
Analysis Result:

Max Structural Usage: 99.9% [Pass]

Max Foundation Usage: 81.0% [Pass]

Additional Usage Caused by New Mount: +2.8%

Report Prepared By: Sital Shrestha





Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

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Fairfield County

Latitude: 41.433102

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Analysis Result:

Max Structural Usage: 99.9% [Pass]

Max Foundation Usage: 81.0% [Pass]

Additional Usage Caused by New Mount: +2.8%

Report Prepared By: Sital Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the 140 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Tower Drawings prepared by Sabre Towers and Poles, Job # 10-01206 Dated 01/28/2010
Foundation Drawing	Foundation Drawings prepared by Sabre Towers and Poles, Job # 10-01206 Dated 01/28/2010
Geotechnical Report	Geotechnical Report prepared by Tower Engineering Professionals Project # 091184.01 Dated 05/13/2009
Modification Drawings	N/A
Mount Analysis	HUDSON Design Group, LLC. Project No. 2051A11MLS, dated 04/13/2022

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 120.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 93.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_5 = 0.217, S_1 = 0.067$

This structural analysis is based upon the tower being classified as a Structure 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.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	137.0	3	RFS APXVAARR18_43-U-NA20 - Panel	(3) T-Arms with extended horizontal support Sitepro RDS-272	(9) 1 5/8" (4) 1 5/8" Fiber	T-Mobile
2		3	Air 32 KRD901146_1_B66A_B2A - Panel			
3		3	AIR6449 B41 - Panel			
4		3	Ericsson KRY 112 144/1-TMA			
5		3	Commscope SDX1926Q-43-Diplexers			
6		3	Ericsson 4449 B71+B85 RRU			
7		3	Ericsson 4415 B25 RRU			
8	127.0	3	Commscope FFV-65B-R2- Panel	(1) Commscope MC-PK8-DSH	(1) 1.75" Hybrid	Dish Wireless
9		3	Fujitsu TA08025-B605- RRH			
10		3	Fujitsu TA08025-B604- RRH			
11		1	Raycap RDIDC-9181-PF-48- OVP			
-	107.0	3	CCI OPA-65R-LCUU-H6	(1) Commscope MC-HPM1250-B (1) Commscope RR-RM1560	(6) 3/4" DC Power (2) 3/8" Fiber (6) 7/8" Coax	AT&T
-		3	KMW EPBQ-652L8H6-L2			
-		3	CCI DTMABP7819VG12A TMA			
-		3	Ericsson RRUS-11 700MHz			
-		3	Ericsson RRUS-12			
-		3	Ericsson RRUS-32			
-		3	Ericsson RRUS 4449 B5/B12			
-		3	Ericsson RRUS 4426 B66			
-		3	Ericsson RRUS-A2			
-		3	Kaelus DBC2055F1V1			
-		3	Raycap DC6-48-60-18-8F			
26		97.0	6			
27	3		Samsung VZS01 - Panel			
28	3		Samsung B5/B13 RRH-BR04C			
29	3		Samsung B2/B66A RRH-BR049			
30	1		Commscope RCMD-6627-PF-48			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
12	107.0	3	KMW EPBQ-652L8H6-L2- Panel	(1) SitePro1 RMQLP-4120-H10	(1) 0.92" DC Power (1) 1/2" Fiber (6) 3/4" DC Power (2) 3/8" Fiber (6) 7/8" Coax	AT&T
13		3	Ericsson AIR6449 B77D- Panel			
14		3	Ericsson AIR6419 B77G- Panel			
15		3	Cci DMP65R-BU6DA- Panel			
16		3	CCI DTMABP7819VG12A T-MA			
17		3	Ericsson RRUS-32- RRH			
18		3	RRUs 4449 B5/B12 Ericsson- RRH			
19		3	Ericsson RRUS 4426 B66- RRH			
20		3	Ericsson 4415 B25- RRH			
21		3	Ericsson RRUS 4478 B14- RRH			
22		3	Ericsson RRUS-A2- RRU			
23		3	Kaelus DBC2055F1V1- Combiners			
24		2	Raycap DC6-48-60-18-8F- OVP			
25		1	Raycap DC9-48-60-24-8C-EV- OVP			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	99.9%	78.4%	74.4%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	2601.5	25.3	60.9

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.9751 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 99.94% at 53.3ft

Structure: CT13549-S-SBA
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.000 (ft)

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

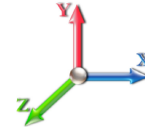
5/10/2022



Page: 1

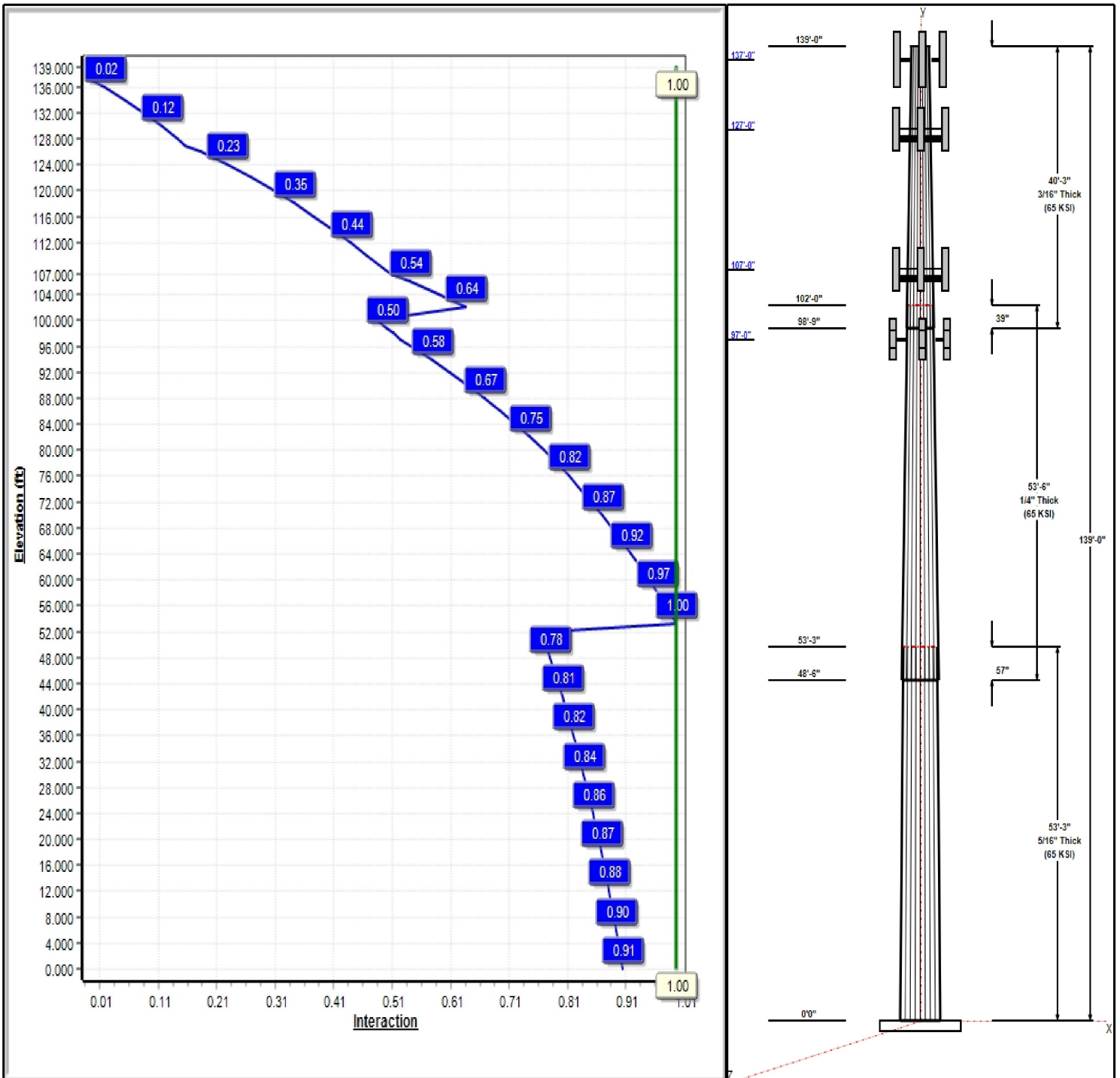
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 93 mph Wind



Iterations: 31

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Structure: CT13549-S-SBA

Type: Tapered
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23097

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Shaft Properties

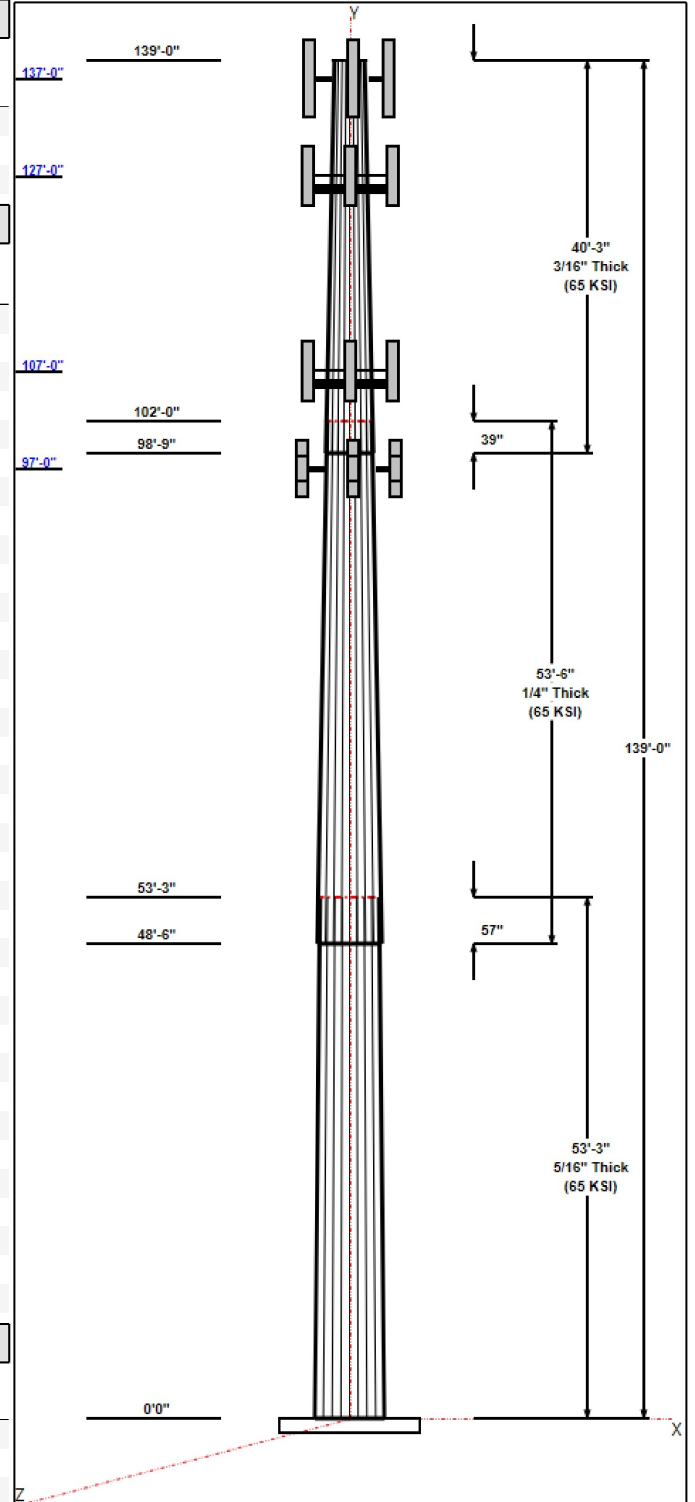
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	34.93	47.23	0.313		0.23097	65
2	53.50	24.17	36.53	0.250	Slip	0.23097	65
3	40.25	16.00	25.30	0.188	Slip	0.23097	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
139.00	139.00	1	6' Lightning rod	
137.00	137.00	3	AIR6449 B41	T-Mobile
137.00	137.00	3	KRY 112 144/1	T-Mobile
137.00	137.00	3	4415 B25	T-Mobile
137.00	137.00	3	RFS	T-Mobile
137.00	137.00	3	Air 32	T-Mobile
137.00	137.00	3	4449 B71+B85	T-Mobile
137.00	137.00	3	RDS-272	T-Mobile
137.00	137.00	3	SDX1926Q-43	T-Mobile
127.00	127.00	3	Commscope	Dish Wireless
127.00	127.00	3	TA08025-B604	Dish Wireless
127.00	127.00	3	TA08025-B605	Dish Wireless
127.00	127.00	1	RDIDC-9181-OF-48	Dish Wireless
127.00	127.00	1	MC-PK8-DSH	Dish Wireless
107.00	107.00	3	AIR 6449 B77D	AT&T
107.00	107.00	3	AIR 6419 B77G	AT&T
107.00	107.00	3	DMP65R-BU6DA	AT&T
107.00	107.00	1	RMQLP-4120-H10	AT&T
107.00	107.00	3	RRUS 4415 B25	AT&T
107.00	107.00	3	RRUS 4478 B14	AT&T
107.00	107.00	1	DC9-48-60-24-8C-EV	AT&T
107.00	107.00	3	RRUS 4449 B5/B12	AT&T
107.00	107.00	3	RRUS A2	AT&T
107.00	107.00	3	RRUS-32	AT&T
107.00	107.00	2	DC6-48-60-18-8F	AT&T
107.00	107.00	3	EPBQ-652L8H6-L2	AT&T
107.00	107.00	3	DBC20056F1V1	AT&T
107.00	107.00	3	DTMABP7819VG12A	AT&T
107.00	107.00	3	4426 B66	AT&T
97.00	97.00	6	JMA MX06FRO660-03	Verizon
97.00	97.00	3	Samsung VZS01	Verizon
97.00	97.00	3	Samsung B5/B13	Verizon
97.00	97.00	3	Samsung B2/B66A	Verizon
97.00	97.00	1	Commscope	Verizon
97.00	97.00	3	T-Arms	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	139.00	Outside	Safety Cable	
0.00	139.00	Outside	Step bolts (ladder)	
0.00	137.00	Inside	1 5/8" Coax	T-Mobile
0.00	137.00	Inside	1 5/8" Fiber	T-Mobile
0.00	127.00	Inside	1.75" Hybrid	Dish Wireless
0.00	107.00	Inside	0.92" DC	AT&T
0.00	107.00	Inside	1/2" Fiber	AT&T
0.00	107.00	Inside	3/4" DC	AT&T



Structure: CT13549-S-SBA

Type: Tapered
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23097

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0.00	107.00	Inside	3/8" Fiber	AT&T
0.00	107.00	Inside	7/8" Coax	AT&T
0.00	97.00	Inside	1 5/8" Coax	Verizon
0.00	97.00	Inside	1 5/8" Hybrid	Verizon

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	51.5	50.0	Clipped

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	2601.5	25.3	36.2
0.9D + 1.6W 93 mph Wind	2555.0	25.3	27.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	815.7	7.7	60.9
1.2D + 1.0E	184.0	1.6	36.2
0.9D + 1.0E	180.1	1.6	27.2
1.0D + 1.0W 60 mph Wind	670.5	6.6	30.2

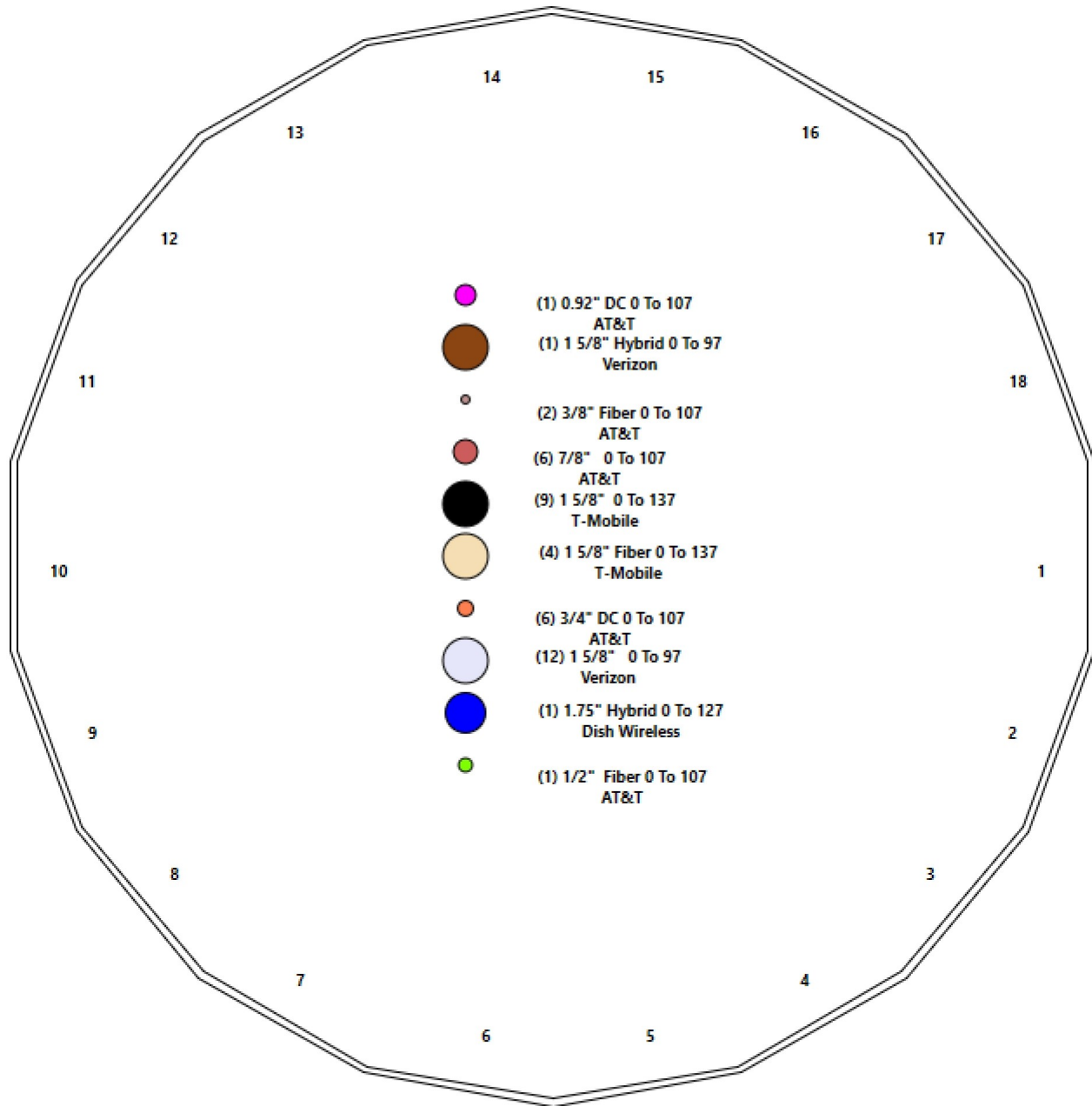
Structure: CT13549-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Danbury 1
Height: 139.00 (ft)

5/10/2022



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Shaft Properties

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.3125	65		0.00	7,327
2	18	53.500	0.2500	65	Slip	57.00	4,348
3	18	40.250	0.1875	65	Slip	39.00	1,668
Total Shaft Weight:							13,342

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	47.23	0.00	46.53	12941.93	25.24	151.14	34.93	53.25	34.34	5198.89	18.30	111.7	0.230971
2	36.53	48.50	28.79	4786.42	24.35	146.11	24.17	102.00	18.98	1372.20	15.64	96.68	0.230971
3	25.30	98.75	14.94	1190.25	22.38	134.92	16.00	139.00	9.41	297.27	13.64	85.33	0.230971

Load Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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	139.00	6' Lightning rod	1	6.50	0.38	1.00	42.53	1.459	1.00	0.00	0.00
2	137.00	AIR6449 B41	3	103.00	5.65	0.71	238.88	6.592	0.71	0.00	0.00
3	137.00	KRY 112 144/1	3	11.00	0.41	0.50	21.68	0.881	0.50	0.00	0.00
4	137.00	4415 B25	3	46.30	1.86	0.50	106.37	2.419	0.50	0.00	0.00
5	137.00	RFS APXVAARR18_43-U-NA20	3	128.00	20.24	0.70	541.69	22.122	0.70	0.00	0.00
6	137.00	Air 32 KRD901146_1_B66A_B2A	3	132.20	6.51	0.87	314.61	7.679	0.87	0.00	0.00
7	137.00	4449 B71+B85	3	70.00	1.65	0.50	137.47	2.182	0.50	0.00	0.00
8	137.00	RDS-272	3	400.00	10.00	0.75	676.71	18.647	0.75	0.00	0.00
9	137.00	SDX1926Q-43	3	7.00	0.38	0.50	16.60	0.832	0.50	0.00	0.00
10	127.00	Commscope FFVV-65B-R2	3	70.80	12.24	0.74	292.46	13.669	0.74	0.00	0.00
11	127.00	TA08025-B604	3	63.90	1.96	0.50	113.69	2.512	0.50	0.00	0.00
12	127.00	TA08025-B605	3	75.00	1.96	0.50	126.44	2.512	0.50	0.00	0.00
13	127.00	RDIDC-9181-OF-48	1	21.90	2.01	0.50	74.27	2.569	0.50	0.00	0.00
14	127.00	MC-PK8-DSH	1	1727.00	34.30	1.00	3386.97	76.688	1.00	0.00	0.00
15	107.00	AIR 6449 B77D	3	81.60	4.13	0.85	213.76	4.957	0.85	0.00	0.00
16	107.00	AIR 6419 B77G	3	81.60	3.80	0.76	196.42	4.569	0.76	0.00	0.00
17	107.00	DMP65R-BU6DA	3	79.40	12.71	0.72	364.16	14.125	0.72	0.00	0.00
18	107.00	RMQLP-4120-H10	1	3249.41	42.00	1.00	6538.94	72.046	1.00	0.00	0.00
19	107.00	RRUS 4415 B25	3	46.00	1.64	0.50	85.74	2.138	0.50	0.00	0.00
20	107.00	RRUS 4478 B14	3	59.40	1.65	0.50	99.49	2.151	0.50	0.00	0.00
21	107.00	DC9-48-60-24-8C-EV	1	26.20	1.14	0.50	128.67	2.674	0.50	0.00	0.00
22	107.00	RRUS 4449 B5/B12	3	85.00	1.65	0.50	198.76	4.261	0.50	0.00	0.00
23	107.00	RRUS A2	3	21.20	1.86	0.50	56.11	2.801	0.50	0.00	0.00
24	107.00	RRUS-32	3	77.00	3.87	0.50	186.06	4.078	0.50	0.00	0.00
25	107.00	DC6-48-60-18-8F	2	31.80	1.47	0.50	91.57	2.147	0.50	0.00	0.00
26	107.00	EPBQ-652L8H6-L2	3	72.80	9.66	0.85	343.47	14.704	0.85	0.00	0.00
27	107.00	DBC20056F1V1	3	7.00	0.41	0.50	21.03	0.720	0.50	0.00	0.00
28	107.00	DTMABP7819VG12A	3	19.20	1.14	0.50	43.87	1.884	0.50	0.00	0.00
29	107.00	4426 B66	3	53.00	1.15	0.50	90.39	1.607	0.50	0.00	0.00
30	97.00	JMA MX06FRO660-03	6	46.00	9.87	0.87	301.82	11.184	0.87	0.00	0.00
31	97.00	Samsung VZS01	3	87.10	4.30	0.69	192.41	5.144	0.75	0.00	0.00
32	97.00	Samsung B5/B13 RRH-BR04C	3	84.40	1.88	0.50	133.47	2.408	0.50	0.00	0.00
33	97.00	Samsung B2/B66A RRH-BR049	3	70.30	1.88	0.50	116.86	2.408	0.50	0.00	0.00
34	97.00	Commscope RCMDC-6627-PF-48	1	20.00	5.60	0.50	130.14	7.191	0.50	0.00	0.00
35	97.00	T-Arms	3	350.00	8.00	0.75	583.91	14.683	0.75	0.00	0.00
Totals:			95	12,537.21			28,833.17				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	139.00	(1) Safety Cable	0.00	Outside
0.00	139.00	(1) Step bolts (ladder)	0.00	Outside
0.00	137.00	(9) 1 5/8" Coax	0.00	Inside
0.00	137.00	(4) 1 5/8" Fiber	0.00	Inside
0.00	127.00	(1) 1.75" Hybrid	0.00	Inside
0.00	107.00	(1) 0.92" DC	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	107.00	(1) 1/2" Fiber		0.00		Inside					
0.00	107.00	(6) 3/4" DC		0.00		Inside					
0.00	107.00	(2) 3/8" Fiber		0.00		Inside					
0.00	107.00	(6) 7/8" Coax		0.00		Inside					
0.00	97.00	(12) 1 5/8" Coax		0.00		Inside					
0.00	97.00	(1) 1 5/8" Hybrid		0.00		Inside					

Shaft Section Properties

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 2 (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		0.3125	47.230	46.535	12941.9	25.24	151.14	71.7	539.7	0.0
2.00		0.3125	46.768	46.076	12563.4	24.98	149.66	72.0	529.1	315.1
4.00		0.3125	46.306	45.618	12192.3	24.72	148.18	72.3	518.6	312.0
6.00		0.3125	45.844	45.160	11828.7	24.46	146.70	72.6	508.2	308.9
8.00		0.3125	45.382	44.702	11472.3	24.20	145.22	72.9	497.9	305.8
10.00		0.3125	44.920	44.244	11123.1	23.94	143.74	73.2	487.7	302.7
12.00		0.3125	44.458	43.786	10781.1	23.67	142.27	73.6	477.6	299.5
14.00		0.3125	43.996	43.327	10446.2	23.41	140.79	73.9	467.7	296.4
16.00		0.3125	43.534	42.869	10118.3	23.15	139.31	74.2	457.8	293.3
18.00		0.3125	43.073	42.411	9797.3	22.89	137.83	74.5	448.0	290.2
20.00		0.3125	42.611	41.953	9483.2	22.63	136.35	74.8	438.3	287.1
22.00		0.3125	42.149	41.495	9175.9	22.37	134.88	75.1	428.8	284.0
24.00		0.3125	41.687	41.037	8875.3	22.11	133.40	75.4	419.3	280.8
26.00		0.3125	41.225	40.578	8581.3	21.85	131.92	75.7	410.0	277.7
28.00		0.3125	40.763	40.120	8293.9	21.59	130.44	76.0	400.8	274.6
30.00		0.3125	40.301	39.662	8013.0	21.33	128.96	76.3	391.6	271.5
32.00		0.3125	39.839	39.204	7738.5	21.07	127.48	76.6	382.6	268.4
34.00		0.3125	39.377	38.746	7470.3	20.81	126.01	76.9	373.7	265.2
36.00		0.3125	38.915	38.288	7208.5	20.55	124.53	77.2	364.8	262.1
38.00		0.3125	38.453	37.829	6952.8	20.29	123.05	77.5	356.1	259.0
40.00		0.3125	37.991	37.371	6703.2	20.03	121.57	77.8	347.5	255.9
42.00		0.3125	37.529	36.913	6459.6	19.77	120.09	78.2	339.0	252.8
44.00		0.3125	37.067	36.455	6222.1	19.50	118.62	78.5	330.6	249.7
46.00		0.3125	36.605	35.997	5990.4	19.24	117.14	78.8	322.3	246.5
48.00		0.3125	36.143	35.538	5764.6	18.98	115.66	79.1	314.1	243.4
48.50	Bot - Section 2	0.3125	36.028	35.424	5709.0	18.92	115.29	79.1	312.1	60.4
50.00		0.3125	35.681	35.080	5544.5	18.72	114.18	79.4	306.1	326.2
52.00		0.3125	35.219	34.622	5330.1	18.46	112.70	79.7	298.1	430.0
53.25	Top - Section 1	0.2500	35.431	27.915	4365.2	23.58	141.72	0.0	0.0	265.9
54.00		0.2500	35.258	27.777	4301.0	23.46	141.03	73.8	240.3	71.1
56.00		0.2500	34.796	27.411	4133.0	23.13	139.18	74.2	233.9	187.8
58.00		0.2500	34.334	27.044	3969.4	22.81	137.33	74.6	227.7	185.3
60.00		0.2500	33.872	26.678	3810.2	22.48	135.49	75.0	221.6	182.8
62.00		0.2500	33.410	26.311	3655.3	22.15	133.64	75.3	215.5	180.3
64.00		0.2500	32.948	25.945	3504.6	21.83	131.79	75.7	209.5	177.8
66.00		0.2500	32.486	25.578	3358.2	21.50	129.94	76.1	203.6	175.3
68.00		0.2500	32.024	25.212	3215.9	21.18	128.10	76.5	197.8	172.8
70.00		0.2500	31.562	24.845	3077.6	20.85	126.25	76.9	192.1	170.3
72.00		0.2500	31.100	24.479	2943.4	20.52	124.40	77.3	186.4	167.8
74.00		0.2500	30.638	24.112	2813.2	20.20	122.55	77.6	180.8	165.3
76.00		0.2500	30.176	23.746	2686.8	19.87	120.70	78.0	175.4	162.8
78.00		0.2500	29.714	23.379	2564.3	19.55	118.86	78.4	170.0	160.4
80.00		0.2500	29.252	23.012	2445.6	19.22	117.01	78.8	164.7	157.9
82.00		0.2500	28.790	22.646	2330.6	18.90	115.16	79.2	159.4	155.4
84.00		0.2500	28.328	22.279	2219.2	18.57	113.31	79.6	154.3	152.9
86.00		0.2500	27.866	21.913	2111.5	18.24	111.47	79.9	149.2	150.4
88.00		0.2500	27.405	21.546	2007.3	17.92	109.62	80.3	144.3	147.9
90.00		0.2500	26.943	21.180	1906.6	17.59	107.77	80.7	139.4	145.4
92.00		0.2500	26.481	20.813	1809.3	17.27	105.92	81.1	134.6	142.9
94.00		0.2500	26.019	20.447	1715.4	16.94	104.07	81.5	129.9	140.4

Increment Length: 2 (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)
96.00		0.2500	25.557	20.080	1624.8	16.61	102.23	81.9	125.2	137.9
97.00		0.2500	25.326	19.897	1580.7	16.45	101.30	82.1	122.9	68.0
98.00		0.2500	25.095	19.714	1537.4	16.29	100.38	82.2	120.7	67.4
98.75	Bot - Section 3	0.2500	24.922	19.576	1505.5	16.17	99.69	82.4	119.0	50.1
100.00		0.2500	24.633	19.347	1453.2	15.96	98.53	82.5	116.2	146.0
102.00	Top - Section 2	0.1875	24.546	14.496	1086.7	21.67	130.91	0.0	0.0	230.0
104.00		0.1875	24.084	14.221	1026.0	21.24	128.45	76.4	83.9	97.7
106.00		0.1875	23.622	13.946	967.6	20.80	125.98	76.9	80.7	95.8
107.00		0.1875	23.391	13.809	939.3	20.59	124.75	77.2	79.1	47.2
108.00		0.1875	23.160	13.671	911.5	20.37	123.52	77.4	77.5	46.8
110.00		0.1875	22.698	13.396	857.7	19.93	121.06	78.0	74.4	92.1
112.00		0.1875	22.236	13.121	805.9	19.50	118.59	78.5	71.4	90.2
114.00		0.1875	21.774	12.846	756.3	19.07	116.13	79.0	68.4	88.4
116.00		0.1875	21.312	12.571	708.8	18.63	113.67	79.5	65.5	86.5
118.00		0.1875	20.850	12.297	663.3	18.20	111.20	80.0	62.7	84.6
120.00		0.1875	20.388	12.022	619.8	17.76	108.74	80.5	59.9	82.7
122.00		0.1875	19.927	11.747	578.3	17.33	106.27	81.0	57.2	80.9
124.00		0.1875	19.465	11.472	538.6	16.89	103.81	81.5	54.5	79.0
126.00		0.1875	19.003	11.197	500.8	16.46	101.35	82.0	51.9	77.1
127.00		0.1875	18.772	11.059	482.6	16.24	100.12	82.3	50.6	37.9
128.00		0.1875	18.541	10.922	464.8	16.03	98.88	82.5	49.4	37.4
130.00		0.1875	18.079	10.647	430.6	15.59	96.42	82.5	46.9	73.4
132.00		0.1875	17.617	10.372	398.1	15.16	93.96	82.5	44.5	71.5
134.00		0.1875	17.155	10.097	367.3	14.72	91.49	82.5	42.2	69.7
136.00		0.1875	16.693	9.822	338.1	14.29	89.03	82.5	39.9	67.8
137.00		0.1875	16.462	9.685	324.1	14.07	87.80	82.5	38.8	33.2
138.00		0.1875	16.231	9.548	310.5	13.85	86.57	82.5	37.7	32.7
139.00		0.1875	16.000	9.410	297.3	13.64	85.33	82.5	36.6	32.3

13342.3

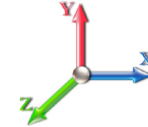
Wind Loading - Shaft

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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	17.879	19.67	342.67	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	339.32	0.650	0.000	2.00	7.954	5.17	162.7	0.0	378.2
4.00		1.00	0.85	17.879	19.67	335.97	0.650	0.000	2.00	7.876	5.12	161.1	0.0	374.4
6.00		1.00	0.85	17.879	19.67	332.62	0.650	0.000	2.00	7.798	5.07	159.5	0.0	370.7
8.00		1.00	0.85	17.879	19.67	329.26	0.650	0.000	2.00	7.719	5.02	157.9	0.0	366.9
10.00		1.00	0.85	17.879	19.67	325.91	0.650	0.000	2.00	7.641	4.97	156.3	0.0	363.2
12.00		1.00	0.85	17.879	19.67	322.56	0.650	0.000	2.00	7.563	4.92	154.7	0.0	359.5
14.00		1.00	0.85	17.879	19.67	319.21	0.650	0.000	2.00	7.485	4.87	153.1	0.0	355.7
16.00		1.00	0.86	18.100	19.91	317.80	0.650	0.000	2.00	7.407	4.81	153.4	0.0	352.0
18.00		1.00	0.88	18.554	20.41	318.35	0.650	0.000	2.00	7.329	4.76	155.6	0.0	348.2
20.00		1.00	0.90	18.971	20.87	318.45	0.650	0.000	2.00	7.250	4.71	157.4	0.0	344.5
22.00		1.00	0.92	19.355	21.29	318.18	0.650	0.000	2.00	7.172	4.66	158.8	0.0	340.7
24.00		1.00	0.94	19.713	21.68	317.58	0.650	0.000	2.00	7.094	4.61	160.0	0.0	337.0
26.00		1.00	0.95	20.048	22.05	316.72	0.650	0.000	2.00	7.016	4.56	160.9	0.0	333.3
28.00		1.00	0.97	20.363	22.40	315.63	0.650	0.000	2.00	6.938	4.51	161.6	0.0	329.5
30.00		1.00	0.98	20.661	22.73	314.32	0.650	0.000	2.00	6.860	4.46	162.1	0.0	325.8
32.00		1.00	1.00	20.944	23.04	312.84	0.650	0.000	2.00	6.781	4.41	162.5	0.0	322.0
34.00		1.00	1.01	21.213	23.33	311.19	0.650	0.000	2.00	6.703	4.36	162.7	0.0	318.3
36.00		1.00	1.02	21.470	23.62	309.40	0.650	0.000	2.00	6.625	4.31	162.7	0.0	314.6
38.00		1.00	1.03	21.715	23.89	307.47	0.650	0.000	2.00	6.547	4.26	162.6	0.0	310.8
40.00		1.00	1.04	21.951	24.15	305.42	0.650	0.000	2.00	6.469	4.20	162.4	0.0	307.1
42.00		1.00	1.05	22.178	24.40	303.26	0.650	0.000	2.00	6.390	4.15	162.1	0.0	303.3
44.00		1.00	1.06	22.396	24.64	301.00	0.650	0.000	2.00	6.312	4.10	161.7	0.0	299.6
46.00		1.00	1.07	22.607	24.87	298.64	0.650	0.000	2.00	6.234	4.05	161.2	0.0	295.8
48.00		1.00	1.08	22.810	25.09	296.19	0.650	0.000	2.00	6.156	4.00	160.6	0.0	292.1
48.50	Bot - Section 2	1.00	1.09	22.860	25.15	295.57	0.650	0.000	0.50	1.527	0.99	39.9	0.0	72.4
50.00		1.00	1.09	23.007	25.31	293.67	0.650	0.000	1.50	4.614	3.00	121.5	0.0	391.4
52.00		1.00	1.10	23.198	25.52	291.07	0.650	0.000	2.00	6.084	3.95	161.5	0.0	516.0
53.25	Top - Section 1	1.00	1.11	23.314	25.65	289.40	0.650	0.000	1.25	3.763	2.45	100.4	0.0	319.1
54.00		1.00	1.11	23.383	25.72	292.54	0.650	0.000	0.75	2.243	1.46	60.0	0.0	85.3
56.00		1.00	1.12	23.562	25.92	289.81	0.650	0.000	2.00	5.928	3.85	159.8	0.0	225.4
58.00		1.00	1.13	23.737	26.11	287.02	0.650	0.000	2.00	5.850	3.80	158.8	0.0	222.4
60.00		1.00	1.14	23.907	26.30	284.18	0.650	0.000	2.00	5.771	3.75	157.8	0.0	219.4
62.00		1.00	1.14	24.073	26.48	281.27	0.650	0.000	2.00	5.693	3.70	156.8	0.0	216.4
64.00		1.00	1.15	24.234	26.66	278.31	0.650	0.000	2.00	5.615	3.65	155.7	0.0	213.4
66.00		1.00	1.16	24.392	26.83	275.30	0.650	0.000	2.00	5.537	3.60	154.5	0.0	210.4
68.00		1.00	1.17	24.545	27.00	272.24	0.650	0.000	2.00	5.459	3.55	153.3	0.0	207.4
70.00		1.00	1.17	24.696	27.17	269.13	0.650	0.000	2.00	5.381	3.50	152.0	0.0	204.4
72.00		1.00	1.18	24.843	27.33	265.98	0.650	0.000	2.00	5.302	3.45	150.7	0.0	201.4
74.00		1.00	1.19	24.986	27.48	262.78	0.650	0.000	2.00	5.224	3.40	149.3	0.0	198.4
76.00		1.00	1.19	25.127	27.64	259.55	0.650	0.000	2.00	5.146	3.34	147.9	0.0	195.4
78.00		1.00	1.20	25.265	27.79	256.28	0.650	0.000	2.00	5.068	3.29	146.5	0.0	192.4
80.00		1.00	1.21	25.400	27.94	252.97	0.650	0.000	2.00	4.990	3.24	145.0	0.0	189.4
82.00		1.00	1.21	25.532	28.09	249.62	0.650	0.000	2.00	4.912	3.19	143.5	0.0	186.4
84.00		1.00	1.22	25.662	28.23	246.24	0.650	0.000	2.00	4.833	3.14	141.9	0.0	183.4
86.00		1.00	1.23	25.789	28.37	242.82	0.650	0.000	2.00	4.755	3.09	140.3	0.0	180.5
88.00		1.00	1.23	25.915	28.51	239.38	0.650	0.000	2.00	4.677	3.04	138.7	0.0	177.5

Wind Loading - Shaft

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 11
	Struct Class: II	



90.00	1.00	1.24	26.037	28.64	235.90	0.650	0.000	2.00	4.599	2.99	137.0	0.0	174.5		
92.00	1.00	1.24	26.158	28.77	232.39	0.650	0.000	2.00	4.521	2.94	135.3	0.0	171.5		
94.00	1.00	1.25	26.277	28.90	228.85	0.650	0.000	2.00	4.442	2.89	133.5	0.0	168.5		
96.00	1.00	1.25	26.394	29.03	225.29	0.650	0.000	2.00	4.364	2.84	131.8	0.0	165.5		
97.00 Appurtenance(s)	1.00	1.26	26.451	29.10	223.50	0.650	0.000	1.00	2.153	1.40	65.1	0.0	81.6		
98.00	1.00	1.26	26.509	29.16	221.70	0.650	0.000	1.00	2.133	1.39	64.7	0.0	80.9		
98.75 Bot - Section 3	1.00	1.26	26.551	29.21	220.34	0.650	0.000	0.75	1.587	1.03	48.2	0.0	60.2		
100.00	1.00	1.27	26.621	29.28	218.08	0.650	0.000	1.25	2.660	1.73	81.0	0.0	175.2		
102.00 Top - Section 2	1.00	1.27	26.733	29.41	214.44	0.650	0.000	2.00	4.193	2.73	128.2	0.0	276.0		
104.00	1.00	1.28	26.842	29.53	214.10	0.650	0.000	2.00	4.115	2.67	126.4	0.0	117.3		
106.00	1.00	1.28	26.950	29.65	210.42	0.650	0.000	2.00	4.037	2.62	124.5	0.0	115.0		
107.00 Appurtenance(s)	1.00	1.28	27.003	29.70	208.57	0.650	0.000	1.00	1.989	1.29	61.4	0.0	56.7		
108.00	1.00	1.29	27.056	29.76	206.71	0.650	0.000	1.00	1.970	1.28	61.0	0.0	56.1		
110.00	1.00	1.29	27.161	29.88	202.98	0.650	0.000	2.00	3.880	2.52	120.6	0.0	110.5		
112.00	1.00	1.30	27.264	29.99	199.22	0.650	0.000	2.00	3.802	2.47	118.6	0.0	108.3		
114.00	1.00	1.30	27.366	30.10	195.45	0.650	0.000	2.00	3.724	2.42	116.6	0.0	106.0		
116.00	1.00	1.31	27.466	30.21	191.65	0.650	0.000	2.00	3.646	2.37	114.6	0.0	103.8		
118.00	1.00	1.31	27.565	30.32	187.84	0.650	0.000	2.00	3.568	2.32	112.5	0.0	101.5		
120.00	1.00	1.32	27.663	30.43	184.00	0.650	0.000	2.00	3.490	2.27	110.4	0.0	99.3		
122.00	1.00	1.32	27.760	30.54	180.15	0.650	0.000	2.00	3.411	2.22	108.3	0.0	97.1		
124.00	1.00	1.32	27.855	30.64	176.27	0.650	0.000	2.00	3.333	2.17	106.2	0.0	94.8		
126.00	1.00	1.33	27.949	30.74	172.38	0.650	0.000	2.00	3.255	2.12	104.1	0.0	92.6		
127.00 Appurtenance(s)	1.00	1.33	27.995	30.79	170.42	0.650	0.000	1.00	1.598	1.04	51.2	0.0	45.4		
128.00	1.00	1.33	28.042	30.85	168.47	0.650	0.000	1.00	1.579	1.03	50.6	0.0	44.9		
130.00	1.00	1.34	28.133	30.95	164.54	0.650	0.000	2.00	3.099	2.01	99.7	0.0	88.1		
132.00	1.00	1.34	28.224	31.05	160.59	0.650	0.000	2.00	3.021	1.96	97.5	0.0	85.8		
134.00	1.00	1.35	28.313	31.14	156.63	0.650	0.000	2.00	2.942	1.91	95.3	0.0	83.6		
136.00	1.00	1.35	28.402	31.24	152.65	0.650	0.000	2.00	2.864	1.86	93.1	0.0	81.3		
137.00 Appurtenance(s)	1.00	1.35	28.446	31.29	150.65	0.650	0.000	1.00	1.403	0.91	45.6	0.0	39.8		
138.00	1.00	1.35	28.489	31.34	148.65	0.650	0.000	1.00	1.383	0.90	45.1	0.0	39.3		
139.00 Appurtenance(s)	1.00	1.36	28.533	31.39	146.65	0.650	0.000	1.00	1.364	0.89	44.5	0.0	38.7		
Totals:								139.00				9,802.0	16,010.8		

Discrete Appurtenance Forces

Structure: CT13549-S-SBA
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

5/10/2022

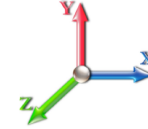
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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor	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	139.00	6' Lightning rod	1	28.533	31.386	1.00	1.00	0.38	7.80	0.000	0.000	19.08	0.00	0.00	
2	137.00	RDS-272	3	28.446	31.290	0.56	0.75	16.88	1440.00	0.000	0.000	844.84	0.00	0.00	
3	137.00	KRY 112 144/1	3	28.446	31.290	0.40	0.80	0.49	39.60	0.000	0.000	24.63	0.00	0.00	
4	137.00	4415 B25	3	28.446	31.290	0.40	0.80	2.23	166.68	0.000	0.000	111.74	0.00	0.00	
5	137.00	AIR6449 B41	3	28.446	31.290	0.57	0.80	9.63	370.80	0.000	0.000	482.00	0.00	0.00	
6	137.00	RFS	3	28.446	31.290	0.56	0.80	34.00	460.80	0.000	0.000	1702.35	0.00	0.00	
7	137.00	Air 32	3	28.446	31.290	0.70	0.80	13.59	475.92	0.000	0.000	680.52	0.00	0.00	
8	137.00	4449 B71+B85	3	28.446	31.290	0.40	0.80	1.98	252.00	0.000	0.000	99.13	0.00	0.00	
9	137.00	SDX1926Q-43	3	28.446	31.290	0.40	0.80	0.46	25.20	0.000	0.000	22.83	0.00	0.00	
10	127.00	TA08025-B604	3	27.995	30.795	0.38	0.75	2.21	230.04	0.000	0.000	108.64	0.00	0.00	
11	127.00	Commscope	3	27.995	30.795	0.55	0.75	20.38	254.88	0.000	0.000	1004.14	0.00	0.00	
12	127.00	RDIDC-9181-OF-48	1	27.995	30.795	0.38	0.75	0.75	26.28	0.000	0.000	37.14	0.00	0.00	
13	127.00	TA08025-B605	3	27.995	30.795	0.38	0.75	2.21	270.00	0.000	0.000	108.64	0.00	0.00	
14	127.00	MC-PK8-DSH	1	27.995	30.795	1.00	1.00	34.30	2072.40	0.000	0.000	1690.02	0.00	0.00	
15	107.00	RRUS 4449 B5/B12	3	27.003	29.704	0.38	0.75	1.86	306.00	0.000	0.000	88.22	0.00	0.00	
16	107.00	DC9-48-60-24-8C-EV	1	27.003	29.704	0.38	0.75	0.43	31.44	0.000	0.000	20.32	0.00	0.00	
17	107.00	RRUS 4478 B14	3	27.003	29.704	0.38	0.75	1.86	213.84	0.000	0.000	88.22	0.00	0.00	
18	107.00	RRUS 4415 B25	3	27.003	29.704	0.38	0.75	1.84	165.60	0.000	0.000	87.69	0.00	0.00	
19	107.00	DBC20056F1V1	3	27.003	29.704	0.38	0.75	0.46	25.20	0.000	0.000	21.92	0.00	0.00	
20	107.00	RRUS A2	3	27.003	29.704	0.38	0.75	2.09	76.32	0.000	0.000	99.45	0.00	0.00	
21	107.00	RRUS-32	3	27.003	29.704	0.38	0.75	4.35	277.20	0.000	0.000	206.92	0.00	0.00	
22	107.00	DC6-48-60-18-8F	2	27.003	29.704	0.38	0.75	1.10	76.32	0.000	0.000	52.40	0.00	0.00	
23	107.00	EPBQ-652L8H6-L2	3	27.003	29.704	0.64	0.75	18.47	262.08	0.000	0.000	878.03	0.00	0.00	
24	107.00	RMQLP-4120-H10	1	27.003	29.704	1.00	1.00	42.00	3899.29	0.000	0.000	1996.09	0.00	0.00	
25	107.00	4426 B66	3	27.003	29.704	0.38	0.75	1.29	190.80	0.000	0.000	61.49	0.00	0.00	
26	107.00	AIR 6449 B77D	3	27.003	29.704	0.64	0.75	7.90	293.76	0.000	0.000	375.39	0.00	0.00	
27	107.00	AIR 6419 B77G	3	27.003	29.704	0.57	0.75	6.50	293.76	0.000	0.000	308.82	0.00	0.00	
28	107.00	DMP65R-BU6DA	3	27.003	29.704	0.54	0.75	20.59	285.84	0.000	0.000	978.57	0.00	0.00	
29	107.00	DTMABP7819VG12A	3	27.003	29.704	0.38	0.75	1.28	69.12	0.000	0.000	60.95	0.00	0.00	
30	97.00	Samsung VZS01	3	26.451	29.096	0.55	0.80	7.12	313.56	0.000	0.000	331.50	0.00	0.00	
31	97.00	T-Arms	3	26.451	29.096	0.56	0.75	13.50	1260.00	0.000	0.000	628.48	0.00	0.00	
32	97.00	JMA MX06FRO660-03	6	26.451	29.096	0.70	0.80	41.22	331.20	0.000	0.000	1918.84	0.00	0.00	
33	97.00	Commscope	1	26.451	29.096	0.40	0.80	2.24	24.00	0.000	0.000	104.28	0.00	0.00	
34	97.00	Samsung B5/B13	3	26.451	29.096	0.40	0.80	2.26	303.84	0.000	0.000	105.03	0.00	0.00	
35	97.00	Samsung B2/B66A	3	26.451	29.096	0.40	0.80	2.26	253.08	0.000	0.000	105.03	0.00	0.00	

Totals: 15,044.65

15,453.33

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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
2.00		162.69	466.59	0.00	0.00
4.00		161.09	462.85	0.00	0.00
6.00		159.49	459.10	0.00	0.00
8.00		157.89	455.36	0.00	0.00
10.00		156.29	451.62	0.00	0.00
12.00		154.69	447.88	0.00	0.00
14.00		153.10	444.14	0.00	0.00
16.00		153.37	440.40	0.00	0.00
18.00		155.56	436.65	0.00	0.00
20.00		157.35	432.91	0.00	0.00
22.00		158.81	429.17	0.00	0.00
24.00		159.98	425.43	0.00	0.00
26.00		160.91	421.69	0.00	0.00
28.00		161.62	417.94	0.00	0.00
30.00		162.13	414.20	0.00	0.00
32.00		162.48	410.46	0.00	0.00
34.00		162.67	406.72	0.00	0.00
36.00		162.72	402.98	0.00	0.00
38.00		162.64	399.24	0.00	0.00
40.00		162.44	395.49	0.00	0.00
42.00		162.13	391.75	0.00	0.00
44.00		161.73	388.01	0.00	0.00
46.00		161.23	384.27	0.00	0.00
48.00		160.64	380.53	0.00	0.00
48.50		39.93	94.55	0.00	0.00
50.00		121.45	457.71	0.00	0.00
52.00		161.46	604.38	0.00	0.00
53.25		100.36	374.32	0.00	0.00
54.00		60.00	118.44	0.00	0.00
56.00		159.79	313.78	0.00	0.00
58.00		158.85	310.79	0.00	0.00
60.00		157.85	307.79	0.00	0.00
62.00		156.79	304.80	0.00	0.00
64.00		155.67	301.80	0.00	0.00
66.00		154.50	298.81	0.00	0.00
68.00		153.28	295.82	0.00	0.00
70.00		152.01	292.82	0.00	0.00
72.00		150.69	289.83	0.00	0.00
74.00		149.33	286.84	0.00	0.00
76.00		147.92	283.84	0.00	0.00
78.00		146.48	280.85	0.00	0.00
80.00		144.99	277.86	0.00	0.00
82.00		143.46	274.86	0.00	0.00
84.00		141.89	271.87	0.00	0.00
86.00		140.29	268.88	0.00	0.00
88.00		138.65	265.88	0.00	0.00

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00		136.98	262.89	0.00	0.00
92.00		135.28	259.90	0.00	0.00
94.00		133.54	256.90	0.00	0.00
96.00		131.78	253.91	0.00	0.00
97.00	(19) attachments	3258.30	2611.51	0.00	0.00
98.00		64.69	108.79	0.00	0.00
98.75		48.21	81.10	0.00	0.00
100.00		81.02	210.06	0.00	0.00
102.00		128.24	331.84	0.00	0.00
104.00		126.36	173.09	0.00	0.00
106.00		124.46	170.85	0.00	0.00
107.00	(40) attachments	5385.92	6551.15	0.00	0.00
108.00		60.96	76.58	0.00	0.00
110.00		120.58	151.48	0.00	0.00
112.00		118.59	149.23	0.00	0.00
114.00		116.59	146.99	0.00	0.00
116.00		114.56	144.74	0.00	0.00
118.00		112.51	142.50	0.00	0.00
120.00		110.43	140.25	0.00	0.00
122.00		108.34	138.01	0.00	0.00
124.00		106.22	135.76	0.00	0.00
126.00		104.08	133.52	0.00	0.00
127.00	(11) attachments	2999.78	2919.52	0.00	0.00
128.00		50.64	62.97	0.00	0.00
130.00		99.73	124.25	0.00	0.00
132.00		97.53	122.00	0.00	0.00
134.00		95.30	119.76	0.00	0.00
136.00		93.06	117.51	0.00	0.00
137.00	(24) attachments	4013.68	3288.92	0.00	0.00
138.00		45.08	40.84	0.00	0.00
139.00	(1) attachments	63.59	48.08	0.00	0.00
	Totals:	25,255.33	36,216.82	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.66
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	2.50
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.66
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	2.50
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.66
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	2.50
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.66
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	2.50
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.66
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	2.50
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.66
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	2.50
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.66
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	2.50
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.100	0.00	0.66
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.100	0.00	2.50
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.554	0.00	0.66
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.554	0.00	2.50
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.971	0.00	0.66
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.971	0.00	2.50
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.355	0.00	0.66
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.355	0.00	2.50
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.713	0.00	0.66
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.713	0.00	2.50
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.048	0.00	0.66
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.048	0.00	2.50
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.363	0.00	0.66
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.363	0.00	2.50
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.661	0.00	0.66
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.661	0.00	2.50
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.944	0.00	0.66
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.944	0.00	2.50
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.213	0.00	0.66
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.213	0.00	2.50
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.470	0.00	0.66
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.470	0.00	2.50
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.715	0.00	0.66
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.715	0.00	2.50
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.951	0.00	0.66
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.951	0.00	2.50
42.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.178	0.00	0.66
42.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.178	0.00	2.50
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.396	0.00	0.66
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.396	0.00	2.50
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.607	0.00	0.66
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.607	0.00	2.50
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.810	0.00	0.66

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



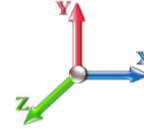
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Load Case: 1.2D + 1.6W 93 mph Wind

Iterations 31

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)
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.810	0.00	2.50
48.50	Safety Cable	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	22.860	0.00	0.16
48.50	Step bolts (ladder)	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	22.860	0.00	0.62
50.00	Safety Cable	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	23.007	0.00	0.49
50.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	23.007	0.00	1.87
52.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.198	0.00	0.66
52.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.198	0.00	2.50
53.25	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	23.314	0.00	0.41
53.25	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	23.314	0.00	1.56
54.00	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	23.383	0.00	0.25
54.00	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	23.383	0.00	0.94
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.562	0.00	0.66
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.562	0.00	2.50
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.737	0.00	0.66
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.737	0.00	2.50
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.907	0.00	0.66
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.907	0.00	2.50
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.073	0.00	0.66
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.073	0.00	2.50
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.234	0.00	0.66
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.234	0.00	2.50
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.392	0.00	0.66
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.392	0.00	2.50
68.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.545	0.00	0.66
68.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.545	0.00	2.50
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.696	0.00	0.66
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.696	0.00	2.50
72.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.843	0.00	0.66
72.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.843	0.00	2.50
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.986	0.00	0.66
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.986	0.00	2.50
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.127	0.00	0.66
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.127	0.00	2.50
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.265	0.00	0.66
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.265	0.00	2.50
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.400	0.00	0.66
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.400	0.00	2.50
82.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.532	0.00	0.66
82.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.532	0.00	2.50
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.662	0.00	0.66
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.662	0.00	2.50
86.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.789	0.00	0.66
86.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.789	0.00	2.50
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.915	0.00	0.66
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.915	0.00	2.50
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.037	0.00	0.66
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.037	0.00	2.50

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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)
92.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.158	0.00	0.66
92.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.158	0.00	2.50
94.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.277	0.00	0.66
94.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.277	0.00	2.50
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.394	0.00	0.66
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.394	0.00	2.50
97.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.451	0.00	0.33
97.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.451	0.00	1.25
98.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.509	0.00	0.33
98.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.509	0.00	1.25
98.75	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	26.551	0.00	0.25
98.75	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	26.551	0.00	0.94
100.00	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	26.621	0.00	0.41
100.00	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	26.621	0.00	1.56
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.733	0.00	0.66
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.733	0.00	2.50
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.842	0.00	0.66
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.842	0.00	2.50
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.950	0.00	0.66
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.950	0.00	2.50
107.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.003	0.00	0.33
107.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.003	0.00	1.25
108.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.056	0.00	0.33
108.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.056	0.00	1.25
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.161	0.00	0.66
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.161	0.00	2.50
112.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.264	0.00	0.66
112.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.264	0.00	2.50
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.366	0.00	0.66
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.366	0.00	2.50
116.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.466	0.00	0.66
116.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.466	0.00	2.50
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.565	0.00	0.66
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.565	0.00	2.50
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.663	0.00	0.66
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.663	0.00	2.50
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.760	0.00	0.66
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.760	0.00	2.50
124.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.855	0.00	0.66
124.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.855	0.00	2.50
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.949	0.00	0.66
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.949	0.00	2.50
127.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.995	0.00	0.33
127.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.995	0.00	1.25
128.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.042	0.00	0.33
128.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.042	0.00	1.25
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.133	0.00	0.66

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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)
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.133	0.00	2.50
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.224	0.00	0.66
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.224	0.00	2.50
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.313	0.00	0.66
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.313	0.00	2.50
136.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.402	0.00	0.66
136.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.402	0.00	2.50
137.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.446	0.00	0.33
137.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.446	0.00	1.25
138.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.489	0.00	0.33
138.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.489	0.00	1.25
139.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.533	0.00	0.33
139.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.533	0.00	1.25
Totals:											0.0	219.0

Calculated Forces

Structure: CT13549-S-SBA
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

5/10/2022

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Load Case: 1.2D + 1.6W 93 mph Wind

Iterations 31

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	-36.19	-25.29	0.00	-2601.5	0.00	2601.52	3003.53	1501.76	5797.25	2902.93	0.00	0.000	0.000	0.909
2.00	-35.67	-25.20	0.00	-2550.9	0.00	2550.93	2986.67	1493.33	5707.57	2858.03	0.02	-0.113	0.000	0.905
4.00	-35.16	-25.11	0.00	-2500.5	0.00	2500.54	2969.56	1484.78	5618.06	2813.21	0.10	-0.228	0.000	0.901
6.00	-34.65	-25.02	0.00	-2450.3	0.00	2450.32	2952.19	1476.10	5528.74	2768.48	0.22	-0.343	0.000	0.897
8.00	-34.15	-24.92	0.00	-2400.2	0.00	2400.29	2934.57	1467.29	5439.61	2723.85	0.39	-0.460	0.000	0.893
10.00	-33.65	-24.83	0.00	-2350.4	0.00	2350.44	2916.70	1458.35	5350.68	2679.32	0.61	-0.578	0.000	0.889
12.00	-33.15	-24.74	0.00	-2300.7	0.00	2300.78	2898.58	1449.29	5261.99	2634.90	0.87	-0.697	0.000	0.885
14.00	-32.65	-24.65	0.00	-2251.2	0.00	2251.29	2880.20	1440.10	5173.53	2590.61	1.19	-0.817	0.000	0.881
16.00	-32.16	-24.56	0.00	-2201.9	0.00	2201.98	2861.57	1430.79	5085.33	2546.44	1.56	-0.938	0.000	0.876
18.00	-31.68	-24.47	0.00	-2152.8	0.00	2152.86	2842.69	1421.35	4997.39	2502.41	1.98	-1.060	0.000	0.872
20.00	-31.20	-24.37	0.00	-2103.9	0.00	2103.93	2823.56	1411.78	4909.74	2458.52	2.45	-1.184	0.000	0.867
22.00	-30.72	-24.27	0.00	-2055.1	0.00	2055.19	2804.17	1402.08	4822.39	2414.78	2.97	-1.309	0.000	0.862
24.00	-30.24	-24.16	0.00	-2006.6	0.00	2006.66	2784.53	1392.26	4735.34	2371.19	3.55	-1.435	0.000	0.857
26.00	-29.77	-24.06	0.00	-1958.3	0.00	1958.33	2764.64	1382.32	4648.63	2327.77	4.18	-1.562	0.000	0.852
28.00	-29.30	-23.95	0.00	-1910.2	0.00	1910.21	2744.49	1372.24	4562.25	2284.52	4.86	-1.690	0.000	0.847
30.00	-28.84	-23.84	0.00	-1862.3	0.00	1862.31	2724.09	1362.04	4476.23	2241.44	5.60	-1.820	0.000	0.842
32.00	-28.38	-23.73	0.00	-1814.6	0.00	1814.63	2703.44	1351.72	4390.58	2198.55	6.39	-1.950	0.000	0.836
34.00	-27.93	-23.62	0.00	-1767.1	0.00	1767.17	2682.53	1341.27	4305.32	2155.86	7.23	-2.082	0.000	0.830
36.00	-27.48	-23.51	0.00	-1719.9	0.00	1719.93	2661.38	1330.69	4220.45	2113.36	8.13	-2.215	0.000	0.824
38.00	-27.03	-23.39	0.00	-1672.9	0.00	1672.92	2639.97	1319.98	4136.00	2071.07	9.09	-2.349	0.000	0.818
40.00	-26.59	-23.27	0.00	-1626.1	0.00	1626.14	2618.30	1309.15	4051.97	2029.00	10.10	-2.484	0.000	0.812
42.00	-26.15	-23.16	0.00	-1579.5	0.00	1579.59	2596.39	1298.19	3968.39	1987.14	11.17	-2.620	0.000	0.805
44.00	-25.71	-23.04	0.00	-1533.2	0.00	1533.28	2574.22	1287.11	3885.26	1945.52	12.30	-2.757	0.000	0.798
46.00	-25.28	-22.92	0.00	-1487.2	0.00	1487.20	2551.80	1275.90	3802.61	1904.13	13.48	-2.895	0.000	0.791
48.00	-24.87	-22.78	0.00	-1441.3	0.00	1441.36	2529.12	1264.56	3720.44	1862.98	14.72	-3.034	0.000	0.784
48.50	-24.75	-22.76	0.00	-1429.9	0.00	1429.97	2523.41	1261.71	3699.97	1852.74	15.04	-3.069	0.000	0.782
50.00	-24.25	-22.67	0.00	-1395.8	0.00	1395.83	2506.19	1253.10	3638.77	1822.09	16.03	-3.175	0.000	0.776
52.00	-23.61	-22.52	0.00	-1350.4	0.00	1350.49	2483.01	1241.51	3557.62	1781.45	17.39	-3.316	0.000	0.768
53.25	-23.22	-22.43	0.00	-1322.3	0.00	1322.33	2480.79	1241.51	3557.62	1781.45	18.27	-3.405	0.000	0.999
54.00	-23.06	-22.41	0.00	-1305.5	0.00	1305.51	2485.26	1241.51	3557.62	1781.45	18.80	-3.459	0.000	0.995
56.00	-22.69	-22.30	0.00	-1260.7	0.00	1260.70	2480.37	1241.51	3557.62	1781.45	20.29	-3.629	0.000	0.981
58.00	-22.32	-22.18	0.00	-1216.1	0.00	1216.11	2475.22	1241.51	3557.62	1781.45	21.85	-3.799	0.000	0.968
60.00	-21.96	-22.07	0.00	-1171.7	0.00	1171.74	2470.82	1241.51	3557.62	1781.45	23.47	-3.970	0.000	0.953
62.00	-21.60	-21.96	0.00	-1127.6	0.00	1127.60	2467.16	1241.51	3557.62	1781.45	25.17	-4.142	0.000	0.939
64.00	-21.25	-21.84	0.00	-1083.6	0.00	1083.69	2464.26	1241.51	3557.62	1781.45	26.94	-4.314	0.000	0.923
66.00	-20.90	-21.73	0.00	-1040.0	0.00	1040.00	2462.10	1241.51	3557.62	1781.45	28.79	-4.487	0.000	0.907
68.00	-20.55	-21.62	0.00	-996.54	0.00	996.54	2460.69	1241.51	3557.62	1781.45	30.70	-4.659	0.000	0.891
70.00	-20.21	-21.50	0.00	-953.30	0.00	953.30	2460.02	1241.51	3557.62	1781.45	32.69	-4.832	0.000	0.873
72.00	-19.87	-21.39	0.00	-910.30	0.00	910.30	2460.02	1241.51	3557.62	1781.45	34.75	-5.004	0.000	0.855
74.00	-19.53	-21.27	0.00	-867.53	0.00	867.53	2460.79	1241.51	3557.62	1781.45	36.88	-5.176	0.000	0.836
76.00	-19.20	-21.15	0.00	-824.99	0.00	824.99	2462.31	1241.51	3557.62	1781.45	39.08	-5.347	0.000	0.816
78.00	-18.87	-21.04	0.00	-782.68	0.00	782.68	2464.58	1241.51	3557.62	1781.45	41.35	-5.517	0.000	0.795
80.00	-18.55	-20.92	0.00	-740.61	0.00	740.61	2467.61	1241.51	3557.62	1781.45	43.70	-5.686	0.000	0.773
82.00	-18.23	-20.80	0.00	-698.76	0.00	698.76	2471.42	1241.51	3557.62	1781.45	46.11	-5.854	0.000	0.750
84.00	-17.91	-20.69	0.00	-657.16	0.00	657.16	2476.02	1241.51	3557.62	1781.45	48.60	-6.019	0.000	0.726
86.00	-17.60	-20.57	0.00	-615.78	0.00	615.78	2481.43	1241.51	3557.62	1781.45	51.15	-6.182	0.000	0.700
88.00	-17.29	-20.45	0.00	-574.65	0.00	574.65	2487.66	1241.51	3557.62	1781.45	53.77	-6.343	0.000	0.673
90.00	-16.99	-20.33	0.00	-533.75	0.00	533.75	2494.73	1241.51	3557.62	1781.45	56.46	-6.500	0.000	0.644

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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



92.00	-16.70	-20.21	0.00	-493.09	0.00	493.09	1519.01	759.51	1634.52	818.47	59.21	-6.653	0.000	0.614
94.00	-16.41	-20.09	0.00	-452.67	0.00	452.67	1499.31	749.66	1584.64	793.50	62.02	-6.802	0.000	0.582
96.00	-16.13	-19.96	0.00	-412.50	0.00	412.50	1479.36	739.68	1535.25	768.77	64.89	-6.945	0.000	0.548
97.00	-13.92	-16.42	0.00	-392.54	0.00	392.54	1469.29	734.65	1510.75	756.50	66.35	-7.016	0.000	0.529
98.00	-13.80	-16.36	0.00	-376.12	0.00	376.12	1459.16	729.58	1486.37	744.29	67.83	-7.085	0.000	0.515
98.75	-13.71	-16.32	0.00	-363.85	0.00	363.85	1451.52	725.76	1468.18	735.18	68.94	-7.136	0.000	0.505
100.00	-13.48	-16.24	0.00	-343.45	0.00	343.45	1437.39	718.70	1436.71	719.42	70.82	-7.220	0.000	0.487
102.00	-13.13	-16.10	0.00	-310.98	0.00	310.98	990.34	495.17	991.38	496.43	73.86	-7.348	0.000	0.641
104.00	-12.94	-15.98	0.00	-278.78	0.00	278.78	978.09	489.05	960.41	480.92	76.96	-7.470	0.000	0.594
106.00	-12.76	-15.86	0.00	-246.83	0.00	246.83	965.60	482.80	929.67	465.53	80.11	-7.616	0.000	0.544
107.00	-6.97	-9.65	0.00	-230.97	0.00	230.97	959.26	479.63	914.39	457.88	81.71	-7.686	0.000	0.512
108.00	-6.88	-9.60	0.00	-221.32	0.00	221.32	952.85	476.43	899.17	450.26	83.32	-7.755	0.000	0.499
110.00	-6.73	-9.47	0.00	-202.12	0.00	202.12	939.85	469.93	868.93	435.11	86.59	-7.887	0.000	0.472
112.00	-6.58	-9.35	0.00	-183.18	0.00	183.18	926.60	463.30	838.95	420.10	89.91	-8.015	0.000	0.444
114.00	-6.43	-9.23	0.00	-164.49	0.00	164.49	913.09	456.55	809.25	405.23	93.28	-8.137	0.000	0.413
116.00	-6.28	-9.10	0.00	-146.03	0.00	146.03	899.33	449.67	779.86	390.51	96.71	-8.254	0.000	0.381
118.00	-6.14	-8.98	0.00	-127.83	0.00	127.83	885.32	442.66	750.77	375.94	100.18	-8.364	0.000	0.347
120.00	-6.00	-8.86	0.00	-109.86	0.00	109.86	871.06	435.53	722.01	361.54	103.69	-8.466	0.000	0.311
122.00	-5.87	-8.75	0.00	-92.13	0.00	92.13	856.54	428.27	693.59	347.31	107.24	-8.559	0.000	0.273
124.00	-5.74	-8.63	0.00	-74.64	0.00	74.64	841.77	420.89	665.53	333.26	110.84	-8.641	0.000	0.231
126.00	-5.62	-8.51	0.00	-57.39	0.00	57.39	826.75	413.37	637.84	319.39	114.46	-8.711	0.000	0.187
127.00	-3.18	-5.10	0.00	-48.88	0.00	48.88	819.14	409.57	624.14	312.53	116.28	-8.741	0.000	0.160
128.00	-3.13	-5.05	0.00	-43.78	0.00	43.78	811.45	405.73	610.52	305.71	118.10	-8.768	0.000	0.147
130.00	-3.02	-4.93	0.00	-33.69	0.00	33.69	791.03	395.51	580.02	290.44	121.77	-8.815	0.000	0.120
132.00	-2.91	-4.82	0.00	-23.83	0.00	23.83	770.61	385.30	550.30	275.56	125.46	-8.853	0.000	0.090
134.00	-2.80	-4.70	0.00	-14.20	0.00	14.20	750.18	375.09	521.37	261.07	129.16	-8.881	0.000	0.058
136.00	-2.70	-4.60	0.00	-4.79	0.00	4.79	729.76	364.88	493.22	246.97	132.87	-8.895	0.000	0.023
137.00	-0.07	-0.12	0.00	-0.19	0.00	0.19	719.55	359.77	479.43	240.07	134.73	-8.897	0.000	0.001
138.00	-0.04	-0.07	0.00	-0.07	0.00	0.07	709.33	354.67	465.84	233.27	136.58	-8.898	0.000	0.000
139.00	0.00	-0.06	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	138.44	-8.898	0.000	0.000

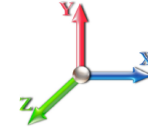
Wind Loading - Shaft

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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 + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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	17.879	19.67	342.67	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	339.32	0.650	0.000	2.00	7.954	5.17	162.7	0.0	283.6
4.00		1.00	0.85	17.879	19.67	335.97	0.650	0.000	2.00	7.876	5.12	161.1	0.0	280.8
6.00		1.00	0.85	17.879	19.67	332.62	0.650	0.000	2.00	7.798	5.07	159.5	0.0	278.0
8.00		1.00	0.85	17.879	19.67	329.26	0.650	0.000	2.00	7.719	5.02	157.9	0.0	275.2
10.00		1.00	0.85	17.879	19.67	325.91	0.650	0.000	2.00	7.641	4.97	156.3	0.0	272.4
12.00		1.00	0.85	17.879	19.67	322.56	0.650	0.000	2.00	7.563	4.92	154.7	0.0	269.6
14.00		1.00	0.85	17.879	19.67	319.21	0.650	0.000	2.00	7.485	4.87	153.1	0.0	266.8
16.00		1.00	0.86	18.100	19.91	317.80	0.650	0.000	2.00	7.407	4.81	153.4	0.0	264.0
18.00		1.00	0.88	18.554	20.41	318.35	0.650	0.000	2.00	7.329	4.76	155.6	0.0	261.2
20.00		1.00	0.90	18.971	20.87	318.45	0.650	0.000	2.00	7.250	4.71	157.4	0.0	258.4
22.00		1.00	0.92	19.355	21.29	318.18	0.650	0.000	2.00	7.172	4.66	158.8	0.0	255.6
24.00		1.00	0.94	19.713	21.68	317.58	0.650	0.000	2.00	7.094	4.61	160.0	0.0	252.8
26.00		1.00	0.95	20.048	22.05	316.72	0.650	0.000	2.00	7.016	4.56	160.9	0.0	249.9
28.00		1.00	0.97	20.363	22.40	315.63	0.650	0.000	2.00	6.938	4.51	161.6	0.0	247.1
30.00		1.00	0.98	20.661	22.73	314.32	0.650	0.000	2.00	6.860	4.46	162.1	0.0	244.3
32.00		1.00	1.00	20.944	23.04	312.84	0.650	0.000	2.00	6.781	4.41	162.5	0.0	241.5
34.00		1.00	1.01	21.213	23.33	311.19	0.650	0.000	2.00	6.703	4.36	162.7	0.0	238.7
36.00		1.00	1.02	21.470	23.62	309.40	0.650	0.000	2.00	6.625	4.31	162.7	0.0	235.9
38.00		1.00	1.03	21.715	23.89	307.47	0.650	0.000	2.00	6.547	4.26	162.6	0.0	233.1
40.00		1.00	1.04	21.951	24.15	305.42	0.650	0.000	2.00	6.469	4.20	162.4	0.0	230.3
42.00		1.00	1.05	22.178	24.40	303.26	0.650	0.000	2.00	6.390	4.15	162.1	0.0	227.5
44.00		1.00	1.06	22.396	24.64	301.00	0.650	0.000	2.00	6.312	4.10	161.7	0.0	224.7
46.00		1.00	1.07	22.607	24.87	298.64	0.650	0.000	2.00	6.234	4.05	161.2	0.0	221.9
48.00		1.00	1.08	22.810	25.09	296.19	0.650	0.000	2.00	6.156	4.00	160.6	0.0	219.1
48.50	Bot - Section 2	1.00	1.09	22.860	25.15	295.57	0.650	0.000	0.50	1.527	0.99	39.9	0.0	54.3
50.00		1.00	1.09	23.007	25.31	293.67	0.650	0.000	1.50	4.614	3.00	121.5	0.0	293.5
52.00		1.00	1.10	23.198	25.52	291.07	0.650	0.000	2.00	6.084	3.95	161.5	0.0	387.0
53.25	Top - Section 1	1.00	1.11	23.314	25.65	289.40	0.650	0.000	1.25	3.763	2.45	100.4	0.0	239.3
54.00		1.00	1.11	23.383	25.72	292.54	0.650	0.000	0.75	2.243	1.46	60.0	0.0	64.0
56.00		1.00	1.12	23.562	25.92	289.81	0.650	0.000	2.00	5.928	3.85	159.8	0.0	169.0
58.00		1.00	1.13	23.737	26.11	287.02	0.650	0.000	2.00	5.850	3.80	158.8	0.0	166.8
60.00		1.00	1.14	23.907	26.30	284.18	0.650	0.000	2.00	5.771	3.75	157.8	0.0	164.5
62.00		1.00	1.14	24.073	26.48	281.27	0.650	0.000	2.00	5.693	3.70	156.8	0.0	162.3
64.00		1.00	1.15	24.234	26.66	278.31	0.650	0.000	2.00	5.615	3.65	155.7	0.0	160.0
66.00		1.00	1.16	24.392	26.83	275.30	0.650	0.000	2.00	5.537	3.60	154.5	0.0	157.8
68.00		1.00	1.17	24.545	27.00	272.24	0.650	0.000	2.00	5.459	3.55	153.3	0.0	155.5
70.00		1.00	1.17	24.696	27.17	269.13	0.650	0.000	2.00	5.381	3.50	152.0	0.0	153.3
72.00		1.00	1.18	24.843	27.33	265.98	0.650	0.000	2.00	5.302	3.45	150.7	0.0	151.1
74.00		1.00	1.19	24.986	27.48	262.78	0.650	0.000	2.00	5.224	3.40	149.3	0.0	148.8
76.00		1.00	1.19	25.127	27.64	259.55	0.650	0.000	2.00	5.146	3.34	147.9	0.0	146.6
78.00		1.00	1.20	25.265	27.79	256.28	0.650	0.000	2.00	5.068	3.29	146.5	0.0	144.3
80.00		1.00	1.21	25.400	27.94	252.97	0.650	0.000	2.00	4.990	3.24	145.0	0.0	142.1
82.00		1.00	1.21	25.532	28.09	249.62	0.650	0.000	2.00	4.912	3.19	143.5	0.0	139.8
84.00		1.00	1.22	25.662	28.23	246.24	0.650	0.000	2.00	4.833	3.14	141.9	0.0	137.6
86.00		1.00	1.23	25.789	28.37	242.82	0.650	0.000	2.00	4.755	3.09	140.3	0.0	135.3
88.00		1.00	1.23	25.915	28.51	239.38	0.650	0.000	2.00	4.677	3.04	138.7	0.0	133.1

Wind Loading - Shaft

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	1.00	1.24	26.037	28.64	235.90	0.650	0.000	2.00	4.599	2.99	137.0	0.0	130.8
92.00	1.00	1.24	26.158	28.77	232.39	0.650	0.000	2.00	4.521	2.94	135.3	0.0	128.6
94.00	1.00	1.25	26.277	28.90	228.85	0.650	0.000	2.00	4.442	2.89	133.5	0.0	126.4
96.00	1.00	1.25	26.394	29.03	225.29	0.650	0.000	2.00	4.364	2.84	131.8	0.0	124.1
97.00 Appurtenance(s)	1.00	1.26	26.451	29.10	223.50	0.650	0.000	1.00	2.153	1.40	65.1	0.0	61.2
98.00	1.00	1.26	26.509	29.16	221.70	0.650	0.000	1.00	2.133	1.39	64.7	0.0	60.7
98.75 Bot - Section 3	1.00	1.26	26.551	29.21	220.34	0.650	0.000	0.75	1.587	1.03	48.2	0.0	45.1
100.00	1.00	1.27	26.621	29.28	218.08	0.650	0.000	1.25	2.660	1.73	81.0	0.0	131.4
102.00 Top - Section 2	1.00	1.27	26.733	29.41	214.44	0.650	0.000	2.00	4.193	2.73	128.2	0.0	207.0
104.00	1.00	1.28	26.842	29.53	214.10	0.650	0.000	2.00	4.115	2.67	126.4	0.0	87.9
106.00	1.00	1.28	26.950	29.65	210.42	0.650	0.000	2.00	4.037	2.62	124.5	0.0	86.3
107.00 Appurtenance(s)	1.00	1.28	27.003	29.70	208.57	0.650	0.000	1.00	1.989	1.29	61.4	0.0	42.5
108.00	1.00	1.29	27.056	29.76	206.71	0.650	0.000	1.00	1.970	1.28	61.0	0.0	42.1
110.00	1.00	1.29	27.161	29.88	202.98	0.650	0.000	2.00	3.880	2.52	120.6	0.0	82.9
112.00	1.00	1.30	27.264	29.99	199.22	0.650	0.000	2.00	3.802	2.47	118.6	0.0	81.2
114.00	1.00	1.30	27.366	30.10	195.45	0.650	0.000	2.00	3.724	2.42	116.6	0.0	79.5
116.00	1.00	1.31	27.466	30.21	191.65	0.650	0.000	2.00	3.646	2.37	114.6	0.0	77.8
118.00	1.00	1.31	27.565	30.32	187.84	0.650	0.000	2.00	3.568	2.32	112.5	0.0	76.2
120.00	1.00	1.32	27.663	30.43	184.00	0.650	0.000	2.00	3.490	2.27	110.4	0.0	74.5
122.00	1.00	1.32	27.760	30.54	180.15	0.650	0.000	2.00	3.411	2.22	108.3	0.0	72.8
124.00	1.00	1.32	27.855	30.64	176.27	0.650	0.000	2.00	3.333	2.17	106.2	0.0	71.1
126.00	1.00	1.33	27.949	30.74	172.38	0.650	0.000	2.00	3.255	2.12	104.1	0.0	69.4
127.00 Appurtenance(s)	1.00	1.33	27.995	30.79	170.42	0.650	0.000	1.00	1.598	1.04	51.2	0.0	34.1
128.00	1.00	1.33	28.042	30.85	168.47	0.650	0.000	1.00	1.579	1.03	50.6	0.0	33.7
130.00	1.00	1.34	28.133	30.95	164.54	0.650	0.000	2.00	3.099	2.01	99.7	0.0	66.1
132.00	1.00	1.34	28.224	31.05	160.59	0.650	0.000	2.00	3.021	1.96	97.5	0.0	64.4
134.00	1.00	1.35	28.313	31.14	156.63	0.650	0.000	2.00	2.942	1.91	95.3	0.0	62.7
136.00	1.00	1.35	28.402	31.24	152.65	0.650	0.000	2.00	2.864	1.86	93.1	0.0	61.0
137.00 Appurtenance(s)	1.00	1.35	28.446	31.29	150.65	0.650	0.000	1.00	1.403	0.91	45.6	0.0	29.9
138.00	1.00	1.35	28.489	31.34	148.65	0.650	0.000	1.00	1.383	0.90	45.1	0.0	29.4
139.00 Appurtenance(s)	1.00	1.36	28.533	31.39	146.65	0.650	0.000	1.00	1.364	0.89	44.5	0.0	29.0
Totals:								139.00			9,802.0		12,008.1

Discrete Appurtenance Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor	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	139.00	6' Lightning rod	1	28.533	31.386	1.00	1.00	0.38	5.85	0.000	0.000	19.08	0.00	0.00	
2	137.00	RDS-272	3	28.446	31.290	0.56	0.75	16.88	1080.00	0.000	0.000	844.84	0.00	0.00	
3	137.00	KRY 112 144/1	3	28.446	31.290	0.40	0.80	0.49	29.70	0.000	0.000	24.63	0.00	0.00	
4	137.00	4415 B25	3	28.446	31.290	0.40	0.80	2.23	125.01	0.000	0.000	111.74	0.00	0.00	
5	137.00	AIR6449 B41	3	28.446	31.290	0.57	0.80	9.63	278.10	0.000	0.000	482.00	0.00	0.00	
6	137.00	RFS	3	28.446	31.290	0.56	0.80	34.00	345.60	0.000	0.000	1702.35	0.00	0.00	
7	137.00	Air 32	3	28.446	31.290	0.70	0.80	13.59	356.94	0.000	0.000	680.52	0.00	0.00	
8	137.00	4449 B71+B85	3	28.446	31.290	0.40	0.80	1.98	189.00	0.000	0.000	99.13	0.00	0.00	
9	137.00	SDX1926Q-43	3	28.446	31.290	0.40	0.80	0.46	18.90	0.000	0.000	22.83	0.00	0.00	
10	127.00	TA08025-B604	3	27.995	30.795	0.38	0.75	2.21	172.53	0.000	0.000	108.64	0.00	0.00	
11	127.00	Commscope	3	27.995	30.795	0.55	0.75	20.38	191.16	0.000	0.000	1004.14	0.00	0.00	
12	127.00	RDIDC-9181-OF-48	1	27.995	30.795	0.38	0.75	0.75	19.71	0.000	0.000	37.14	0.00	0.00	
13	127.00	TA08025-B605	3	27.995	30.795	0.38	0.75	2.21	202.50	0.000	0.000	108.64	0.00	0.00	
14	127.00	MC-PK8-DSH	1	27.995	30.795	1.00	1.00	34.30	1554.30	0.000	0.000	1690.02	0.00	0.00	
15	107.00	RRUS 4449 B5/B12	3	27.003	29.704	0.38	0.75	1.86	229.50	0.000	0.000	88.22	0.00	0.00	
16	107.00	DC9-48-60-24-8C-EV	1	27.003	29.704	0.38	0.75	0.43	23.58	0.000	0.000	20.32	0.00	0.00	
17	107.00	RRUS 4478 B14	3	27.003	29.704	0.38	0.75	1.86	160.38	0.000	0.000	88.22	0.00	0.00	
18	107.00	RRUS 4415 B25	3	27.003	29.704	0.38	0.75	1.84	124.20	0.000	0.000	87.69	0.00	0.00	
19	107.00	DBC20056F1V1	3	27.003	29.704	0.38	0.75	0.46	18.90	0.000	0.000	21.92	0.00	0.00	
20	107.00	RRUS A2	3	27.003	29.704	0.38	0.75	2.09	57.24	0.000	0.000	99.45	0.00	0.00	
21	107.00	RRUS-32	3	27.003	29.704	0.38	0.75	4.35	207.90	0.000	0.000	206.92	0.00	0.00	
22	107.00	DC6-48-60-18-8F	2	27.003	29.704	0.38	0.75	1.10	57.24	0.000	0.000	52.40	0.00	0.00	
23	107.00	EPBQ-652L8H6-L2	3	27.003	29.704	0.64	0.75	18.47	196.56	0.000	0.000	878.03	0.00	0.00	
24	107.00	RMQLP-4120-H10	1	27.003	29.704	1.00	1.00	42.00	2924.47	0.000	0.000	1996.09	0.00	0.00	
25	107.00	4426 B66	3	27.003	29.704	0.38	0.75	1.29	143.10	0.000	0.000	61.49	0.00	0.00	
26	107.00	AIR 6449 B77D	3	27.003	29.704	0.64	0.75	7.90	220.32	0.000	0.000	375.39	0.00	0.00	
27	107.00	AIR 6419 B77G	3	27.003	29.704	0.57	0.75	6.50	220.32	0.000	0.000	308.82	0.00	0.00	
28	107.00	DMP65R-BU6DA	3	27.003	29.704	0.54	0.75	20.59	214.38	0.000	0.000	978.57	0.00	0.00	
29	107.00	DTMABP7819VG12A	3	27.003	29.704	0.38	0.75	1.28	51.84	0.000	0.000	60.95	0.00	0.00	
30	97.00	Samsung VZS01	3	26.451	29.096	0.55	0.80	7.12	235.17	0.000	0.000	331.50	0.00	0.00	
31	97.00	T-Arms	3	26.451	29.096	0.56	0.75	13.50	945.00	0.000	0.000	628.48	0.00	0.00	
32	97.00	JMA MX06FRO660-03	6	26.451	29.096	0.70	0.80	41.22	248.40	0.000	0.000	1918.84	0.00	0.00	
33	97.00	Commscope	1	26.451	29.096	0.40	0.80	2.24	18.00	0.000	0.000	104.28	0.00	0.00	
34	97.00	Samsung B5/B13	3	26.451	29.096	0.40	0.80	2.26	227.88	0.000	0.000	105.03	0.00	0.00	
35	97.00	Samsung B2/B66A	3	26.451	29.096	0.40	0.80	2.26	189.81	0.000	0.000	105.03	0.00	0.00	

Totals: 11,283.49

15,453.33

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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
2.00		162.69	349.94	0.00	0.00
4.00		161.09	347.13	0.00	0.00
6.00		159.49	344.33	0.00	0.00
8.00		157.89	341.52	0.00	0.00
10.00		156.29	338.72	0.00	0.00
12.00		154.69	335.91	0.00	0.00
14.00		153.10	333.10	0.00	0.00
16.00		153.37	330.30	0.00	0.00
18.00		155.56	327.49	0.00	0.00
20.00		157.35	324.68	0.00	0.00
22.00		158.81	321.88	0.00	0.00
24.00		159.98	319.07	0.00	0.00
26.00		160.91	316.26	0.00	0.00
28.00		161.62	313.46	0.00	0.00
30.00		162.13	310.65	0.00	0.00
32.00		162.48	307.85	0.00	0.00
34.00		162.67	305.04	0.00	0.00
36.00		162.72	302.23	0.00	0.00
38.00		162.64	299.43	0.00	0.00
40.00		162.44	296.62	0.00	0.00
42.00		162.13	293.81	0.00	0.00
44.00		161.73	291.01	0.00	0.00
46.00		161.23	288.20	0.00	0.00
48.00		160.64	285.40	0.00	0.00
48.50		39.93	70.91	0.00	0.00
50.00		121.45	343.28	0.00	0.00
52.00		161.46	453.29	0.00	0.00
53.25		100.36	280.74	0.00	0.00
54.00		60.00	88.83	0.00	0.00
56.00		159.79	235.33	0.00	0.00
58.00		158.85	233.09	0.00	0.00
60.00		157.85	230.84	0.00	0.00
62.00		156.79	228.60	0.00	0.00
64.00		155.67	226.35	0.00	0.00
66.00		154.50	224.11	0.00	0.00
68.00		153.28	221.86	0.00	0.00
70.00		152.01	219.62	0.00	0.00
72.00		150.69	217.37	0.00	0.00
74.00		149.33	215.13	0.00	0.00
76.00		147.92	212.88	0.00	0.00
78.00		146.48	210.64	0.00	0.00
80.00		144.99	208.39	0.00	0.00
82.00		143.46	206.15	0.00	0.00
84.00		141.89	203.90	0.00	0.00
86.00		140.29	201.66	0.00	0.00
88.00		138.65	199.41	0.00	0.00

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00		136.98	197.17	0.00	0.00
92.00		135.28	194.92	0.00	0.00
94.00		133.54	192.68	0.00	0.00
96.00		131.78	190.43	0.00	0.00
97.00	(19) attachments	3258.30	1958.63	0.00	0.00
98.00		64.69	81.59	0.00	0.00
98.75		48.21	60.83	0.00	0.00
100.00		81.02	157.55	0.00	0.00
102.00		128.24	248.88	0.00	0.00
104.00		126.36	129.82	0.00	0.00
106.00		124.46	128.14	0.00	0.00
107.00	(40) attachments	5385.92	4913.37	0.00	0.00
108.00		60.96	57.44	0.00	0.00
110.00		120.58	113.61	0.00	0.00
112.00		118.59	111.92	0.00	0.00
114.00		116.59	110.24	0.00	0.00
116.00		114.56	108.56	0.00	0.00
118.00		112.51	106.87	0.00	0.00
120.00		110.43	105.19	0.00	0.00
122.00		108.34	103.51	0.00	0.00
124.00		106.22	101.82	0.00	0.00
126.00		104.08	100.14	0.00	0.00
127.00	(11) attachments	2999.78	2189.64	0.00	0.00
128.00		50.64	47.22	0.00	0.00
130.00		99.73	93.19	0.00	0.00
132.00		97.53	91.50	0.00	0.00
134.00		95.30	89.82	0.00	0.00
136.00		93.06	88.14	0.00	0.00
137.00	(24) attachments	4013.68	2466.69	0.00	0.00
138.00		45.08	30.63	0.00	0.00
139.00	(1) attachments	63.59	36.06	0.00	0.00
	Totals:	25,255.33	27,162.62	0.00	0.00

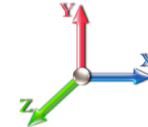
Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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 + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.49
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	1.87
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.49
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	1.87
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.49
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	1.87
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.49
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	1.87
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.49
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	1.87
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.49
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	1.87
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	0.49
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.879	0.00	1.87
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.100	0.00	0.49
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.100	0.00	1.87
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.554	0.00	0.49
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.554	0.00	1.87
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.971	0.00	0.49
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.971	0.00	1.87
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.355	0.00	0.49
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.355	0.00	1.87
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.713	0.00	0.49
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.713	0.00	1.87
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.048	0.00	0.49
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.048	0.00	1.87
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.363	0.00	0.49
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.363	0.00	1.87
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.661	0.00	0.49
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.661	0.00	1.87
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.944	0.00	0.49
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.944	0.00	1.87
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.213	0.00	0.49
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.213	0.00	1.87
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.470	0.00	0.49
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.470	0.00	1.87
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.715	0.00	0.49
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.715	0.00	1.87
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.951	0.00	0.49
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.951	0.00	1.87
42.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.178	0.00	0.49
42.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.178	0.00	1.87
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.396	0.00	0.49
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.396	0.00	1.87
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.607	0.00	0.49
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.607	0.00	1.87
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.810	0.00	0.49

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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)
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.810	0.00	1.87
48.50	Safety Cable	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	22.860	0.00	0.12
48.50	Step bolts (ladder)	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	22.860	0.00	0.47
50.00	Safety Cable	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	23.007	0.00	0.37
50.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	23.007	0.00	1.40
52.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.198	0.00	0.49
52.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.198	0.00	1.87
53.25	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	23.314	0.00	0.31
53.25	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	23.314	0.00	1.17
54.00	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	23.383	0.00	0.18
54.00	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	23.383	0.00	0.70
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.562	0.00	0.49
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.562	0.00	1.87
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.737	0.00	0.49
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.737	0.00	1.87
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.907	0.00	0.49
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.907	0.00	1.87
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.073	0.00	0.49
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.073	0.00	1.87
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.234	0.00	0.49
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.234	0.00	1.87
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.392	0.00	0.49
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.392	0.00	1.87
68.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.545	0.00	0.49
68.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.545	0.00	1.87
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.696	0.00	0.49
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.696	0.00	1.87
72.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.843	0.00	0.49
72.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.843	0.00	1.87
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.986	0.00	0.49
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.986	0.00	1.87
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.127	0.00	0.49
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.127	0.00	1.87
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.265	0.00	0.49
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.265	0.00	1.87
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.400	0.00	0.49
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.400	0.00	1.87
82.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.532	0.00	0.49
82.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.532	0.00	1.87
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.662	0.00	0.49
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.662	0.00	1.87
86.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.789	0.00	0.49
86.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.789	0.00	1.87
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.915	0.00	0.49
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.915	0.00	1.87
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.037	0.00	0.49
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.037	0.00	1.87

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



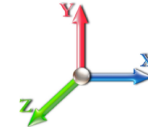
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Load Case: 0.9D + 1.6W 93 mph Wind

Iterations 31

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)
92.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.158	0.00	0.49
92.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.158	0.00	1.87
94.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.277	0.00	0.49
94.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.277	0.00	1.87
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.394	0.00	0.49
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.394	0.00	1.87
97.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.451	0.00	0.25
97.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.451	0.00	0.94
98.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.509	0.00	0.25
98.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.509	0.00	0.94
98.75	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	26.551	0.00	0.18
98.75	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	26.551	0.00	0.70
100.00	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	26.621	0.00	0.31
100.00	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	26.621	0.00	1.17
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.733	0.00	0.49
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.733	0.00	1.87
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.842	0.00	0.49
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.842	0.00	1.87
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.950	0.00	0.49
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.950	0.00	1.87
107.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.003	0.00	0.25
107.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.003	0.00	0.94
108.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.056	0.00	0.25
108.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.056	0.00	0.94
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.161	0.00	0.49
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.161	0.00	1.87
112.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.264	0.00	0.49
112.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.264	0.00	1.87
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.366	0.00	0.49
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.366	0.00	1.87
116.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.466	0.00	0.49
116.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.466	0.00	1.87
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.565	0.00	0.49
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.565	0.00	1.87
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.663	0.00	0.49
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.663	0.00	1.87
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.760	0.00	0.49
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.760	0.00	1.87
124.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.855	0.00	0.49
124.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.855	0.00	1.87
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.949	0.00	0.49
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.949	0.00	1.87
127.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.995	0.00	0.25
127.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.995	0.00	0.94
128.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.042	0.00	0.25
128.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.042	0.00	0.94
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.133	0.00	0.49

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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)
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.133	0.00	1.87
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.224	0.00	0.49
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.224	0.00	1.87
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.313	0.00	0.49
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.313	0.00	1.87
136.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.402	0.00	0.49
136.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.402	0.00	1.87
137.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.446	0.00	0.25
137.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.446	0.00	0.94
138.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.489	0.00	0.25
138.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.489	0.00	0.94
139.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.533	0.00	0.25
139.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.533	0.00	0.94
Totals:											0.0	164.3

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Iterations 31

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	-27.14	-25.28	0.00	-2555.0	0.00	2555.04	3003.53	1501.76	5797.25	2902.93	0.00	0.000	0.000	0.889
2.00	-26.74	-25.17	0.00	-2504.4	0.00	2504.47	2986.67	1493.33	5707.57	2858.03	0.02	-0.111	0.000	0.886
4.00	-26.34	-25.06	0.00	-2454.1	0.00	2454.13	2969.56	1484.78	5618.06	2813.21	0.10	-0.224	0.000	0.882
6.00	-25.95	-24.95	0.00	-2404.0	0.00	2404.01	2952.19	1476.10	5528.74	2768.48	0.21	-0.337	0.000	0.877
8.00	-25.56	-24.84	0.00	-2354.1	0.00	2354.11	2934.57	1467.29	5439.61	2723.85	0.38	-0.451	0.000	0.873
10.00	-25.17	-24.73	0.00	-2304.4	0.00	2304.43	2916.70	1458.35	5350.68	2679.32	0.59	-0.567	0.000	0.869
12.00	-24.79	-24.63	0.00	-2254.9	0.00	2254.96	2898.58	1449.29	5261.99	2634.90	0.86	-0.683	0.000	0.865
14.00	-24.41	-24.52	0.00	-2205.7	0.00	2205.71	2880.20	1440.10	5173.53	2590.61	1.17	-0.801	0.000	0.860
16.00	-24.03	-24.41	0.00	-2156.6	0.00	2156.67	2861.57	1430.79	5085.33	2546.44	1.53	-0.920	0.000	0.856
18.00	-23.65	-24.30	0.00	-2107.8	0.00	2107.84	2842.69	1421.35	4997.39	2502.41	1.94	-1.040	0.000	0.851
20.00	-23.28	-24.19	0.00	-2059.2	0.00	2059.25	2823.56	1411.78	4909.74	2458.52	2.40	-1.161	0.000	0.846
22.00	-22.91	-24.07	0.00	-2010.8	0.00	2010.87	2804.17	1402.08	4822.39	2414.78	2.92	-1.283	0.000	0.841
24.00	-22.54	-23.95	0.00	-1962.7	0.00	1962.74	2784.53	1392.26	4735.34	2371.19	3.48	-1.406	0.000	0.836
26.00	-22.18	-23.83	0.00	-1914.8	0.00	1914.84	2764.64	1382.32	4648.63	2327.77	4.10	-1.531	0.000	0.831
28.00	-21.82	-23.71	0.00	-1867.1	0.00	1867.18	2744.49	1372.24	4562.25	2284.52	4.77	-1.656	0.000	0.826
30.00	-21.46	-23.58	0.00	-1819.7	0.00	1819.76	2724.09	1362.04	4476.23	2241.44	5.49	-1.782	0.000	0.820
32.00	-21.10	-23.46	0.00	-1772.5	0.00	1772.59	2703.44	1351.72	4390.58	2198.55	6.26	-1.910	0.000	0.814
34.00	-20.75	-23.33	0.00	-1725.6	0.00	1725.68	2682.53	1341.27	4305.32	2155.86	7.09	-2.039	0.000	0.808
36.00	-20.40	-23.21	0.00	-1679.0	0.00	1679.01	2661.38	1330.69	4220.45	2113.36	7.97	-2.168	0.000	0.802
38.00	-20.06	-23.08	0.00	-1632.6	0.00	1632.60	2639.97	1319.98	4136.00	2071.07	8.91	-2.299	0.000	0.796
40.00	-19.71	-22.95	0.00	-1586.4	0.00	1586.45	2618.30	1309.15	4051.97	2029.00	9.90	-2.431	0.000	0.790
42.00	-19.38	-22.82	0.00	-1540.5	0.00	1540.55	2596.39	1298.19	3968.39	1987.14	10.95	-2.563	0.000	0.783
44.00	-19.04	-22.69	0.00	-1494.9	0.00	1494.91	2574.22	1287.11	3885.26	1945.52	12.05	-2.697	0.000	0.776
46.00	-18.71	-22.56	0.00	-1449.5	0.00	1449.54	2551.80	1275.90	3802.61	1904.13	13.21	-2.832	0.000	0.769
48.00	-18.40	-22.41	0.00	-1404.4	0.00	1404.42	2529.12	1264.56	3720.44	1862.98	14.42	-2.967	0.000	0.761
48.50	-18.30	-22.39	0.00	-1393.2	0.00	1393.22	2523.41	1261.71	3699.97	1852.74	14.73	-3.002	0.000	0.760
50.00	-17.92	-22.29	0.00	-1359.6	0.00	1359.64	2506.19	1253.10	3638.77	1822.09	15.69	-3.105	0.000	0.754
52.00	-17.43	-22.13	0.00	-1315.0	0.00	1315.06	2483.01	1241.51	3557.62	1781.45	17.02	-3.242	0.000	0.746
53.25	-17.13	-22.04	0.00	-1287.4	0.00	1287.40	2480.79	1241.51	3557.62	1781.45	17.88	-3.329	0.000	0.970
54.00	-17.00	-22.01	0.00	-1270.8	0.00	1270.87	2485.26	1241.51	3557.62	1781.45	18.41	-3.381	0.000	0.965
56.00	-16.71	-21.88	0.00	-1226.8	0.00	1226.86	2480.79	1241.51	3557.62	1781.45	19.86	-3.546	0.000	0.952
58.00	-16.43	-21.76	0.00	-1183.1	0.00	1183.10	2480.79	1241.51	3557.62	1781.45	21.38	-3.712	0.000	0.939
60.00	-16.14	-21.63	0.00	-1139.5	0.00	1139.59	2480.79	1241.51	3557.62	1781.45	22.97	-3.879	0.000	0.924
62.00	-15.87	-21.50	0.00	-1096.3	0.00	1096.33	2480.79	1241.51	3557.62	1781.45	24.63	-4.046	0.000	0.910
64.00	-15.59	-21.38	0.00	-1053.3	0.00	1053.32	2480.79	1241.51	3557.62	1781.45	26.36	-4.213	0.000	0.895
66.00	-15.31	-21.25	0.00	-1010.5	0.00	1010.57	2480.79	1241.51	3557.62	1781.45	28.16	-4.381	0.000	0.879
68.00	-15.04	-21.13	0.00	-968.06	0.00	968.06	2480.79	1241.51	3557.62	1781.45	30.03	-4.548	0.000	0.862
70.00	-14.78	-21.00	0.00	-925.81	0.00	925.81	2480.79	1241.51	3557.62	1781.45	31.97	-4.716	0.000	0.845
72.00	-14.51	-20.87	0.00	-883.81	0.00	883.81	2480.79	1241.51	3557.62	1781.45	33.98	-4.883	0.000	0.827
74.00	-14.25	-20.75	0.00	-842.06	0.00	842.06	2480.79	1241.51	3557.62	1781.45	36.06	-5.050	0.000	0.809
76.00	-13.99	-20.62	0.00	-800.57	0.00	800.57	2480.79	1241.51	3557.62	1781.45	38.21	-5.216	0.000	0.789
78.00	-13.74	-20.50	0.00	-759.33	0.00	759.33	2480.79	1241.51	3557.62	1781.45	40.43	-5.381	0.000	0.769
80.00	-13.48	-20.37	0.00	-718.33	0.00	718.33	2480.79	1241.51	3557.62	1781.45	42.71	-5.545	0.000	0.747
82.00	-13.24	-20.25	0.00	-677.59	0.00	677.59	2480.79	1241.51	3557.62	1781.45	45.07	-5.708	0.000	0.725
84.00	-12.99	-20.12	0.00	-637.10	0.00	637.10	2480.79	1241.51	3557.62	1781.45	47.49	-5.868	0.000	0.701
86.00	-12.75	-19.99	0.00	-596.86	0.00	596.86	2480.79	1241.51	3557.62	1781.45	49.98	-6.026	0.000	0.676
88.00	-12.51	-19.87	0.00	-556.87	0.00	556.87	2480.79	1241.51	3557.62	1781.45	52.53	-6.182	0.000	0.649
90.00	-12.28	-19.74	0.00	-517.14	0.00	517.14	2480.79	1241.51	3557.62	1781.45	55.15	-6.334	0.000	0.622

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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92.00	-12.05	-19.62	0.00	-477.65	0.00	477.65	1519.01	759.51	1634.52	818.47	57.83	-6.482	0.000	0.592
94.00	-11.83	-19.49	0.00	-438.42	0.00	438.42	1499.31	749.66	1584.64	793.50	60.57	-6.626	0.000	0.561
96.00	-11.62	-19.36	0.00	-399.43	0.00	399.43	1479.36	739.68	1535.25	768.77	63.37	-6.765	0.000	0.528
97.00	-10.04	-15.91	0.00	-380.07	0.00	380.07	1469.29	734.65	1510.75	756.50	64.80	-6.834	0.000	0.510
98.00	-9.95	-15.84	0.00	-364.17	0.00	364.17	1459.16	729.58	1486.37	744.29	66.23	-6.901	0.000	0.497
98.75	-9.88	-15.80	0.00	-352.28	0.00	352.28	1451.52	725.76	1468.18	735.18	67.32	-6.950	0.000	0.486
100.00	-9.71	-15.72	0.00	-332.54	0.00	332.54	1437.39	718.70	1436.71	719.42	69.14	-7.031	0.000	0.469
102.00	-9.44	-15.58	0.00	-301.11	0.00	301.11	990.34	495.17	991.38	496.43	72.11	-7.155	0.000	0.617
104.00	-9.29	-15.46	0.00	-269.95	0.00	269.95	978.09	489.05	960.41	480.92	75.12	-7.274	0.000	0.572
106.00	-9.15	-15.33	0.00	-239.04	0.00	239.04	965.60	482.80	929.67	465.53	78.19	-7.415	0.000	0.524
107.00	-4.97	-9.36	0.00	-223.71	0.00	223.71	959.26	479.63	914.39	457.88	79.75	-7.483	0.000	0.494
108.00	-4.91	-9.30	0.00	-214.35	0.00	214.35	952.85	476.43	899.17	450.26	81.32	-7.549	0.000	0.482
110.00	-4.79	-9.18	0.00	-195.74	0.00	195.74	939.85	469.93	868.93	435.11	84.50	-7.677	0.000	0.455
112.00	-4.67	-9.06	0.00	-177.39	0.00	177.39	926.60	463.30	838.95	420.10	87.74	-7.801	0.000	0.428
114.00	-4.56	-8.93	0.00	-159.28	0.00	159.28	913.09	456.55	809.25	405.23	91.02	-7.920	0.000	0.398
116.00	-4.45	-8.81	0.00	-141.41	0.00	141.41	899.33	449.67	779.86	390.51	94.35	-8.033	0.000	0.367
118.00	-4.35	-8.70	0.00	-123.78	0.00	123.78	885.32	442.66	750.77	375.94	97.73	-8.139	0.000	0.335
120.00	-4.25	-8.58	0.00	-106.39	0.00	106.39	871.06	435.53	722.01	361.54	101.15	-8.238	0.000	0.300
122.00	-4.15	-8.46	0.00	-89.23	0.00	89.23	856.54	428.27	693.59	347.31	104.61	-8.328	0.000	0.262
124.00	-4.05	-8.35	0.00	-72.31	0.00	72.31	841.77	420.89	665.53	333.26	108.10	-8.407	0.000	0.222
126.00	-3.96	-8.23	0.00	-55.61	0.00	55.61	826.75	413.37	637.84	319.39	111.63	-8.475	0.000	0.179
127.00	-2.24	-4.94	0.00	-47.38	0.00	47.38	819.14	409.57	624.14	312.53	113.40	-8.504	0.000	0.154
128.00	-2.19	-4.89	0.00	-42.43	0.00	42.43	811.45	405.73	610.52	305.71	115.18	-8.531	0.000	0.142
130.00	-2.11	-4.78	0.00	-32.66	0.00	32.66	791.03	395.51	580.02	290.44	118.75	-8.577	0.000	0.115
132.00	-2.03	-4.67	0.00	-23.10	0.00	23.10	770.61	385.30	550.30	275.56	122.33	-8.613	0.000	0.087
134.00	-1.96	-4.56	0.00	-13.77	0.00	13.77	750.18	375.09	521.37	261.07	125.94	-8.640	0.000	0.055
136.00	-1.88	-4.46	0.00	-4.64	0.00	4.64	729.76	364.88	493.22	246.97	129.55	-8.654	0.000	0.022
137.00	-0.05	-0.12	0.00	-0.19	0.00	0.19	719.55	359.77	479.43	240.07	131.35	-8.656	0.000	0.001
138.00	-0.03	-0.07	0.00	-0.07	0.00	0.07	709.33	354.67	465.84	233.27	133.16	-8.656	0.000	0.000
139.00	0.00	-0.06	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	134.96	-8.656	0.000	0.000

Wind Loading - Shaft

Structure: CT13549-S-SBA
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

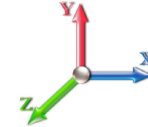
5/10/2022

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 31

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
2.00		1.00	0.85	5.168	5.68	0.00	1.200	1.133	2.00	8.332	10.00	56.8	136.0	514.2
4.00		1.00	0.85	5.168	5.68	0.00	1.200	1.215	2.00	8.281	9.94	56.5	144.6	519.0
6.00		1.00	0.85	5.168	5.68	0.00	1.200	1.265	2.00	8.219	9.86	56.1	149.3	520.0
8.00		1.00	0.85	5.168	5.68	0.00	1.200	1.302	2.00	8.153	9.78	55.6	152.3	519.2
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	2.00	8.085	9.70	55.2	154.3	517.5
12.00		1.00	0.85	5.168	5.68	0.00	1.200	1.356	2.00	8.015	9.62	54.7	155.6	515.1
14.00		1.00	0.85	5.168	5.68	0.00	1.200	1.377	2.00	7.944	9.53	54.2	156.5	512.2
16.00		1.00	0.86	5.232	5.76	0.00	1.200	1.395	2.00	7.872	9.45	54.4	157.1	509.0
18.00		1.00	0.88	5.363	5.90	0.00	1.200	1.412	2.00	7.799	9.36	55.2	157.3	505.6
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	2.00	7.726	9.27	55.9	157.4	501.9
22.00		1.00	0.92	5.595	6.15	0.00	1.200	1.440	2.00	7.652	9.18	56.5	157.3	498.0
24.00		1.00	0.94	5.698	6.27	0.00	1.200	1.453	2.00	7.578	9.09	57.0	157.0	494.0
26.00		1.00	0.95	5.795	6.37	0.00	1.200	1.465	2.00	7.504	9.00	57.4	156.6	489.9
28.00		1.00	0.97	5.886	6.47	0.00	1.200	1.476	2.00	7.430	8.92	57.7	156.1	485.7
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	2.00	7.355	8.83	58.0	155.5	481.3
32.00		1.00	1.00	6.054	6.66	0.00	1.200	1.495	2.00	7.280	8.74	58.2	154.9	476.9
34.00		1.00	1.01	6.132	6.74	0.00	1.200	1.504	2.00	7.205	8.65	58.3	154.1	472.4
36.00		1.00	1.02	6.206	6.83	0.00	1.200	1.513	2.00	7.129	8.56	58.4	153.3	467.8
38.00		1.00	1.03	6.277	6.90	0.00	1.200	1.521	2.00	7.054	8.46	58.4	152.4	463.2
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	2.00	6.978	8.37	58.4	151.4	458.5
42.00		1.00	1.05	6.410	7.05	0.00	1.200	1.537	2.00	6.903	8.28	58.4	150.4	453.7
44.00		1.00	1.06	6.474	7.12	0.00	1.200	1.544	2.00	6.827	8.19	58.3	149.3	448.9
46.00		1.00	1.07	6.534	7.19	0.00	1.200	1.551	2.00	6.751	8.10	58.2	148.2	444.1
48.00		1.00	1.08	6.593	7.25	0.00	1.200	1.557	2.00	6.675	8.01	58.1	147.1	439.2
48.50	Bot - Section 2	1.00	1.09	6.608	7.27	0.00	1.200	1.559	0.50	1.657	1.99	14.4	36.7	109.1
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	1.50	5.005	6.01	43.9	110.9	502.3
52.00		1.00	1.10	6.705	7.38	0.00	1.200	1.570	2.00	6.607	7.93	58.5	146.6	662.6
53.25	Top - Section 1	1.00	1.11	6.739	7.41	0.00	1.200	1.574	1.25	4.091	4.91	36.4	91.2	410.2
54.00		1.00	1.11	6.759	7.43	0.00	1.200	1.576	0.75	2.440	2.93	21.8	54.5	139.8
56.00		1.00	1.12	6.811	7.49	0.00	1.200	1.581	2.00	6.455	7.75	58.0	144.1	369.5
58.00		1.00	1.13	6.861	7.55	0.00	1.200	1.587	2.00	6.379	7.65	57.8	142.8	365.2
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	2.00	6.302	7.56	57.5	141.5	360.8
62.00		1.00	1.14	6.958	7.65	0.00	1.200	1.598	2.00	6.226	7.47	57.2	140.1	356.5
64.00		1.00	1.15	7.005	7.71	0.00	1.200	1.603	2.00	6.149	7.38	56.9	138.7	352.1
66.00		1.00	1.16	7.050	7.76	0.00	1.200	1.608	2.00	6.073	7.29	56.5	137.3	347.7
68.00		1.00	1.17	7.095	7.80	0.00	1.200	1.612	2.00	5.996	7.20	56.2	135.9	343.2
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	2.00	5.920	7.10	55.8	134.4	338.8
72.00		1.00	1.18	7.181	7.90	0.00	1.200	1.622	2.00	5.843	7.01	55.4	132.9	334.3
74.00		1.00	1.19	7.222	7.94	0.00	1.200	1.626	2.00	5.766	6.92	55.0	131.4	329.8
76.00		1.00	1.19	7.263	7.99	0.00	1.200	1.631	2.00	5.690	6.83	54.5	129.9	325.3
78.00		1.00	1.20	7.303	8.03	0.00	1.200	1.635	2.00	5.613	6.74	54.1	128.4	320.8
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	2.00	5.536	6.64	53.7	126.8	316.2
82.00		1.00	1.21	7.380	8.12	0.00	1.200	1.643	2.00	5.459	6.55	53.2	125.2	311.7
84.00		1.00	1.22	7.418	8.16	0.00	1.200	1.647	2.00	5.382	6.46	52.7	123.6	307.1
86.00		1.00	1.23	7.454	8.20	0.00	1.200	1.651	2.00	5.305	6.37	52.2	122.0	302.5
88.00		1.00	1.23	7.491	8.24	0.00	1.200	1.655	2.00	5.228	6.27	51.7	120.4	297.9

Wind Loading - Shaft

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	1.00	1.24	7.526	8.28	0.00	1.200	1.658	2.00	5.152	6.18	51.2	118.8	293.2		
92.00	1.00	1.24	7.561	8.32	0.00	1.200	1.662	2.00	5.075	6.09	50.6	117.1	288.6		
94.00	1.00	1.25	7.595	8.35	0.00	1.200	1.666	2.00	4.998	6.00	50.1	115.5	284.0		
96.00	1.00	1.25	7.629	8.39	0.00	1.200	1.669	2.00	4.921	5.90	49.6	113.8	279.3		
97.00 Appurtenance(s)	1.00	1.26	7.646	8.41	0.00	1.200	1.671	1.00	2.431	2.92	24.5	56.5	138.1		
98.00	1.00	1.26	7.662	8.43	0.00	1.200	1.672	1.00	2.412	2.89	24.4	56.1	136.9		
98.75 Bot - Section 3	1.00	1.26	7.675	8.44	0.00	1.200	1.674	0.75	1.796	2.16	18.2	41.8	102.0		
100.00	1.00	1.27	7.695	8.46	0.00	1.200	1.676	1.25	3.010	3.61	30.6	70.0	245.2		
102.00 Top - Section 2	1.00	1.27	7.727	8.50	0.00	1.200	1.679	2.00	4.753	5.70	48.5	110.3	386.3		
104.00	1.00	1.28	7.759	8.53	0.00	1.200	1.682	2.00	4.676	5.61	47.9	108.6	225.8		
106.00	1.00	1.28	7.790	8.57	0.00	1.200	1.686	2.00	4.599	5.52	47.3	106.8	221.8		
107.00 Appurtenance(s)	1.00	1.28	7.805	8.59	0.00	1.200	1.687	1.00	2.270	2.72	23.4	53.0	109.6		
108.00	1.00	1.29	7.821	8.60	0.00	1.200	1.689	1.00	2.251	2.70	23.2	52.5	108.6		
110.00	1.00	1.29	7.851	8.64	0.00	1.200	1.692	2.00	4.444	5.33	46.1	103.3	213.9		
112.00	1.00	1.30	7.881	8.67	0.00	1.200	1.695	2.00	4.367	5.24	45.4	101.6	209.8		
114.00	1.00	1.30	7.910	8.70	0.00	1.200	1.698	2.00	4.290	5.15	44.8	99.8	205.8		
116.00	1.00	1.31	7.939	8.73	0.00	1.200	1.701	2.00	4.213	5.06	44.2	98.0	201.8		
118.00	1.00	1.31	7.968	8.76	0.00	1.200	1.704	2.00	4.136	4.96	43.5	96.2	197.8		
120.00	1.00	1.32	7.996	8.80	0.00	1.200	1.707	2.00	4.058	4.87	42.8	94.4	193.7		
122.00	1.00	1.32	8.024	8.83	0.00	1.200	1.710	2.00	3.981	4.78	42.2	92.6	189.7		
124.00	1.00	1.32	8.051	8.86	0.00	1.200	1.712	2.00	3.904	4.68	41.5	90.8	185.6		
126.00	1.00	1.33	8.079	8.89	0.00	1.200	1.715	2.00	3.827	4.59	40.8	89.0	181.5		
127.00 Appurtenance(s)	1.00	1.33	8.092	8.90	0.00	1.200	1.716	1.00	1.884	2.26	20.1	44.0	89.5		
128.00	1.00	1.33	8.105	8.92	0.00	1.200	1.718	1.00	1.865	2.24	20.0	43.6	88.4		
130.00	1.00	1.34	8.132	8.95	0.00	1.200	1.720	2.00	3.672	4.41	39.4	85.3	173.3		
132.00	1.00	1.34	8.158	8.97	0.00	1.200	1.723	2.00	3.595	4.31	38.7	83.4	169.2		
134.00	1.00	1.35	8.184	9.00	0.00	1.200	1.726	2.00	3.518	4.22	38.0	81.6	165.1		
136.00	1.00	1.35	8.210	9.03	0.00	1.200	1.728	2.00	3.440	4.13	37.3	79.7	161.0		
137.00 Appurtenance(s)	1.00	1.35	8.222	9.04	0.00	1.200	1.729	1.00	1.691	2.03	18.4	39.4	79.2		
138.00	1.00	1.35	8.235	9.06	0.00	1.200	1.731	1.00	1.672	2.01	18.2	38.9	78.2		
139.00 Appurtenance(s)	1.00	1.36	8.247	9.07	0.00	1.200	1.732	1.00	1.652	1.98	18.0	38.4	77.1		
Totals:								139.00					3,608.0	24,890.8	

Discrete Appurtenance Forces

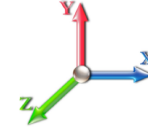
Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 31

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor	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	139.00	6' Lightning rod	1	8.247	9.072	1.00	1.00	1.46	38.53	0.000	0.000	13.24	0.00	0.00	
2	137.00	RDS-272	3	8.222	9.044	0.56	0.75	31.47	2030.14	0.000	0.000	284.61	0.00	0.00	
3	137.00	KRY 112 144/1	3	8.222	9.044	0.40	0.80	1.06	62.35	0.000	0.000	9.56	0.00	0.00	
4	137.00	4415 B25	3	8.222	9.044	0.40	0.80	2.90	346.89	0.000	0.000	26.25	0.00	0.00	
5	137.00	AIR6449 B41	3	8.222	9.044	0.57	0.80	11.23	683.34	0.000	0.000	101.59	0.00	0.00	
6	137.00	RFS	3	8.222	9.044	0.56	0.80	37.17	1701.86	0.000	0.000	336.14	0.00	0.00	
7	137.00	Air 32	3	8.222	9.044	0.70	0.80	16.03	1023.15	0.000	0.000	145.02	0.00	0.00	
8	137.00	4449 B71+B85	3	8.222	9.044	0.40	0.80	2.62	454.42	0.000	0.000	23.69	0.00	0.00	
9	137.00	SDX1926Q-43	3	8.222	9.044	0.40	0.80	1.00	45.61	0.000	0.000	9.03	0.00	0.00	
10	127.00	TA08025-B604	3	8.092	8.901	0.38	0.75	2.83	343.12	0.000	0.000	25.15	0.00	0.00	
11	127.00	Commscope	3	8.092	8.901	0.55	0.75	22.76	688.85	0.000	0.000	202.58	0.00	0.00	
12	127.00	RDIDC-9181-OF-48	1	8.092	8.901	0.38	0.75	0.96	65.95	0.000	0.000	8.57	0.00	0.00	
13	127.00	TA08025-B605	3	8.092	8.901	0.38	0.75	2.83	386.52	0.000	0.000	25.15	0.00	0.00	
14	127.00	MC-PK8-DSH	1	8.092	8.901	1.00	1.00	76.69	3359.37	0.000	0.000	682.62	0.00	0.00	
15	107.00	RRUS 4449 B5/B12	3	7.805	8.586	0.38	0.75	4.79	647.28	0.000	0.000	41.15	0.00	0.00	
16	107.00	DC9-48-60-24-8C-EV	1	7.805	8.586	0.38	0.75	1.00	116.81	0.000	0.000	8.61	0.00	0.00	
17	107.00	RRUS 4478 B14	3	7.805	8.586	0.38	0.75	2.42	305.91	0.000	0.000	20.78	0.00	0.00	
18	107.00	RRUS 4415 B25	3	7.805	8.586	0.38	0.75	2.41	256.61	0.000	0.000	20.65	0.00	0.00	
19	107.00	DBC20056F1V1	3	7.805	8.586	0.38	0.75	0.81	60.09	0.000	0.000	6.95	0.00	0.00	
20	107.00	RRUS A2	3	7.805	8.586	0.38	0.75	3.15	150.45	0.000	0.000	27.06	0.00	0.00	
21	107.00	RRUS-32	3	7.805	8.586	0.38	0.75	4.59	604.39	0.000	0.000	39.39	0.00	0.00	
22	107.00	DC6-48-60-18-8F	2	7.805	8.586	0.38	0.75	1.61	160.46	0.000	0.000	13.82	0.00	0.00	
23	107.00	EPBQ-652L8H6-L2	3	7.805	8.586	0.64	0.75	28.12	1074.08	0.000	0.000	241.45	0.00	0.00	
24	107.00	RMQLP-4120-H10	1	7.805	8.586	1.00	1.00	72.05	7538.23	0.000	0.000	618.58	0.00	0.00	
25	107.00	4426 B66	3	7.805	8.586	0.38	0.75	1.81	302.97	0.000	0.000	15.52	0.00	0.00	
26	107.00	AIR 6449 B77D	3	7.805	8.586	0.64	0.75	9.48	690.24	0.000	0.000	81.40	0.00	0.00	
27	107.00	AIR 6419 B77G	3	7.805	8.586	0.57	0.75	7.81	616.63	0.000	0.000	67.09	0.00	0.00	
28	107.00	DMP65R-BU6DA	3	7.805	8.586	0.54	0.75	22.88	938.22	0.000	0.000	196.47	0.00	0.00	
29	107.00	DTMABP7819VG12A	3	7.805	8.586	0.38	0.75	2.12	121.24	0.000	0.000	18.20	0.00	0.00	
30	97.00	Samsung VZS01	3	7.646	8.410	0.60	0.80	9.26	629.50	0.000	0.000	77.87	0.00	0.00	
31	97.00	T-Arms	3	7.646	8.410	0.56	0.75	24.78	1751.72	0.000	0.000	208.39	0.00	0.00	
32	97.00	JMA MX06FRO660-03	6	7.646	8.410	0.70	0.80	46.70	1866.12	0.000	0.000	392.80	0.00	0.00	
33	97.00	Commscope	1	7.646	8.410	0.40	0.80	2.88	101.14	0.000	0.000	24.19	0.00	0.00	
34	97.00	Samsung B5/B13	3	7.646	8.410	0.40	0.80	2.89	345.46	0.000	0.000	24.30	0.00	0.00	
35	97.00	Samsung B2/B66A	3	7.646	8.410	0.40	0.80	2.89	357.96	0.000	0.000	24.30	0.00	0.00	
Totals:									29,865.62			4,062.19			

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 31

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
2.00		56.84	610.74	0.00	0.00
4.00		56.49	616.66	0.00	0.00
6.00		56.07	618.29	0.00	0.00
8.00		55.62	618.03	0.00	0.00
10.00		55.15	616.71	0.00	0.00
12.00		54.68	614.67	0.00	0.00
14.00		54.19	612.14	0.00	0.00
16.00		54.36	609.23	0.00	0.00
18.00		55.21	606.03	0.00	0.00
20.00		55.92	602.58	0.00	0.00
22.00		56.51	598.94	0.00	0.00
24.00		57.00	595.13	0.00	0.00
26.00		57.40	591.19	0.00	0.00
28.00		57.72	587.11	0.00	0.00
30.00		57.98	582.93	0.00	0.00
32.00		58.17	578.66	0.00	0.00
34.00		58.31	574.30	0.00	0.00
36.00		58.40	569.86	0.00	0.00
38.00		58.44	565.35	0.00	0.00
40.00		58.45	560.78	0.00	0.00
42.00		58.41	556.15	0.00	0.00
44.00		58.34	551.47	0.00	0.00
46.00		58.23	546.74	0.00	0.00
48.00		58.09	541.96	0.00	0.00
48.50		14.45	134.84	0.00	0.00
50.00		43.94	579.45	0.00	0.00
52.00		58.48	765.59	0.00	0.00
53.25		36.39	474.63	0.00	0.00
54.00		21.77	178.46	0.00	0.00
56.00		58.03	472.66	0.00	0.00
58.00		57.77	468.45	0.00	0.00
60.00		57.49	464.21	0.00	0.00
62.00		57.18	459.94	0.00	0.00
64.00		56.86	455.65	0.00	0.00
66.00		56.52	451.33	0.00	0.00
68.00		56.16	446.98	0.00	0.00
70.00		55.78	442.61	0.00	0.00
72.00		55.38	438.21	0.00	0.00
74.00		54.97	433.79	0.00	0.00
76.00		54.55	429.36	0.00	0.00
78.00		54.11	424.90	0.00	0.00
80.00		53.65	420.42	0.00	0.00
82.00		53.18	415.93	0.00	0.00
84.00		52.70	411.42	0.00	0.00
86.00		52.20	406.89	0.00	0.00
88.00		51.70	402.34	0.00	0.00

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00		51.18	397.78	0.00	0.00
92.00		50.65	393.20	0.00	0.00
94.00		50.11	388.61	0.00	0.00
96.00		49.55	384.01	0.00	0.00
97.00	(19) attachments	776.39	5242.37	0.00	0.00
98.00		24.40	173.02	0.00	0.00
98.75		18.20	129.05	0.00	0.00
100.00		30.57	290.32	0.00	0.00
102.00		48.48	458.60	0.00	0.00
104.00		47.89	298.19	0.00	0.00
106.00		47.29	294.27	0.00	0.00
107.00	(40) attachments	1440.52	13729.50	0.00	0.00
108.00		23.24	137.45	0.00	0.00
110.00		46.06	271.52	0.00	0.00
112.00		45.43	267.57	0.00	0.00
114.00		44.79	263.60	0.00	0.00
116.00		44.15	259.63	0.00	0.00
118.00		43.50	255.64	0.00	0.00
120.00		42.84	251.65	0.00	0.00
122.00		42.17	247.64	0.00	0.00
124.00		41.49	243.63	0.00	0.00
126.00		40.81	239.60	0.00	0.00
127.00	(11) attachments	964.21	4962.32	0.00	0.00
128.00		19.95	115.12	0.00	0.00
130.00		39.42	226.75	0.00	0.00
132.00		38.71	222.70	0.00	0.00
134.00		38.00	218.64	0.00	0.00
136.00		37.28	214.57	0.00	0.00
137.00	(24) attachments	954.24	6453.75	0.00	0.00
138.00		18.17	88.46	0.00	0.00
139.00	(1) attachments	31.23	125.96	0.00	0.00
	Totals:	7,670.15	60,948.86	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 31

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	4.48
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	6.80
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	4.99
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	7.35
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	5.33
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	7.70
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	5.58
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	7.97
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	5.79
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	8.19
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	5.96
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	8.37
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	6.11
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	8.53
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.232	0.00	6.25
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.232	0.00	8.67
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.363	0.00	6.37
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.363	0.00	8.80
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	6.48
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	8.92
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.595	0.00	6.59
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.595	0.00	9.03
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.698	0.00	6.68
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.698	0.00	9.13
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.795	0.00	6.77
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.795	0.00	9.23
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.886	0.00	6.86
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.886	0.00	9.32
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	6.94
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	9.40
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.054	0.00	7.02
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.054	0.00	9.48
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.132	0.00	7.09
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.132	0.00	9.55
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	7.16
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	9.63
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.277	0.00	7.22
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.277	0.00	9.70
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	7.28
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	9.76
42.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.410	0.00	7.34
42.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.410	0.00	9.82
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.474	0.00	7.40
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.474	0.00	9.89
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.534	0.00	7.46
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.534	0.00	9.94
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	7.51

Linear Appurtenance Segment Forces (Factored)

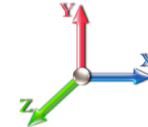
Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 31

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)
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	10.00
48.50	Safety Cable	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	6.608	0.00	1.88
48.50	Step bolts (ladder)	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	6.608	0.00	2.50
50.00	Safety Cable	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	5.67
50.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	7.54
52.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.705	0.00	7.62
52.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.705	0.00	10.11
53.25	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	6.739	0.00	4.78
53.25	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	6.739	0.00	6.34
54.00	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	6.759	0.00	2.87
54.00	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	6.759	0.00	3.81
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.811	0.00	7.71
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.811	0.00	10.21
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.861	0.00	7.76
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.861	0.00	10.26
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	7.80
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	10.31
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.958	0.00	7.85
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.958	0.00	10.35
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.005	0.00	7.89
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.005	0.00	10.40
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.050	0.00	7.93
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.050	0.00	10.44
68.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.095	0.00	7.97
68.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.095	0.00	10.48
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	8.01
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	10.52
72.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.181	0.00	8.05
72.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.181	0.00	10.56
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.222	0.00	8.09
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.222	0.00	10.60
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.263	0.00	8.13
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.263	0.00	10.64
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.303	0.00	8.16
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.303	0.00	10.68
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	8.20
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	10.72
82.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.380	0.00	8.23
82.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.380	0.00	10.75
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.418	0.00	8.27
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.418	0.00	10.79
86.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.454	0.00	8.30
86.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.454	0.00	10.82
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.491	0.00	8.33
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.491	0.00	10.86
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	8.37
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	10.89

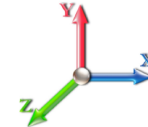
Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 31

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)
92.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.561	0.00	8.40
92.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.561	0.00	10.93
94.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.595	0.00	8.43
94.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.595	0.00	10.96
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.629	0.00	8.46
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.629	0.00	10.99
97.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.646	0.00	4.24
97.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.646	0.00	5.50
98.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.662	0.00	4.24
98.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.662	0.00	5.51
98.75	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	7.675	0.00	3.19
98.75	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	7.675	0.00	4.14
100.00	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	5.32
100.00	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	6.91
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.727	0.00	8.55
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.727	0.00	11.08
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.759	0.00	8.58
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.759	0.00	11.11
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.790	0.00	8.60
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.790	0.00	11.14
107.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.805	0.00	4.31
107.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.805	0.00	5.58
108.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.821	0.00	4.32
108.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.821	0.00	5.59
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	8.66
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	11.20
112.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.881	0.00	8.69
112.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.881	0.00	11.23
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.910	0.00	8.71
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.910	0.00	11.26
116.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	8.74
116.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	11.28
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.968	0.00	8.77
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.968	0.00	11.31
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	8.79
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	11.34
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.024	0.00	8.82
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.024	0.00	11.36
124.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.051	0.00	8.84
124.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.051	0.00	11.39
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.079	0.00	8.87
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.079	0.00	11.42
127.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.092	0.00	4.44
127.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.092	0.00	5.71
128.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.105	0.00	4.45
128.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.105	0.00	5.72
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	8.91

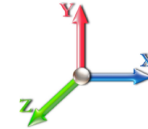
Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 31

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)
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	11.47
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.158	0.00	8.94
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.158	0.00	11.49
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.184	0.00	8.96
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.184	0.00	11.52
136.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.210	0.00	8.98
136.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.210	0.00	11.54
137.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.222	0.00	4.50
137.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.222	0.00	5.78
138.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.235	0.00	4.50
138.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.235	0.00	5.78
139.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.247	0.00	4.51
139.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.247	0.00	5.79
Totals:											0.0	1,250.1

Calculated Forces

Structure: CT13549-S-SBA
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

5/10/2022

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

Iterations 31

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	-60.95	-7.69	0.00	-815.70	0.00	815.70	3003.53	1501.76	5797.25	2902.93	0.00	0.000	0.000	0.301
2.00	-60.33	-7.67	0.00	-800.33	0.00	800.33	2986.67	1493.33	5707.57	2858.03	0.01	-0.036	0.000	0.300
4.00	-59.71	-7.65	0.00	-784.99	0.00	784.99	2969.56	1484.78	5618.06	2813.21	0.03	-0.071	0.000	0.299
6.00	-59.09	-7.63	0.00	-769.69	0.00	769.69	2952.19	1476.10	5528.74	2768.48	0.07	-0.108	0.000	0.298
8.00	-58.46	-7.61	0.00	-754.43	0.00	754.43	2934.57	1467.29	5439.61	2723.85	0.12	-0.144	0.000	0.297
10.00	-57.84	-7.59	0.00	-739.20	0.00	739.20	2916.70	1458.35	5350.68	2679.32	0.19	-0.181	0.000	0.296
12.00	-57.22	-7.57	0.00	-724.02	0.00	724.02	2898.58	1449.29	5261.99	2634.90	0.27	-0.219	0.000	0.295
14.00	-56.61	-7.55	0.00	-708.87	0.00	708.87	2880.20	1440.10	5173.53	2590.61	0.37	-0.257	0.000	0.293
16.00	-55.99	-7.53	0.00	-693.77	0.00	693.77	2861.57	1430.79	5085.33	2546.44	0.49	-0.295	0.000	0.292
18.00	-55.38	-7.51	0.00	-678.70	0.00	678.70	2842.69	1421.35	4997.39	2502.41	0.62	-0.333	0.000	0.291
20.00	-54.77	-7.49	0.00	-663.67	0.00	663.67	2823.56	1411.78	4909.74	2458.52	0.77	-0.372	0.000	0.289
22.00	-54.17	-7.47	0.00	-648.69	0.00	648.69	2804.17	1402.08	4822.39	2414.78	0.93	-0.412	0.000	0.288
24.00	-53.57	-7.44	0.00	-633.76	0.00	633.76	2784.53	1392.26	4735.34	2371.19	1.12	-0.452	0.000	0.287
26.00	-52.97	-7.42	0.00	-618.87	0.00	618.87	2764.64	1382.32	4648.63	2327.77	1.31	-0.492	0.000	0.285
28.00	-52.38	-7.39	0.00	-604.03	0.00	604.03	2744.49	1372.24	4562.25	2284.52	1.53	-0.532	0.000	0.284
30.00	-51.79	-7.37	0.00	-589.25	0.00	589.25	2724.09	1362.04	4476.23	2241.44	1.76	-0.573	0.000	0.282
32.00	-51.21	-7.34	0.00	-574.52	0.00	574.52	2703.44	1351.72	4390.58	2198.55	2.01	-0.614	0.000	0.280
34.00	-50.63	-7.31	0.00	-559.84	0.00	559.84	2682.53	1341.27	4305.32	2155.86	2.28	-0.656	0.000	0.279
36.00	-50.06	-7.28	0.00	-545.22	0.00	545.22	2661.38	1330.69	4220.45	2113.36	2.56	-0.698	0.000	0.277
38.00	-49.49	-7.25	0.00	-530.65	0.00	530.65	2639.97	1319.98	4136.00	2071.07	2.86	-0.741	0.000	0.275
40.00	-48.92	-7.23	0.00	-516.14	0.00	516.14	2618.30	1309.15	4051.97	2029.00	3.18	-0.784	0.000	0.273
42.00	-48.36	-7.20	0.00	-501.69	0.00	501.69	2596.39	1298.19	3968.39	1987.14	3.52	-0.827	0.000	0.271
44.00	-47.81	-7.17	0.00	-487.30	0.00	487.30	2574.22	1287.11	3885.26	1945.52	3.87	-0.870	0.000	0.269
46.00	-47.25	-7.14	0.00	-472.97	0.00	472.97	2551.80	1275.90	3802.61	1904.13	4.25	-0.914	0.000	0.267
48.00	-46.71	-7.09	0.00	-458.70	0.00	458.70	2529.12	1264.56	3720.44	1862.98	4.64	-0.958	0.000	0.265
48.50	-46.57	-7.09	0.00	-455.15	0.00	455.15	2523.41	1261.71	3699.97	1852.74	4.74	-0.970	0.000	0.264
50.00	-45.99	-7.07	0.00	-444.51	0.00	444.51	2506.19	1253.10	3638.77	1822.09	5.05	-1.003	0.000	0.262
52.00	-45.22	-7.03	0.00	-430.37	0.00	430.37	2483.01	1241.51	3557.62	1781.45	5.48	-1.048	0.000	0.260
53.25	-44.74	-7.00	0.00	-421.59	0.00	421.59	1850.79	925.39	2677.47	1340.72	5.76	-1.077	0.000	0.339
54.00	-44.56	-7.00	0.00	-416.34	0.00	416.34	1845.26	922.63	2656.25	1330.10	5.93	-1.094	0.000	0.337
56.00	-44.08	-6.98	0.00	-402.33	0.00	402.33	1830.37	915.18	2599.79	1301.83	6.40	-1.148	0.000	0.333
58.00	-43.61	-6.95	0.00	-388.38	0.00	388.38	1815.22	907.61	2543.55	1273.66	6.89	-1.202	0.000	0.329
60.00	-43.14	-6.93	0.00	-374.48	0.00	374.48	1799.82	899.91	2487.54	1245.62	7.41	-1.257	0.000	0.325
62.00	-42.68	-6.90	0.00	-360.63	0.00	360.63	1784.16	892.08	2431.77	1217.69	7.95	-1.312	0.000	0.320
64.00	-42.21	-6.87	0.00	-346.83	0.00	346.83	1768.26	884.13	2376.27	1189.90	8.51	-1.367	0.000	0.315
66.00	-41.76	-6.84	0.00	-333.09	0.00	333.09	1752.10	876.05	2321.03	1162.24	9.09	-1.422	0.000	0.310
68.00	-41.31	-6.82	0.00	-319.40	0.00	319.40	1735.69	867.84	2266.09	1134.73	9.70	-1.478	0.000	0.305
70.00	-40.86	-6.79	0.00	-305.77	0.00	305.77	1719.02	859.51	2211.45	1107.37	10.33	-1.533	0.000	0.300
72.00	-40.42	-6.76	0.00	-292.19	0.00	292.19	1702.10	851.05	2157.12	1080.16	10.99	-1.588	0.000	0.294
74.00	-39.98	-6.73	0.00	-278.67	0.00	278.67	1684.93	842.47	2103.13	1053.13	11.66	-1.643	0.000	0.288
76.00	-39.54	-6.70	0.00	-265.20	0.00	265.20	1667.51	833.75	2049.48	1026.26	12.36	-1.698	0.000	0.282
78.00	-39.11	-6.67	0.00	-251.80	0.00	251.80	1649.83	824.92	1996.20	999.58	13.09	-1.753	0.000	0.276
80.00	-38.69	-6.64	0.00	-238.45	0.00	238.45	1631.90	815.95	1943.29	973.09	13.83	-1.807	0.000	0.269
82.00	-38.27	-6.61	0.00	-225.17	0.00	225.17	1613.72	806.86	1890.77	946.79	14.60	-1.861	0.000	0.262
84.00	-37.85	-6.58	0.00	-211.94	0.00	211.94	1595.28	797.64	1838.65	920.69	15.39	-1.915	0.000	0.254
86.00	-37.44	-6.55	0.00	-198.78	0.00	198.78	1576.59	788.30	1786.95	894.80	16.21	-1.967	0.000	0.246
88.00	-37.04	-6.52	0.00	-185.68	0.00	185.68	1557.65	778.83	1735.69	869.13	17.04	-2.019	0.000	0.237
90.00	-36.63	-6.48	0.00	-172.65	0.00	172.65	1538.46	769.23	1684.87	843.69	17.90	-2.070	0.000	0.229

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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92.00	-36.24	-6.45	0.00	-159.68	0.00	159.68	1519.01	759.51	1634.52	818.47	18.78	-2.120	0.000	0.219
94.00	-35.85	-6.41	0.00	-146.79	0.00	146.79	1499.31	749.66	1584.64	793.50	19.68	-2.168	0.000	0.209
96.00	-35.46	-6.37	0.00	-133.96	0.00	133.96	1479.36	739.68	1535.25	768.77	20.59	-2.214	0.000	0.198
97.00	-30.25	-5.40	0.00	-127.58	0.00	127.58	1469.29	734.65	1510.75	756.50	21.06	-2.237	0.000	0.189
98.00	-30.08	-5.38	0.00	-122.18	0.00	122.18	1459.16	729.58	1486.37	744.29	21.53	-2.260	0.000	0.185
98.75	-29.95	-5.37	0.00	-118.14	0.00	118.14	1451.52	725.76	1468.18	735.18	21.89	-2.276	0.000	0.181
100.00	-29.65	-5.35	0.00	-111.43	0.00	111.43	1437.39	718.70	1436.71	719.42	22.49	-2.304	0.000	0.176
102.00	-29.19	-5.30	0.00	-100.74	0.00	100.74	990.34	495.17	991.38	496.43	23.46	-2.345	0.000	0.233
104.00	-28.89	-5.26	0.00	-90.13	0.00	90.13	978.09	489.05	960.41	480.92	24.45	-2.385	0.000	0.217
106.00	-28.60	-5.22	0.00	-79.61	0.00	79.61	965.60	482.80	929.67	465.53	25.46	-2.432	0.000	0.201
107.00	-14.94	-3.20	0.00	-74.39	0.00	74.39	959.26	479.63	914.39	457.88	25.97	-2.454	0.000	0.178
108.00	-14.80	-3.18	0.00	-71.19	0.00	71.19	952.85	476.43	899.17	450.26	26.49	-2.476	0.000	0.174
110.00	-14.53	-3.13	0.00	-64.83	0.00	64.83	939.85	469.93	868.93	435.11	27.54	-2.519	0.000	0.164
112.00	-14.27	-3.09	0.00	-58.56	0.00	58.56	926.60	463.30	838.95	420.10	28.60	-2.560	0.000	0.155
114.00	-14.00	-3.04	0.00	-52.39	0.00	52.39	913.09	456.55	809.25	405.23	29.68	-2.599	0.000	0.145
116.00	-13.74	-2.99	0.00	-46.31	0.00	46.31	899.33	449.67	779.86	390.51	30.78	-2.636	0.000	0.134
118.00	-13.49	-2.94	0.00	-40.33	0.00	40.33	885.32	442.66	750.77	375.94	31.89	-2.671	0.000	0.123
120.00	-13.24	-2.90	0.00	-34.44	0.00	34.44	871.06	435.53	722.01	361.54	33.01	-2.703	0.000	0.110
122.00	-12.99	-2.85	0.00	-28.65	0.00	28.65	856.54	428.27	693.59	347.31	34.15	-2.732	0.000	0.098
124.00	-12.75	-2.80	0.00	-22.95	0.00	22.95	841.77	420.89	665.53	333.26	35.30	-2.757	0.000	0.084
126.00	-12.51	-2.75	0.00	-17.35	0.00	17.35	826.75	413.37	637.84	319.39	36.46	-2.779	0.000	0.069
127.00	-7.60	-1.55	0.00	-14.59	0.00	14.59	819.14	409.57	624.14	312.53	37.04	-2.788	0.000	0.056
128.00	-7.49	-1.52	0.00	-13.05	0.00	13.05	811.45	405.73	610.52	305.71	37.63	-2.796	0.000	0.052
130.00	-7.26	-1.48	0.00	-10.00	0.00	10.00	791.03	395.51	580.02	290.44	38.80	-2.810	0.000	0.044
132.00	-7.04	-1.43	0.00	-7.04	0.00	7.04	770.61	385.30	550.30	275.56	39.98	-2.821	0.000	0.035
134.00	-6.82	-1.38	0.00	-4.19	0.00	4.19	750.18	375.09	521.37	261.07	41.17	-2.829	0.000	0.025
136.00	-6.61	-1.33	0.00	-1.43	0.00	1.43	729.76	364.88	493.22	246.97	42.35	-2.834	0.000	0.015
137.00	-0.21	-0.06	0.00	-0.10	0.00	0.10	719.55	359.77	479.43	240.07	42.94	-2.834	0.000	0.001
138.00	-0.12	-0.04	0.00	-0.04	0.00	0.04	709.33	354.67	465.84	233.27	43.54	-2.834	0.000	0.000
139.00	0.00	-0.03	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	44.13	-2.834	0.000	0.000

Seismic Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E				Iterations 28
Gust Response Factor	1.10	Sds	0.23	Ss 0.22
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.07
Wind Load Factor	0.00	Structure Frequency (f1)	0.28	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	
2.00		315.13	0.00	0.02	0.01	4.90	
4.00		312.02	0.00	0.03	0.02	7.76	
6.00		308.90	0.00	0.04	0.02	9.60	
8.00		305.78	0.01	0.05	0.03	10.83	
10.00		302.66	0.01	0.05	0.03	11.66	
12.00		299.54	0.01	0.06	0.03	12.21	
14.00		296.43	0.02	0.06	0.04	12.57	
16.00		293.31	0.03	0.07	0.04	12.80	
18.00		290.19	0.03	0.07	0.04	12.93	
20.00		287.07	0.04	0.07	0.04	12.99	
22.00		283.95	0.05	0.07	0.04	13.02	
24.00		280.84	0.06	0.07	0.04	13.02	
26.00		277.72	0.07	0.07	0.04	13.01	
28.00		274.60	0.08	0.07	0.04	13.00	
30.00		271.48	0.09	0.07	0.04	12.99	
32.00		268.36	0.10	0.07	0.04	12.98	
34.00		265.24	0.11	0.07	0.04	12.98	
36.00		262.13	0.13	0.07	0.03	12.97	
38.00		259.01	0.14	0.07	0.03	12.95	
40.00		255.89	0.16	0.07	0.03	12.92	
42.00		252.77	0.17	0.07	0.03	12.86	
44.00		249.65	0.19	0.06	0.02	12.76	
46.00		246.54	0.21	0.06	0.02	12.61	
48.00		243.42	0.23	0.06	0.02	12.39	
48.50	Bot - Section 2	60.37	0.23	0.06	0.02	3.07	
50.00		326.16	0.24	0.06	0.02	16.39	
52.00		429.96	0.26	0.05	0.02	21.12	
53.25	Top - Section 1	265.88	0.28	0.05	0.01	12.79	
54.00		71.07	0.29	0.05	0.01	3.37	
56.00		187.79	0.31	0.04	0.01	8.43	
58.00		185.30	0.33	0.04	0.01	7.69	
60.00		182.81	0.35	0.03	0.01	6.78	
62.00		180.31	0.38	0.03	0.01	5.69	
64.00		177.82	0.40	0.02	0.01	4.43	
66.00		175.32	0.43	0.01	0.01	3.01	
68.00		172.83	0.45	0.00	0.01	1.47	
70.00		170.33	0.48	-0.01	0.01	-0.13	
72.00		167.84	0.51	-0.02	0.01	-1.74	
74.00		165.34	0.54	-0.03	0.01	-3.27	
76.00		162.85	0.57	-0.04	0.01	-4.66	
78.00		160.35	0.60	-0.05	0.01	-5.86	
80.00		157.86	0.63	-0.06	0.02	-6.84	
82.00		155.37	0.66	-0.07	0.02	-7.59	
84.00		152.87	0.69	-0.08	0.03	-8.10	
86.00		150.38	0.72	-0.09	0.03	-8.40	

Seismic Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00		147.88	0.76	-0.10	0.04	-8.48
90.00		145.39	0.79	-0.11	0.05	-8.37
92.00		142.89	0.83	-0.12	0.06	-8.08
94.00		140.40	0.86	-0.12	0.07	-7.63
96.00		137.90	0.90	-0.12	0.09	-7.04
97.00	Appurtenance(s)	2139.4	0.92	-0.12	0.10	-104.70
98.00		67.39	0.94	-0.12	0.10	-3.14
98.75	Bot - Section 3	50.14	0.95	-0.12	0.11	-2.24
100.00		145.97	0.98	-0.11	0.12	-5.99
102.00	Top - Section 2	230.01	1.02	-0.11	0.14	-7.91
104.00		97.72	1.06	-0.09	0.16	-2.61
106.00		95.85	1.10	-0.07	0.19	-1.72
107.00	Appurtenance(s)	5436.0	1.12	-0.06	0.20	-71.35
108.00		46.75	1.14	-0.04	0.21	-0.38
110.00		92.10	1.18	-0.01	0.24	0.26
112.00		90.23	1.23	0.03	0.28	1.34
114.00		88.36	1.27	0.08	0.31	2.47
116.00		86.49	1.32	0.14	0.35	3.64
118.00		84.62	1.36	0.22	0.39	4.86
120.00		82.75	1.41	0.30	0.44	6.11
122.00		80.88	1.46	0.40	0.49	7.39
124.00		79.01	1.50	0.51	0.55	8.70
126.00		77.14	1.55	0.64	0.61	10.03
127.00	Appurtenance(s)	2415.8	1.58	0.71	0.64	339.16
128.00		37.40	1.60	0.79	0.67	5.65
130.00		73.40	1.65	0.95	0.74	12.72
132.00		71.52	1.70	1.14	0.82	14.07
134.00		69.65	1.76	1.35	0.90	15.43
136.00		67.78	1.81	1.58	0.99	16.77
137.00	Appurtenance(s)	2725.6	1.84	1.71	1.04	710.84
138.00		32.72	1.86	1.84	1.09	8.98
139.00	Appurtenance(s)	38.75	1.89	1.98	1.14	11.18
Totals:		25,879.5				1,276.4
						Total Wind: 25,255.3

Calculated Forces

Structure: CT13549-S-SBA
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: TIA-222-G
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II
Topography: 1

5/10/2022



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Load Case: 1.2D + 1.0E

Iterations 28

Gust Response Factor 1.10

Sds 0.23

Ss 0.22

Dead Load Factor 1.20

Seismic Load Factor 1.00

Sd1 0.11

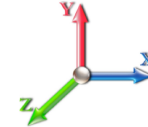
S1 0.07

Wind Load Factor 0.00

Structure Frequency (f1) 0.28

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	-36.22	-1.56	0.00	-184.01	0.00	184.01	3003.53	1501.76	5797.25	2902.93	0.00	0.00	0.00	0.075
2.00	-35.75	-1.56	0.00	-180.88	0.00	180.88	2986.67	1493.33	5707.57	2858.03	0.00	-0.01	0.075	0.075
4.00	-35.29	-1.56	0.00	-177.75	0.00	177.75	2969.56	1484.78	5618.06	2813.21	0.01	-0.02	0.075	0.075
6.00	-34.83	-1.56	0.00	-174.63	0.00	174.63	2952.19	1476.10	5528.74	2768.48	0.02	-0.02	0.075	0.075
8.00	-34.37	-1.55	0.00	-171.52	0.00	171.52	2934.57	1467.29	5439.61	2723.85	0.03	-0.03	0.075	0.075
10.00	-33.92	-1.54	0.00	-168.42	0.00	168.42	2916.70	1458.35	5350.68	2679.32	0.04	-0.04	0.074	0.074
12.00	-33.47	-1.54	0.00	-165.33	0.00	165.33	2898.58	1449.29	5261.99	2634.90	0.06	-0.05	0.074	0.074
14.00	-33.03	-1.53	0.00	-162.26	0.00	162.26	2880.20	1440.10	5173.53	2590.61	0.08	-0.06	0.074	0.074
16.00	-32.59	-1.52	0.00	-159.20	0.00	159.20	2861.57	1430.79	5085.33	2546.44	0.11	-0.07	0.074	0.074
18.00	-32.15	-1.51	0.00	-156.16	0.00	156.16	2842.69	1421.35	4997.39	2502.41	0.14	-0.08	0.074	0.074
20.00	-31.72	-1.50	0.00	-153.14	0.00	153.14	2823.56	1411.78	4909.74	2458.52	0.17	-0.08	0.074	0.074
22.00	-31.29	-1.49	0.00	-150.13	0.00	150.13	2804.17	1402.08	4822.39	2414.78	0.21	-0.09	0.073	0.073
24.00	-30.86	-1.49	0.00	-147.15	0.00	147.15	2784.53	1392.26	4735.34	2371.19	0.25	-0.10	0.073	0.073
26.00	-30.44	-1.48	0.00	-144.17	0.00	144.17	2764.64	1382.32	4648.63	2327.77	0.30	-0.11	0.073	0.073
28.00	-30.02	-1.47	0.00	-141.22	0.00	141.22	2744.49	1372.24	4562.25	2284.52	0.35	-0.12	0.073	0.073
30.00	-29.61	-1.46	0.00	-138.29	0.00	138.29	2724.09	1362.04	4476.23	2241.44	0.40	-0.13	0.073	0.073
32.00	-29.20	-1.45	0.00	-135.37	0.00	135.37	2703.44	1351.72	4390.58	2198.55	0.46	-0.14	0.072	0.072
34.00	-28.79	-1.44	0.00	-132.47	0.00	132.47	2682.53	1341.27	4305.32	2155.86	0.52	-0.15	0.072	0.072
36.00	-28.39	-1.43	0.00	-129.59	0.00	129.59	2661.38	1330.69	4220.45	2113.36	0.59	-0.16	0.072	0.072
38.00	-27.99	-1.42	0.00	-126.73	0.00	126.73	2639.97	1319.98	4136.00	2071.07	0.66	-0.17	0.072	0.072
40.00	-27.59	-1.41	0.00	-123.88	0.00	123.88	2618.30	1309.15	4051.97	2029.00	0.73	-0.18	0.072	0.072
42.00	-27.20	-1.40	0.00	-121.06	0.00	121.06	2596.39	1298.19	3968.39	1987.14	0.81	-0.19	0.071	0.071
44.00	-26.81	-1.40	0.00	-118.25	0.00	118.25	2574.22	1287.11	3885.26	1945.52	0.89	-0.20	0.071	0.071
46.00	-26.43	-1.39	0.00	-115.46	0.00	115.46	2551.80	1275.90	3802.61	1904.13	0.98	-0.21	0.071	0.071
48.00	-26.05	-1.38	0.00	-112.69	0.00	112.69	2529.12	1264.56	3720.44	1862.98	1.07	-0.22	0.071	0.071
48.50	-25.95	-1.37	0.00	-112.00	0.00	112.00	2523.41	1261.71	3699.97	1852.74	1.09	-0.23	0.071	0.071
50.00	-25.49	-1.36	0.00	-109.94	0.00	109.94	2506.19	1253.10	3638.77	1822.09	1.16	-0.24	0.071	0.071
52.00	-24.89	-1.34	0.00	-107.22	0.00	107.22	2483.01	1241.51	3557.62	1781.45	1.27	-0.25	0.070	0.070
53.25	-24.51	-1.33	0.00	-105.54	0.00	105.54	1850.79	925.39	2677.47	1340.72	1.33	-0.25	0.092	0.092
54.00	-24.40	-1.33	0.00	-104.54	0.00	104.54	1845.26	922.63	2656.25	1330.10	1.37	-0.26	0.092	0.092
56.00	-24.08	-1.32	0.00	-101.89	0.00	101.89	1830.37	915.18	2599.79	1301.83	1.48	-0.27	0.091	0.091
58.00	-23.77	-1.32	0.00	-99.24	0.00	99.24	1815.22	907.61	2543.55	1273.66	1.60	-0.29	0.091	0.091
60.00	-23.46	-1.32	0.00	-96.60	0.00	96.60	1799.82	899.91	2487.54	1245.62	1.72	-0.30	0.091	0.091
62.00	-23.16	-1.32	0.00	-93.96	0.00	93.96	1784.16	892.08	2431.77	1217.69	1.85	-0.31	0.090	0.090
64.00	-22.86	-1.32	0.00	-91.32	0.00	91.32	1768.26	884.13	2376.27	1189.90	1.98	-0.33	0.090	0.090
66.00	-22.56	-1.32	0.00	-88.69	0.00	88.69	1752.10	876.05	2321.03	1162.24	2.12	-0.34	0.089	0.089
68.00	-22.26	-1.32	0.00	-86.06	0.00	86.06	1735.69	867.84	2266.09	1134.73	2.27	-0.36	0.089	0.089
70.00	-21.97	-1.32	0.00	-83.42	0.00	83.42	1719.02	859.51	2211.45	1107.37	2.42	-0.37	0.088	0.088
72.00	-21.68	-1.33	0.00	-80.77	0.00	80.77	1702.10	851.05	2157.12	1080.16	2.58	-0.39	0.088	0.088
74.00	-21.39	-1.33	0.00	-78.11	0.00	78.11	1684.93	842.47	2103.13	1053.13	2.75	-0.40	0.087	0.087
76.00	-21.11	-1.34	0.00	-75.45	0.00	75.45	1667.51	833.75	2049.48	1026.26	2.92	-0.42	0.086	0.086
78.00	-20.82	-1.34	0.00	-72.78	0.00	72.78	1649.83	824.92	1996.20	999.58	3.10	-0.43	0.085	0.085
80.00	-20.55	-1.34	0.00	-70.10	0.00	70.10	1631.90	815.95	1943.29	973.09	3.28	-0.45	0.085	0.085
82.00	-20.27	-1.35	0.00	-67.41	0.00	67.41	1613.72	806.86	1890.77	946.79	3.48	-0.47	0.084	0.084
84.00	-20.00	-1.35	0.00	-64.72	0.00	64.72	1595.28	797.64	1838.65	920.69	3.68	-0.48	0.083	0.083
86.00	-19.73	-1.35	0.00	-62.02	0.00	62.02	1576.59	788.30	1786.95	894.80	3.88	-0.50	0.082	0.082
88.00	-19.46	-1.36	0.00	-59.31	0.00	59.31	1557.65	778.83	1735.69	869.13	4.09	-0.51	0.081	0.081

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	-19.20	-1.36	0.00	-56.60	0.00	56.60	1538.46	769.23	1684.87	843.69	4.31	-0.53	0.080
92.00	-18.94	-1.36	0.00	-53.88	0.00	53.88	1519.01	759.51	1634.52	818.47	4.54	-0.55	0.078
94.00	-18.68	-1.37	0.00	-51.16	0.00	51.16	1499.31	749.66	1584.64	793.50	4.77	-0.56	0.077
96.00	-18.43	-1.37	0.00	-48.43	0.00	48.43	1479.36	739.68	1535.25	768.77	5.01	-0.58	0.075
97.00	-15.82	-1.34	0.00	-47.06	0.00	47.06	1469.29	734.65	1510.75	756.50	5.13	-0.59	0.073
98.00	-15.71	-1.34	0.00	-45.72	0.00	45.72	1459.16	729.58	1486.37	744.29	5.26	-0.60	0.072
98.75	-15.63	-1.34	0.00	-44.71	0.00	44.71	1451.52	725.76	1468.18	735.18	5.35	-0.60	0.072
100.00	-15.42	-1.35	0.00	-43.03	0.00	43.03	1437.39	718.70	1436.71	719.42	5.51	-0.61	0.071
102.00	-15.08	-1.35	0.00	-40.34	0.00	40.34	990.34	495.17	991.38	496.43	5.77	-0.63	0.096
104.00	-14.91	-1.35	0.00	-37.64	0.00	37.64	978.09	489.05	960.41	480.92	6.04	-0.65	0.094
106.00	-14.74	-1.35	0.00	-34.94	0.00	34.94	965.60	482.80	929.67	465.53	6.31	-0.67	0.090
107.00	-8.19	-1.28	0.00	-33.59	0.00	33.59	959.26	479.63	914.39	457.88	6.45	-0.68	0.082
108.00	-8.11	-1.28	0.00	-32.31	0.00	32.31	952.85	476.43	899.17	450.26	6.60	-0.69	0.080
110.00	-7.96	-1.28	0.00	-29.76	0.00	29.76	939.85	469.93	868.93	435.11	6.89	-0.71	0.077
112.00	-7.81	-1.28	0.00	-27.20	0.00	27.20	926.60	463.30	838.95	420.10	7.19	-0.72	0.073
114.00	-7.66	-1.28	0.00	-24.65	0.00	24.65	913.09	456.55	809.25	405.23	7.50	-0.74	0.069
116.00	-7.52	-1.27	0.00	-22.10	0.00	22.10	899.33	449.67	779.86	390.51	7.81	-0.76	0.065
118.00	-7.37	-1.27	0.00	-19.55	0.00	19.55	885.32	442.66	750.77	375.94	8.13	-0.78	0.060
120.00	-7.23	-1.26	0.00	-17.02	0.00	17.02	871.06	435.53	722.01	361.54	8.46	-0.79	0.055
122.00	-7.10	-1.25	0.00	-14.49	0.00	14.49	856.54	428.27	693.59	347.31	8.80	-0.81	0.050
124.00	-6.96	-1.25	0.00	-11.98	0.00	11.98	841.77	420.89	665.53	333.26	9.14	-0.82	0.044
126.00	-6.83	-1.23	0.00	-9.49	0.00	9.49	826.75	413.37	637.84	319.39	9.49	-0.83	0.038
127.00	-3.91	-0.85	0.00	-8.26	0.00	8.26	819.14	409.57	624.14	312.53	9.66	-0.84	0.031
128.00	-3.85	-0.85	0.00	-7.41	0.00	7.41	811.45	405.73	610.52	305.71	9.84	-0.84	0.029
130.00	-3.73	-0.83	0.00	-5.71	0.00	5.71	791.03	395.51	580.02	290.44	10.19	-0.85	0.024
132.00	-3.60	-0.82	0.00	-4.05	0.00	4.05	770.61	385.30	550.30	275.56	10.55	-0.86	0.019
134.00	-3.48	-0.80	0.00	-2.42	0.00	2.42	750.18	375.09	521.37	261.07	10.91	-0.86	0.014
136.00	-3.37	-0.78	0.00	-0.81	0.00	0.81	729.76	364.88	493.22	246.97	11.27	-0.86	0.008
137.00	-0.09	-0.02	0.00	-0.03	0.00	0.03	719.55	359.77	479.43	240.07	11.45	-0.86	0.000
138.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	709.33	354.67	465.84	233.27	11.63	-0.86	0.000
139.00	0.00	-0.01	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	11.81	-0.86	0.000

Seismic Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E				Iterations 27
Gust Response Factor	1.10	Sds	0.23	Ss 0.22
Dead Load Factor	0.90	Seismic Load Factor	1.00	S1 0.07
Wind Load Factor	0.00	Structure Frequency (f1)	0.28	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	
2.00		315.13	0.00	0.02	0.01	4.90	
4.00		312.02	0.00	0.03	0.02	7.76	
6.00		308.90	0.00	0.04	0.02	9.60	
8.00		305.78	0.01	0.05	0.03	10.83	
10.00		302.66	0.01	0.05	0.03	11.66	
12.00		299.54	0.01	0.06	0.03	12.21	
14.00		296.43	0.02	0.06	0.04	12.57	
16.00		293.31	0.03	0.07	0.04	12.80	
18.00		290.19	0.03	0.07	0.04	12.93	
20.00		287.07	0.04	0.07	0.04	12.99	
22.00		283.95	0.05	0.07	0.04	13.02	
24.00		280.84	0.06	0.07	0.04	13.02	
26.00		277.72	0.07	0.07	0.04	13.01	
28.00		274.60	0.08	0.07	0.04	13.00	
30.00		271.48	0.09	0.07	0.04	12.99	
32.00		268.36	0.10	0.07	0.04	12.98	
34.00		265.24	0.11	0.07	0.04	12.98	
36.00		262.13	0.13	0.07	0.03	12.97	
38.00		259.01	0.14	0.07	0.03	12.95	
40.00		255.89	0.16	0.07	0.03	12.92	
42.00		252.77	0.17	0.07	0.03	12.86	
44.00		249.65	0.19	0.06	0.02	12.76	
46.00		246.54	0.21	0.06	0.02	12.61	
48.00		243.42	0.23	0.06	0.02	12.39	
48.50	Bot - Section 2	60.37	0.23	0.06	0.02	3.07	
50.00		326.16	0.24	0.06	0.02	16.39	
52.00		429.96	0.26	0.05	0.02	21.12	
53.25	Top - Section 1	265.88	0.28	0.05	0.01	12.79	
54.00		71.07	0.29	0.05	0.01	3.37	
56.00		187.79	0.31	0.04	0.01	8.43	
58.00		185.30	0.33	0.04	0.01	7.69	
60.00		182.81	0.35	0.03	0.01	6.78	
62.00		180.31	0.38	0.03	0.01	5.69	
64.00		177.82	0.40	0.02	0.01	4.43	
66.00		175.32	0.43	0.01	0.01	3.01	
68.00		172.83	0.45	0.00	0.01	1.47	
70.00		170.33	0.48	-0.01	0.01	-0.13	
72.00		167.84	0.51	-0.02	0.01	-1.74	
74.00		165.34	0.54	-0.03	0.01	-3.27	
76.00		162.85	0.57	-0.04	0.01	-4.66	
78.00		160.35	0.60	-0.05	0.01	-5.86	
80.00		157.86	0.63	-0.06	0.02	-6.84	
82.00		155.37	0.66	-0.07	0.02	-7.59	
84.00		152.87	0.69	-0.08	0.03	-8.10	
86.00		150.38	0.72	-0.09	0.03	-8.40	

Seismic Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00		147.88	0.76	-0.10	0.04	-8.48
90.00		145.39	0.79	-0.11	0.05	-8.37
92.00		142.89	0.83	-0.12	0.06	-8.08
94.00		140.40	0.86	-0.12	0.07	-7.63
96.00		137.90	0.90	-0.12	0.09	-7.04
97.00	Appurtenance(s)	2139.4	0.92	-0.12	0.10	-104.70
98.00		67.39	0.94	-0.12	0.10	-3.14
98.75	Bot - Section 3	50.14	0.95	-0.12	0.11	-2.24
100.00		145.97	0.98	-0.11	0.12	-5.99
102.00	Top - Section 2	230.01	1.02	-0.11	0.14	-7.91
104.00		97.72	1.06	-0.09	0.16	-2.61
106.00		95.85	1.10	-0.07	0.19	-1.72
107.00	Appurtenance(s)	5436.0	1.12	-0.06	0.20	-71.35
108.00		46.75	1.14	-0.04	0.21	-0.38
110.00		92.10	1.18	-0.01	0.24	0.26
112.00		90.23	1.23	0.03	0.28	1.34
114.00		88.36	1.27	0.08	0.31	2.47
116.00		86.49	1.32	0.14	0.35	3.64
118.00		84.62	1.36	0.22	0.39	4.86
120.00		82.75	1.41	0.30	0.44	6.11
122.00		80.88	1.46	0.40	0.49	7.39
124.00		79.01	1.50	0.51	0.55	8.70
126.00		77.14	1.55	0.64	0.61	10.03
127.00	Appurtenance(s)	2415.8	1.58	0.71	0.64	339.16
128.00		37.40	1.60	0.79	0.67	5.65
130.00		73.40	1.65	0.95	0.74	12.72
132.00		71.52	1.70	1.14	0.82	14.07
134.00		69.65	1.76	1.35	0.90	15.43
136.00		67.78	1.81	1.58	0.99	16.77
137.00	Appurtenance(s)	2725.6	1.84	1.71	1.04	710.84
138.00		32.72	1.86	1.84	1.09	8.98
139.00	Appurtenance(s)	38.75	1.89	1.98	1.14	11.18
Totals:		25,879.5				1,276.4
						Total Wind: 25,255.3

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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 27
Gust Response Factor 1.10					Sds 0.23					Ss 0.22
Dead Load Factor 0.90			Seismic Load Factor 1.00			Sd1 0.11			S1 0.07	
Wind Load Factor 0.00		Structure Frequency (f1) 0.28		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	-27.16	-1.56	0.00	-180.08	0.00	180.08	3003.53	1501.76	5797.25	2902.93	0.00	0.00	0.00	0.071
2.00	-26.81	-1.56	0.00	-176.95	0.00	176.95	2986.67	1493.33	5707.57	2858.03	0.00	-0.01	0.071	
4.00	-26.46	-1.56	0.00	-173.83	0.00	173.83	2969.56	1484.78	5618.06	2813.21	0.01	-0.02	0.071	
6.00	-26.12	-1.55	0.00	-170.72	0.00	170.72	2952.19	1476.10	5528.74	2768.48	0.02	-0.02	0.071	
8.00	-25.78	-1.54	0.00	-167.62	0.00	167.62	2934.57	1467.29	5439.61	2723.85	0.03	-0.03	0.070	
10.00	-25.44	-1.54	0.00	-164.53	0.00	164.53	2916.70	1458.35	5350.68	2679.32	0.04	-0.04	0.070	
12.00	-25.10	-1.53	0.00	-161.46	0.00	161.46	2898.58	1449.29	5261.99	2634.90	0.06	-0.05	0.070	
14.00	-24.77	-1.52	0.00	-158.41	0.00	158.41	2880.20	1440.10	5173.53	2590.61	0.08	-0.06	0.070	
16.00	-24.44	-1.51	0.00	-155.37	0.00	155.37	2861.57	1430.79	5085.33	2546.44	0.11	-0.07	0.070	
18.00	-24.11	-1.50	0.00	-152.36	0.00	152.36	2842.69	1421.35	4997.39	2502.41	0.14	-0.07	0.069	
20.00	-23.79	-1.49	0.00	-149.36	0.00	149.36	2823.56	1411.78	4909.74	2458.52	0.17	-0.08	0.069	
22.00	-23.47	-1.48	0.00	-146.39	0.00	146.39	2804.17	1402.08	4822.39	2414.78	0.21	-0.09	0.069	
24.00	-23.15	-1.47	0.00	-143.43	0.00	143.43	2784.53	1392.26	4735.34	2371.19	0.25	-0.10	0.069	
26.00	-22.83	-1.46	0.00	-140.49	0.00	140.49	2764.64	1382.32	4648.63	2327.77	0.29	-0.11	0.069	
28.00	-22.52	-1.45	0.00	-137.58	0.00	137.58	2744.49	1372.24	4562.25	2284.52	0.34	-0.12	0.068	
30.00	-22.20	-1.44	0.00	-134.68	0.00	134.68	2724.09	1362.04	4476.23	2241.44	0.39	-0.13	0.068	
32.00	-21.90	-1.43	0.00	-131.80	0.00	131.80	2703.44	1351.72	4390.58	2198.55	0.45	-0.14	0.068	
34.00	-21.59	-1.42	0.00	-128.95	0.00	128.95	2682.53	1341.27	4305.32	2155.86	0.51	-0.15	0.068	
36.00	-21.29	-1.41	0.00	-126.11	0.00	126.11	2661.38	1330.69	4220.45	2113.36	0.57	-0.16	0.068	
38.00	-20.99	-1.40	0.00	-123.29	0.00	123.29	2639.97	1319.98	4136.00	2071.07	0.64	-0.17	0.067	
40.00	-20.69	-1.39	0.00	-120.50	0.00	120.50	2618.30	1309.15	4051.97	2029.00	0.71	-0.18	0.067	
42.00	-20.40	-1.38	0.00	-117.72	0.00	117.72	2596.39	1298.19	3968.39	1987.14	0.79	-0.19	0.067	
44.00	-20.11	-1.37	0.00	-114.97	0.00	114.97	2574.22	1287.11	3885.26	1945.52	0.87	-0.20	0.067	
46.00	-19.82	-1.36	0.00	-112.23	0.00	112.23	2551.80	1275.90	3802.61	1904.13	0.95	-0.21	0.067	
48.00	-19.53	-1.35	0.00	-109.52	0.00	109.52	2529.12	1264.56	3720.44	1862.98	1.04	-0.22	0.067	
48.50	-19.46	-1.34	0.00	-108.84	0.00	108.84	2523.41	1261.71	3699.97	1852.74	1.07	-0.22	0.066	
50.00	-19.12	-1.33	0.00	-106.83	0.00	106.83	2506.19	1253.10	3638.77	1822.09	1.14	-0.23	0.066	
52.00	-18.67	-1.31	0.00	-104.17	0.00	104.17	2483.01	1241.51	3557.62	1781.45	1.24	-0.24	0.066	
53.25	-18.38	-1.30	0.00	-102.53	0.00	102.53	1850.79	925.39	2677.47	1340.72	1.30	-0.25	0.086	
54.00	-18.30	-1.30	0.00	-101.56	0.00	101.56	1845.26	922.63	2656.25	1330.10	1.34	-0.25	0.086	
56.00	-18.06	-1.29	0.00	-98.96	0.00	98.96	1830.37	915.18	2599.79	1301.83	1.45	-0.26	0.086	
58.00	-17.83	-1.29	0.00	-96.38	0.00	96.38	1815.22	907.61	2543.55	1273.66	1.56	-0.28	0.085	
60.00	-17.60	-1.28	0.00	-93.80	0.00	93.80	1799.82	899.91	2487.54	1245.62	1.68	-0.29	0.085	
62.00	-17.37	-1.28	0.00	-91.24	0.00	91.24	1784.16	892.08	2431.77	1217.69	1.80	-0.31	0.085	
64.00	-17.14	-1.28	0.00	-88.67	0.00	88.67	1768.26	884.13	2376.27	1189.90	1.93	-0.32	0.084	
66.00	-16.92	-1.28	0.00	-86.12	0.00	86.12	1752.10	876.05	2321.03	1162.24	2.07	-0.33	0.084	
68.00	-16.69	-1.28	0.00	-83.56	0.00	83.56	1735.69	867.84	2266.09	1134.73	2.21	-0.35	0.083	
70.00	-16.47	-1.28	0.00	-81.00	0.00	81.00	1719.02	859.51	2211.45	1107.37	2.36	-0.36	0.083	
72.00	-16.26	-1.29	0.00	-78.43	0.00	78.43	1702.10	851.05	2157.12	1080.16	2.52	-0.38	0.082	
74.00	-16.04	-1.29	0.00	-75.86	0.00	75.86	1684.93	842.47	2103.13	1053.13	2.68	-0.39	0.082	
76.00	-15.83	-1.29	0.00	-73.28	0.00	73.28	1667.51	833.75	2049.48	1026.26	2.85	-0.41	0.081	
78.00	-15.62	-1.29	0.00	-70.69	0.00	70.69	1649.83	824.92	1996.20	999.58	3.02	-0.42	0.080	
80.00	-15.41	-1.30	0.00	-68.10	0.00	68.10	1631.90	815.95	1943.29	973.09	3.20	-0.44	0.079	
82.00	-15.20	-1.30	0.00	-65.51	0.00	65.51	1613.72	806.86	1890.77	946.79	3.39	-0.45	0.079	
84.00	-15.00	-1.30	0.00	-62.91	0.00	62.91	1595.28	797.64	1838.65	920.69	3.58	-0.47	0.078	
86.00	-14.79	-1.30	0.00	-60.30	0.00	60.30	1576.59	788.30	1786.95	894.80	3.78	-0.48	0.077	
88.00	-14.60	-1.31	0.00	-57.69	0.00	57.69	1557.65	778.83	1735.69	869.13	3.99	-0.50	0.076	

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	-14.40	-1.31	0.00	-55.08	0.00	55.08	1538.46	769.23	1684.87	843.69	4.20	-0.52	0.075
92.00	-14.20	-1.31	0.00	-52.46	0.00	52.46	1519.01	759.51	1634.52	818.47	4.42	-0.53	0.073
94.00	-14.01	-1.31	0.00	-49.84	0.00	49.84	1499.31	749.66	1584.64	793.50	4.65	-0.55	0.072
96.00	-13.82	-1.32	0.00	-47.21	0.00	47.21	1479.36	739.68	1535.25	768.77	4.88	-0.56	0.071
97.00	-11.86	-1.30	0.00	-45.89	0.00	45.89	1469.29	734.65	1510.75	756.50	5.00	-0.57	0.069
98.00	-11.78	-1.30	0.00	-44.60	0.00	44.60	1459.16	729.58	1486.37	744.29	5.12	-0.58	0.068
98.75	-11.72	-1.30	0.00	-43.62	0.00	43.62	1451.52	725.76	1468.18	735.18	5.21	-0.59	0.067
100.00	-11.56	-1.30	0.00	-42.00	0.00	42.00	1437.39	718.70	1436.71	719.42	5.37	-0.60	0.066
102.00	-11.31	-1.30	0.00	-39.40	0.00	39.40	990.34	495.17	991.38	496.43	5.62	-0.61	0.091
104.00	-11.18	-1.30	0.00	-36.80	0.00	36.80	978.09	489.05	960.41	480.92	5.88	-0.63	0.088
106.00	-11.05	-1.30	0.00	-34.19	0.00	34.19	965.60	482.80	929.67	465.53	6.15	-0.65	0.085
107.00	-6.14	-1.25	0.00	-32.89	0.00	32.89	959.26	479.63	914.39	457.88	6.29	-0.66	0.078
108.00	-6.08	-1.25	0.00	-31.64	0.00	31.64	952.85	476.43	899.17	450.26	6.42	-0.67	0.077
110.00	-5.97	-1.25	0.00	-29.14	0.00	29.14	939.85	469.93	868.93	435.11	6.71	-0.69	0.073
112.00	-5.85	-1.25	0.00	-26.64	0.00	26.64	926.60	463.30	838.95	420.10	7.00	-0.71	0.070
114.00	-5.74	-1.25	0.00	-24.14	0.00	24.14	913.09	456.55	809.25	405.23	7.30	-0.72	0.066
116.00	-5.63	-1.24	0.00	-21.64	0.00	21.64	899.33	449.67	779.86	390.51	7.61	-0.74	0.062
118.00	-5.53	-1.24	0.00	-19.15	0.00	19.15	885.32	442.66	750.77	375.94	7.92	-0.76	0.057
120.00	-5.42	-1.23	0.00	-16.67	0.00	16.67	871.06	435.53	722.01	361.54	8.24	-0.77	0.052
122.00	-5.32	-1.23	0.00	-14.20	0.00	14.20	856.54	428.27	693.59	347.31	8.57	-0.79	0.047
124.00	-5.22	-1.22	0.00	-11.75	0.00	11.75	841.77	420.89	665.53	333.26	8.90	-0.80	0.041
126.00	-5.12	-1.21	0.00	-9.32	0.00	9.32	826.75	413.37	637.84	319.39	9.24	-0.81	0.035
127.00	-2.93	-0.84	0.00	-8.11	0.00	8.11	819.14	409.57	624.14	312.53	9.41	-0.82	0.030
128.00	-2.88	-0.83	0.00	-7.27	0.00	7.27	811.45	405.73	610.52	305.71	9.58	-0.82	0.027
130.00	-2.79	-0.82	0.00	-5.61	0.00	5.61	791.03	395.51	580.02	290.44	9.93	-0.83	0.023
132.00	-2.70	-0.80	0.00	-3.98	0.00	3.98	770.61	385.30	550.30	275.56	10.27	-0.83	0.018
134.00	-2.61	-0.79	0.00	-2.37	0.00	2.37	750.18	375.09	521.37	261.07	10.63	-0.84	0.013
136.00	-2.52	-0.77	0.00	-0.80	0.00	0.80	729.76	364.88	493.22	246.97	10.98	-0.84	0.007
137.00	-0.07	-0.02	0.00	-0.03	0.00	0.03	719.55	359.77	479.43	240.07	11.15	-0.84	0.000
138.00	-0.04	-0.01	0.00	-0.01	0.00	0.01	709.33	354.67	465.84	233.27	11.33	-0.84	0.000
139.00	0.00	-0.01	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	11.51	-0.84	0.000

Wind Loading - Shaft

Structure: CT13549-S-SBA

Code: TIA-222-G

5/10/2022

Site Name: Danbury 1

Exposure: C

Height: 139.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 29

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	221.08	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	7.442	8.19	218.92	0.650	0.000	2.00	7.954	5.17	42.3	0.0	315.1
4.00		1.00	0.85	7.442	8.19	216.75	0.650	0.000	2.00	7.876	5.12	41.9	0.0	312.0
6.00		1.00	0.85	7.442	8.19	214.59	0.650	0.000	2.00	7.798	5.07	41.5	0.0	308.9
8.00		1.00	0.85	7.442	8.19	212.43	0.650	0.000	2.00	7.719	5.02	41.1	0.0	305.8
10.00		1.00	0.85	7.442	8.19	210.27	0.650	0.000	2.00	7.641	4.97	40.7	0.0	302.7
12.00		1.00	0.85	7.442	8.19	208.10	0.650	0.000	2.00	7.563	4.92	40.2	0.0	299.5
14.00		1.00	0.85	7.442	8.19	205.94	0.650	0.000	2.00	7.485	4.87	39.8	0.0	296.4
16.00		1.00	0.86	7.534	8.29	205.03	0.650	0.000	2.00	7.407	4.81	39.9	0.0	293.3
18.00		1.00	0.88	7.723	8.50	205.39	0.650	0.000	2.00	7.329	4.76	40.5	0.0	290.2
20.00		1.00	0.90	7.896	8.69	205.45	0.650	0.000	2.00	7.250	4.71	40.9	0.0	287.1
22.00		1.00	0.92	8.056	8.86	205.27	0.650	0.000	2.00	7.172	4.66	41.3	0.0	284.0
24.00		1.00	0.94	8.205	9.03	204.89	0.650	0.000	2.00	7.094	4.61	41.6	0.0	280.8
26.00		1.00	0.95	8.345	9.18	204.34	0.650	0.000	2.00	7.016	4.56	41.9	0.0	277.7
28.00		1.00	0.97	8.476	9.32	203.63	0.650	0.000	2.00	6.938	4.51	42.0	0.0	274.6
30.00		1.00	0.98	8.600	9.46	202.79	0.650	0.000	2.00	6.860	4.46	42.2	0.0	271.5
32.00		1.00	1.00	8.717	9.59	201.83	0.650	0.000	2.00	6.781	4.41	42.3	0.0	268.4
34.00		1.00	1.01	8.829	9.71	200.77	0.650	0.000	2.00	6.703	4.36	42.3	0.0	265.2
36.00		1.00	1.02	8.936	9.83	199.61	0.650	0.000	2.00	6.625	4.31	42.3	0.0	262.1
38.00		1.00	1.03	9.039	9.94	198.37	0.650	0.000	2.00	6.547	4.26	42.3	0.0	259.0
40.00		1.00	1.04	9.137	10.05	197.04	0.650	0.000	2.00	6.469	4.20	42.3	0.0	255.9
42.00		1.00	1.05	9.231	10.15	195.65	0.650	0.000	2.00	6.390	4.15	42.2	0.0	252.8
44.00		1.00	1.06	9.322	10.25	194.19	0.650	0.000	2.00	6.312	4.10	42.1	0.0	249.7
46.00		1.00	1.07	9.410	10.35	192.67	0.650	0.000	2.00	6.234	4.05	41.9	0.0	246.5
48.00		1.00	1.08	9.494	10.44	191.09	0.650	0.000	2.00	6.156	4.00	41.8	0.0	243.4
48.50	Bot - Section 2	1.00	1.09	9.515	10.47	190.69	0.650	0.000	0.50	1.527	0.99	10.4	0.0	60.4
50.00		1.00	1.09	9.576	10.53	189.46	0.650	0.000	1.50	4.614	3.00	31.6	0.0	326.2
52.00		1.00	1.10	9.656	10.62	187.78	0.650	0.000	2.00	6.084	3.95	42.0	0.0	430.0
53.25	Top - Section 1	1.00	1.11	9.704	10.67	186.71	0.650	0.000	1.25	3.763	2.45	26.1	0.0	265.9
54.00		1.00	1.11	9.733	10.71	188.74	0.650	0.000	0.75	2.243	1.46	15.6	0.0	71.1
56.00		1.00	1.12	9.807	10.79	186.98	0.650	0.000	2.00	5.928	3.85	41.6	0.0	187.8
58.00		1.00	1.13	9.880	10.87	185.18	0.650	0.000	2.00	5.850	3.80	41.3	0.0	185.3
60.00		1.00	1.14	9.951	10.95	183.34	0.650	0.000	2.00	5.771	3.75	41.1	0.0	182.8
62.00		1.00	1.14	10.020	11.02	181.46	0.650	0.000	2.00	5.693	3.70	40.8	0.0	180.3
64.00		1.00	1.15	10.087	11.10	179.55	0.650	0.000	2.00	5.615	3.65	40.5	0.0	177.8
66.00		1.00	1.16	10.153	11.17	177.61	0.650	0.000	2.00	5.537	3.60	40.2	0.0	175.3
68.00		1.00	1.17	10.217	11.24	175.64	0.650	0.000	2.00	5.459	3.55	39.9	0.0	172.8
70.00		1.00	1.17	10.279	11.31	173.63	0.650	0.000	2.00	5.381	3.50	39.5	0.0	170.3
72.00		1.00	1.18	10.340	11.37	171.60	0.650	0.000	2.00	5.302	3.45	39.2	0.0	167.8
74.00		1.00	1.19	10.400	11.44	169.54	0.650	0.000	2.00	5.224	3.40	38.8	0.0	165.3
76.00		1.00	1.19	10.459	11.50	167.45	0.650	0.000	2.00	5.146	3.34	38.5	0.0	162.8
78.00		1.00	1.20	10.516	11.57	165.34	0.650	0.000	2.00	5.068	3.29	38.1	0.0	160.4
80.00		1.00	1.21	10.572	11.63	163.20	0.650	0.000	2.00	4.990	3.24	37.7	0.0	157.9
82.00		1.00	1.21	10.627	11.69	161.04	0.650	0.000	2.00	4.912	3.19	37.3	0.0	155.4
84.00		1.00	1.22	10.681	11.75	158.86	0.650	0.000	2.00	4.833	3.14	36.9	0.0	152.9
86.00		1.00	1.23	10.734	11.81	156.66	0.650	0.000	2.00	4.755	3.09	36.5	0.0	150.4
88.00		1.00	1.23	10.787	11.87	154.44	0.650	0.000	2.00	4.677	3.04	36.1	0.0	147.9

Wind Loading - Shaft

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 52
	Struct Class: II	



90.00	1.00	1.24	10.838	11.92	152.19	0.650	0.000	2.00	4.599	2.99	35.6	0.0	145.4		
92.00	1.00	1.24	10.888	11.98	149.93	0.650	0.000	2.00	4.521	2.94	35.2	0.0	142.9		
94.00	1.00	1.25	10.937	12.03	147.65	0.650	0.000	2.00	4.442	2.89	34.7	0.0	140.4		
96.00	1.00	1.25	10.986	12.08	145.35	0.650	0.000	2.00	4.364	2.84	34.3	0.0	137.9		
97.00 Appurtenance(s)	1.00	1.26	11.010	12.11	144.19	0.650	0.000	1.00	2.153	1.40	16.9	0.0	68.0		
98.00	1.00	1.26	11.034	12.14	143.03	0.650	0.000	1.00	2.133	1.39	16.8	0.0	67.4		
98.75 Bot - Section 3	1.00	1.26	11.051	12.16	142.16	0.650	0.000	0.75	1.587	1.03	12.5	0.0	50.1		
100.00	1.00	1.27	11.081	12.19	140.70	0.650	0.000	1.25	2.660	1.73	21.1	0.0	146.0		
102.00 Top - Section 2	1.00	1.27	11.127	12.24	138.35	0.650	0.000	2.00	4.193	2.73	33.4	0.0	230.0		
104.00	1.00	1.28	11.173	12.29	138.13	0.650	0.000	2.00	4.115	2.67	32.9	0.0	97.7		
106.00	1.00	1.28	11.218	12.34	135.75	0.650	0.000	2.00	4.037	2.62	32.4	0.0	95.8		
107.00 Appurtenance(s)	1.00	1.28	11.240	12.36	134.56	0.650	0.000	1.00	1.989	1.29	16.0	0.0	47.2		
108.00	1.00	1.29	11.262	12.39	133.36	0.650	0.000	1.00	1.970	1.28	15.9	0.0	46.8		
110.00	1.00	1.29	11.305	12.44	130.95	0.650	0.000	2.00	3.880	2.52	31.4	0.0	92.1		
112.00	1.00	1.30	11.348	12.48	128.53	0.650	0.000	2.00	3.802	2.47	30.9	0.0	90.2		
114.00	1.00	1.30	11.391	12.53	126.10	0.650	0.000	2.00	3.724	2.42	30.3	0.0	88.4		
116.00	1.00	1.31	11.432	12.58	123.65	0.650	0.000	2.00	3.646	2.37	29.8	0.0	86.5		
118.00	1.00	1.31	11.474	12.62	121.19	0.650	0.000	2.00	3.568	2.32	29.3	0.0	84.6		
120.00	1.00	1.32	11.514	12.67	118.71	0.650	0.000	2.00	3.490	2.27	28.7	0.0	82.7		
122.00	1.00	1.32	11.554	12.71	116.22	0.650	0.000	2.00	3.411	2.22	28.2	0.0	80.9		
124.00	1.00	1.32	11.594	12.75	113.72	0.650	0.000	2.00	3.333	2.17	27.6	0.0	79.0		
126.00	1.00	1.33	11.633	12.80	111.21	0.650	0.000	2.00	3.255	2.12	27.1	0.0	77.1		
127.00 Appurtenance(s)	1.00	1.33	11.653	12.82	109.95	0.650	0.000	1.00	1.598	1.04	13.3	0.0	37.9		
128.00	1.00	1.33	11.672	12.84	108.69	0.650	0.000	1.00	1.579	1.03	13.2	0.0	37.4		
130.00	1.00	1.34	11.710	12.88	106.15	0.650	0.000	2.00	3.099	2.01	25.9	0.0	73.4		
132.00	1.00	1.34	11.748	12.92	103.61	0.650	0.000	2.00	3.021	1.96	25.4	0.0	71.5		
134.00	1.00	1.35	11.785	12.96	101.05	0.650	0.000	2.00	2.942	1.91	24.8	0.0	69.7		
136.00	1.00	1.35	11.822	13.00	98.48	0.650	0.000	2.00	2.864	1.86	24.2	0.0	67.8		
137.00 Appurtenance(s)	1.00	1.35	11.840	13.02	97.19	0.650	0.000	1.00	1.403	0.91	11.9	0.0	33.2		
138.00	1.00	1.35	11.858	13.04	95.90	0.650	0.000	1.00	1.383	0.90	11.7	0.0	32.7		
139.00 Appurtenance(s)	1.00	1.36	11.876	13.06	94.61	0.650	0.000	1.00	1.364	0.89	11.6	0.0	32.3		
Totals:								139.00				2,549.9	13,342.3		

Discrete Appurtenance Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor 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	139.00	6' Lightning rod	1	11.876	13.064	1.00	1.00	0.38	6.50	0.000	0.000	4.96	0.00	0.00
2	137.00	RDS-272	3	11.840	13.024	0.56	0.75	16.88	1200.00	0.000	0.000	219.78	0.00	0.00
3	137.00	KRY 112 144/1	3	11.840	13.024	0.40	0.80	0.49	33.00	0.000	0.000	6.41	0.00	0.00
4	137.00	4415 B25	3	11.840	13.024	0.40	0.80	2.23	138.90	0.000	0.000	29.07	0.00	0.00
5	137.00	AIR6449 B41	3	11.840	13.024	0.57	0.80	9.63	309.00	0.000	0.000	125.39	0.00	0.00
6	137.00	RFS	3	11.840	13.024	0.56	0.80	34.00	384.00	0.000	0.000	442.86	0.00	0.00
7	137.00	Air 32	3	11.840	13.024	0.70	0.80	13.59	396.60	0.000	0.000	177.03	0.00	0.00
8	137.00	4449 B71+B85	3	11.840	13.024	0.40	0.80	1.98	210.00	0.000	0.000	25.79	0.00	0.00
9	137.00	SDX1926Q-43	3	11.840	13.024	0.40	0.80	0.46	21.00	0.000	0.000	5.94	0.00	0.00
10	127.00	TA08025-B604	3	11.653	12.818	0.38	0.75	2.21	191.70	0.000	0.000	28.26	0.00	0.00
11	127.00	Commscope	3	11.653	12.818	0.55	0.75	20.38	212.40	0.000	0.000	261.22	0.00	0.00
12	127.00	RDIDC-9181-OF-48	1	11.653	12.818	0.38	0.75	0.75	21.90	0.000	0.000	9.66	0.00	0.00
13	127.00	TA08025-B605	3	11.653	12.818	0.38	0.75	2.21	225.00	0.000	0.000	28.26	0.00	0.00
14	127.00	MC-PK8-DSH	1	11.653	12.818	1.00	1.00	34.30	1727.00	0.000	0.000	439.65	0.00	0.00
15	107.00	RRUS 4449 B5/B12	3	11.240	12.364	0.38	0.75	1.86	255.00	0.000	0.000	22.95	0.00	0.00
16	107.00	DC9-48-60-24-8C-EV	1	11.240	12.364	0.38	0.75	0.43	26.20	0.000	0.000	5.29	0.00	0.00
17	107.00	RRUS 4478 B14	3	11.240	12.364	0.38	0.75	1.86	178.20	0.000	0.000	22.95	0.00	0.00
18	107.00	RRUS 4415 B25	3	11.240	12.364	0.38	0.75	1.84	138.00	0.000	0.000	22.81	0.00	0.00
19	107.00	DBC20056F1V1	3	11.240	12.364	0.38	0.75	0.46	21.00	0.000	0.000	5.70	0.00	0.00
20	107.00	RRUS A2	3	11.240	12.364	0.38	0.75	2.09	63.60	0.000	0.000	25.87	0.00	0.00
21	107.00	RRUS-32	3	11.240	12.364	0.38	0.75	4.35	231.00	0.000	0.000	53.83	0.00	0.00
22	107.00	DC6-48-60-18-8F	2	11.240	12.364	0.38	0.75	1.10	63.60	0.000	0.000	13.63	0.00	0.00
23	107.00	EPBQ-652L8H6-L2	3	11.240	12.364	0.64	0.75	18.47	218.40	0.000	0.000	228.42	0.00	0.00
24	107.00	RMQLP-4120-H10	1	11.240	12.364	1.00	1.00	42.00	3249.41	0.000	0.000	519.27	0.00	0.00
25	107.00	4426 B66	3	11.240	12.364	0.38	0.75	1.29	159.00	0.000	0.000	16.00	0.00	0.00
26	107.00	AIR 6449 B77D	3	11.240	12.364	0.64	0.75	7.90	244.80	0.000	0.000	97.66	0.00	0.00
27	107.00	AIR 6419 B77G	3	11.240	12.364	0.57	0.75	6.50	244.80	0.000	0.000	80.34	0.00	0.00
28	107.00	DMP65R-BU6DA	3	11.240	12.364	0.54	0.75	20.59	238.20	0.000	0.000	254.57	0.00	0.00
29	107.00	DTMABP7819VG12A	3	11.240	12.364	0.38	0.75	1.28	57.60	0.000	0.000	15.86	0.00	0.00
30	97.00	Samsung VZS01	3	11.010	12.111	0.55	0.80	7.12	261.30	0.000	0.000	86.24	0.00	0.00
31	97.00	T-Arms	3	11.010	12.111	0.56	0.75	13.50	1050.00	0.000	0.000	163.50	0.00	0.00
32	97.00	JMA MX06FRO660-03	6	11.010	12.111	0.70	0.80	41.22	276.00	0.000	0.000	499.18	0.00	0.00
33	97.00	Commscope	1	11.010	12.111	0.40	0.80	2.24	20.00	0.000	0.000	27.13	0.00	0.00
34	97.00	Samsung B5/B13	3	11.010	12.111	0.40	0.80	2.26	253.20	0.000	0.000	27.32	0.00	0.00
35	97.00	Samsung B2/B66A	3	11.010	12.111	0.40	0.80	2.26	210.90	0.000	0.000	27.32	0.00	0.00
Totals:									12,537.21			4,020.12		

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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
2.00		42.32	388.82	0.00	0.00
4.00		41.91	385.70	0.00	0.00
6.00		41.49	382.59	0.00	0.00
8.00		41.08	379.47	0.00	0.00
10.00		40.66	376.35	0.00	0.00
12.00		40.24	373.23	0.00	0.00
14.00		39.83	370.11	0.00	0.00
16.00		39.90	367.00	0.00	0.00
18.00		40.47	363.88	0.00	0.00
20.00		40.93	360.76	0.00	0.00
22.00		41.31	357.64	0.00	0.00
24.00		41.62	354.52	0.00	0.00
26.00		41.86	351.41	0.00	0.00
28.00		42.04	348.29	0.00	0.00
30.00		42.18	345.17	0.00	0.00
32.00		42.27	342.05	0.00	0.00
34.00		42.32	338.93	0.00	0.00
36.00		42.33	335.81	0.00	0.00
38.00		42.31	332.70	0.00	0.00
40.00		42.26	329.58	0.00	0.00
42.00		42.18	326.46	0.00	0.00
44.00		42.07	323.34	0.00	0.00
46.00		41.94	320.22	0.00	0.00
48.00		41.79	317.11	0.00	0.00
48.50		10.39	78.79	0.00	0.00
50.00		31.60	381.42	0.00	0.00
52.00		42.00	503.65	0.00	0.00
53.25		26.11	311.93	0.00	0.00
54.00		15.61	98.70	0.00	0.00
56.00		41.57	261.48	0.00	0.00
58.00		41.32	258.99	0.00	0.00
60.00		41.06	256.49	0.00	0.00
62.00		40.79	254.00	0.00	0.00
64.00		40.50	251.50	0.00	0.00
66.00		40.19	249.01	0.00	0.00
68.00		39.88	246.52	0.00	0.00
70.00		39.55	244.02	0.00	0.00
72.00		39.20	241.53	0.00	0.00
74.00		38.85	239.03	0.00	0.00
76.00		38.48	236.54	0.00	0.00
78.00		38.11	234.04	0.00	0.00
80.00		37.72	231.55	0.00	0.00
82.00		37.32	229.05	0.00	0.00
84.00		36.91	226.56	0.00	0.00
86.00		36.50	224.06	0.00	0.00
88.00		36.07	221.57	0.00	0.00

Total Applied Force Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00		35.64	219.08	0.00	0.00
92.00		35.19	216.58	0.00	0.00
94.00		34.74	214.09	0.00	0.00
96.00		34.28	211.59	0.00	0.00
97.00	(19) attachments	847.63	2176.26	0.00	0.00
98.00		16.83	90.66	0.00	0.00
98.75		12.54	67.58	0.00	0.00
100.00		21.08	175.05	0.00	0.00
102.00		33.36	276.54	0.00	0.00
104.00		32.87	144.24	0.00	0.00
106.00		32.38	142.37	0.00	0.00
107.00	(40) attachments	1401.12	5459.30	0.00	0.00
108.00		15.86	63.82	0.00	0.00
110.00		31.37	126.23	0.00	0.00
112.00		30.85	124.36	0.00	0.00
114.00		30.33	122.49	0.00	0.00
116.00		29.80	120.62	0.00	0.00
118.00		29.27	118.75	0.00	0.00
120.00		28.73	116.88	0.00	0.00
122.00		28.18	115.01	0.00	0.00
124.00		27.63	113.14	0.00	0.00
126.00		27.07	111.26	0.00	0.00
127.00	(11) attachments	780.38	2432.93	0.00	0.00
128.00		13.17	52.47	0.00	0.00
130.00		25.94	103.54	0.00	0.00
132.00		25.37	101.67	0.00	0.00
134.00		24.79	99.80	0.00	0.00
136.00		24.21	97.93	0.00	0.00
137.00	(24) attachments	1044.14	2740.76	0.00	0.00
138.00		11.73	34.03	0.00	0.00
139.00	(1) attachments	16.54	40.07	0.00	0.00
	Totals:	6,570.07	30,180.69	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

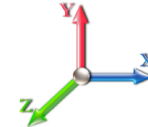
Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	0.55
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	2.08
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	0.55
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	2.08
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	0.55
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	2.08
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	0.55
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	2.08
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	0.55
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	2.08
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	0.55
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	2.08
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	0.55
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	2.08
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.534	0.00	0.55
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.534	0.00	2.08
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.723	0.00	0.55
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.723	0.00	2.08
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	0.55
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	2.08
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.056	0.00	0.55
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.056	0.00	2.08
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.205	0.00	0.55
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.205	0.00	2.08
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.345	0.00	0.55
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.345	0.00	2.08
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.476	0.00	0.55
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.476	0.00	2.08
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	0.55
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	2.08
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.717	0.00	0.55
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.717	0.00	2.08
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.829	0.00	0.55
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.829	0.00	2.08
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.936	0.00	0.55
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.936	0.00	2.08
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.039	0.00	0.55
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.039	0.00	2.08
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	0.55
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	2.08
42.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.231	0.00	0.55
42.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.231	0.00	2.08
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.322	0.00	0.55
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.322	0.00	2.08
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.410	0.00	0.55
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.410	0.00	2.08
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	0.55

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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)
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	2.08
48.50	Safety Cable	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	9.515	0.00	0.14
48.50	Step bolts (ladder)	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	9.515	0.00	0.52
50.00	Safety Cable	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	0.41
50.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	1.56
52.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.656	0.00	0.55
52.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.656	0.00	2.08
53.25	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	9.704	0.00	0.34
53.25	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	9.704	0.00	1.30
54.00	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	9.733	0.00	0.20
54.00	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	9.733	0.00	0.78
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.807	0.00	0.55
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.807	0.00	2.08
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.880	0.00	0.55
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.880	0.00	2.08
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	0.55
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	2.08
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.020	0.00	0.55
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.020	0.00	2.08
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.087	0.00	0.55
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.087	0.00	2.08
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.153	0.00	0.55
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.153	0.00	2.08
68.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.217	0.00	0.55
68.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.217	0.00	2.08
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	0.55
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	2.08
72.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.340	0.00	0.55
72.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.340	0.00	2.08
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.400	0.00	0.55
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.400	0.00	2.08
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.459	0.00	0.55
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.459	0.00	2.08
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.516	0.00	0.55
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.516	0.00	2.08
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	0.55
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	2.08
82.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.627	0.00	0.55
82.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.627	0.00	2.08
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.681	0.00	0.55
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.681	0.00	2.08
86.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.734	0.00	0.55
86.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.734	0.00	2.08
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.787	0.00	0.55
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.787	0.00	2.08
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	0.55
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	2.08

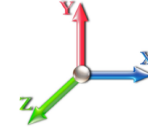
Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (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

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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)
92.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.888	0.00	0.55
92.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.888	0.00	2.08
94.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.937	0.00	0.55
94.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.937	0.00	2.08
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.986	0.00	0.55
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.986	0.00	2.08
97.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.010	0.00	0.27
97.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.010	0.00	1.04
98.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.034	0.00	0.27
98.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.034	0.00	1.04
98.75	Safety Cable	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	11.051	0.00	0.20
98.75	Step bolts (ladder)	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	11.051	0.00	0.78
100.00	Safety Cable	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	0.34
100.00	Step bolts (ladder)	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	1.30
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.127	0.00	0.55
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.127	0.00	2.08
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.173	0.00	0.55
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.173	0.00	2.08
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.218	0.00	0.55
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.218	0.00	2.08
107.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.240	0.00	0.27
107.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.240	0.00	1.04
108.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.262	0.00	0.27
108.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.262	0.00	1.04
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	0.55
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	2.08
112.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.348	0.00	0.55
112.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.348	0.00	2.08
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.391	0.00	0.55
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.391	0.00	2.08
116.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.432	0.00	0.55
116.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.432	0.00	2.08
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.474	0.00	0.55
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.474	0.00	2.08
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	0.55
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	2.08
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.554	0.00	0.55
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.554	0.00	2.08
124.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.594	0.00	0.55
124.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.594	0.00	2.08
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.633	0.00	0.55
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.633	0.00	2.08
127.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.653	0.00	0.27
127.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.653	0.00	1.04
128.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.672	0.00	0.27
128.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.672	0.00	1.04
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	0.55

Linear Appurtenance Segment Forces (Factored)

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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)
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	2.08
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.748	0.00	0.55
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.748	0.00	2.08
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.785	0.00	0.55
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.785	0.00	2.08
136.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.822	0.00	0.55
136.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.822	0.00	2.08
137.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.840	0.00	0.27
137.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.840	0.00	1.04
138.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.858	0.00	0.27
138.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.858	0.00	1.04
139.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.876	0.00	0.27
139.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.876	0.00	1.04
Totals:											0.0	182.5

Calculated Forces

Structure: CT13549-S-SBA
Site Name: Danbury 1
Height: 139.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: TIA-222-G
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

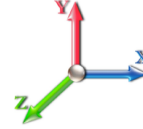
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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 29

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	-30.18	-6.58	0.00	-670.54	0.00	670.54	3003.53	1501.76	5797.25	2902.93	0.00	0.000	0.000	0.241
2.00	-29.79	-6.55	0.00	-657.39	0.00	657.39	2986.67	1493.33	5707.57	2858.03	0.01	-0.029	0.000	0.240
4.00	-29.40	-6.52	0.00	-644.29	0.00	644.29	2969.56	1484.78	5618.06	2813.21	0.03	-0.059	0.000	0.239
6.00	-29.01	-6.50	0.00	-631.24	0.00	631.24	2952.19	1476.10	5528.74	2768.48	0.06	-0.088	0.000	0.238
8.00	-28.63	-6.47	0.00	-618.25	0.00	618.25	2934.57	1467.29	5439.61	2723.85	0.10	-0.118	0.000	0.237
10.00	-28.25	-6.44	0.00	-605.32	0.00	605.32	2916.70	1458.35	5350.68	2679.32	0.16	-0.149	0.000	0.236
12.00	-27.87	-6.42	0.00	-592.43	0.00	592.43	2898.58	1449.29	5261.99	2634.90	0.22	-0.179	0.000	0.234
14.00	-27.50	-6.39	0.00	-579.60	0.00	579.60	2880.20	1440.10	5173.53	2590.61	0.31	-0.210	0.000	0.233
16.00	-27.13	-6.36	0.00	-566.82	0.00	566.82	2861.57	1430.79	5085.33	2546.44	0.40	-0.242	0.000	0.232
18.00	-26.76	-6.34	0.00	-554.09	0.00	554.09	2842.69	1421.35	4997.39	2502.41	0.51	-0.273	0.000	0.231
20.00	-26.40	-6.31	0.00	-541.42	0.00	541.42	2823.56	1411.78	4909.74	2458.52	0.63	-0.305	0.000	0.230
22.00	-26.04	-6.28	0.00	-528.81	0.00	528.81	2804.17	1402.08	4822.39	2414.78	0.77	-0.337	0.000	0.228
24.00	-25.68	-6.25	0.00	-516.25	0.00	516.25	2784.53	1392.26	4735.34	2371.19	0.91	-0.369	0.000	0.227
26.00	-25.32	-6.22	0.00	-503.75	0.00	503.75	2764.64	1382.32	4648.63	2327.77	1.08	-0.402	0.000	0.226
28.00	-24.97	-6.19	0.00	-491.31	0.00	491.31	2744.49	1372.24	4562.25	2284.52	1.25	-0.435	0.000	0.224
30.00	-24.62	-6.16	0.00	-478.93	0.00	478.93	2724.09	1362.04	4476.23	2241.44	1.44	-0.468	0.000	0.223
32.00	-24.28	-6.13	0.00	-466.61	0.00	466.61	2703.44	1351.72	4390.58	2198.55	1.64	-0.502	0.000	0.221
34.00	-23.94	-6.10	0.00	-454.35	0.00	454.35	2682.53	1341.27	4305.32	2155.86	1.86	-0.536	0.000	0.220
36.00	-23.60	-6.07	0.00	-442.15	0.00	442.15	2661.38	1330.69	4220.45	2113.36	2.09	-0.570	0.000	0.218
38.00	-23.26	-6.03	0.00	-430.02	0.00	430.02	2639.97	1319.98	4136.00	2071.07	2.34	-0.604	0.000	0.216
40.00	-22.93	-6.00	0.00	-417.95	0.00	417.95	2618.30	1309.15	4051.97	2029.00	2.60	-0.639	0.000	0.215
42.00	-22.60	-5.97	0.00	-405.95	0.00	405.95	2596.39	1298.19	3968.39	1987.14	2.88	-0.674	0.000	0.213
44.00	-22.27	-5.94	0.00	-394.01	0.00	394.01	2574.22	1287.11	3885.26	1945.52	3.17	-0.709	0.000	0.211
46.00	-21.95	-5.91	0.00	-382.13	0.00	382.13	2551.80	1275.90	3802.61	1904.13	3.47	-0.745	0.000	0.209
48.00	-21.63	-5.87	0.00	-370.32	0.00	370.32	2529.12	1264.56	3720.44	1862.98	3.79	-0.781	0.000	0.207
48.50	-21.55	-5.86	0.00	-367.38	0.00	367.38	2523.41	1261.71	3699.97	1852.74	3.87	-0.790	0.000	0.207
50.00	-21.17	-5.84	0.00	-358.59	0.00	358.59	2506.19	1253.10	3638.77	1822.09	4.13	-0.817	0.000	0.205
52.00	-20.66	-5.80	0.00	-346.91	0.00	346.91	2483.01	1241.51	3557.62	1781.45	4.48	-0.853	0.000	0.203
53.25	-20.35	-5.78	0.00	-339.66	0.00	339.66	1850.79	925.39	2677.47	1340.72	4.70	-0.876	0.000	0.264
54.00	-20.25	-5.77	0.00	-335.33	0.00	335.33	1845.26	922.63	2656.25	1330.10	4.84	-0.890	0.000	0.263
56.00	-19.98	-5.74	0.00	-323.79	0.00	323.79	1830.37	915.18	2599.79	1301.83	5.22	-0.933	0.000	0.260
58.00	-19.72	-5.71	0.00	-312.32	0.00	312.32	1815.22	907.61	2543.55	1273.66	5.62	-0.977	0.000	0.256
60.00	-19.46	-5.68	0.00	-300.90	0.00	300.90	1799.82	899.91	2487.54	1245.62	6.04	-1.021	0.000	0.252
62.00	-19.20	-5.65	0.00	-289.55	0.00	289.55	1784.16	892.08	2431.77	1217.69	6.48	-1.065	0.000	0.249
64.00	-18.95	-5.62	0.00	-278.25	0.00	278.25	1768.26	884.13	2376.27	1189.90	6.94	-1.109	0.000	0.245
66.00	-18.69	-5.59	0.00	-267.02	0.00	267.02	1752.10	876.05	2321.03	1162.24	7.41	-1.154	0.000	0.240
68.00	-18.44	-5.55	0.00	-255.85	0.00	255.85	1735.69	867.84	2266.09	1134.73	7.90	-1.198	0.000	0.236
70.00	-18.20	-5.52	0.00	-244.74	0.00	244.74	1719.02	859.51	2211.45	1107.37	8.41	-1.242	0.000	0.232
72.00	-17.95	-5.49	0.00	-233.69	0.00	233.69	1702.10	851.05	2157.12	1080.16	8.94	-1.286	0.000	0.227
74.00	-17.71	-5.46	0.00	-222.71	0.00	222.71	1684.93	842.47	2103.13	1053.13	9.49	-1.331	0.000	0.222
76.00	-17.47	-5.43	0.00	-211.78	0.00	211.78	1667.51	833.75	2049.48	1026.26	10.06	-1.374	0.000	0.217
78.00	-17.23	-5.40	0.00	-200.92	0.00	200.92	1649.83	824.92	1996.20	999.58	10.65	-1.418	0.000	0.211
80.00	-17.00	-5.37	0.00	-190.12	0.00	190.12	1631.90	815.95	1943.29	973.09	11.25	-1.462	0.000	0.206
82.00	-16.76	-5.34	0.00	-179.38	0.00	179.38	1613.72	806.86	1890.77	946.79	11.87	-1.505	0.000	0.200
84.00	-16.54	-5.31	0.00	-168.70	0.00	168.70	1595.28	797.64	1838.65	920.69	12.51	-1.547	0.000	0.194
86.00	-16.31	-5.28	0.00	-158.08	0.00	158.08	1576.59	788.30	1786.95	894.80	13.17	-1.589	0.000	0.187
88.00	-16.08	-5.25	0.00	-147.52	0.00	147.52	1557.65	778.83	1735.69	869.13	13.84	-1.630	0.000	0.180
90.00	-15.86	-5.22	0.00	-137.03	0.00	137.03	1538.46	769.23	1684.87	843.69	14.53	-1.670	0.000	0.173

Calculated Forces

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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92.00	-15.64	-5.19	0.00	-126.59	0.00	126.59	1519.01	759.51	1634.52	818.47	15.24	-1.710	0.000	0.165
94.00	-15.43	-5.15	0.00	-116.22	0.00	116.22	1499.31	749.66	1584.64	793.50	15.97	-1.748	0.000	0.157
96.00	-15.21	-5.12	0.00	-105.91	0.00	105.91	1479.36	739.68	1535.25	768.77	16.71	-1.785	0.000	0.148
97.00	-13.06	-4.21	0.00	-100.79	0.00	100.79	1469.29	734.65	1510.75	756.50	17.08	-1.803	0.000	0.142
98.00	-12.97	-4.19	0.00	-96.58	0.00	96.58	1459.16	729.58	1486.37	744.29	17.46	-1.821	0.000	0.139
98.75	-12.91	-4.18	0.00	-93.44	0.00	93.44	1451.52	725.76	1468.18	735.18	17.75	-1.834	0.000	0.136
100.00	-12.73	-4.16	0.00	-88.21	0.00	88.21	1437.39	718.70	1436.71	719.42	18.23	-1.855	0.000	0.131
102.00	-12.45	-4.13	0.00	-79.88	0.00	79.88	990.34	495.17	991.38	496.43	19.02	-1.888	0.000	0.174
104.00	-12.31	-4.10	0.00	-71.63	0.00	71.63	978.09	489.05	960.41	480.92	19.81	-1.920	0.000	0.162
106.00	-12.16	-4.07	0.00	-63.44	0.00	63.44	965.60	482.80	929.67	465.53	20.63	-1.957	0.000	0.149
107.00	-6.75	-2.48	0.00	-59.37	0.00	59.37	959.26	479.63	914.39	457.88	21.04	-1.975	0.000	0.137
108.00	-6.69	-2.46	0.00	-56.89	0.00	56.89	952.85	476.43	899.17	450.26	21.45	-1.993	0.000	0.133
110.00	-6.56	-2.43	0.00	-51.96	0.00	51.96	939.85	469.93	868.93	435.11	22.30	-2.027	0.000	0.126
112.00	-6.44	-2.40	0.00	-47.09	0.00	47.09	926.60	463.30	838.95	420.10	23.15	-2.060	0.000	0.119
114.00	-6.32	-2.37	0.00	-42.29	0.00	42.29	913.09	456.55	809.25	405.23	24.02	-2.091	0.000	0.111
116.00	-6.20	-2.34	0.00	-37.55	0.00	37.55	899.33	449.67	779.86	390.51	24.90	-2.121	0.000	0.103
118.00	-6.08	-2.31	0.00	-32.87	0.00	32.87	885.32	442.66	750.77	375.94	25.80	-2.149	0.000	0.094
120.00	-5.96	-2.28	0.00	-28.26	0.00	28.26	871.06	435.53	722.01	361.54	26.71	-2.176	0.000	0.085
122.00	-5.85	-2.25	0.00	-23.70	0.00	23.70	856.54	428.27	693.59	347.31	27.62	-2.200	0.000	0.075
124.00	-5.73	-2.22	0.00	-19.21	0.00	19.21	841.77	420.89	665.53	333.26	28.55	-2.221	0.000	0.064
126.00	-5.62	-2.19	0.00	-14.77	0.00	14.77	826.75	413.37	637.84	319.39	29.48	-2.239	0.000	0.053
127.00	-3.22	-1.31	0.00	-12.58	0.00	12.58	819.14	409.57	624.14	312.53	29.95	-2.246	0.000	0.044
128.00	-3.17	-1.30	0.00	-11.27	0.00	11.27	811.45	405.73	610.52	305.71	30.42	-2.253	0.000	0.041
130.00	-3.07	-1.27	0.00	-8.67	0.00	8.67	791.03	395.51	580.02	290.44	31.37	-2.266	0.000	0.034
132.00	-2.97	-1.24	0.00	-6.14	0.00	6.14	770.61	385.30	550.30	275.56	32.32	-2.275	0.000	0.026
134.00	-2.87	-1.21	0.00	-3.66	0.00	3.66	750.18	375.09	521.37	261.07	33.28	-2.282	0.000	0.018
136.00	-2.77	-1.18	0.00	-1.23	0.00	1.23	729.76	364.88	493.22	246.97	34.23	-2.286	0.000	0.009
137.00	-0.07	-0.03	0.00	-0.05	0.00	0.05	719.55	359.77	479.43	240.07	34.71	-2.287	0.000	0.000
138.00	-0.04	-0.02	0.00	-0.02	0.00	0.02	709.33	354.67	465.84	233.27	35.19	-2.287	0.000	0.000
139.00	0.00	-0.02	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	35.67	-2.287	0.000	0.000

Final Analysis Summary

Structure: CT13549-S-SBA	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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 93 mph Wind	25.3	0.00	36.19	0.00	0.00	2601.52
0.9D + 1.6W 93 mph Wind	25.3	0.00	27.14	0.00	0.00	2555.04
1.2D + 1.0Di + 1.0Wi 50 mph Wind	7.7	0.00	60.95	0.00	0.00	815.70
1.2D + 1.0E	1.6	0.00	36.22	0.00	0.00	184.01
0.9D + 1.0E	1.6	0.00	27.16	0.00	0.00	180.08
1.0D + 1.0W 60 mph Wind	6.6	0.00	30.18	0.00	0.00	670.54

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 93 mph Wind	-23.22	-22.43	0.00	-1322.3	0.00	-1322.3	1850.79	925.39	2677.47	1340.72	53.25	0.999
0.9D + 1.6W 93 mph Wind	-17.13	-22.04	0.00	-1287.4	0.00	-1287.4	1850.79	925.39	2677.47	1340.72	53.25	0.970
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-44.74	-7.00	0.00	-421.59	0.00	-421.59	1850.79	925.39	2677.47	1340.72	53.25	0.339
1.2D + 1.0E	-15.08	-1.35	0.00	-40.34	0.00	-40.34	990.34	495.17	991.38	496.43	102.00	0.096
0.9D + 1.0E	-11.31	-1.30	0.00	-39.40	0.00	-39.40	990.34	495.17	991.38	496.43	102.00	0.091
1.0D + 1.0W 60 mph Wind	-20.35	-5.78	0.00	-339.66	0.00	-339.66	1850.79	925.39	2677.47	1340.72	53.25	0.264

Base Plate Summary

Structure: CT13549-S-SB	Code: TIA-222-G	5/10/2022
Site Name: Danbury 1	Exposure: C	
Height: 139.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 50.00	Bolt Circle: 53.50
Moment (kip-ft): 2074.00	Width (in): 51.50	Number Bolts: 12.00
Axial (kip): 21.70	Style: Clipped	Bolt Type: 2.25" 18J
Shear (kip): 20.70	Polygon Sides: 4.00	Bolt Diameter (in): 2.25
Analysis (1.2D + 1.6W)	Clip Length (in): 9.00	Yield (ksi): 75.00
Moment (kip-ft): 2601.52	Effective Len (in): 9.88	Ultimate (ksi): 100.00
Axial (kip): 36.19	Moment (kip-in): 625.70	Arrangement: Clustered
Shear (kip): 25.29	Allow Stress (ksi): 67.50	Cluster Dist (in): 6.00
	Applied Stress (ksi): 49.95	Start Angle (deg): 45.00
	Stress Ratio: 0.74	Compression
		Force (kip): 199.58
		Allowable (kip): 260.00
		Ratio: 0.78
		Tension
		Force (kip): 189.43
		Allowable (kip): 260.00
		Ratio: 0.74



Monopole Mat Foundation Design

Date

5/10/2022

Customer Name:	AT&T	TIA Standard:	TIA-222-G
Site Name:		Structure Height (Ft.):	139
Site Number:	CT13549-S-SBA	Engineer Name:	J. Tibbetts
Engr. Number:	128907	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations
Monopole
Analysis

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	36.2	Shear Force (Kips):	25.3
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2601.5

Allowable overstress %: 5.0%

Foundation Geometries:

Diameter of Pier (ft.):	5.5	Mods required -Yes/No ?:	No
Pier Height A. G. (ft.):	0.50	Depth of Base BG (ft.):	6.5
Length of Pad (ft.):	19	Thickness of Pad (ft.):	5.00
		Width of Pad (ft.):	19

Final Length of pad (ft)	19.0	Final width of pad (ft):	19.0
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Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	24	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30
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Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30
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Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

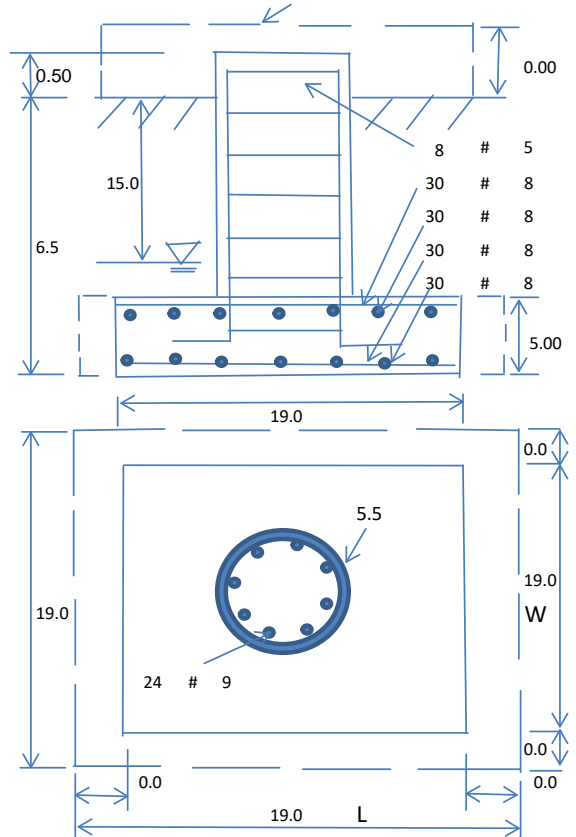
Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	50.0	Pcf	Angle from Top of Pad:	30
Water Table B.G.S. (ft):	15.0	Unit Weight of Water:	62.4	pcf	Angle from Bottm of Pad:	25
Ultimate Bearing Pressure (psf):	8600	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	Yes		Reduction factor on the maximum soil bearing pressure:	1.00
Consider soil hor. resist. for OTM.:	Yes					

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	505.86	Total Dry Soil Weight (Kips):	58.17
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	58.17	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1852.52	Total Dry Concrete Weight (Kips):	277.88
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	277.88	Total Vertical Load on Base (Kips):	372.25

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	4612	< Allowable Factored Soil Bearing (psf):	6450	0.72	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	3217.1	> Design Factored Momont (kips-ft):	2593	0.81	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.24				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		
				Load/ Capacity Ratio	
(1) Concrete Pier:					
Vertical Steel Rebar Area (sq. in./each):	1.00	Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	3146.1	> Design Factored Moment (Mu, Kips-F	2652.1	0.84	OK!
Calculated Shear Capacity (Kips):	488.2	> Design Factored Shear (Kips):	25.3	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	1296.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	6006.2	> Design Factored Axial Load (Pu Kips):	36.2	0.01	OK!
Moment & Axial Strength Combination:	0.84	OK! Check Tie Spacing (Design/Required):	1		OK!
Pier Reinforcement Ratio:	0.007	Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:					
One-Way Design Shear Capacity (L-Direction, Kips):	1222.1	> One-Way Factored Shear (L-D. Kips):	111.3	0.09	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1222.1	> One-Way Factored Shear (W-D., Kips)	111.3	0.09	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	768.9	> One-Way Factored Shear (C-C, Kips):	119.5	0.16	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0018		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	5927.9	> Moment at Bottom (L-Dir. K-Ft):	816.8	0.14	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	5927.9	> Moment at Bottom (W-Dir. K-Ft):	816.8	0.14	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	8347.7	> Moment at Bottom (C-C Dir. K-Ft):	1155.1	0.14	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK! Upper Steel Reinf. Ratio (W-Dir.):	0.0018		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	5927.9	> Moment at the top (L-Dir K-Ft):	386.3	0.07	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	5927.9	> Moment at the top (W-Dir K-Ft):	386.3	0.07	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	8347.7	> Moment at the top (C-C Dir. K-Ft):	362.9	0.04	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:					
Moment transferred by punching shear:	1040.6	k-ft. Max. factored shear stress $v_{u,CD}$:	3.3	Psi	
Max. factored shear stress $v_{u,AB}$:	5.6	Psi Factored shear Strength ϕv_n :	189.7	Psi	
Max. factored shear stress v_u :	5.6	Psi Check Usage of Punching Shear Capacity:	0.03		OK!

EXHIBIT 4

April 13, 2022



Centerline Communications
750 West Center Street, Suite #301
West Bridgewater, MA 02379

RE: Site Number: CT2312
 FA Number: 12676398
 PACE Number: MRCTB055425
 PT Number: 2051A11MLS
 Site Name: DANBURY STADLEY ROUGH ROAD
 Site Address: 52 Stadley Rough Road
 Danbury, CT 06811

To Whom It May Concern:

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

- (3) EPBQ-654L8H6-L2 Antennas (73.0"x21.0"x6.3" – Wt. = 73 lbs. /each)
- (3) 4426 B66 RRH's (14.9"x13.2"x5.8" – Wt. = 49 lbs. /each)
- (3) 4449 B5/B12 RRH's (17.9"x13.2"x9.4" – Wt. = 73 lbs. /each)
- (3) RRUS-32 B30 RRH's (27.2"x12.1"x7.0" – Wt. = 60 lbs. /each)
- (2) DC6-48-60-18 Surge Arrestors (31.4"x10.2" Ø – Wt. = 29 lbs. /each)
- **(3) AIR6419 Antennas (31.1"x16.1"x7.3" – Wt. = 66 lbs. /each)**
- **(3) AIR6449 Antennas (30.6"x15.9"x10.6" – Wt. 82 lbs. /each)**
- **(3) DMP65R-BU6DA Antennas (71.2"x20.7"x7.7" – Wt. = 80 lbs. /each)**
- **(3) 4478 B14 RRH's (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each)**
- **(3) 4415 B25 RRH's (16.5"x13.4"x5.9" – Wt. = 46 lbs. /each)**
- **(1) DC9-48-60-24-8C-EV Surge Arrestor (31.4"x10.2" Ø – Wt. = 29 lbs.)**

**Proposed equipment shown in bold*

Mount fabrication drawings prepared by SitePro1, P/N RMQLP-4120-H10, dated October 18, 2019. HDG's subconsultant, VTS, conducted a ground audit of the existing AT&T antenna mounts on November 6, 2021.

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 – R16.
- 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 120 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.0 in. An escalated ice thickness of 1.12 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 0.217 and a spectral response acceleration parameter at a period of 1 second, S_1 , of 0.067.
- The mount has been analyzed with load combinations consisting of 500 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 3.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The proposed mounts are to be secured to the existing monopole with ring mounts and threaded rods. HDG considers the threaded rods to be the governing connection member.

Based on our evaluation, we have determined that the Proposed SitePro1 P/N RMQLP-4120-H10 mounts **ARE CAPABLE** of supporting the proposed installation.

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Proposed Mount Rating	5	LC2	90%	PASS

Reference Documents:

- Fabrication drawings prepared by SitePro1, P/N RMQLP-4120-H10, dated October 18, 2019.

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



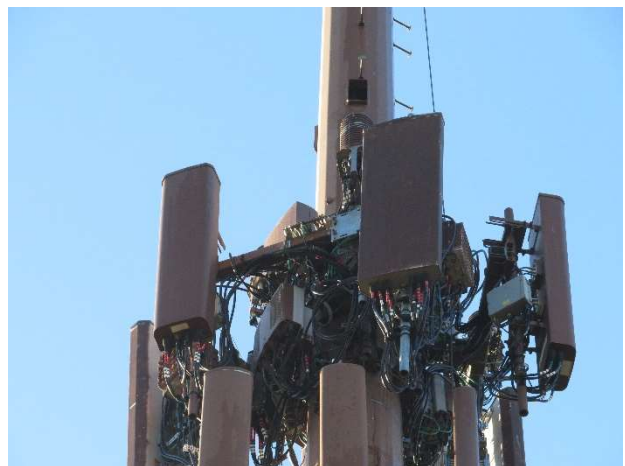
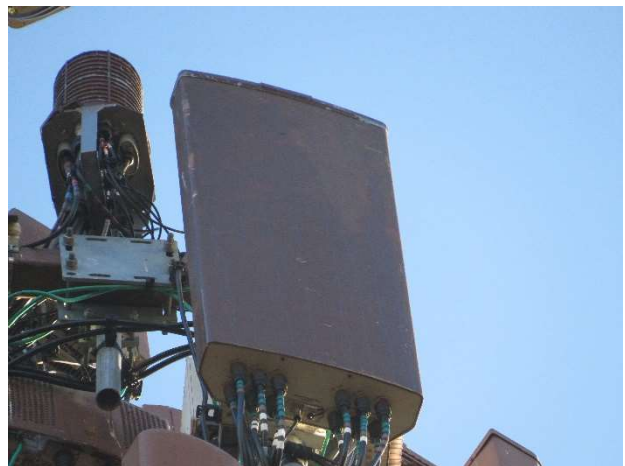
Michael Cabral
Vice President



Daniel P. Hamm, PE
Principal

FIELD PHOTOS:

Existing mounts to be removed and replaced.





HUDSON
Design Group LLC

**Wind & Ice
Calculations**

Date: 4/13/2022
 Project Name: DANBURY STADLEY ROUGH ROAD
 Project No.: CT2312
 Designed By: CL Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

$K_z = 2.01 (z/z_g)^{2/\alpha}$
 $K_z = 1.284$
 $z = 107$ (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

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

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

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

$K_h = 1$
 $K_c = 1$ (from Table 2-4)
 $K_t = 0$ (from Table 2-5)
 $f = 0$ (from Table 2-5)
 $z = 107$
 $z_s = 550$ (Mean elevation of base of structure above sea level)
 $H = 0$ (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)

2.6.10 Design Ice Thickness

Max Ice Thickness =
 Importance Factor =

$t_i = 1.00$ in
 $I = 1.0$ (from Table 2-3)
 $K_{iz} = 1.12$ (from Sec. 2.6.10)

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

$t_{iz} = 1.12$ in

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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

$h =$ 139

$G_h =$ 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

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

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

$q_z =$ 44.07
 $q_z (ice) =$ 7.65
 $q_z (30) =$ 2.75

$K_z =$ 1.284 (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)
 $V_{max} =$ 120 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

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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		$1.2 - 2.8(r_s) \geq 0.85$	$1.4 - 4.0(r_s) \geq 0.90$	$2.0 - 6.0(r_s) \geq 1.25$
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	$39 \leq C \leq 78$ (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 = **1.12 in** Angle = **0 (deg)** Equivalent Angle = **180 (deg)**

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)	Force (lbs) (30 mph)
EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.48	1.24	583	116	36
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.93	1.20	184	39	11
AIR6449 Antenna	30.6	15.9	10.6	3.38	1.92	1.20	179	38	11
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.44	1.24	560	111	35
4478 B14 RRH	18.1	8.3	13.4	1.04	2.18	1.20	55	14	3
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	4.36	1.28	29	9	2
4415 B25 RRH	16.5	5.9	13.4	0.68	2.80	1.21	36	10	2
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	5.59	1.34	20	7	1
4426 B66 RRH	14.9	13.2	5.8	1.37	1.13	1.20	72	17	5
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	2.26	1.20	36	10	2
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.90	1.20	62	15	4
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	3.81	1.26	32	9	2
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	3.89	1.26	74	18	5
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	7.77	1.43	42	13	3
DC6-48-60-18 Surge Arrestor	31.4	10.2	10.2	2.22	3.08	0.70	69	16	4
DC9-48-60-24-8C-EV Surge Arrestor	31.4	10.2	10.2	2.22	3.08	0.70	69	16	4
2-1/2" Pipe	2.9	12.0		0.24	0.24	1.20		13	
3" Pipe	3.5	12.0		0.29	0.29	1.20		15	
L 2x2 Angles	2.0	12.0		0.17	0.17	2.00		15	
L 2-1/2x2-1/2 Angles	2.5	12.0		0.21	0.21	2.00		18	
PL 6x3/8"	0.4	12.0		0.03	0.03	2.00		3	
HSS 4x4	4.0	12.0		0.33	0.33	2.00		29	

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 Designed By: CL Checked By: MSC



WIND LOADS

Angle = 30 (deg) Ice Thickness = 1.12 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)	Force (lbs)	Force (lbs)
EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	583	219	492
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	184	89	160
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	179	121	164
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	560	247	482
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	55	89	64
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	29	89	44
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	36	81	47
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	20	81	35
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	72	32	62
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	36	32	35
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	62	87	68
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	32	87	46
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	74	121	85
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	42	121	61

WIND LOADS WITH ICE:

EPBQ-654L8H6-L2 Antenna	75.2	23.2	8.5	12.15	4.47	3.24	8.80	1.23	1.46	115	50	98
AIR6419 Antenna	33.3	18.3	9.5	4.25	2.21	1.82	3.49	1.20	1.24	39	21	35
AIR6449 Antenna	32.8	18.1	12.8	4.14	2.93	1.81	2.56	1.20	1.20	38	27	35
DMP65R-BU6DA Antenna	73.4	22.9	9.9	11.71	5.07	3.20	7.38	1.23	1.41	110	55	96
4478 B14 RRH	20.3	10.5	15.6	1.49	2.21	1.93	1.30	1.20	1.20	14	20	15
4478 B14 RRH (Shielded)	20.3	6.4	15.6	0.90	2.21	3.18	1.30	1.23	1.20	9	20	11
4415 B25 RRH	18.7	8.1	15.6	1.06	2.04	2.30	1.20	1.20	1.20	10	19	12
4415 B25 RRH (Shielded)	18.7	5.2	15.6	0.68	2.04	3.61	1.20	1.25	1.20	6	19	10
4426 B66 RRH	17.1	15.4	8.0	1.84	0.96	1.11	2.13	1.20	1.20	17	9	15
4426 B66 RRH (Shielded)	17.1	8.8	8.0	1.05	0.96	1.94	2.13	1.20	1.20	10	9	9
4449 B5/B12 RRH	20.1	11.6	15.4	1.63	2.16	1.73	1.30	1.20	1.20	15	20	16
4449 B5/B12 RRH (Shielded)	20.1	6.9	15.4	0.97	2.16	2.90	1.30	1.22	1.20	9	20	12
RRUS-32 B30 RRH	29.4	9.2	14.3	1.89	2.93	3.18	2.05	1.23	1.20	18	27	20
RRUS-32 B30 RRH (Shielded)	29.4	5.7	14.3	1.18	2.93	5.12	2.05	1.32	1.20	12	27	16

WIND LOADS AT 30 MPH:

EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	36	14	31
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	11	6	10
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	11	8	10
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	35	15	30
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	3	6	4
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	2	6	3
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	2	5	3
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	1	5	2
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	5	2	4
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	2	2	2
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	4	5	4
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	2	5	3
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	5	8	5
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	3	8	4

Date: 4/13/2022
 Project Name: DANBURY STADLEY ROUGH ROAD
 Project No.: CT2312
 Designed By: CL Checked By: MSC



WIND LOADS

Angle = 60 (deg)

Ice Thickness = 1.12 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)	Force (lbs)	Force (lbs)
EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	583	219	310
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	184	89	113
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	179	121	135
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	560	247	326
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	55	89	81
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	29	89	74
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	36	81	70
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	20	81	66
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	72	32	42
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	36	32	33
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	62	87	81
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	32	87	73
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	74	121	109
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	42	121	101

WIND LOADS WITH ICE:

EPBQ-654L8H6-L2 Antenna	75.2	23.2	8.5	12.15	4.47	3.24	8.80	1.23	1.46	115	50	66
AIR6419 Antenna	33.3	18.3	9.5	4.25	2.21	1.82	3.49	1.20	1.24	39	21	26
AIR6449 Antenna	32.8	18.1	12.8	4.14	2.93	1.81	2.56	1.20	1.20	38	27	30
DMP65R-BU6DA Antenna	73.4	22.9	9.9	11.71	5.07	3.20	7.38	1.23	1.41	110	55	69
4478 B14 RRH	20.3	10.5	15.6	1.49	2.21	1.93	1.30	1.20	1.20	14	20	19
4478 B14 RRH (Shielded)	20.3	6.4	15.6	0.90	2.21	3.18	1.30	1.23	1.20	9	20	17
4415 B25 RRH	18.7	8.1	15.6	1.06	2.04	2.30	1.20	1.20	1.20	10	19	16
4415 B25 RRH (Shielded)	18.7	5.2	15.6	0.68	2.04	3.61	1.20	1.25	1.20	6	19	16
4426 B66 RRH	17.1	15.4	8.0	1.84	0.96	1.11	2.13	1.20	1.20	17	9	11
4426 B66 RRH (Shielded)	17.1	8.8	8.0	1.05	0.96	1.94	2.13	1.20	1.20	10	9	9
4449 B5/B12 RRH	20.1	11.6	15.4	1.63	2.16	1.73	1.30	1.20	1.20	15	20	19
4449 B5/B12 RRH (Shielded)	20.1	6.9	15.4	0.97	2.16	2.90	1.30	1.22	1.20	9	20	17
RRUS-32 B30 RRH	29.4	9.2	14.3	1.89	2.93	3.18	2.05	1.23	1.20	18	27	25
RRUS-32 B30 RRH (Shielded)	29.4	5.7	14.3	1.18	2.93	5.12	2.05	1.32	1.20	12	27	23

WIND LOADS AT 30 MPH:

EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	36	14	19
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	11	6	7
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	11	8	8
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	35	15	20
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	3	6	5
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	2	6	5
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	2	5	4
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	1	5	4
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	5	2	3
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	2	2	2
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	4	5	5
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	2	5	5
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	5	8	7
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	3	8	6

Date: 4/13/2022
 Project Name: DANBURY STADLEY ROUGH ROAD
 Project No.: CT2312
 Designed By: CL Checked By: MSC



WIND LOADS

Angle = **90** (deg) Ice Thickness = **1.12** 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)	Force (lbs)	Force (lbs)
EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	583	219	219
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	184	89	89
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	179	121	121
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	560	247	247
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	55	89	89
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	29	89	89
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	36	81	81
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	20	81	81
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	72	32	32
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	36	32	32
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	62	87	87
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	32	87	87
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	74	121	121
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	42	121	121

WIND LOADS WITH ICE:

EPBQ-654L8H6-L2 Antenna	75.2	23.2	8.5	12.15	4.47	3.24	8.80	1.23	1.46	115	50	50
AIR6419 Antenna	33.3	18.3	9.5	4.25	2.21	1.82	3.49	1.20	1.24	39	21	21
AIR6449 Antenna	32.8	18.1	12.8	4.14	2.93	1.81	2.56	1.20	1.20	38	27	27
DMP65R-BU6DA Antenna	73.4	22.9	9.9	11.71	5.07	3.20	7.38	1.23	1.41	110	55	55
4478 B14 RRH	20.3	10.5	15.6	1.49	2.21	1.93	1.30	1.20	1.20	14	20	20
4478 B14 RRH (Shielded)	20.3	6.4	15.6	0.90	2.21	3.18	1.30	1.23	1.20	9	20	20
4415 B25 RRH	18.7	8.1	15.6	1.06	2.04	2.30	1.20	1.20	1.20	10	19	19
4415 B25 RRH (Shielded)	18.7	5.2	15.6	0.68	2.04	3.61	1.20	1.25	1.20	6	19	19
4426 B66 RRH	17.1	15.4	8.0	1.84	0.96	1.11	2.13	1.20	1.20	17	9	9
4426 B66 RRH (Shielded)	17.1	8.8	8.0	1.05	0.96	1.94	2.13	1.20	1.20	10	9	9
4449 B5/B12 RRH	20.1	11.6	15.4	1.63	2.16	1.73	1.30	1.20	1.20	15	20	20
4449 B5/B12 RRH (Shielded)	20.1	6.9	15.4	0.97	2.16	2.90	1.30	1.22	1.20	9	20	20
RRUS-32 B30 RRH	29.4	9.2	14.3	1.89	2.93	3.18	2.05	1.23	1.20	18	27	27
RRUS-32 B30 RRH (Shielded)	29.4	5.7	14.3	1.18	2.93	5.12	2.05	1.32	1.20	12	27	27

WIND LOADS AT 30 MPH:

EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	36	14	14
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	11	6	6
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	11	8	8
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	35	15	15
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	3	6	6
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	2	6	6
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	2	5	5
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	1	5	5
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	5	2	2
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	2	2	2
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	4	5	5
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	2	5	5
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	5	8	8
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	3	8	8

Date: 4/13/2022
 Project Name: DANBURY STADLEY ROUGH ROAD
 Project No.: CT2312
 Designed By: CL Checked By: MSC



WIND LOADS

Angle = 120 (deg)

Ice Thickness = 1.12 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)	Force (lbs)	Force (lbs)
EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	583	219	310
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	184	89	113
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	179	121	135
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	560	247	326
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	55	89	81
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	29	89	74
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	36	81	70
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	20	81	66
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	72	32	42
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	36	32	33
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	62	87	81
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	32	87	73
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	74	121	109
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	42	121	101

WIND LOADS WITH ICE:

EPBQ-654L8H6-L2 Antenna	75.2	23.2	8.5	12.15	4.47	3.24	8.80	1.23	1.46	115	50	66
AIR6419 Antenna	33.3	18.3	9.5	4.25	2.21	1.82	3.49	1.20	1.24	39	21	26
AIR6449 Antenna	32.8	18.1	12.8	4.14	2.93	1.81	2.56	1.20	1.20	38	27	30
DMP65R-BU6DA Antenna	73.4	22.9	9.9	11.71	5.07	3.20	7.38	1.23	1.41	110	55	69
4478 B14 RRH	20.3	10.5	15.6	1.49	2.21	1.93	1.30	1.20	1.20	14	20	19
4478 B14 RRH (Shielded)	20.3	6.4	15.6	0.90	2.21	3.18	1.30	1.23	1.20	9	20	17
4415 B25 RRH	18.7	8.1	15.6	1.06	2.04	2.30	1.20	1.20	1.20	10	19	16
4415 B25 RRH (Shielded)	18.7	5.2	15.6	0.68	2.04	3.61	1.20	1.25	1.20	6	19	16
4426 B66 RRH	17.1	15.4	8.0	1.84	0.96	1.11	2.13	1.20	1.20	17	9	11
4426 B66 RRH (Shielded)	17.1	8.8	8.0	1.05	0.96	1.94	2.13	1.20	1.20	10	9	9
4449 B5/B12 RRH	20.1	11.6	15.4	1.63	2.16	1.73	1.30	1.20	1.20	15	20	19
4449 B5/B12 RRH (Shielded)	20.1	6.9	15.4	0.97	2.16	2.90	1.30	1.22	1.20	9	20	17
RRUS-32 B30 RRH	29.4	9.2	14.3	1.89	2.93	3.18	2.05	1.23	1.20	18	27	25
RRUS-32 B30 RRH (Shielded)	29.4	5.7	14.3	1.18	2.93	5.12	2.05	1.32	1.20	12	27	23

WIND LOADS AT 30 MPH:

EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	36	14	19
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	11	6	7
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	11	8	8
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	35	15	20
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	3	6	5
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	2	6	5
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	2	5	4
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	1	5	4
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	5	2	3
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	2	2	2
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	4	5	5
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	2	5	5
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	5	8	7
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	3	8	6

Date: 4/13/2022
 Project Name: DANBURY STADLEY ROUGH ROAD
 Project No.: CT2312
 Designed By: CL Checked By: MSC



WIND LOADS

Angle = 150 (deg)

Ice Thickness = 1.12 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)	Force (lbs)	Force (lbs)
EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	583	219	492
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	184	89	160
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	179	121	164
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	560	247	482
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	55	89	64
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	29	89	44
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	36	81	47
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	20	81	35
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	72	32	62
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	36	32	35
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	62	87	68
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	32	87	46
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	74	121	85
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	42	121	61

WIND LOADS WITH ICE:

EPBQ-654L8H6-L2 Antenna	75.2	23.2	8.5	12.15	4.47	3.24	8.80	1.23	1.46	115	50	98
AIR6419 Antenna	33.3	18.3	9.5	4.25	2.21	1.82	3.49	1.20	1.24	39	21	35
AIR6449 Antenna	32.8	18.1	12.8	4.14	2.93	1.81	2.56	1.20	1.20	38	27	35
DMP65R-BU6DA Antenna	73.4	22.9	9.9	11.71	5.07	3.20	7.38	1.23	1.41	110	55	96
4478 B14 RRH	20.3	10.5	15.6	1.49	2.21	1.93	1.30	1.20	1.20	14	20	15
4478 B14 RRH (Shielded)	20.3	6.4	15.6	0.90	2.21	3.18	1.30	1.23	1.20	9	20	11
4415 B25 RRH	18.7	8.1	15.6	1.06	2.04	2.30	1.20	1.20	1.20	10	19	12
4415 B25 RRH (Shielded)	18.7	5.2	15.6	0.68	2.04	3.61	1.20	1.25	1.20	6	19	10
4426 B66 RRH	17.1	15.4	8.0	1.84	0.96	1.11	2.13	1.20	1.20	17	9	15
4426 B66 RRH (Shielded)	17.1	8.8	8.0	1.05	0.96	1.94	2.13	1.20	1.20	10	9	9
4449 B5/B12 RRH	20.1	11.6	15.4	1.63	2.16	1.73	1.30	1.20	1.20	15	20	16
4449 B5/B12 RRH (Shielded)	20.1	6.9	15.4	0.97	2.16	2.90	1.30	1.22	1.20	9	20	12
RRUS-32 B30 RRH	29.4	9.2	14.3	1.89	2.93	3.18	2.05	1.23	1.20	18	27	20
RRUS-32 B30 RRH (Shielded)	29.4	5.7	14.3	1.18	2.93	5.12	2.05	1.32	1.20	12	27	16

WIND LOADS AT 30 MPH:

EPBQ-654L8H6-L2 Antenna	73.0	21.0	6.3	10.65	3.19	3.48	11.59	1.24	1.55	36	14	31
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	11	6	10
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	11	8	10
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	35	15	30
4478 B14 RRH	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	3	6	4
4478 B14 RRH (Shielded)	18.1	4.2	13.4	0.52	1.68	4.36	1.35	1.28	1.20	2	6	3
4415 B25 RRH	16.5	5.9	13.4	0.68	1.54	2.80	1.23	1.21	1.20	2	5	3
4415 B25 RRH (Shielded)	16.5	3.0	13.4	0.34	1.54	5.59	1.23	1.34	1.20	1	5	2
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	5	2	4
4426 B66 RRH (Shielded)	14.9	6.6	5.8	0.68	0.60	2.26	2.57	1.20	1.20	2	2	2
4449 B5/B12 RRH	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	4	5	4
4449 B5/B12 RRH (Shielded)	17.9	4.7	13.2	0.58	1.64	3.81	1.36	1.26	1.20	2	5	3
RRUS-32 B30 RRH	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	5	8	5
RRUS-32 B30 RRH (Shielded)	27.2	3.5	12.1	0.66	2.29	7.77	2.25	1.43	1.20	3	8	4

Date: 4/13/2022
 Project Name: DANBURY STADLEY ROUGH ROAD
 Project No.: CT2312
 Designed By: CL Checked By: MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 1.12 in.
 Density of ice: 56 pcf

EPBQ-654L8H6-L2 Antenna

Weight of ice based on total radial SF area:
 Height (in): 73.0
 Width (in): 21.0
 Depth (in): 6.3
 Total weight of ice on object: 192 lbs
 Weight of object: 73.0 lbs
Combined weight of ice and object: 265 lbs

AIR6419 Antenna

Weight of ice based on total radial SF area:
 Height (in): 31.1
 Width (in): 16.1
 Depth (in): 7.3
 Total weight of ice on object: 67 lbs
 Weight of object: 66.0 lbs
Combined weight of ice and object: 133 lbs

AIR6449 Antenna

Weight of ice based on total radial SF area:
 Height (in): 30.6
 Width (in): 15.9
 Depth (in): 10.6
 Total weight of ice on object: 71 lbs
 Weight of object: 82.0 lbs
Combined weight of ice and object: 153 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: 188 lbs
 Weight of object: 80.0 lbs
Combined weight of ice and object: 268 lbs

4478 B14 RRH

Weight of ice based on total radial SF area:
 Height (in): 18.1
 Width (in): 13.4
 Depth (in): 8.3
 Total weight of ice on object: 35 lbs
 Weight of object: 60.0 lbs
Combined weight of ice and object: 95 lbs

4415 B25 RRH

Weight of ice based on total radial SF area:
 Height (in): 16.5
 Width (in): 13.4
 Depth (in): 5.9
 Total weight of ice on object: 30 lbs
 Weight of object: 46.0 lbs
Combined weight of ice and object: 76 lbs

4426 B66 RRH

Weight of ice based on total radial SF area:
 Height (in): 14.9
 Width (in): 13.2
 Depth (in): 5.8
 Total weight of ice on object: 26 lbs
 Weight of object: 49.0 lbs
Combined weight of ice and object: 75 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:
 Height (in): 17.9
 Width (in): 13.2
 Depth (in): 9.4
 Total weight of ice on object: 35 lbs
 Weight of object: 73.0 lbs
Combined weight of ice and object: 108 lbs

RRUS-32 B30 RRH

Weight of ice based on total radial SF area:
 Height (in): 27.2
 Width (in): 12.1
 Depth (in): 7.0
 Total weight of ice on object: 47 lbs
 Weight of object: 60.0 lbs
Combined weight of ice and object: 107 lbs

DC6-48-60-18 Surge Arrestor

Weight of ice based on total radial SF area:
 Depth (in): 31.4
 Diameter(in): 10.2
 Total weight of ice on object: 41 lbs
 Weight of object: 29 lbs
Combined weight of ice and object: 70 lbs

DC9-48-60-24-8C-EV Surge Arrestor

Weight of ice based on total radial SF area:
 Depth (in): 31.4
 Diameter(in): 10.2
 Total weight of ice on object: 41 lbs
 Weight of object: 29 lbs
Combined weight of ice and object: 70 lbs

2-1/2" Pipe

Per foot weight of ice:
 diameter (in): 2.88
Per foot weight of ice on object: 5 plf

3" Pipe

Per foot weight of ice:
 diameter (in): 3.5
Per foot weight of ice on object: 6 plf

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: 5 plf

L 2-1/2x2-1/2 Angles

Weight of ice based on total radial SF area:
 Height (in): 2.5
 Width (in): 2.5
Per foot weight of ice on object: 6 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: 10 plf

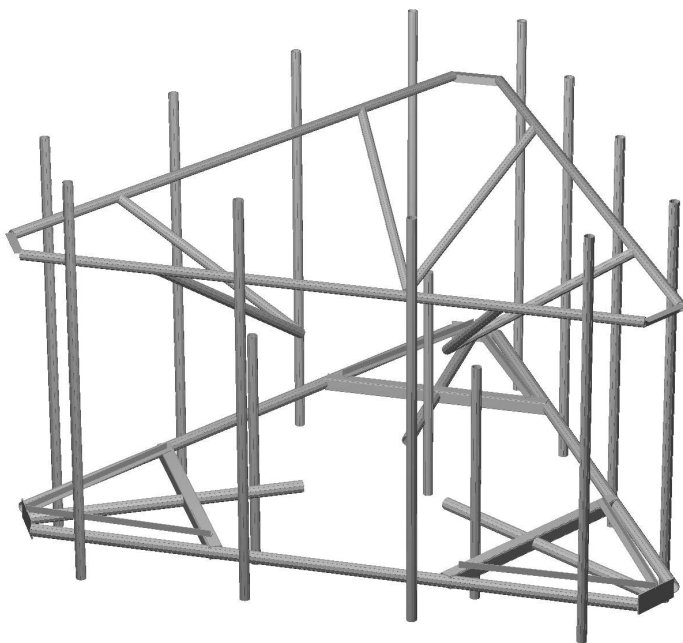
HSS 4x4

Weight of ice based on total radial SF area:
 Height (in): 4
 Width (in): 4
Per foot weight of ice on object: 9 plf



HUDSON
Design Group LLC

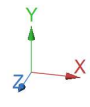
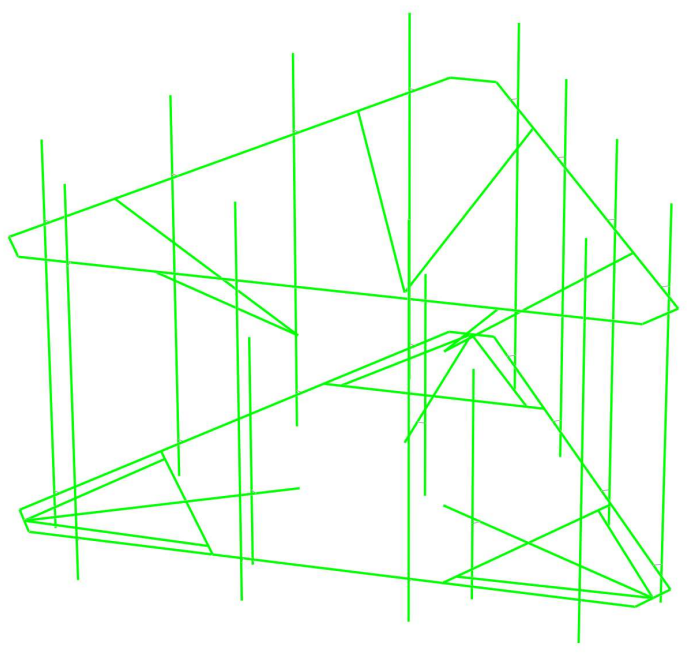
**Mount Calculations
(Proposed Conditions)**

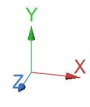
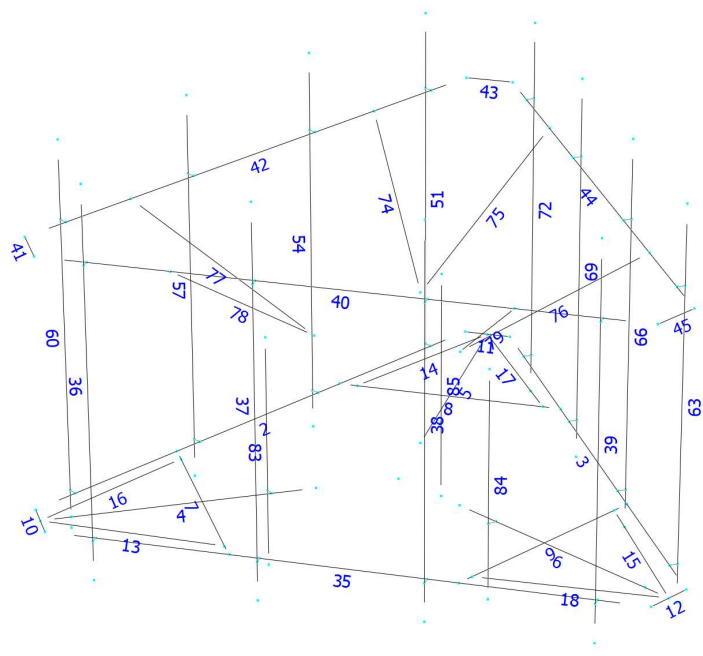




Design status

- Not designed
- Error on design
- Design O.K.
- With warnings





Load data

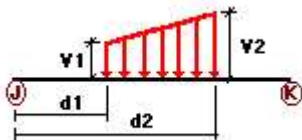
GLOSSARY

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	500 lb Live Load on Antenna 1	No	LL
LLa2	500 lb Live Load on Antenna 2	No	LL
LLa3	500 lb Live Load on Antenna 3	No	LL
LLa4	500 lb Live Load on Antenna 4	No	LL

Distributed force on members

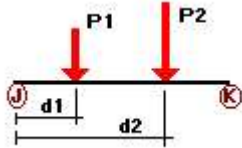


Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%	
DL	4	y	-0.01	-0.01	0.00	No	3.90	No	
	5	y	-0.01	-0.01	0.00	No	3.90	No	
	6	y	-0.01	-0.01	0.00	No	3.90	No	
	7	y	-0.01	0.00	0.00	No	0.00	No	
	8	y	-0.01	0.00	0.00	No	0.00	No	
	9	y	-0.01	0.00	0.00	No	0.00	No	
	13	y	-0.01	0.00	0.00	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	-0.015	-0.015	0.00	No	100.00	Yes
		3	z	-0.015	-0.015	0.00	No	100.00	Yes
		4	z	-0.015	-0.015	0.00	No	100.00	Yes
		5	z	-0.015	-0.015	0.00	No	100.00	Yes

6	z	-0.015	-0.015	0.00	No	100.00	Yes	
7	z	-0.029	-0.029	0.00	No	100.00	Yes	
8	z	-0.029	-0.029	0.00	No	100.00	Yes	
9	z	-0.029	-0.029	0.00	No	100.00	Yes	
10	z	-0.003	-0.003	0.00	No	100.00	Yes	
11	z	-0.003	-0.003	0.00	No	100.00	Yes	
12	z	-0.003	-0.003	0.00	No	100.00	Yes	
13	z	-0.015	-0.015	0.00	No	100.00	Yes	
14	z	-0.015	-0.015	0.00	No	100.00	Yes	
15	z	-0.015	-0.015	0.00	No	100.00	Yes	
16	z	-0.015	-0.015	0.00	No	100.00	Yes	
17	z	-0.015	-0.015	0.00	No	100.00	Yes	
18	z	-0.015	-0.015	0.00	No	100.00	Yes	
35	z	-0.015	-0.015	0.00	No	100.00	Yes	
39	z	-0.013	-0.013	0.00	No	100.00	Yes	
40	z	-0.013	-0.013	0.00	No	100.00	Yes	
41	z	-0.018	-0.018	0.00	No	100.00	Yes	
42	z	-0.013	-0.013	0.00	No	100.00	Yes	
43	z	-0.018	-0.018	0.00	No	100.00	Yes	
44	z	-0.013	-0.013	0.00	No	100.00	Yes	
45	z	-0.018	-0.018	0.00	No	100.00	Yes	
51	z	-0.013	-0.013	0.00	No	100.00	Yes	
54	z	-0.013	-0.013	0.00	No	100.00	Yes	
57	z	-0.013	-0.013	0.00	No	100.00	Yes	
60	z	-0.013	-0.013	0.00	No	100.00	Yes	
63	z	-0.013	-0.013	0.00	No	100.00	Yes	
66	z	-0.013	-0.013	0.00	No	100.00	Yes	
69	z	-0.013	-0.013	0.00	No	100.00	Yes	
72	z	-0.013	-0.013	0.00	No	100.00	Yes	
74	z	-0.013	-0.013	0.00	No	100.00	Yes	
75	z	-0.013	-0.013	0.00	No	100.00	Yes	
76	z	-0.013	-0.013	0.00	No	100.00	Yes	
77	z	-0.013	-0.013	0.00	No	100.00	Yes	
78	z	-0.013	-0.013	0.00	No	100.00	Yes	
79	z	-0.013	-0.013	0.00	No	100.00	Yes	
83	z	-0.013	-0.013	0.00	No	100.00	Yes	
84	z	-0.013	-0.013	0.00	No	100.00	Yes	
85	z	-0.013	-0.013	0.00	No	100.00	Yes	
W30	2	x	-0.015	-0.015	0.00	No	100.00	Yes
	3	x	-0.015	-0.015	0.00	No	100.00	Yes
	4	x	-0.015	-0.015	0.00	No	100.00	Yes
	5	x	-0.015	-0.015	0.00	No	100.00	Yes
	6	x	-0.015	-0.015	0.00	No	100.00	Yes
	7	x	-0.029	-0.029	0.00	No	100.00	Yes
	9	x	-0.029	-0.029	0.00	No	100.00	Yes
	10	x	-0.003	-0.003	0.00	No	100.00	Yes
	12	x	-0.003	-0.003	0.00	No	100.00	Yes
	14	x	-0.015	-0.015	0.00	No	100.00	Yes
	15	x	-0.015	-0.015	0.00	No	100.00	Yes
	16	x	-0.015	-0.015	0.00	No	100.00	Yes
	17	x	-0.015	-0.015	0.00	No	100.00	Yes
	36	x	-0.013	-0.013	0.00	No	100.00	Yes
	37	x	-0.013	-0.013	0.00	No	100.00	Yes
	38	x	-0.013	-0.013	0.00	No	100.00	Yes
	39	x	-0.013	-0.013	0.00	No	100.00	Yes
	41	x	-0.018	-0.018	0.00	No	100.00	Yes
	42	x	-0.013	-0.013	0.00	No	100.00	Yes
	44	x	-0.013	-0.013	0.00	No	100.00	Yes
	45	x	-0.018	-0.018	0.00	No	100.00	Yes
	51	x	-0.013	-0.013	0.00	No	100.00	Yes

	54	x	-0.013	-0.013	0.00	No	100.00	Yes
	57	x	-0.013	-0.013	0.00	No	100.00	Yes
	60	x	-0.013	-0.013	0.00	No	100.00	Yes
	72	x	-0.013	-0.013	0.00	No	100.00	Yes
	74	x	-0.013	-0.013	0.00	No	100.00	Yes
	75	x	-0.013	-0.013	0.00	No	100.00	Yes
	76	x	-0.013	-0.013	0.00	No	100.00	Yes
	77	x	-0.013	-0.013	0.00	No	100.00	Yes
	78	x	-0.013	-0.013	0.00	No	100.00	Yes
	79	x	-0.013	-0.013	0.00	No	100.00	Yes
	83	x	-0.013	-0.013	0.00	No	100.00	Yes
	84	x	-0.013	-0.013	0.00	No	100.00	Yes
	85	x	-0.013	-0.013	0.00	No	100.00	Yes
Di	2	y	-0.006	-0.006	0.00	No	100.00	Yes
	3	y	-0.006	-0.006	0.00	No	100.00	Yes
	4	y	-0.006	-0.006	0.00	No	100.00	Yes
	5	y	-0.006	-0.006	0.00	No	100.00	Yes
	6	y	-0.006	-0.006	0.00	No	100.00	Yes
	7	y	-0.009	-0.009	0.00	No	100.00	Yes
	8	y	-0.009	-0.009	0.00	No	100.00	Yes
	9	y	-0.009	-0.009	0.00	No	100.00	Yes
	10	y	-0.01	-0.01	0.00	No	100.00	Yes
	11	y	-0.01	-0.01	0.00	No	100.00	Yes
	12	y	-0.01	-0.01	0.00	No	100.00	Yes
	13	y	-0.005	-0.005	0.00	No	100.00	Yes
	14	y	-0.005	-0.005	0.00	No	100.00	Yes
	15	y	-0.005	-0.005	0.00	No	100.00	Yes
	16	y	-0.005	-0.005	0.00	No	100.00	Yes
	17	y	-0.005	-0.005	0.00	No	100.00	Yes
	18	y	-0.005	-0.005	0.00	No	100.00	Yes
	35	y	-0.006	-0.006	0.00	No	100.00	Yes
	36	y	-0.005	-0.005	0.00	No	100.00	Yes
	37	y	-0.005	-0.005	0.00	No	100.00	Yes
	38	y	-0.005	-0.005	0.00	No	100.00	Yes
	39	y	-0.005	-0.005	0.00	No	100.00	Yes
	40	y	-0.005	-0.005	0.00	No	100.00	Yes
	41	y	-0.006	-0.006	0.00	No	100.00	Yes
	42	y	-0.005	-0.005	0.00	No	100.00	Yes
	43	y	-0.006	-0.006	0.00	No	100.00	Yes
	44	y	-0.005	-0.005	0.00	No	100.00	Yes
	45	y	-0.006	-0.006	0.00	No	100.00	Yes
	51	y	-0.005	-0.005	0.00	No	100.00	Yes
	54	y	-0.005	-0.005	0.00	No	100.00	Yes
	57	y	-0.005	-0.005	0.00	No	100.00	Yes
	60	y	-0.005	-0.005	0.00	No	100.00	Yes
	63	y	-0.005	-0.005	0.00	No	100.00	Yes
	66	y	-0.005	-0.005	0.00	No	100.00	Yes
	69	y	-0.005	-0.005	0.00	No	100.00	Yes
	72	y	-0.005	-0.005	0.00	No	100.00	Yes
	74	y	-0.005	-0.005	0.00	No	100.00	Yes
	75	y	-0.005	-0.005	0.00	No	100.00	Yes
	76	y	-0.005	-0.005	0.00	No	100.00	Yes
	77	y	-0.005	-0.005	0.00	No	100.00	Yes
	78	y	-0.005	-0.005	0.00	No	100.00	Yes
	79	y	-0.005	-0.005	0.00	No	100.00	Yes
	83	y	-0.005	-0.005	0.00	No	100.00	Yes
	84	y	-0.005	-0.005	0.00	No	100.00	Yes
	85	y	-0.005	-0.005	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	36	y	-0.04	2.50	No
		y	-0.04	7.50	No
		y	-0.06	5.00	No
		y	-0.073	5.00	No
	37	y	-0.033	2.00	No
		y	-0.033	4.50	No
		y	-0.041	5.50	No
		y	-0.041	8.00	No
	38	y	-0.037	2.50	No
		y	-0.037	7.50	No
		y	-0.049	4.00	No
		y	-0.046	6.00	No
	51	y	-0.06	6.00	No
		y	-0.04	2.50	No
		y	-0.04	7.50	No
		y	-0.06	5.00	No
	54	y	-0.073	5.00	No
		y	-0.033	2.00	No
		y	-0.033	4.50	No
		y	-0.041	5.50	No
	57	y	-0.041	8.00	No
		y	-0.037	2.50	No
		y	-0.037	7.50	No
		y	-0.049	4.00	No
63	y	-0.046	6.00	No	
	y	-0.06	6.00	No	
	y	-0.04	2.50	No	
	y	-0.04	7.50	No	
66	y	-0.06	5.00	No	
	y	-0.073	5.00	No	
	y	-0.033	2.00	No	
	y	-0.033	4.50	No	
69	y	-0.041	5.50	No	
	y	-0.041	8.00	No	
	y	-0.037	2.50	No	
	y	-0.037	7.50	No	
83	y	-0.049	4.00	No	
	y	-0.046	6.00	No	
	y	-0.06	6.00	No	
	y	-0.029	2.50	No	
84	y	-0.029	2.50	No	
	y	-0.029	2.50	No	
	W0 36	z	-0.28	2.50	No
		z	-0.28	7.50	No
z		-0.042	5.00	No	
z		-0.032	5.00	No	
37	z	-0.092	2.00	No	
	z	-0.092	4.50	No	
	z	-0.09	5.50	No	
	z	-0.09	8.00	No	
38	z	-0.292	2.50	No	
	z	-0.292	7.50	No	
	z	-0.036	4.00	No	

		z	-0.02	6.00	No
		z	-0.029	6.00	No
51		z	-0.163	2.50	No
		z	-0.163	7.50	No
		z	-0.109	5.00	No
54		z	-0.057	2.00	No
		z	-0.057	4.50	No
		z	-0.068	5.50	No
		z	-0.068	8.00	No
57		z	-0.155	2.50	No
		z	-0.155	7.50	No
		z	-0.042	4.00	No
		z	-0.081	6.00	No
63		z	-0.163	2.50	No
		z	-0.163	7.50	No
		z	-0.109	5.00	No
66		z	-0.057	2.00	No
		z	-0.057	4.50	No
		z	-0.068	5.50	No
		z	-0.068	8.00	No
69		z	-0.155	2.50	No
		z	-0.155	7.50	No
		z	-0.042	4.00	No
		z	-0.081	6.00	No
83		z	-0.069	2.50	No
84		z	-0.069	2.50	No
85		z	-0.069	2.50	No
W30	36	x	-0.124	2.50	No
		x	-0.124	7.50	No
		x	-0.121	5.00	No
37		x	-0.045	2.00	No
		x	-0.045	4.50	No
		x	-0.061	5.50	No
		x	-0.061	8.00	No
38		x	-0.11	2.50	No
		x	-0.11	7.50	No
		x	-0.032	4.00	No
		x	-0.089	6.00	No
51		x	-0.241	2.50	No
		x	-0.241	7.50	No
		x	-0.085	5.00	No
		x	-0.068	5.00	No
54		x	-0.08	2.00	No
		x	-0.08	4.50	No
		x	-0.082	5.50	No
		x	-0.082	8.00	No
57		x	-0.246	2.50	No
		x	-0.246	7.50	No
		x	-0.062	4.00	No
		x	-0.047	6.00	No
		x	-0.064	6.00	No
63		x	-0.241	2.50	No
		x	-0.241	7.50	No
		x	-0.085	5.00	No
		x	-0.068	5.00	No
66		x	-0.08	2.00	No
		x	-0.08	4.50	No
		x	-0.082	5.50	No
		x	-0.082	8.00	No
69		x	-0.246	2.50	No

		x	-0.246	7.50	No
		x	-0.062	4.00	No
		x	-0.047	6.00	No
		x	-0.064	6.00	No
	83	x	-0.069	2.50	No
	84	x	-0.069	2.50	No
	85	x	-0.069	2.50	No
Di	36	y	-0.094	2.50	No
		y	-0.094	7.50	No
		y	-0.047	5.00	No
		y	-0.035	5.00	No
	37	y	-0.034	2.00	No
		y	-0.034	4.50	No
		y	-0.036	5.50	No
		y	-0.036	8.00	No
	38	y	-0.037	2.50	No
		y	-0.037	7.50	No
		y	-0.026	4.00	No
		y	-0.03	6.00	No
		y	-0.035	6.00	No
	51	y	-0.094	2.50	No
		y	-0.094	7.50	No
		y	-0.047	5.00	No
		y	-0.035	5.00	No
	54	y	-0.034	2.00	No
		y	-0.034	4.50	No
		y	-0.036	5.50	No
		y	-0.036	8.00	No
	57	y	-0.037	2.50	No
		y	-0.037	7.50	No
		y	-0.026	4.00	No
		y	-0.03	6.00	No
		y	-0.035	6.00	No
	63	y	-0.094	2.50	No
		y	-0.094	7.50	No
		y	-0.047	5.00	No
		y	-0.035	5.00	No
	66	y	-0.034	2.00	No
		y	-0.034	4.50	No
		y	-0.036	5.50	No
		y	-0.036	8.00	No
	69	y	-0.037	2.50	No
		y	-0.037	7.50	No
		y	-0.026	4.00	No
		y	-0.03	6.00	No
		y	-0.035	6.00	No
	83	y	-0.041	2.50	No
	84	y	-0.041	2.50	No
	85	y	-0.041	2.50	No
Wi0	36	z	-0.056	2.50	No
		z	-0.056	7.50	No
		z	-0.013	5.00	No
		z	-0.009	5.00	No
	37	z	-0.02	2.00	No
		z	-0.02	4.50	No
		z	-0.019	5.50	No
		z	-0.019	8.00	No
	38	z	-0.058	2.50	No
		z	-0.058	7.50	No
		z	-0.01	4.00	No

		z	-0.007	6.00	No
		z	-0.009	6.00	No
51		z	-0.035	2.50	No
		z	-0.035	7.50	No
		z	-0.025	5.00	No
54		z	-0.013	2.00	No
		z	-0.013	4.50	No
		z	-0.015	5.50	No
		z	-0.015	8.00	No
57		z	-0.033	2.50	No
		z	-0.033	7.50	No
		z	-0.011	4.00	No
		z	-0.019	6.00	No
63		z	-0.035	2.50	No
		z	-0.035	7.50	No
		z	-0.025	5.00	No
66		z	-0.013	2.00	No
		z	-0.013	4.50	No
		z	-0.015	5.50	No
		z	-0.015	8.00	No
69		z	-0.033	2.50	No
		z	-0.033	7.50	No
		z	-0.011	4.00	No
		z	-0.019	6.00	No
83		z	-0.016	2.50	No
84		z	-0.016	2.50	No
85		z	-0.016	2.50	No
Wi30	36	x	-0.028	2.50	No
		x	-0.028	7.50	No
		x	-0.027	5.00	No
37		x	-0.011	2.00	No
		x	-0.011	4.50	No
		x	-0.014	5.50	No
		x	-0.014	8.00	No
38		x	-0.025	2.50	No
		x	-0.025	7.50	No
		x	-0.009	4.00	No
		x	-0.02	6.00	No
51		x	-0.048	2.50	No
		x	-0.048	7.50	No
		x	-0.02	5.00	No
		x	-0.016	5.00	No
54		x	-0.018	2.00	No
		x	-0.018	4.50	No
		x	-0.018	5.50	No
		x	-0.018	8.00	No
57		x	-0.049	2.50	No
		x	-0.049	7.50	No
		x	-0.015	4.00	No
		x	-0.012	6.00	No
		x	-0.015	6.00	No
63		x	-0.048	2.50	No
		x	-0.048	7.50	No
		x	-0.02	5.00	No
		x	-0.016	5.00	No
66		x	-0.018	2.00	No
		x	-0.018	4.50	No
		x	-0.018	5.50	No
		x	-0.018	8.00	No
69		x	-0.049	2.50	No

		x	-0.049	7.50	No
		x	-0.015	4.00	No
		x	-0.012	6.00	No
		x	-0.015	6.00	No
83		x	-0.016	2.50	No
84		x	-0.016	2.50	No
85		x	-0.016	2.50	No
WLO	36	z	-0.018	2.50	No
		z	-0.018	7.50	No
		z	-0.003	5.00	No
		z	-0.002	5.00	No
37		z	-0.006	2.00	No
		z	-0.006	4.50	No
		z	-0.006	5.50	No
		z	-0.006	8.00	No
38		z	-0.018	2.50	No
		z	-0.018	7.50	No
		z	-0.002	4.00	No
		z	-0.001	6.00	No
		z	-0.002	6.00	No
51		z	-0.01	2.50	No
		z	-0.01	7.50	No
		z	-0.007	5.00	No
54		z	-0.004	2.00	No
		z	-0.004	4.50	No
		z	-0.004	5.50	No
		z	-0.004	8.00	No
57		z	-0.01	2.50	No
		z	-0.01	7.50	No
		z	-0.003	4.00	No
		z	-0.005	6.00	No
63		z	-0.01	2.50	No
		z	-0.01	7.50	No
		z	-0.007	5.00	No
66		z	-0.004	2.00	No
		z	-0.004	4.50	No
		z	-0.004	5.50	No
		z	-0.004	8.00	No
69		z	-0.01	2.50	No
		z	-0.01	7.50	No
		z	-0.003	4.00	No
		z	-0.005	6.00	No
83		z	-0.004	2.50	No
84		z	-0.004	2.50	No
85		z	-0.004	2.50	No
WL30	36	x	-0.008	2.50	No
		x	-0.008	7.50	No
		x	-0.008	5.00	No
37		x	-0.003	2.00	No
		x	-0.003	4.50	No
		x	-0.004	5.50	No
		x	-0.004	8.00	No
38		x	-0.007	2.50	No
		x	-0.007	7.50	No
		x	-0.002	4.00	No
		x	-0.006	6.00	No
51		x	-0.015	2.50	No
		x	-0.015	7.50	No
		x	-0.005	5.00	No
		x	-0.004	5.00	No

	54	x	-0.005	2.00	No
		x	-0.005	4.50	No
		x	-0.005	5.50	No
		x	-0.005	8.00	No
	57	x	-0.016	2.50	No
		x	-0.016	7.50	No
		x	-0.004	4.00	No
		x	-0.003	6.00	No
		x	-0.004	6.00	No
	63	x	-0.015	2.50	No
		x	-0.015	7.50	No
		x	-0.005	5.00	No
		x	-0.004	5.00	No
	66	x	-0.005	2.00	No
		x	-0.005	4.50	No
		x	-0.005	5.50	No
		x	-0.005	8.00	No
	69	x	-0.016	2.50	No
		x	-0.016	7.50	No
		x	-0.004	4.00	No
		x	-0.003	6.00	No
		x	-0.004	6.00	No
	83	x	-0.004	2.50	No
	84	x	-0.004	2.50	No
	85	x	-0.004	2.50	No
LL1	35	y	-0.25	50.00	Yes
LL2	35	y	-0.25	100.00	Yes
LLa1	39	y	-0.50	50.00	Yes
LLa2	38	y	-0.50	50.00	Yes
LLa3	37	y	-0.50	50.00	Yes
LLa4	36	y	-0.50	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	500 lb Live Load on Antenna 1	No	0.00	0.00	0.00
LLa2	500 lb Live Load on Antenna 2	No	0.00	0.00	0.00
LLa3	500 lb Live Load on Antenna 3	No	0.00	0.00	0.00
LLa4	500 lb Live Load on 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 :

- W180=-W0
- W210=-W30
- Wi180=-Wi0
- Wi210=-Wi30
- WL180=-WL0
- WL210=-WL30
- LC1=1.2DL+1.6W0
- LC2=1.2DL+1.6W30
- LC3=1.2DL-1.6W0
- LC4=1.2DL-1.6W30
- LC5=0.9DL+1.6W0
- LC6=0.9DL+1.6W30
- LC7=0.9DL-1.6W0
- LC8=0.9DL-1.6W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.2DL
- LC14=0.9DL
- LC15=1.2DL+1.6LL1
- LC16=1.2DL+1.6LL2
- LC17=1.2DL+WL0+LLa1
- LC18=1.2DL+WL30+LLa1
- LC19=1.2DL-WL0+LLa1
- LC20=1.2DL-WL30+LLa1
- LC21=1.2DL+WL0+LLa2
- LC22=1.2DL+WL30+LLa2
- LC23=1.2DL-WL0+LLa2
- LC24=1.2DL-WL30+LLa2
- LC25=1.2DL+WL0+LLa3
- LC26=1.2DL+WL30+LLa3
- LC27=1.2DL-WL0+LLa3
- LC28=1.2DL-WL30+LLa3
- LC29=1.2DL+WL0+LLa4
- LC30=1.2DL+WL30+LLa4
- LC31=1.2DL-WL0+LLa4
- LC32=1.2DL-WL30+LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	7	LC2 at 50.00%	0.29	OK	Eq. H1-1b
		8	LC1 at 50.00%	0.26	OK	Eq. H1-1b
		9	LC4 at 48.44%	0.26	OK	Eq. H1-1b
	L 2-1_2X2-1_2X3_16	41	LC4 at 100.00%	0.81	OK	Sec. F1
		43	LC3 at 0.00%	0.87	OK	Sec. F1
		45	LC2 at 100.00%	0.81	OK	Eq. H2-1
	L 2X2X1_4	13	LC3 at 100.00%	0.32	OK	Eq. H2-1
		14	LC1 at 100.00%	0.38	OK	Eq. H2-1
		15	LC4 at 100.00%	0.38	OK	Eq. H2-1
		16	LC2 at 0.00%	0.40	OK	Eq. H2-1

	17	LC1 at 0.00%	0.39	OK	Eq. H2-1
	18	LC3 at 0.00%	0.32	OK	Eq. H2-1
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PIPE 2-1_2x0.203	36	LC2 at 89.58%	0.32	OK	Eq. H1-1b
	37	LC2 at 89.58%	0.25	OK	Eq. H1-1b
	38	LC4 at 89.58%	0.30	OK	Eq. H1-1b
	39	LC4 at 89.58%	0.18	OK	Eq. H1-1b
	40	LC1 at 77.68%	0.69	OK	Eq. H1-1b
	42	LC4 at 22.32%	0.87	OK	Eq. H1-1b
	44	LC2 at 77.68%	0.87	OK	Eq. H1-1b
	51	LC1 at 89.58%	0.38	OK	Eq. H1-1b
	54	LC2 at 54.17%	0.24	OK	Eq. H1-1b
	57	LC2 at 60.42%	0.34	OK	Eq. H1-1b
	60	LC2 at 89.58%	0.27	OK	Eq. H1-1b
	63	LC4 at 50.00%	0.36	OK	Eq. H1-1b
	66	LC3 at 89.58%	0.22	OK	Eq. H1-1b
	69	LC4 at 60.42%	0.31	OK	Eq. H1-1b
	72	LC1 at 89.58%	0.22	OK	Eq. H1-1b
	74	LC2 at 0.00%	0.73	OK	Eq. H1-1b
	75	LC4 at 0.00%	0.69	OK	Eq. H1-1b
	76	LC4 at 0.00%	0.64	OK	Eq. H1-1b
	77	LC2 at 0.00%	0.62	OK	Eq. H1-1b
	78	LC3 at 0.00%	0.45	OK	Eq. H1-1b
	79	LC3 at 0.00%	0.42	OK	Eq. H1-1b
	83	LC2 at 65.63%	0.19	OK	Eq. H1-1b
	84	LC3 at 65.63%	0.19	OK	Eq. H1-1b
	85	LC1 at 65.63%	0.19	OK	Eq. H1-1b
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PIPE 3x0.216	2	LC2 at 35.71%	0.27	OK	Eq. H1-1b
	3	LC4 at 91.96%	0.24	OK	Eq. H1-1b
	4	LC3 at 100.00%	0.70	OK	Eq. H1-1b
	5	LC2 at 100.00%	0.90	OK	Eq. H1-1b
	6	LC3 at 100.00%	0.68	OK	Eq. H1-1b
	35	LC3 at 91.96%	0.22	OK	Eq. H1-1b
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PL 6x3/8"	10	LC2 at 50.00%	0.36	OK	Eq. H1-1b
	11	LC1 at 50.00%	0.42	OK	Eq. H1-1b
	12	LC4 at 46.88%	0.35	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	6.00	-4.00	4.874	0
87	6.00	-4.00	5.074	0
90	2.00	-4.00	4.874	0
91	2.00	-4.00	5.074	0
94	-2.00	-4.00	4.874	0
95	-2.00	-4.00	5.074	0
98	-6.00	-4.00	4.874	0
99	-6.00	-4.00	5.074	0
100	6.00	5.00	5.074	0
101	2.00	5.00	5.074	0
102	-2.00	5.00	5.074	0
103	-6.00	5.00	5.074	0
104	6.00	-5.00	5.074	0
105	2.00	-5.00	5.074	0
106	-2.00	-5.00	5.074	0
107	-6.00	-5.00	5.074	0
108	-7.25	3.00	4.874	0
109	-7.846	3.00	3.8417	0
110	-0.596	3.00	-8.7157	0
111	0.596	3.00	-8.7157	0
112	7.25	3.00	4.874	0
113	7.846	3.00	3.8417	0
114	-1.7716	0.00	1.0228	0
115	0.00	0.00	-2.0457	0
116	1.7716	0.00	1.0228	0
117	-6.00	3.00	4.874	0
118	-6.00	3.00	5.074	0
119	-2.00	3.00	4.874	0
120	-2.00	3.00	5.074	0
121	2.00	3.00	4.874	0
122	2.00	3.00	5.074	0
123	6.00	3.00	4.874	0
124	6.00	3.00	5.074	0
125	-1.221	-4.00	-7.6332	0
126	-1.3942	-4.00	-7.7332	0
127	-1.3942	5.00	-7.7332	0
128	-1.3942	-5.00	-7.7332	0
129	-1.221	3.00	-7.6332	0
130	-1.3942	3.00	-7.7332	0
131	-3.221	-4.00	-4.1691	0
132	-3.3942	-4.00	-4.2691	0
133	-3.3942	5.00	-4.2691	0
134	-3.3942	-5.00	-4.2691	0
135	-3.221	3.00	-4.1691	0
136	-3.3942	3.00	-4.2691	0
137	-5.221	-4.00	-0.7049	0
138	-5.3942	-4.00	-0.8049	0
139	-5.3942	5.00	-0.8049	0
140	-5.3942	-5.00	-0.8049	0
141	-5.221	3.00	-0.7049	0
142	-5.3942	3.00	-0.8049	0
143	-7.221	-4.00	2.7592	0
144	-7.3942	-4.00	2.6592	0
145	-7.3942	5.00	2.6592	0
146	-7.3942	-5.00	2.6592	0
147	-7.221	3.00	2.7592	0
148	-7.3942	3.00	2.6592	0
149	7.221	-4.00	2.7592	0

150	7.3942	-4.00	2.6592	0
151	7.3942	5.00	2.6592	0
152	7.3942	-5.00	2.6592	0
153	7.221	3.00	2.7592	0
154	7.3942	3.00	2.6592	0
155	5.221	-4.00	-0.7049	0
156	5.3942	-4.00	-0.8049	0
157	5.3942	5.00	-0.8049	0
158	5.3942	-5.00	-0.8049	0
159	5.221	3.00	-0.7049	0
160	5.3942	3.00	-0.8049	0
161	3.221	-4.00	-4.1691	0
162	3.3942	-4.00	-4.2691	0
163	3.3942	5.00	-4.2691	0
164	3.3942	-5.00	-4.2691	0
165	3.221	3.00	-4.1691	0
166	3.3942	3.00	-4.2691	0
167	1.221	-4.00	-7.6332	0
168	1.3942	-4.00	-7.7332	0
169	1.3942	5.00	-7.7332	0
170	1.3942	-5.00	-7.7332	0
171	1.221	3.00	-7.6332	0
172	1.3942	3.00	-7.7332	0
173	6.221	3.00	1.0271	0
174	-4.00	3.00	4.874	0
175	-2.221	3.00	-5.9011	0
176	4.00	3.00	4.874	0
177	-6.221	3.00	1.0271	0
178	2.221	3.00	-5.9011	0
179	0.00	-4.00	-7.9746	0
180	6.9062	-4.00	3.9873	0
181	-6.9062	-4.00	3.9873	0
182	-2.7052	-4.00	1.5618	0
183	2.8219	-4.00	1.6292	0
184	0.00	-4.00	-3.2584	0
185	0.20	-4.00	-3.2584	0
186	2.6719	-4.00	1.7792	0
187	-2.8552	-4.00	1.4118	0
188	-2.8552	0.00	1.4118	0
189	0.20	0.00	-3.2584	0
190	2.6719	0.00	1.7792	0
191	-2.8552	-6.00	1.4118	0
192	2.6719	-6.00	1.7792	0
193	0.20	-6.00	-3.2584	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
114	1	1	1	1	1	1
115	1	1	1	1	1	1
116	1	1	1	1	1	1
179	0	1	0	0	0	0

180	0	1	0	0	0	0
181	0	1	0	0	0	0

Members

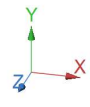
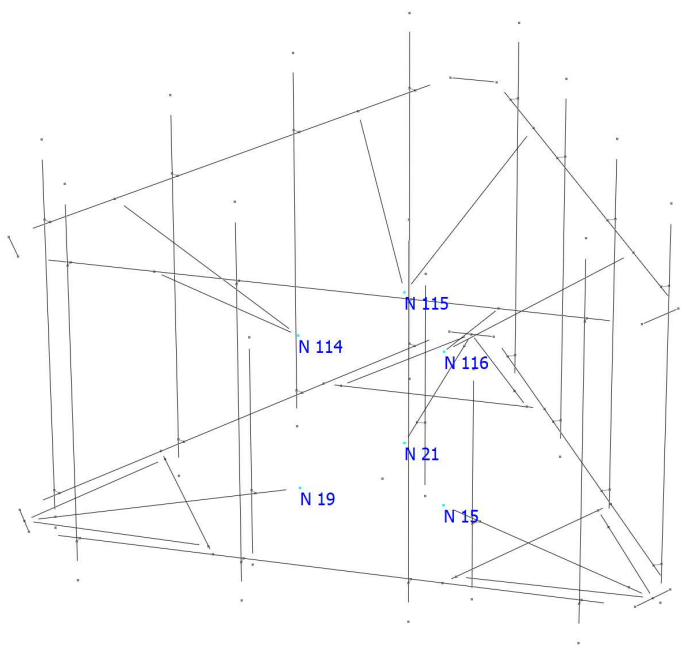
Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
2	9	10		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
3	3	4		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
4	18	19		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
5	20	21		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
6	14	15		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
7	28	27		HSS_SQR 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 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
37	102	106		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
38	101	105		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
39	100	104		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
40	112	108		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
41	108	109		L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
42	109	110		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
43	110	111		L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
44	111	113		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
45	112	113		L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
51	127	128		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
54	133	134		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
57	139	140		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
60	145	146		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
63	151	152		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
66	157	158		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
69	163	164		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
72	169	170		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
74	115	175		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
75	115	178		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
76	116	173		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
77	114	177		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
78	114	174		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
79	116	176		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
83	188	191		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
84	190	192		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
85	189	193		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
36	315.00	0	0.00	0.00	0.00
37	315.00	0	0.00	0.00	0.00
38	315.00	0	0.00	0.00	0.00
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
51	315.00	0	0.00	0.00	0.00
54	315.00	0	0.00	0.00	0.00
57	315.00	0	0.00	0.00	0.00
63	315.00	0	0.00	0.00	0.00
66	315.00	0	0.00	0.00	0.00
69	315.00	0	0.00	0.00	0.00
83	315.00	0	0.00	0.00	0.00
84	315.00	0	0.00	0.00	0.00
85	315.00	0	0.00	0.00	0.00

Rigid end offsets

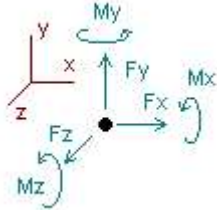
Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
13	0.00	3.00	0.00	0.00	3.00	0.00
14	0.00	3.00	0.00	0.00	3.00	0.00
15	0.00	3.00	0.00	0.00	3.00	0.00
16	0.00	3.00	0.00	0.00	3.00	0.00
17	0.00	3.00	0.00	0.00	3.00	0.00
18	0.00	3.00	0.00	0.00	3.00	0.00



Analysis result

Envelope for nodal reactions

Note.- Ic is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

- W180=-W0
- W210=-W30
- Wi180=-Wi0
- Wi210=-Wi30
- WL180=-WL0
- WL210=-WL30
- LC1=1.2DL+1.6W0
- LC2=1.2DL+1.6W30
- LC3=1.2DL-1.6W0
- LC4=1.2DL-1.6W30
- LC5=0.9DL+1.6W0
- LC6=0.9DL+1.6W30
- LC7=0.9DL-1.6W0
- LC8=0.9DL-1.6W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.2DL
- LC14=0.9DL
- LC15=1.2DL+1.6LL1
- LC16=1.2DL+1.6LL2
- LC17=1.2DL+WL0+LLa1
- LC18=1.2DL+WL30+LLa1
- LC19=1.2DL-WL0+LLa1
- LC20=1.2DL-WL30+LLa1
- LC21=1.2DL+WL0+LLa2
- LC22=1.2DL+WL30+LLa2
- LC23=1.2DL-WL0+LLa2
- LC24=1.2DL-WL30+LLa2
- LC25=1.2DL+WL0+LLa3
- LC26=1.2DL+WL30+LLa3
- LC27=1.2DL-WL0+LLa3
- LC28=1.2DL-WL30+LLa3
- LC29=1.2DL+WL0+LLa4
- LC30=1.2DL+WL30+LLa4
- LC31=1.2DL-WL0+LLa4
- LC32=1.2DL-WL30+LLa4

Node		Forces						Moments					
		Fx	lc	Fy	lc	Fz	lc	Mx	lc	My	lc	Mz	lc
		[Kip]		[Kip]		[Kip]		[Kip*ft]		[Kip*ft]		[Kip*ft]	
15	Max	2.386	LC2	0.950	LC12	1.766	LC1	0.27812	LC5	1.42674	LC3	1.27513	LC4
	Min	-2.292	LC8	0.005	WL180	-1.730	LC7	-0.99433	LC3	-1.40773	LC5	-0.03364	LC6
19	Max	2.383	LC6	0.952	LC10	1.796	LC1	0.30327	LC5	1.51422	LC1	0.38506	W210
	Min	-2.465	LC4	-0.184	W210	-1.736	LC7	-1.01789	LC3	-1.48754	LC7	-1.32406	LC2
21	Max	1.759	LC6	0.949	LC9	2.964	LC5	1.34647	LC1	2.59657	LC4	0.64560	LC4
	Min	-1.773	LC4	-0.181	W180	-3.062	LC3	-0.32927	W180	-2.57343	LC6	-0.64561	LC2
114	Max	2.133	LC6	1.398	LC4	1.575	LC1	1.08944	LC5	0.75760	LC5	0.90431	LC8
	Min	-2.250	LC4	-1.043	LC6	-1.517	LC7	-1.29601	LC3	-0.79778	LC3	-1.20719	LC2
115	Max	1.397	LC2	1.468	LC3	2.399	LC5	1.34749	LC1	1.47728	LC8	1.48735	LC8
	Min	-1.389	LC8	-1.116	LC5	-2.524	LC3	-0.97966	LC7	-1.51476	LC2	-1.51317	LC2
116	Max	2.105	LC2	1.283	LC2	1.513	LC1	1.04339	LC5	0.71336	LC7	1.20712	LC4
	Min	-1.994	LC8	-0.930	LC8	-1.444	LC7	-1.20444	LC3	-0.74922	LC1	-0.87718	LC6



HUDSON
Design Group LLC

Connection Check

Date: 4/13/2022
Project Name: DANBURY STADLEY ROUGH ROAD
Project No.: CT2312
Designed By: CL Checked By: MSC



CHECK CONNECTION CAPACITY (Worst Case)

Reference: AISC Steel Construction Manual 14th Edition (ASD)

Bolt Type = A36 5/8" Threaded Rod

Allowable Tensile Load =

$F_{Tall} = 6673$ lbs.

Allowable Shear Load =

$F_{Vall} = 4004$ lbs.

TENSILE FORCES

Reaction $F = 3062$ lbs. (See Bentley Output)

SHEAR FORCES

Reactions in X direction: 1773 lbs. (See Bentley Output)

Reactions in Y direction: 949 lbs. (See Bentley Output)

Resultant: 2011 lbs.

No. of Supports = 1

No. of Bolts / Support = 3

Tension Design Load /Bolts =

$f_t = 1020.67$ lbs. < 6673 lbs. **Therefore, OK !**

Shear Design Load / Bolts=

$f_v = 670.33$ lbs. < 4004 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

$f_t / F_T + f_v / F_V \leq 1.0$
0.153 + 0.167 = 0.320 < 1.0 **Therefore, OK !**

EXHIBIT 5



Radio Frequency Exposure Analysis Report

April 7, 2022

Centerline on behalf of AT&T
Centerline Communications Project Number: 566656

AT&T Site Name: DANBURY STADLEY ROUGH ROAD
Site Number: CT2312
FA#: 12676398
USID: 150547

Site Address: 52 STADLEY ROUGH ROAD, DANBURY, CT 06811

Site Compliance Summary

AT&T Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	2.55544 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Ground Level):	0.31394%



April 7, 2022

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

RF Exposure Analysis for Site: **DANBURY STADLEY ROUGH ROAD**

Centerline Communications, LLC (“Centerline”) was contracted to analyze the proposed AT&T facility at **52 STADLEY ROUGH ROAD, DANBURY, CT 06811** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

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

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

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

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



Calculation Methodology

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

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



Data & Results

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

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

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



Maximum Calculated Cumulative Power Density (Location: approximately 6' West of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
AT&T A 1	KMW EPBQ-654L8H6-L2	700	12.13	107.00	4.00	40.00	2612.88	0.00018	466.67	0.00004
AT&T A 1	KMW EPBQ-654L8H6-L2	1900	13.65	107.00	4.00	40.00	3707.83	0.00003	1000.00	0.00000
AT&T A 1	KMW EPBQ-654L8H6-L2	2100	13.90	107.00	4.00	60.00	5891.30	0.00003	1000.00	0.00000
AT&T A 2	ERICSSON SON_AIR6449	3700	23.55	107.00	1.00	108.40	24548.74	0.00968	1000.00	0.00097
AT&T A 3	ERICSSON SON_AIR6419	3450	22.15	107.00	1.00	0.00	0.00	0.00000	1000.00	0.00000
AT&T A 4	CCI DMP65R-BU6D	700	11.35	107.00	4.00	40.00	2183.33	0.00035	466.67	0.00007
AT&T A 4	CCI DMP65R-BU6D	850	11.45	107.00	4.00	40.00	2234.19	0.00017	566.67	0.00003
AT&T A 4	CCI DMP65R-BU6D	2300	15.25	107.00	4.00	25.00	3349.65	0.00011	1000.00	0.00001
AT&T B 5	KMW EPBQ-654L8H6-L2	700	12.13	107.00	4.00	40.00	2612.88	0.00021	466.67	0.00005
AT&T B 5	KMW EPBQ-654L8H6-L2	1900	13.65	107.00	4.00	40.00	3707.83	0.00001	1000.00	0.00000
AT&T B 5	KMW EPBQ-654L8H6-L2	2100	13.90	107.00	4.00	60.00	5891.30	0.00001	1000.00	0.00000
AT&T B 6	ERICSSON SON_AIR6449	3700	23.55	107.00	1.00	108.40	24548.74	0.00968	1000.00	0.00097
AT&T B 7	ERICSSON SON_AIR6419	3450	22.15	107.00	1.00	0.00	0.00	0.00000	1000.00	0.00000
AT&T B 8	CCI DMP65R-BU6D	700	11.35	107.00	4.00	40.00	2183.33	0.00023	466.67	0.00005
AT&T B 8	CCI DMP65R-BU6D	850	11.45	107.00	4.00	40.00	2234.19	0.00012	566.67	0.00002
AT&T B 8	CCI DMP65R-BU6D	2300	15.25	107.00	4.00	25.00	3349.65	0.00003	1000.00	0.00000
AT&T C 9	KMW EPBQ-654L8H6-L2	700	12.13	107.00	4.00	40.00	2612.88	0.10921	466.67	0.02340
AT&T C 9	KMW EPBQ-654L8H6-L2	1900	13.65	107.00	4.00	40.00	3707.83	0.12610	1000.00	0.01261
AT&T C 9	KMW EPBQ-654L8H6-L2	2100	13.90	107.00	4.00	60.00	5891.30	0.18356	1000.00	0.01836
AT&T C 10	ERICSSON SON_AIR6449	3700	23.55	107.00	1.00	108.40	24548.74	1.26781	1000.00	0.12678
AT&T C 11	ERICSSON SON_AIR6419	3450	22.15	107.00	1.00	0.00	0.00	0.01202	1000.00	0.00120
AT&T C 12	CCI DMP65R-BU6D	700	11.35	107.00	4.00	40.00	2183.33	0.12002	466.67	0.02572
AT&T C 12	CCI DMP65R-BU6D	850	11.45	107.00	4.00	40.00	2234.19	0.10050	566.67	0.01774
AT&T C 12	CCI DMP65R-BU6D	2300	15.25	107.00	4.00	25.00	3349.65	0.08146	1000.00	0.00815
T-Mobile A 13	GENERIC PANEL 6FT	1900	15.84	97.00	2.00	60.00	4604.49	0.00003	1000.00	0.00000
T-Mobile A 13	GENERIC PANEL 6FT	2100	16.39	97.00	2.00	60.00	5226.14	0.00005	1000.00	0.00001
T-Mobile A 14	GENERIC PANEL 6FT	700	12.33	97.00	2.00	60.00	2052.02	0.00059	466.67	0.00013
T-Mobile B 15	GENERIC PANEL 6FT	1900	15.84	97.00	2.00	60.00	4604.49	0.00019	1000.00	0.00002
T-Mobile B 15	GENERIC PANEL 6FT	2100	16.39	97.00	2.00	60.00	5226.14	0.00012	1000.00	0.00001
T-Mobile B 16	GENERIC PANEL 6FT	700	12.33	97.00	2.00	60.00	2052.02	0.00027	466.67	0.00006
T-Mobile C 17	GENERIC PANEL 6FT	1900	15.84	97.00	2.00	60.00	4604.49	0.13685	1000.00	0.01369
T-Mobile C 17	GENERIC PANEL 6FT	2100	16.39	97.00	2.00	60.00	5226.14	0.14402	1000.00	0.01440
T-Mobile C 18	GENERIC PANEL 6FT	700	12.33	97.00	2.00	60.00	2052.02	0.13287	466.67	0.02847
Unknown A 19	GENERIC PANEL 6FT	850	12.62	117.00	1.00	60.00	1096.86	0.00001	566.67	0.00000
Unknown B 20	GENERIC PANEL 6FT	850	12.62	117.00	1.00	60.00	1096.86	0.00012	566.67	0.00002



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
Unknown C 21	GENERIC PANEL 6FT	850	12.62	117.00	1.00	60.00	1096.86	0.04612	566.67	0.00814
Unknown A 22	GENERIC PANEL 6FT	850	12.62	127.00	1.00	60.00	1096.86	0.00000	566.67	0.00000
Unknown B 23	GENERIC PANEL 6FT	850	12.62	127.00	1.00	60.00	1096.86	0.00010	566.67	0.00002
Unknown C 24	GENERIC PANEL 6FT	850	12.62	127.00	1.00	60.00	1096.86	0.03913	566.67	0.00691
Unknown A 25	GENERIC PANEL 6FT	850	12.62	137.00	1.00	60.00	1096.86	0.00000	566.67	0.00000
Unknown B 26	GENERIC PANEL 6FT	850	12.62	137.00	1.00	60.00	1096.86	0.00009	566.67	0.00002
Unknown C 27	GENERIC PANEL 6FT	850	12.62	137.00	1.00	60.00	1096.86	0.03337	566.67	0.00589
							Cumulative Power Density:	2.55544 $\mu\text{W}/\text{cm}^2$	Cumulative % MPE:	0.31394%



Summary

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

Matt Schulzinger
RF EME Technical Writer
Centerline Communications, LLC

Matthew Schulzinger

EXHIBIT 6

Internal Use Only

Cell Tower Bldg 2010



CITY OF DANBURY
155 DEER HILL AVENUE
DANBURY, CONNECTICUT 06810

Internal Use Only

10-18014 foundation
for cell tower

09-47554- T-Mobile
cell tower 140'
Mound Pole + Equip.

48557, 51355, 54851
48639, 53632, 58059

BUILDING DEPARTMENT
(203) 797-4580
(203) 796-1585 (FAX)

Email Requests to Laura Marchi
Lmarchi@danbury-ct.gov

DAVID B. NEWLAND
BUILDING OFFICIAL

Antennas

REQUEST FOR INFORMATION

The Building Department can only search for historical building permits, building plans, and Certificates of Occupancy that exist within our indexed records (permits 1965-present). Mechanical permits are not indexed prior to 1997 and you must note the year and month the work was done in order for us to find it.

Please address requests for other information via separate requests to the appropriate departments as follows: (current permits to Permit Center, surveys/site plans/legal use of property to Planning & Zoning, well/septic to Health, water/sewer to Engineering, property history to Assessor, environmental/wetlands to EIC, tank removals to Fire Marshal).

*8.5 x 11 copies are \$.50 per page

Date of Request: 2/16/2022
Property Owner: Christ the Shepherd Church
Number & Street: 52 Statley Rough Rd
Assessor (MBLU) #: X0711 019

Completed
2/24/2022
Emanuel

Information being requested (please be as specific as possible):

Permit(s) Certificate(s) of Occupancy Building Plans

(limited availability)

Original permit for Cell tower @ 2010

Please provide information via:

Phone Call *Copies * Appointment in office to inspect

Requests are addressed in the order they are received. Due to the high number of requests, searches may take 1-2 weeks, and **we may require prepayment of past due amounts as well as prepayment for current requested information before the search is commenced.** We will call you when the information is available.

***We make no guarantee that information provided will accurately reflect actual existing building conditions.

I acknowledge the search conditions stated on this form. This information is requested by:

Name: EVAN
PLEASE PRINT LEGIBLY!

Phone #: 774-428-0194

Email: erenwick@CLINE LLC, COM

Application Number 09-00047554 Date 7/26/10
 Application pin number 454992
 Property Address 52 STADLEY ROUGH RD
 Tax Assessor's Lot Number K07019-
 Tenant nbr, name CHRIST THE SHEPARD-CELLTW
 Application type description CELL TOWER NEW CONSTRUCTION
 Property Use COMMERCIAL
 Property Zoning RES, SF 40000
 Application valuation 216000

Owner	Contractor
-----	-----
CHRIST THE SHEPHERD CHURCH PCA	BOWLIN GROUP, LLC
52 STADLEY ROUGH RD	12200 CHANDLER DRIVE
DANBURY CT 068113237	CONTACT:GREG STEPHENSON
	WALTON KY 41094
	(856) 760-0916

--- Structure Information 000 000 T-MOBILE/140' MONO POLE & EQUIP. ---

Permit ELECTRIC PERMIT
 Additional desc WIRE EQUIPMENT
 Permit pin number 665133
 Sub Contractor GENOVESE, THOMAS A (E1)
 Permit Fee00 Plan Check Fee00
 Issue Date 7/26/10 Valuation 0
 Expiration Date 7/26/11

Special Notes and Comments

NEED TO COLLECT \$125.00 FEE FOR B-100
 REVIEW PER PETE DUNN. GG
 ZONING REMOVED PER SPH 2/4/10. GG
 LETTER OF AUTH IN TO CHANGE GC/NEW GC
 SIGNED ON/BOWLIN GROUP. CHRIS
 PERMANENT C.O. ISSUED IN ERROR ON
 4/22/10 FOR ENTIRE JOB. SHOULD HAVE
 BEEN FOR MONOPOLE ONLY. TEMP. C.O.
 ISSUED 7/21/10. GG
 see #48014 (FO)
 former GC: SBA Communications, SBA
 Towers, II LLC.
 Construction of this project in accordance with all
 applicable sections of the Connecticut Fire Safety Code and
 referenced standards constitutes approval of the project by
 the Fire Marshal's Office.
 PLAN IN REVIEW, AWAITING REVISION.
 REVISED B-100 PLAN SUBMITTED BY VHB INC., PAUL VITALIANO
 P.E., APPROVED.

Other Fees	CO FEE	28.00
	ENGINEERED SEWAGE PLAN	125.00
	STATE EDUCATION FEE PER K	47.52

Fee summary	Charged	Paid	Credited	Due
Permit Fee Total	.00	.00	.00	.00
Plan Check Total	.00	.00	.00	.00
Other Fee Total	200.52	200.52	.00	.00
Grand Total	200.52	200.52	.00	.00

Page 2
Date 7/26/10

Application Number 09-00047554
 Property Address 52 STADLEY ROUGH RD
 Tax Assessor's Lot Number K07019-
 Tenant nbr, name CHRIST THE SHEPARD-CELLTW
 Application description CELL TOWER NEW CONSTRUCTION
 Property Use COMMERCIAL
 Property Zoning RES, SF 40000

Permit ELECTRIC PERMIT

Additional desc WIRE EQUIPMENT
 Permit pin number 665133

 Required Inspections

Seq	Insp Code	Description	Initials	Date

10-40	CESL	COM ELEC SLAB	_____	____/____/____
10	CETS	COM ELEC TEMP SERVICE	_____	____/____/____
10-40	CEU	COMM ELECTRIC UNDERGROUND	_____	____/____/____
20-40	CESV	COM ELEC SERVICE	_____	____/____/____
30	CERW	COM ELEC ROUGH WALL	_____	____/____/____
40	CEC	COM ELEC CEILING	_____	____/____/____
50	CEFL	COM ELEC FINAL	_____	____/____/____

EXHIBIT 7

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030312110934

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

04/18/2022

Delivered On

05/25/2022 9:48 A.M.

Delivered To

155 DEER HILL AVE
DANBURY, CT, 06810, US

Received By

TC

Left At

Front Desk

Reference Number(s)

CT2312-CSC DIRECTOR OF PLANNING

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 05/26/2022 1:32 P.M. EST

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030307323929

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

04/18/2022

Delivered On

05/25/2022 9:48 A.M.

Delivered To

155 DEER HILL AVE
DANBURY, CT, 06810, US

Received By

TC

Left At

Front Desk

Reference Number(s)

CT2312-CSC MAYOR

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 05/26/2022 1:34 P.M. EST

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030314290951

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

04/18/2022

Delivered On

05/27/2022 2:45 P.M.

Delivered To

8051 CONGRESS AVE
BOCA RATON, FL, 33487, US

Received By

HAMPTON

Left At

Mail Room

Reference Number(s)

CT2312-CSC_SBA TOWERS

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 05/28/2022 10:44 P.M. EST

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030314299943

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

04/18/2022

Delivered On

05/25/2022 9:48 A.M.

Delivered To

155 DEER HILL AVE
DANBURY, CT, 06810, US

Received By

TC

Left At

Front Desk

Reference Number(s)

CT2312-CSC ZEO

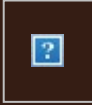
Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 05/26/2022 1:35 P.M. EST

From: [UPS](#)
To: [Evan Renwick](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030332121617
Date: Wednesday, May 25, 2022 12:13:32 PM



Hello, your package has been delivered.

Delivery Date: Wednesday, 05/25/2022

Delivery Time: 12:11 PM

Signed by: HOTCHINSON

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030332121617
Ship To:	CHRIST THE SHEPHERD CHURCH PCA 52 STADLEY ROUGH RD DANBURY, CT 068113237 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT2312-CSC CHRIST THE SHEPHERD

Discover more about UPS:

Visit [https://link.edgepilot.com/s/962a31df/_U5YVmy1qEWhRnV-YFaHvw?](https://link.edgepilot.com/s/962a31df/_U5YVmy1qEWhRnV-YFaHvw?u=http://www.ups.com/)
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