August 08, 2022

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

Regarding: Notice of Exempt Modification – AT&T Site CT1151 / FA# 10035290
Address: 225 Grist Mill Road, Simsbury, CT 06070

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC ("AT&T") currently maintains a wireless telecommunications facility on an existing +/- 150' monopole at the above-referenced address, latitude 41.8667231, longitude -72.8158050. Said monopole is operated by SBA Towers II, LLC.

AT&T desires to modify its existing telecommunications facility by swapping nine (9) antennas, adding three (3) 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, last revised August 5, 2022. The centerline height of the existing antennas is and will remain at 150 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 Wendy Mackstutis, First Selectwoman of the Town of Simsbury, as elected official, Laura Barkowski, Zoning Enforcement Officer of the Town of Simsbury, George McGregor, Town Planner of the Town of Simsbury, SBA Towers II, LLC, as tower operator, and Ensign-Bickford Realty Corporation 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 July 18, 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 Wendy Mackstutis, First Selectwoman, Town of Simsbury, elected official
Laura Barkowski, Zoning Enforcement Officer, Town of Simsbury
George McGregor, Town Planner, Town of Simsbury.
SBA Towers II, LLC, as tower operator
Ensign-Bickford Realty Corporation, as property owner

EXHIBIT 1

PROJECT INFORMATION

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:
- NEW AT&T ANTENNAS: TPA65R-BU6DA-K @ POS. 2 (ALPHA SECTOR, TOTAL OF 1).
- NEW AT&T ANTENNAS: TPA65R-BU8DA-K @ POS. 2 (TYP. OF 1 PER BETA & GAMMAS SECTORS, TOTAL OF 2).
- NEW AT&T ANTENNAS: DUAL ANTENNAS (AIR6419 B77G) STACKED (TOP) @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T ANTENNAS: DUAL ANTENNAS (AIR6449 B77D) STACKED (BOTTOM) @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T ANTENNAS: OPA65R-BU6DA @ POS. 4 (ALPHA SECTOR, TOTAL OF 1).
- NEW AT&T ANTENNAS: OPA65R-BU8DA @ POS. 4 (TYP. OF 1 PER BETA & GAMMA SECTORS, TOTAL OF 2).
- NEW AT&T RRUS: 4478 B14 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 4449 B5/B12 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T SURGE ARRESTOR DC9-48-60-24-8C-EV (TOTAL OF 1).
- NEW AT&T (3) 6 AWG DC POWER TRUNKS & (1) 24 PAIR FIBER RUN.
- ADD (3) "Y-CABLES" (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- INSTALL NEW MOUNT (SITEPRO1 PART# VFA14-H10-2120) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:
- ADD (1) NEW 6648+XCEDE CABLE

FINAL = 1X5216+1XXMU+|| XXXXX /1X6630 MIXED-MODE/XXXXX+ //1X6648+IDLE XCEDE
- INSTALL (1) NEW BATTERY RACK
- INSTALL (3) NEW STRINGS OF 190AH BATTERIES INSIDE NEW BATTERY RACK
- INSTALL (2) STRINGS OF 190AH BATTERIES INSIDE EXISTING POWER PLANT

ITEMS TO BE REMOVED:
- EXISTING AT&T ANTENNAS: 800-10121 POS. 1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T ANTENNAS: HPA-65R-BUU-H6 @ POS. 2 (ALPHA SECTOR, TOTAL OF 1).
- EXISTING AT&T ANTENNAS: HPA-65R-BUU-H8 @ POS. 2 (TYP. OF 1 PER BETA & GAMMA SECTORS, TOTAL OF 2).
- EXISTING AT&T ANTENNAS: QS66512-2 @ POS. 3 (ALPHA SECTOR, TOTAL OF 1).
- EXISTING AT&T ANTENNAS: TPA-65R-LCUUUU-H8 @ POS. 3 (TYP. OF 1 PER BETA & GAMMA SECTORS, TOTAL OF 2).
- EXISTING AT&T RRUS: RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-4478 B5 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T DIPLEXER: CM1007-DBPXBC-003 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T TRIPLEXER: TPX-070821 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T TMA: DTMABP7819VG12A (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T GALAXY POWER PLANT.
- EXISTING AT&T (2) STRINGS OF 148AH BATTERIES.
- EXISTING AT&T (6) COAX CABLES

ITEMS TO REMAIN:
- (9) RRU'S, (2) SURGE ARRESTOR, (6) COAX CABLES, (4) DC POWER & (2) FIBER.

SITE ADDRESS:	GRIST MILL ROAD SIMSBURY, CT 06070
LATITUDE:	41.8667231° N, 41° 52' 0.20" N
LONGITUDE:	72.8158050° W, 72° 48' 56.89" W
TYPE OF SITE:	MONOPOLE / INDOOR EQUIPMENT
STRUCTURE HEIGHT:	151'-0"±
RAD CENTER:	150'-0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

DRAWING INDEX

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

ISSUED FOR PERMITTING

SITE NUMBER: CTL01151

SITE NAME: SIMSBURY CENTRAL

FA CODE: 10035290

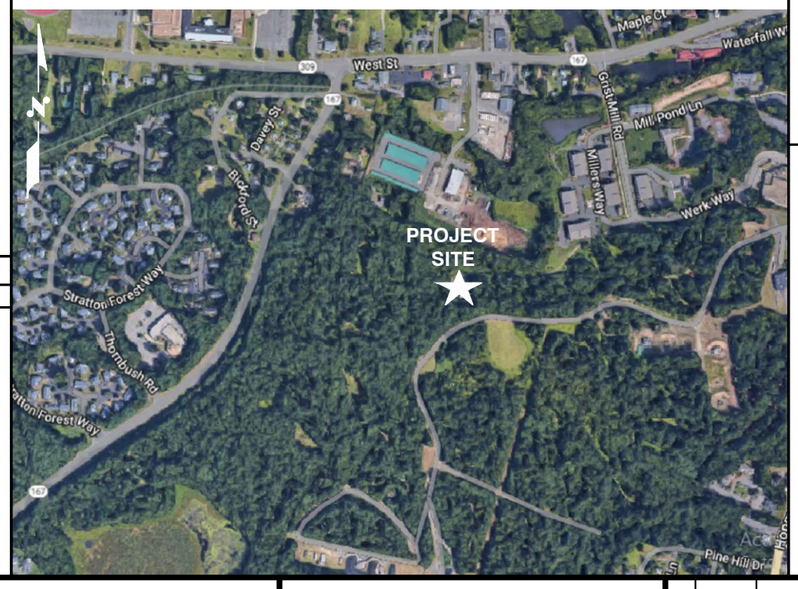
PACE ID: MRCTB057007, MRCTB056958, MRCTB056986, MRCTB057003, MRCTB056998, MRCTB057026, MRCTB056882, MRCTB062483

PROJECT: 4TXRX SOFTWARE RETROFIT, 5G NR 1SR CBAND, 5G NR RADIO, LTE 6C, RF MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT, 2022 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

HEAD SOUTHEAST TOWARD CAPITAL BLVD, TURN LEFT ONTO CAPITAL BLVD, USE THE LEFT LANE TO TURN LEFT ONTO STATE HWY 411, TURN LEFT TO MERGE WITH I-91 N, TAKE THE CT-218 EXIT TOWARD WINDSOR/BLOOMFIELD, TURN LEFT ONTO CT-218 W, TURN RIGHT ONTO CT-189 N, TURN LEFT ONTO GABB RD, GABB RD TURNS LEFT AND BECOMES CT-178 W, TURN RIGHT ONTO CT-185 W, SLIGHT RIGHT ONTO E WEATOGUE ST, TURN LEFT ONTO RIVERSIDE RD, TURN LEFT ONTO DRAKE HILL RD, TURN LEFT ONTO HOPMEADOW ST, TURN RIGHT ONTO WEST ST, TURN LEFT.



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

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SITE NAME: SIMSBURY CENTRAL

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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: JS

DANIEL P. HAMM — STATE OF CONNECTICUT — No. 24178 — LICENSED PROFESSIONAL ENGINEER

AT&T

TITLE SHEET

4TXRX SOFTWARE RETROFIT, 5G NR 1SR CBAND, 5G NR RADIO, LTE 6C, RF MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT, 2022 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL01151	T-1	B

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 ANTENNA	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

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: CTL01151
SITE NAME: SIMSBURY CENTRAL

GRIST MILL ROAD
SIMSBURY, CT 06070
HARTFORD COUNTY

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

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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: JS

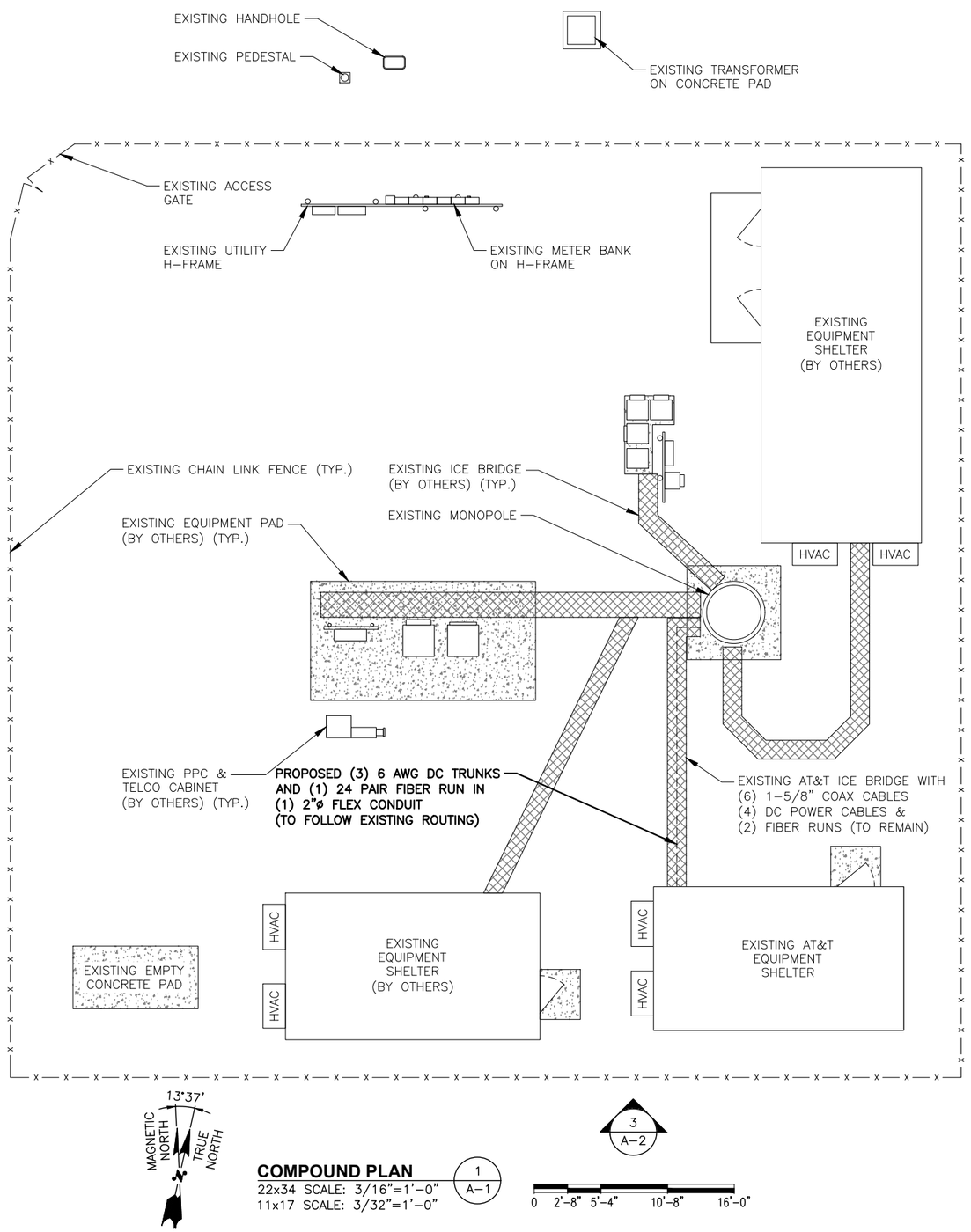
STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

GENERAL NOTES

4TXRE SOFTWARE RETROFIT, 5G NR 1SR CBAND, 5G NR RADIO, LTE 4CBRE MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT 2023 UPGRADE

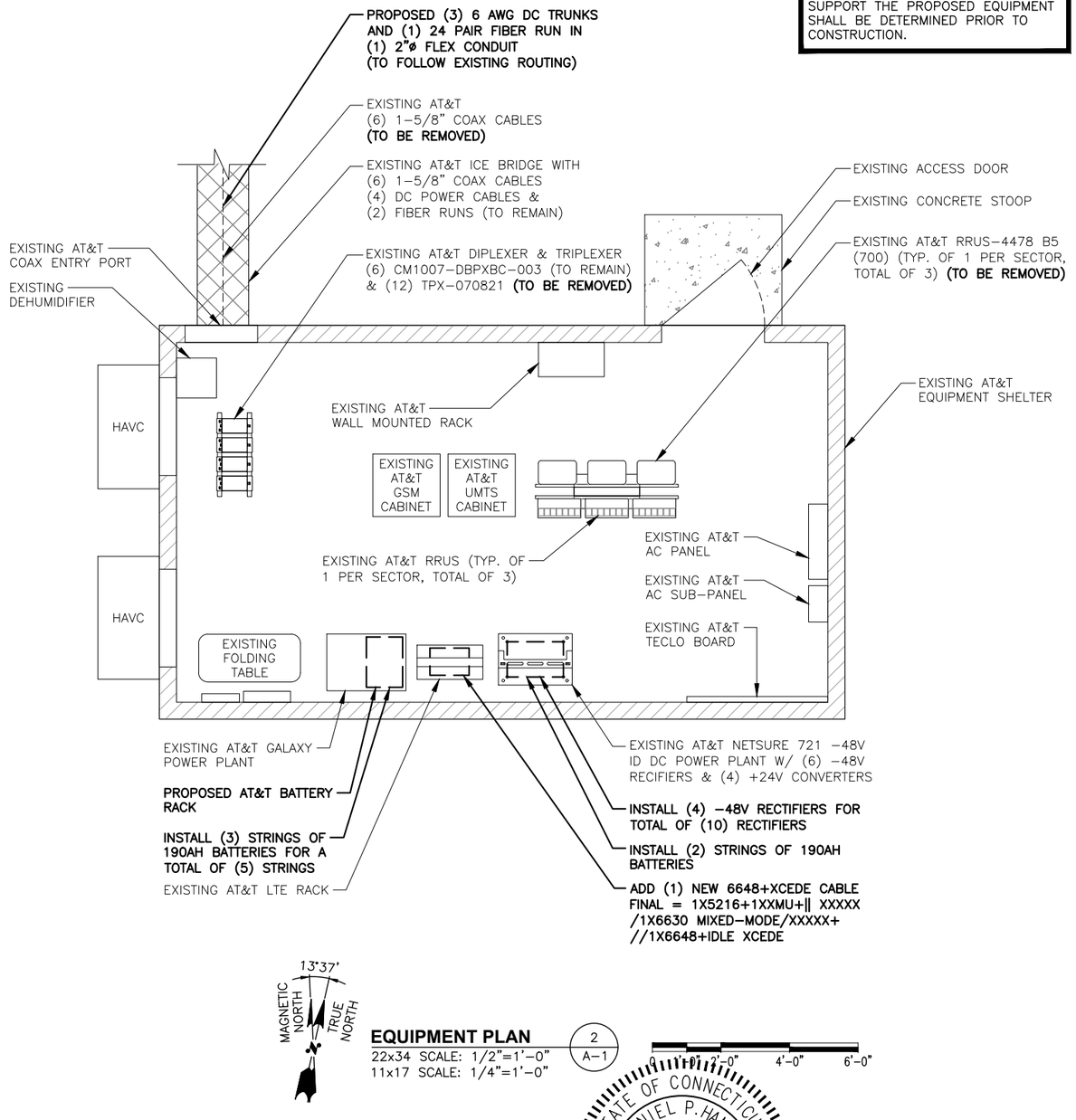
SITE NUMBER	DRAWING NUMBER	REV
CTL01151	GN-1	B



COMPOUND PLAN (1 / A-1)
22x34 SCALE: 3/16"=1'-0"
11x17 SCALE: 3/32"=1'-0"

3 / A-2

0 2'-8" 5'-4" 10'-8" 16'-0"



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

0 1'-4" 2'-0" 4'-0" 6'-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.

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

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STATE OF CONNECTICUT
DANIEL P. HAMM
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AT&T

COMPOUND & EQUIPMENT PLANS
4TXR2 SOFTWARE RETROFIT, 3G NR 1SR CBAND, 5G NR RADIO, LTE BORE MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT 2022 UPGRADE

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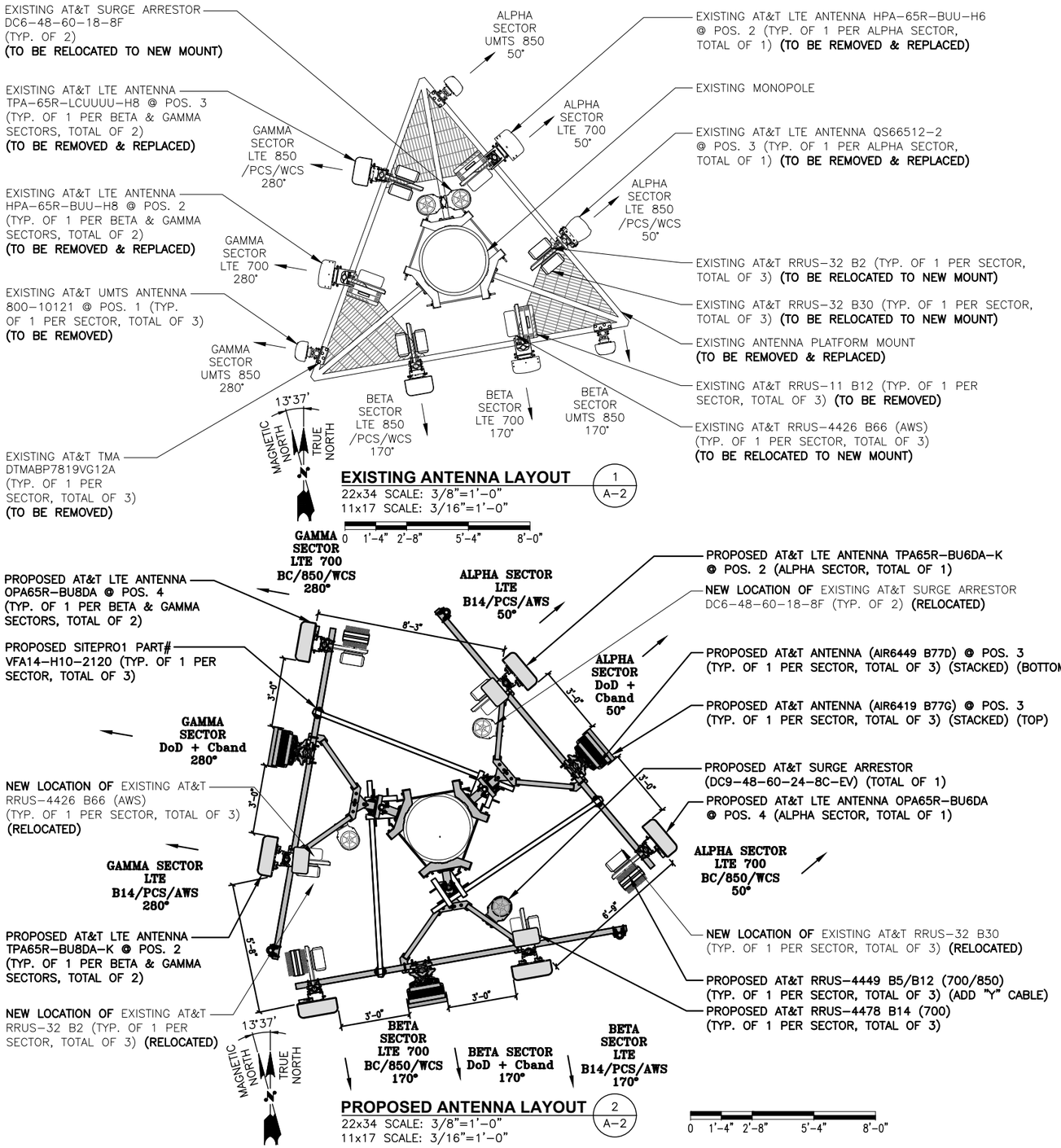


EXISTING ANTENNA LAYOUT (1 / A-2)

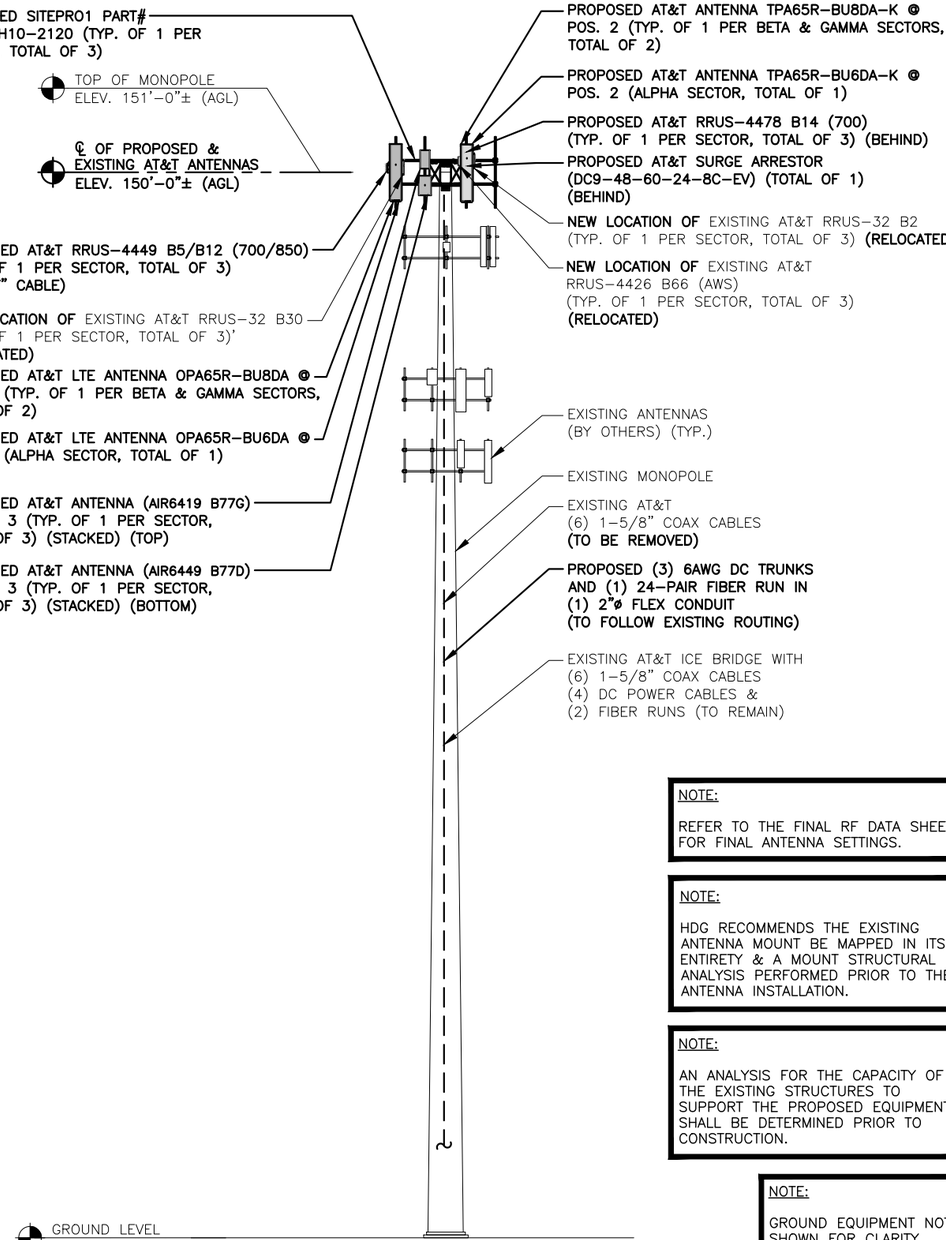
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

0 1'-4" 2'-8" 5'-4" 8'-0"

PROPOSED ANTENNA LAYOUT (2 / A-2)

22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

0 1'-4" 2'-8" 5'-4" 8'-0"



ELEVATION

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

0 5'-4" 10'-8" 21'-4" 32'-0"

NOTE:

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

NOTE:

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

NOTE:

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

NOTE:

GROUND EQUIPMENT NOT SHOWN FOR CLARITY

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: CTL01151
SITE NAME: SIMSBURY CENTRAL

GRIST MILL ROAD
SIMSBURY, CT 06070
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	08/05/22	ISSUED FOR PERMITTING	KW	AT	DPH
A	06/01/22	ISSUED FOR REVIEW	KW	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: JS

STATE OF CONNECTICUT — DANIEL P. HAMM — No. 24178 — LICENSED PROFESSIONAL ENGINEER

AT&T

ANTENNA LAYOUTS & ELEVATION

4TXRE SOFTWARE RETROFIT, 5G NR 1SFF CBAND, 5G NR RADIO, LTE SOFTWARE MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT 2022 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL01151	A-2	B

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ℄ HEIGHT	ANTENNA TIP HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	–	–	–	–	–	–	–	–	–	–		(E) (1) RAYCAP DC6-48-60-18
A2	PROPOSED	LTE B14/PCS/AWS	TPA65R-BU6DA-K	71.2X20.7X7.7	150'-0"±	153'-0"±	50°	–	(P)(1) 4478 B14 (700) (E)(1) RRUS-32 B2 (PCS) (E)(1) 4426 B66 (AWS)	18.1"x13.4"x8.3"	(E)(2) DC POWER, (E)(1) FIBER, (E)(1) Y-CABLE	
A3	PROPOSED	DOD + CBAND	AIR6419 B77G AIR6449 B77D (STACKED)	31.1X16.1X7.3 30.6X15.9X10.6	150'-0"±	152'-1"±	50°	–	–	–	–	
A4	PROPOSED	LTE 700 BC/850/WCS	OPA65R-BU6DA	71.2X21X7.8	150'-0"±	153'-0"±	50°	–	(P)(1) 4449 B5/B12 (700/850) (E)(1) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4"	(P)(1) Y-CABLE	
B1	–	–	–	–	–	–	–	–	–	–	(2) 1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18
B2	PROPOSED	LTE B14/PCS/AWS	TPA65R-BU8DA-K	96X20.7X7.7	150'-0"±	154'-0"±	170°	–	(P)(1) 4478 B14 (700) (E)(1) RRUS-32 B2 (PCS) (E)(1) 4426 B66 (AWS)	18.1"x13.4"x8.3"	(E)(2) DC POWER, (E)(1) FIBER, (E)(1) Y-CABLE	
B3	PROPOSED	DOD + CBAND	AIR6419 B77G AIR6449 B77D (STACKED)	31.1X16.1X7.3 30.6X15.9X10.6	150'-0"±	153'-1"±	170°	–	–	–	–	
B4	PROPOSED	LTE 700 BC/850/WCS	OPA65R-BU8DA	96X21X7.8	150'-0"±	154'-0"±	170°	–	(P)(1) 4449 B5/B12 (700/850) (E)(1) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4"	(P)(1) Y-CABLE	
C1	–	–	–	–	–	–	–	–	–	–	(2) 1-5/8 COAX	(P) (1) RAYCAP DC9-48-60-24-8C-EV
C2	PROPOSED	LTE B14/PCS/AWS	TPA65R-BU8DA-K	96X20.7X7.7	150'-0"±	154'-0"±	280°	–	(P)(1) 4478 B14 (700) (E)(1) RRUS-32 B2 (PCS) (E)(1) 4426 B66 (AWS)	18.1"x13.4"x8.3"	(P)(3) 6 AWG DC POWER, (P)(1) 24 PAIR FIBER, (E)(2) DC POWER, (E)(1) FIBER, (E)(1) Y-CABLE	
C3	PROPOSED	DOD + CBAND	AIR6419 B77G AIR6449 B77D (STACKED)	31.1X16.1X7.3 30.6X15.9X10.6	150'-0"±	153'-1"±	280°	–	–	–	–	
C4	PROPOSED	LTE 700 BC/850/WCS	OPA65R-BU8DA	96X21X7.8	150'-0"±	154'-0"±	280°	–	(P)(1) 4449 B5/B12 (700/850) (E)(1) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4"	(P)(1) Y-CABLE	

NOTE:

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

NOTE:

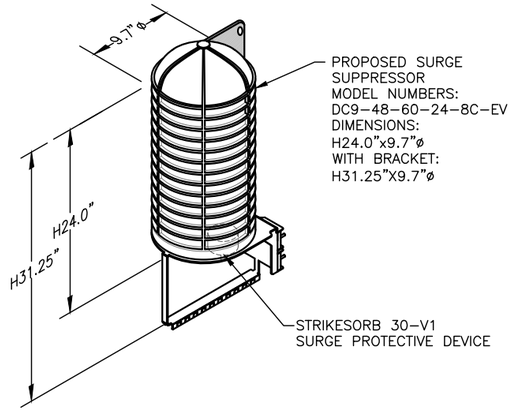
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:

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

FINAL ANTENNA SCHEDULE
SCALE: N.T.S

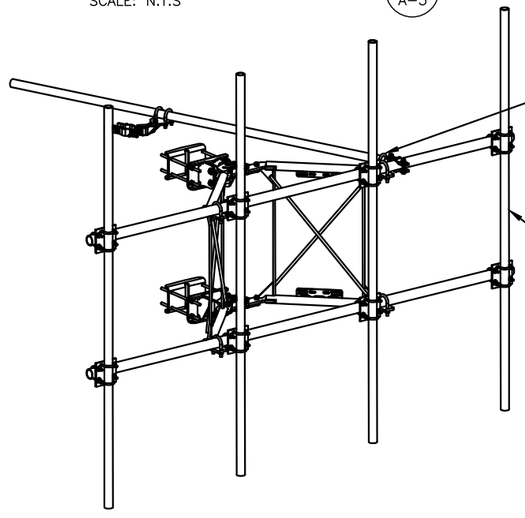
1 / A-3



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL
SCALE: N.T.S

1 / A-3



PROPOSED MOUNT (SITEPRO1 #VFA14-H10-2120) DETAIL
SCALE: N.T.S

2 / A-3

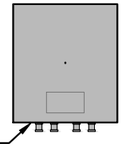
RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
3(P)	4449 B5/B12 (850/700)	17.9"x13.2"x10.4"
3(P)	4478 B14 (700)	18.1"x13.4"x8.3"
3(E)	RRUS-32 B2 (PCS)	27.2"x12.1"x7.0"
3(E)	RRUS-32 B30 (WCS)	27.2"x12.1"x7.0"
3(E)	4426 B66 (AWS)	14.9"x13.2"x5.8"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER



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

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL
SCALE: N.T.S

3 / A-3

HUDSON Design Group LLC
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SITE NUMBER: CTL01151
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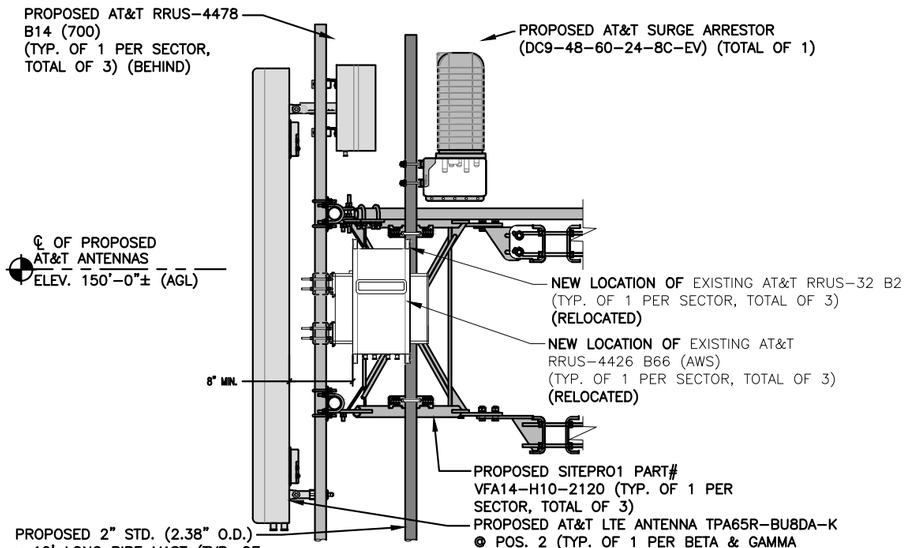
STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS

4TXRX SOFTWARE RETROFIT, 5G NR 1SR CBAND, 5G NR RADIO, LTE 4CBRE MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT 2022 UPGRADE

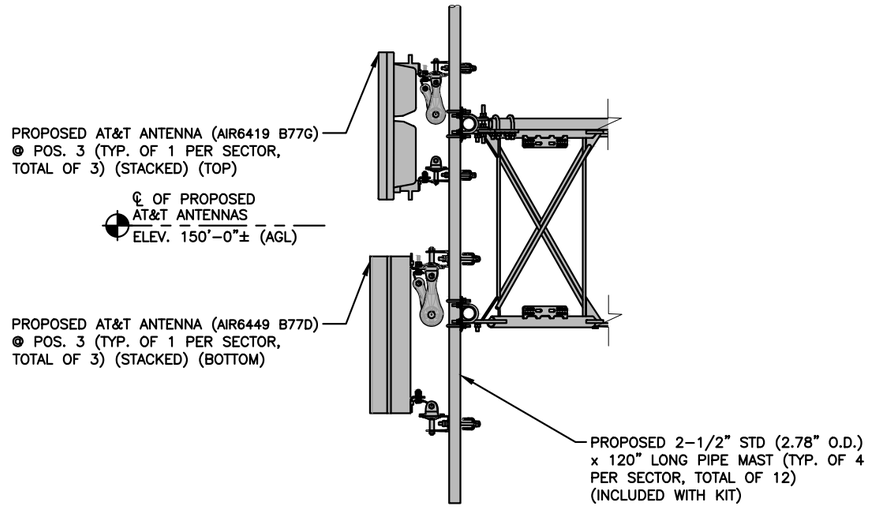
SITE NUMBER	DRAWING NUMBER	REV
CTL01151	A-3	B



PROPOSED ANTENNA @ POS. 2 (BETA & GAMMA SECTORS) — 1 / A-4

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

0 8" 1'-4" 2'-8" 4'-0"



PROPOSED ANTENNA @ POS. 3 — 2 / A-4

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

0 8" 1'-4" 2'-8" 4'-0"

NOTE:

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

NOTE:

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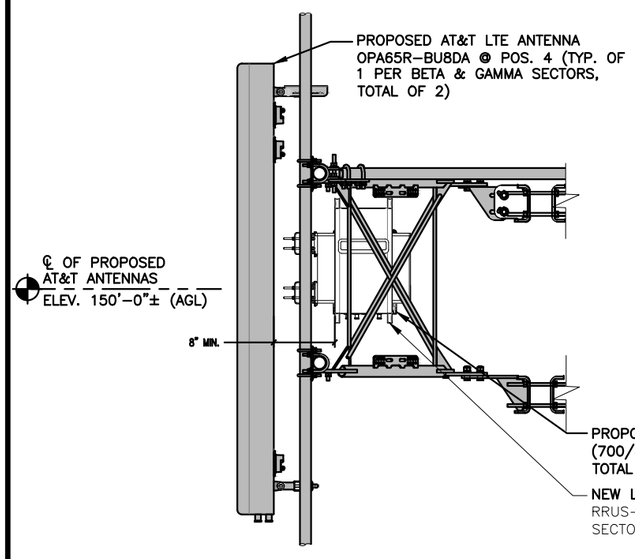
NOTE:

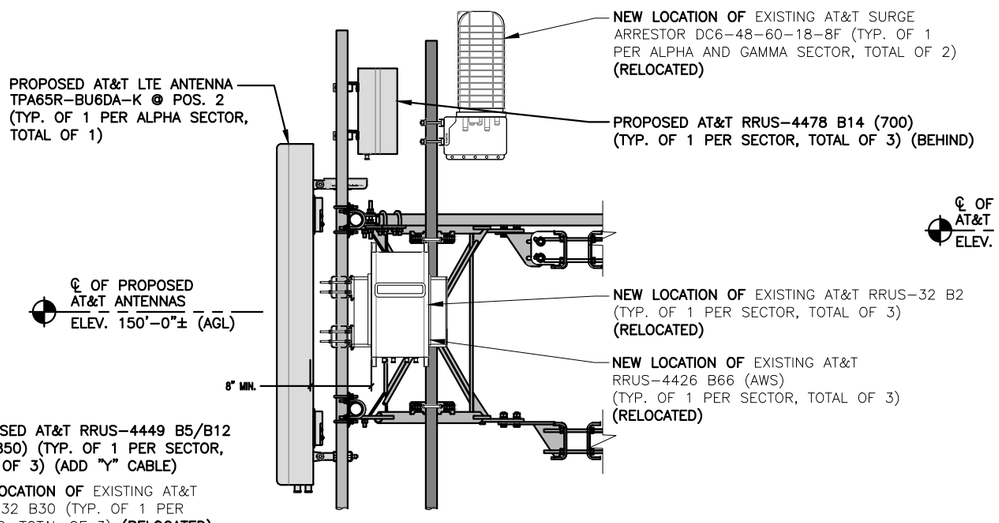
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



PROPOSED ANTENNA @ POS. 4 (BETA & GAMMA SECTORS) — 3 / A-4

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

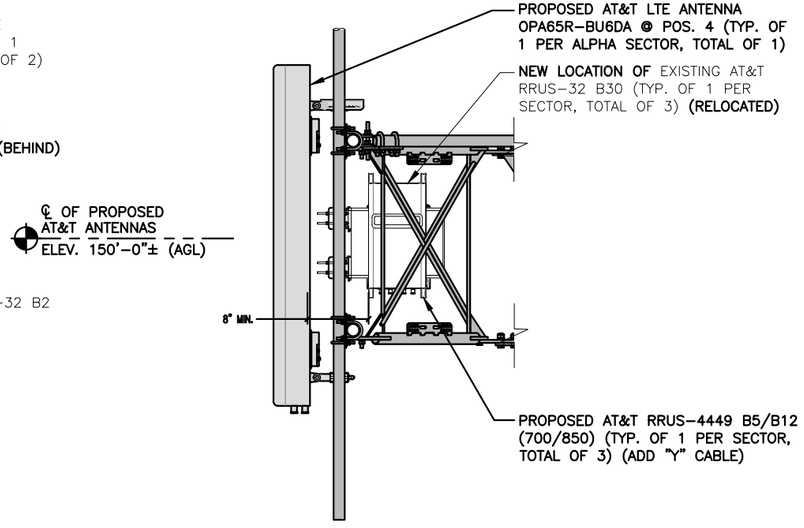
0 8" 1'-4" 2'-8" 4'-0"



PROPOSED ANTENNA @ POS. 2 (ALPHA SECTOR) — 4 / A-4

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

0 8" 1'-4" 2'-8" 4'-0"



PROPOSED ANTENNA @ POS. 4 (ALPHA SECTOR) — 4 / A-4

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

0 8" 1'-4" 2'-8" 4'-0"

HUDSON Design Group LLC
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WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL01151
SITE NAME: SIMSBURY CENTRAL

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SIMSBURY, CT 06070
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	08/05/22	ISSUED FOR PERMITTING	KW	AT	DPH
A	06/01/22	ISSUED FOR REVIEW	KW	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: JS

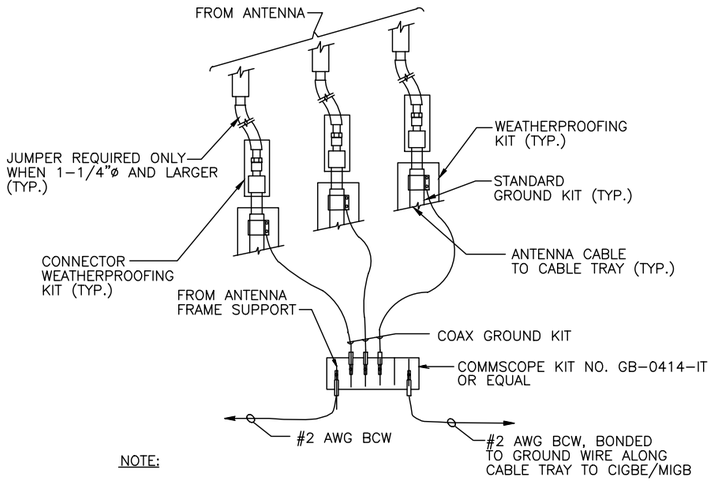
STATE OF CONNECTICUT — DANIEL P. HAMM — No. 24178 — LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS

4TXRX SOFTWARE RETROFIT, 5G NR 1SR CBAND, 5G NR RADIO, LTE SCOPE MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT 2022 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL01151	A-4	B



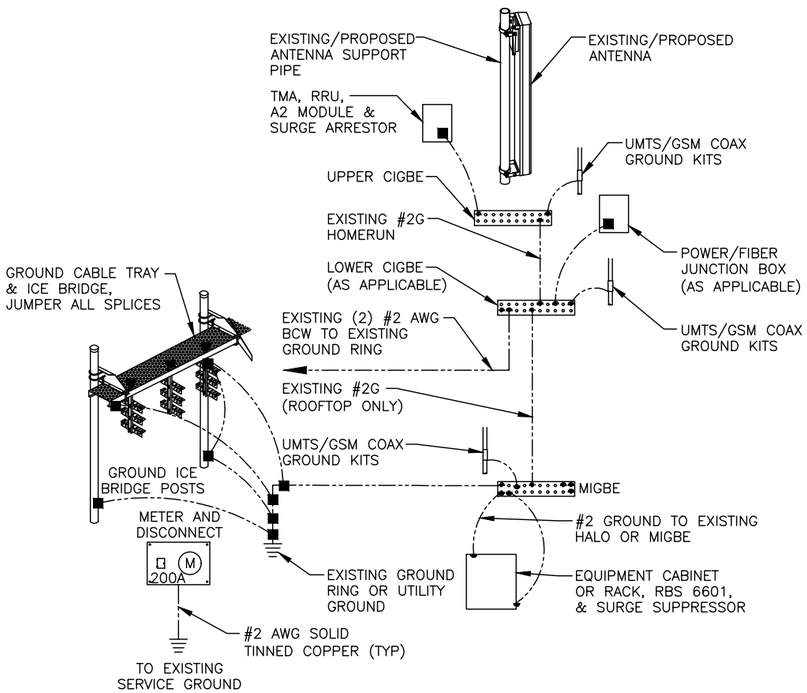
NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL

SCALE: N.T.S

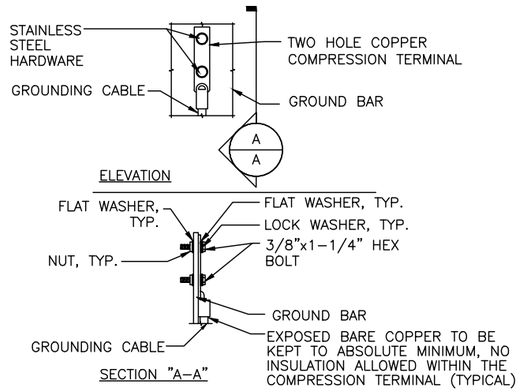
1 / G-1



GROUNDING RISER DIAGRAM

SCALE: N.T.S

2 / 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

SCALE: N.T.S

3 / G-1

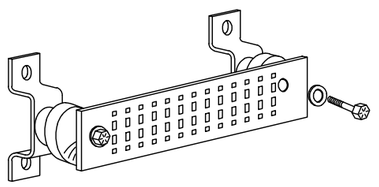
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

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

SECTION "A" – SURGE ABSORBERS

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



GROUND BAR - DETAIL (AS REQUIRED)

SCALE: N.T.S

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: JS

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

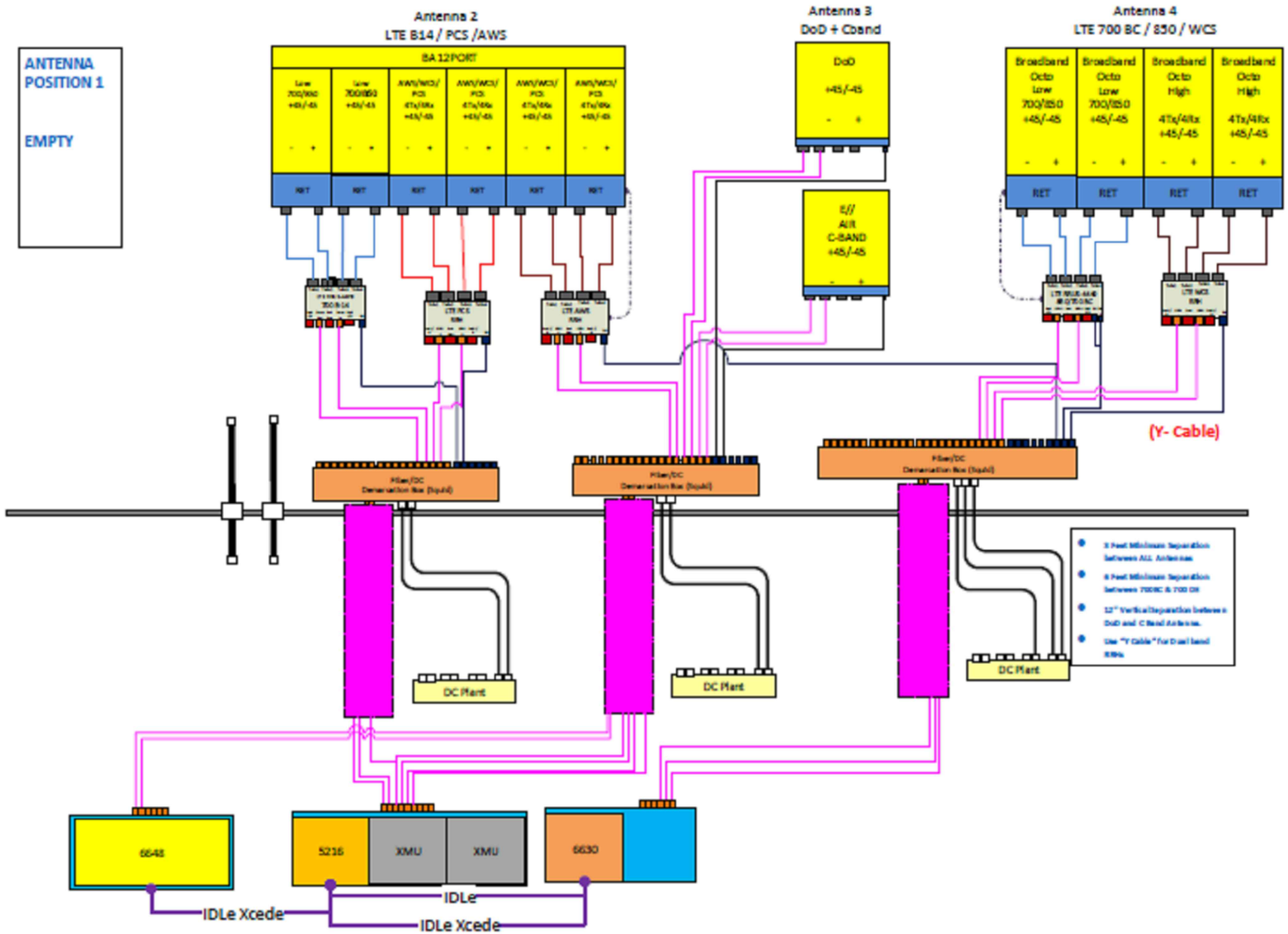
GROUNDING DETAILS

4TXRE SOFTWARE RETROFIT, 5G NR 1SK CBAND, 5G NR RADIO, LTE 4CBRE MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT 2022 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL01151	G-1	B

NOTE:

REV: 2
DATED: 03/11/2022
RFDS ID: 4831837



RF PLUMBING DIAGRAM (1 / RF–1)
SCALE: N.T.S

NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS.
3. RFDS USED FOR REFERENCE.

NOTE:

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

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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: JS

AT&T

RF PLUMBING DIAGRAM
4TXRX SOFTWARE RETROFIT, 5G NR 1SR CBAND, 5G NR RADIO, LTE 6C, RF MODIFICATIONS, 5G NR SOFTWARE RADIO, 4T4R ANTENNA RETROFIT 2022 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL01151	RF–1	B

EXHIBIT 2

Town of Simsbury, CT

Property Listing Report

Map Block Lot	Building #	Unique Identifier
F11 103 005		30569027

Property Information

Property Location	225 GRIST MILL ROAD
Mailing Address	P O BOX 711 SIMSBURY CT 06070
Land Use	Commercial Vacant Land
Zoning Code	I-2
Neighborhood	0239

Owner	ENSIGN-BICKFORD REALTY CORPORATION
Co-Owner	
Book / Page	0294/0600
Land Class	Commercial
Census Tract	
Acreage	0.23

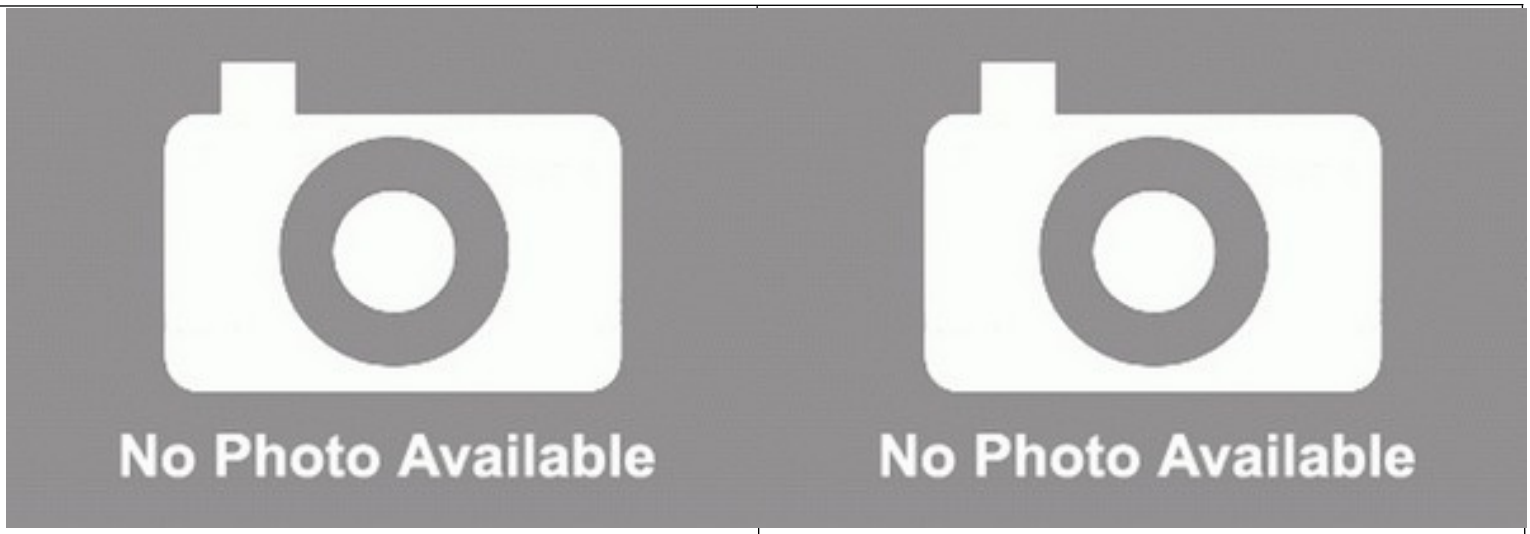
Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Outbuildings	120000	84000
Land	490188	343130
Total	610188	427130

Utility Information

Electric	No
Gas	No
Sewer	No
Public Water	No
Well	No



Primary Construction Details

Year Built		Heating Fuel		Livable Area (ft)		Bsmt Area	
Building Desc.		Heating Type		Building Use		Fin Bsmt Area	
Building Style		AC Type		Building Condition		Fin Bsmt Quality	
Stories		Bedrooms		Frame Type		Bsmt Access	
Exterior Walls		Full Bathrooms		Building Grade		Bsmt Gar	
Exterior Walls 2		Half Bathrooms		Fireplaces		Bsmt Sump Pump	
Interior Walls		Extra Fixtures		Wood Stoves			
Interior Walls 2		Total Rooms		Attic Access			
Interior Floors 1		Bath Style		Roof Style			
Interior Floors 2		Kitchen Style		Roof Cover			
		Occupancy					

Report Created On 8/2/2022

Town of Simsbury, CT

Property Listing Report | Map Block Lot: **F11 103 005** | Building #: | Unique Identifier: **30569027**

Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
Tower	Cell Tower	1	Average	0

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
ENSIGN-BICKFORD REALTY CORPORATION	0294_0600	11/25/1985	0

Report Created On **8/2/2022**

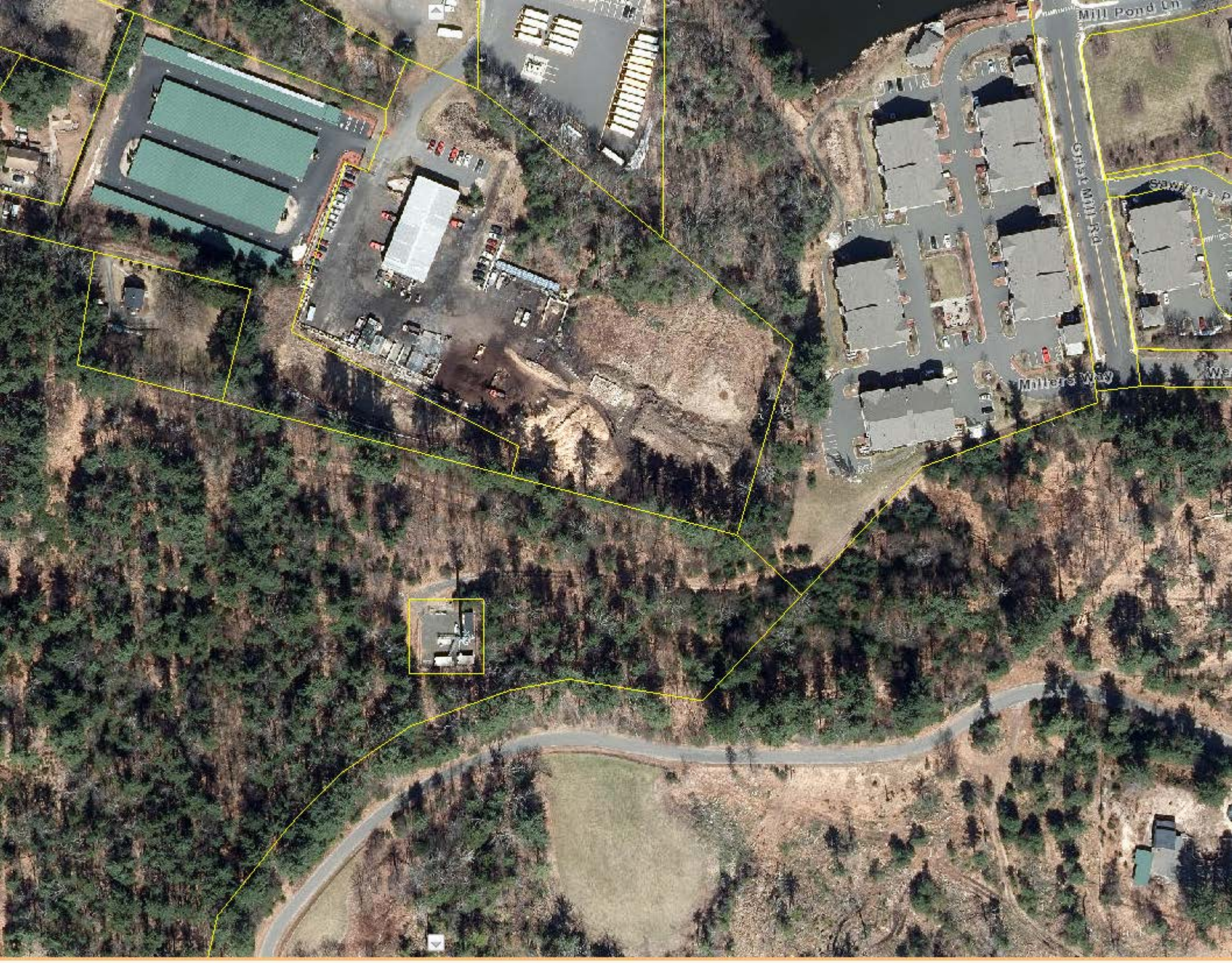

Mill Pond Ln
Grist Mill Rd
Millers Way

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 150 ft Rohn Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT10022-A

Customer Site Name: Simsbury 2, CT

Carrier Name: AT&T (App#: 200347-2)

Carrier Site ID / Name: CT1151 / Simsbury Central

Site Location: 225 Grist Mill Road

Simsbury, Connecticut

Hartford County

Latitude: 41.866708

Longitude: -72.815772

Analysis Result:

Max Structural Usage: 96.2% [Pass]

Max Foundation Usage: 83.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: +3.7%

Report Prepared By: Kevin Azisllari

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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Introduction

The purpose of this report is to summarize the analysis results on the 150 ft Rohn 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	Rohn Industries, Inc., File No. 50754AE, Drawing No. A020293, dated February 13, 2002
Foundation Drawing	Rohn Industries, Inc., File No. 50754AE, Drawing No. A020294 1-3, dated February 13, 2002
Geotechnical Report	FDH Engineering, Inc., Project No. 15BGSH1600, dated March 19, 2015
Modification Drawings	TES 124082, dated 03/02/2022
Mount Analysis	Hudson Design Group, FA Number: 10035290 Rev.1, dated 06/15/2022

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 1" 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_S = 0.179, S_1 = 0.064

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
-	150.7	3	Kathrein 800 10121 - Panel	Low Profile Platform	(6) 1 5/8" (1) 3" Conduit (2) 1/2" DC (4) 3/8" Fiber	AT&T
-	150.0	1	Cci HPA-65R-BUU-H6 - Panel			
-		2	Cci TPA-65R-LCUUUU-H8 - Panel			
-		1	Quintel QS66512-2 - Panel			
-		2	Cci HPA-65R-BUU-H8 - Panel			
-		6	Cci DTMABP7819VG12A TMA			
-		6	CCI TPX-070821			
-		3	Ericsson RRUS 11			
-		3	Ericsson RRUS 32 B2			
-		3	Ericsson RRUS32			
-		3	Ericsson 4426 B66			
-		3	CSS DBC-750			
-		2	Raycap DC6-48-60-18-8F			
-		3	Commscope ABT-DRDM-ADBH			
-		1	LMU Antenna - Panel			
19	140.0	6	Andrew SBNHH-1D65B - Panel	Modified Low Profile Platform w/ (1) handrail (HRK-14) and (3) Commscope BSAMNT-SBS-2-2	(12) 1 5/8" (2) 1 5/8" Hybrid (1) 1/2"	Verizon
20		3	Amphenol Antel BXA-70080-4CF- Panel			
21		3	Samsung XXDWMM-12.5-65-8T-CBRS			
22		3	Samsung MT6407-77A			
23		3	Samsung B2/B66A RRHBR049			
24		3	Samsung B5/B13 RRHBR04C			
25		2	Raycap RVZDC-6627-PF48			
26		3	Samsung CBRS RRH-RT4401			
27	131.0	3	RFS APXVAALL24-43-U-NA20 Panel	(1) PV-LPPGS-12M-HR2-AP3 with PV-KKRS-3-M	(12) 7/8" (3) 1 5/8" Hybrid	T-Mobile
28		3	Ericsson AIR6449 B41 Panel			
29		3	Ericsson AIR32 KRD901146-1_B66A_B2A (Octo) Panel			
30		3	Ericsson KRY 112 144-1 Double TMAs			
31		3	RFS ATMAA1412D-1A20 TMA			
32		3	Commscope SDX1926Q-43 Diplexers			
33		3	Ericsson Radio 4449 B71+B85 RRUs			
34		3	Ericsson 4415 B25 RRUs			
35		3	Kathrein 782 11056			
36	123.0	2	RFS - APXVSPP18-C-A20 - Panel	Platform w/ Handrail Kit [SitePro1 HRK14]	(4) 1-1/4" Fiber	Sprint Nextel
37		1	RFS - APXVSPP18-C-A20 (50 lb) - Panel			
38		3	RFS - APXVTM14-C-I20 - Panel			
39		4	RFS - ACU-A20-N - RET			
40		3	ALU - TD-RRH8x20-25 - RRU			
41		3	ALU - 1900 MHz RRH - RRU			
42		3	ALU - 800 MHz RRH - RRU			
43		3	ALU - 800 MHz Filter			

Continued…

44	110.0	3	JMA Wireless MX08FRO665-21 - Panel	Platform w/HRK Commscope MC-PK8-DSH	(1) 1.60" Hybrid	Dish Wireless
45		3	Fujitsu TA08025-B605 RRU			
46		3	Fujitsu TA08025-B604 RRU			
47		1	Raycap RDIDC-9181-PF-48-OVP			

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
1	151.75	3	Ericsson AIR6419 B77G - Panel	(3) Sector Frames SitePro1 VFA14-H10-2120 (2) Site Pro1 LWRM (6) Site Pro1 MM01	(3) 0.92" DC (6) 1 5/8" (1) 1/2" Fiber (1) 3" Conduit* (4) 3/4" DC (3) 3/8" Fiber	AT&T
2	150.0	1	Cci TPA65R-BU6DA-K - Panel			
3		1	Cci OPA65R-BU6DA - Panel			
4		2	Cci TPA65R-BU8DA-K - Panel			
5		2	Cci OPA65R-BU8DA - Panel			
6		6	Cci DTMABP7819VG12A TMA			
7		6	CCI TPX-070821 - Diplexer			
8		3	Ericsson 4426 B66 - RRU			
9		3	Ericsson RRUS32 - RRU			
10		3	Ericsson RRUS 32 B2 - RRU			
11		3	Ericsson RRUS 4478 B14 - RRU			
12		3	Ericsson RRUS 4449 B5/B12 - RRU			
13		3	CSS DBC-750 - Combiners			
14		2	Raycap DC6-48-60-18-8F - DC Surge			
15		1	Raycap DC9-48-60-24-8C-EV - DC Surge			
16		3	Commscope ABT-DRDM-ADBH - BiasT			
17		1	LMU Antenna unknown - LMU Antenna			
18	148.75	3	Ericsson AIR6449 B77D - Panel			

*Housing (2) 1/2" DC power / (4) 3/8" Fiber

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:	**96.2%**	**89.6%**	**69.4%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4394.9	38.2	53.6

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 1.4163 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.

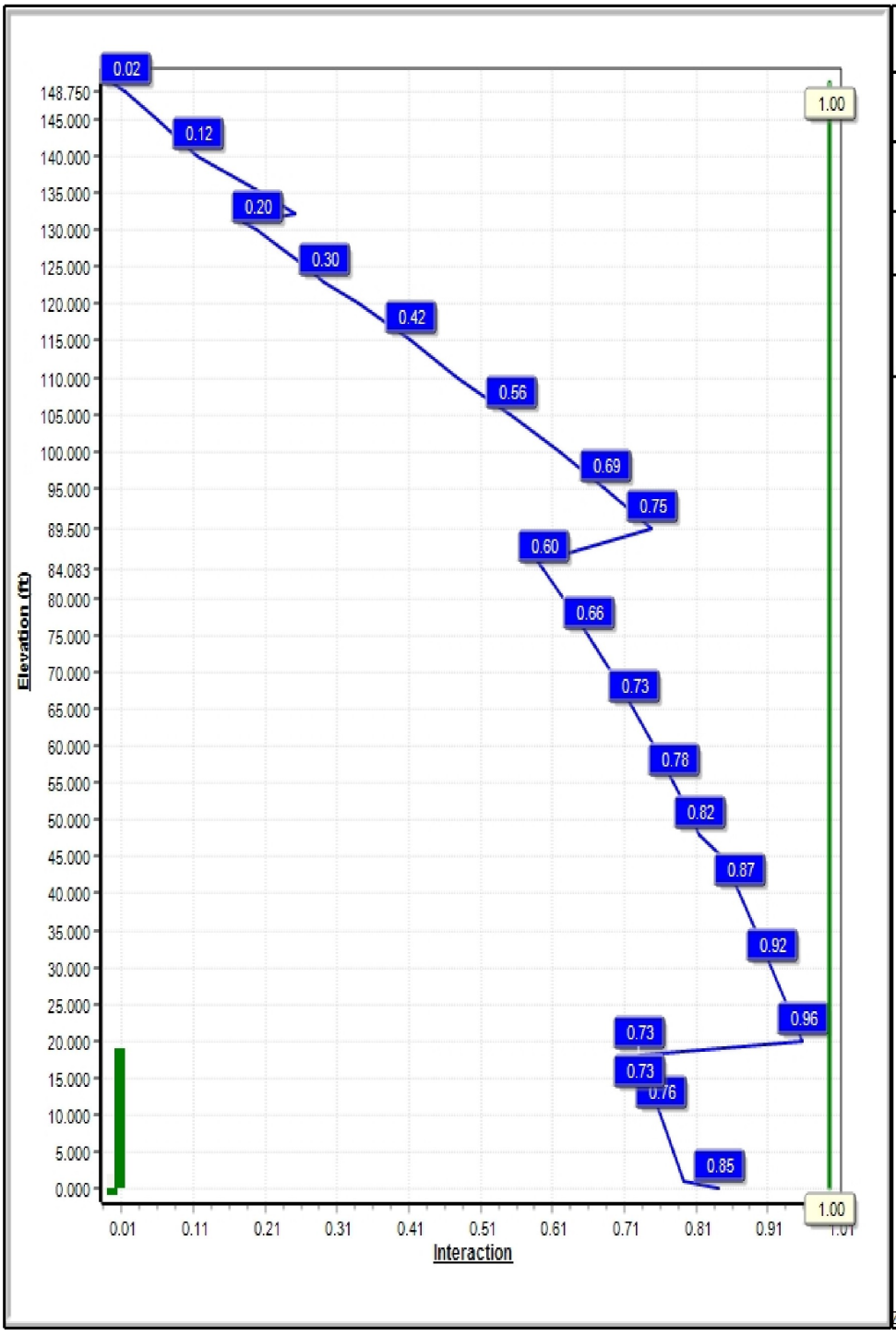
Usage Diagram - Max Ratio 96.17% at 20.0ft

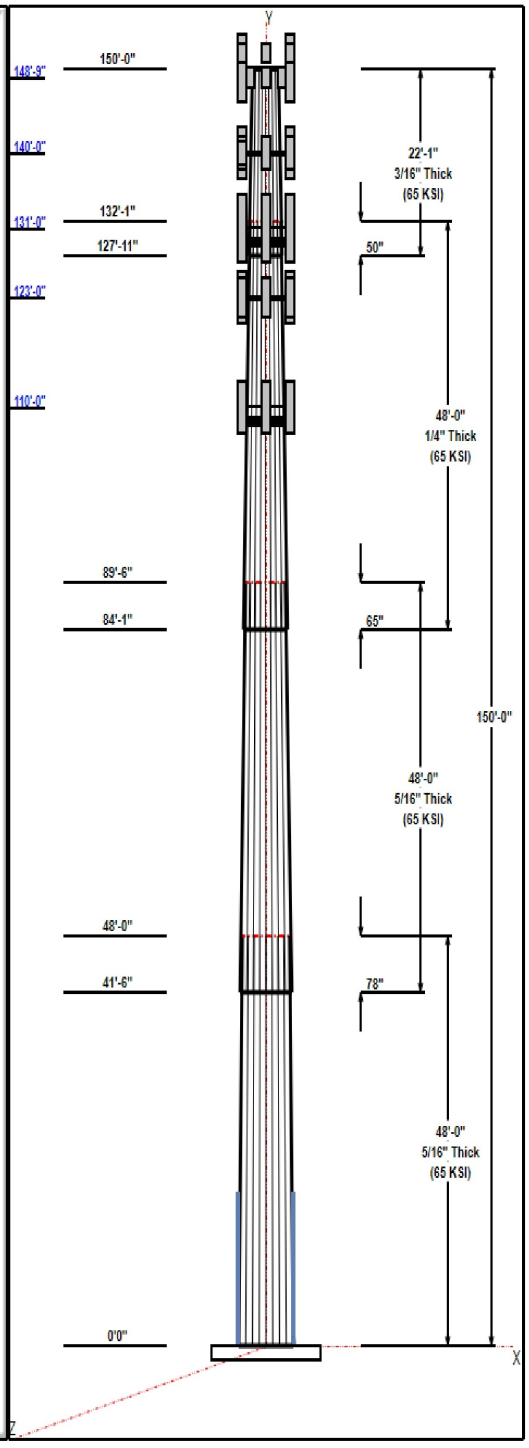
Structure:	CT10022-A-SBA	**Code:**	EIA/TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Gh:**	1.1		
Base Elev:	0.000 (ft)			Page: 1	

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	23
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 93 mph Wind





Structure: CT10022-A-SBA

Type: Tapered
Site Name: Simsbury 2, CT
Height: 150.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23136

7/18/2022

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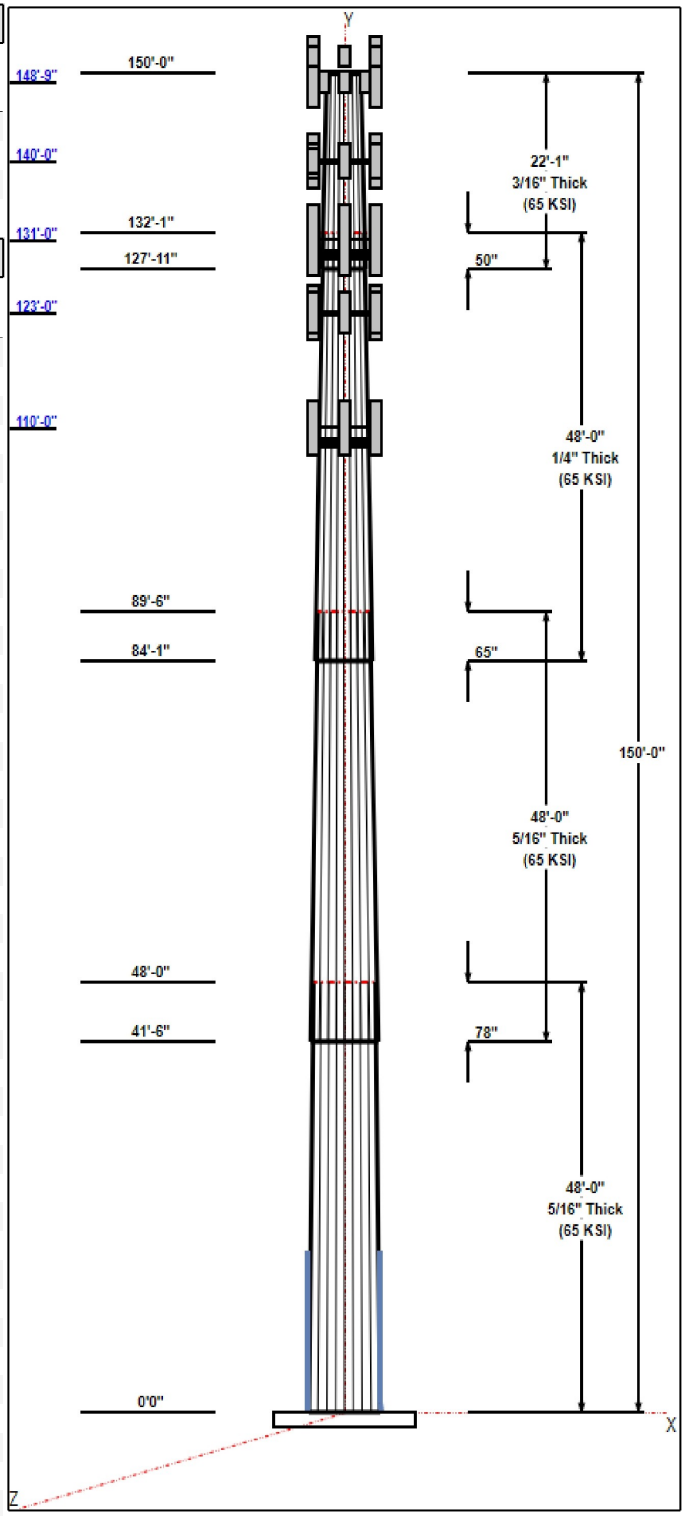
Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	50.39	61.50	0.313		0.23136	65
2	48.00	41.42	52.52	0.313	Slip	0.23136	65
3	48.00	32.07	43.17	0.250	Slip	0.23136	65
4	22.08	28.30	33.41	0.188	Slip	0.23136	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
150.00	150.00	1	Cci TPA65R-BU6DA-K	AT&T
150.00	150.00	1	Cci OPA65R-BU6DA	AT&T
150.00	150.00	2	Cci TPA65R-BU8DA-K	AT&T
150.00	150.00	2	Cci OPA65R-BU8DA	AT&T
150.00	151.75	3	Ericsson AIR6419 B77G	AT&T
150.00	150.00	6	Cci DTMABP7819VG12A	AT&T
150.00	150.00	6	CCI TPX-070821	AT&T
150.00	150.00	3	Ericsson 4426 B66	AT&T
150.00	150.00	3	Ericsson RRUS32	AT&T
150.00	150.00	3	Ericsson RRUS 32 B2	AT&T
150.00	150.00	3	Ericsson RRUS 4478 B14	AT&T
150.00	150.00	3	Ericsson RRUS 4449	AT&T
150.00	150.00	3	CSS DBC-750	AT&T
150.00	150.00	2	Raycap DC6-48-60-18-8F	AT&T
150.00	150.00	1	Raycap	AT&T
150.00	150.00	3	Commscope	AT&T
150.00	150.00	1	LMU Antenna unknown	AT&T
150.00	150.00	1	Proposed SitePro1	AT&T
148.75	148.75	3	Ericsson AIR6449 B77D	AT&T
140.00	140.00	3	Antel	Verizon
140.00	140.00	6	Andrew SBNHH-1D65B	Verizon
140.00	140.00	1	Low Profile Platform	Verizon
140.00	140.00	3	XXDWMM-12.5-65-8T-CB	Verizon
140.00	140.00	3	BSAMNT-SBS-2-2	Verizon
140.00	140.00	3	B2/B66A RRHBR049	Verizon
140.00	140.00	3	B5/B13 RRHBR04C	Verizon
140.00	140.00	2	RVZDC-6627-PF48	Verizon
140.00	140.00	1	SamsungMT6407-77A	Verizon
140.00	140.00	3	CBRS RRH-RT4401	Verizon
131.00	131.00	3	APXVAALL24-43-U-NA20	T-Mobile
131.00	131.00	3	AIR6449 B41	T-Mobile
131.00	131.00	3	AIR32	T-Mobile
131.00	131.00	1	PV-LPPGS-12M-HR2-AP3	T-Mobile
131.00	131.00	3	KRY 112 144-1 Double	T-Mobile
131.00	131.00	3	ATMAA1412D-1A20 TMA	T-Mobile
131.00	131.00	3	SDX1926Q-43 Diplexer	T-Mobile
131.00	131.00	3	Radio 4449 B71+B85	T-Mobile
131.00	131.00	3	Ericsson 4415 B25	T-Mobile
131.00	131.00	3	Bias-T 782 11056	T-Mobile
123.00	123.00	3	ALU - 800 MHz RRH -	Sprint Nextel
123.00	123.00	4	RFS - ACU-A20-N - RET	Sprint Nextel
123.00	123.00	1	APXVSPP18-C-A20 (50 lb)	Sprint Nextel
123.00	123.00	3	ALU - 800 MHz Filter	Sprint Nextel
123.00	123.00	3	APXVTM14-C-I20	Sprint Nextel
123.00	123.00	2	APXVSPP18-C-A20	Sprint Nextel



123.00	123.00	3	ALU - TD-RRH8x20-25 -	Sprint Nextel
123.00	123.00	3	ALU - 1900 MHz RRH -	Sprint Nextel
123.00	123.00	1	Platform w/ HRK Handrail	Sprint Nextel
110.00	110.00	3	JMA Wireless	Dish Wireless
110.00	110.00	1	MC-PK8-DSH	Dish Wireless
110.00	110.00	3	Fujitsu TA08025-B605	Dish Wireless
110.00	110.00	3	Fujitsu TA08025-B604	Dish Wireless
110.00	110.00	1	Raycap	Dish Wireless

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	150.00	Inside	0.92" DC	AT&T
0.00	150.00	Inside	1 5/8" Coax	AT&T
0.00	150.00	Inside	1/2" Fiber	AT&T
0.00	150.00	Inside	3" Conduit	AT&T
0.00	150.00	Inside	3/4" DC	AT&T
0.00	150.00	Inside	3/8" Fiber	AT&T
0.00	141.00	Inside	1 5/8" Coax	Verizon
0.00	141.00	Inside	1 5/8" Hybrid	Verizon
0.00	141.00	Inside	1/2" Coax	Verizon
0.00	131.00	Inside	1 5/8" Hybrid	T-Mobile
0.00	131.00	Inside	7/8" Coax	T-Mobile
0.00	123.00	Inside	1-1/4" Fiber	Sprint Nextel
0.00	110.00	Outside	1.60" Hybrid	Dish Wireless
0.00	20.00	Outside	1.25" Reinforcing plate	

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
14	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.0000	73.5	50.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	4394.9	38.2	53.6
0.9D + 1.6W 93 mph Wind	4343.9	38.2	40.2
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1467.8	12.4	98.6
1.2D + 1.0E	340.4	2.6	53.6
0.9D + 1.0E	336.0	2.6	40.2
1.0D + 1.0W 60 mph Wind	1135.9	9.9	44.6

Structure: CT10022-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Simsbury 2, CT
Height: 150.00 (ft)

7/18/2022

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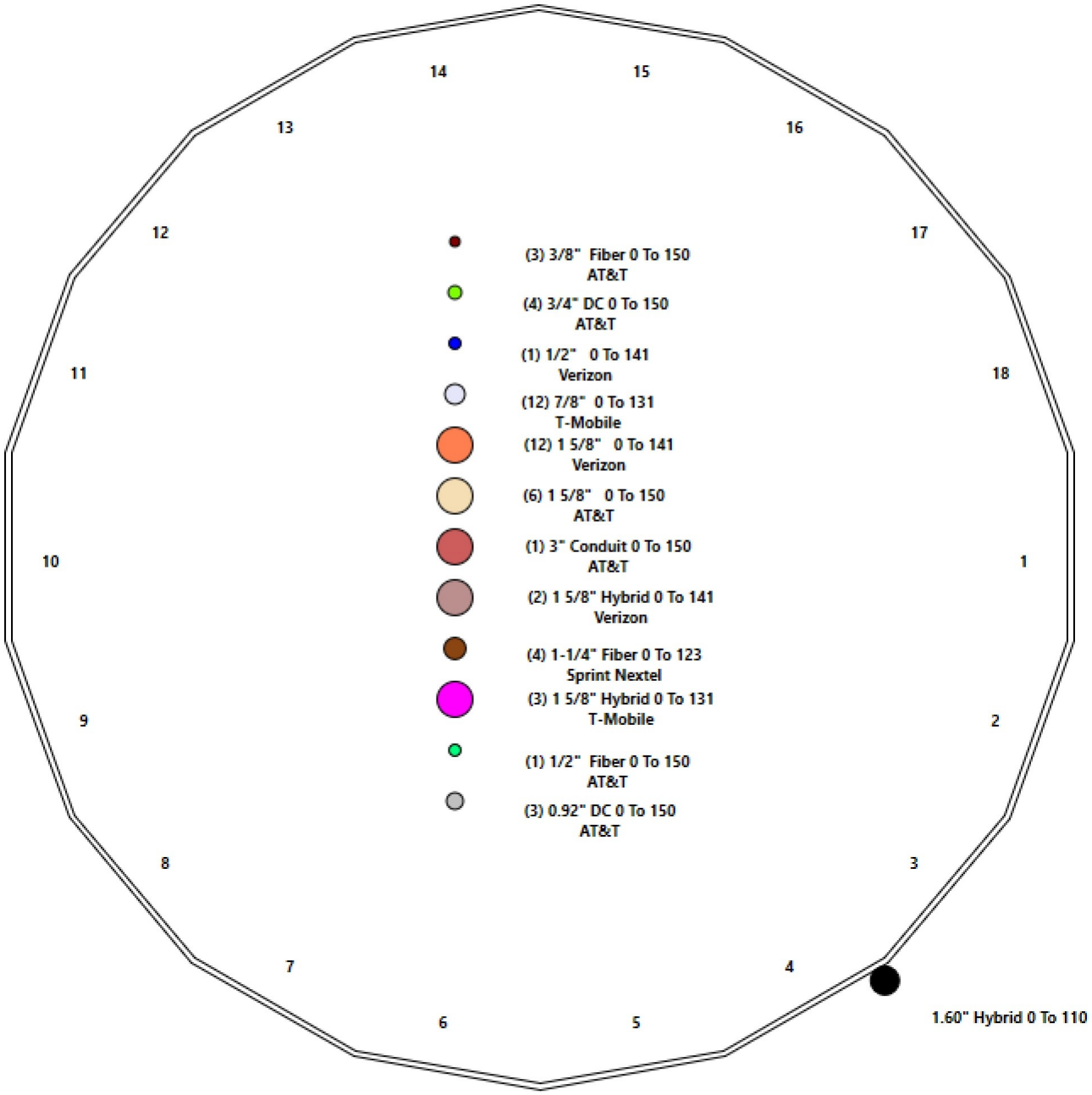

Shaft Properties

Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.3125	65		0.00	9,013
2	18	48.000	0.3125	65	Slip	78.00	7,559
3	18	48.000	0.2500	65	Slip	65.00	4,843
4	18	22.083	0.1875	65	Slip	50.00	1,371
					Total Shaft Weight:		**22,786**

	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	61.50	0.00	60.69	28706.65	33.29	196.80	50.39	48.00	49.67	15741.4	27.02	161.2	0.231360
2	52.52	41.50	51.78	17835.36	28.23	168.08	41.42	89.50	40.77	8703.68	21.96	132.5	0.231360
3	43.17	84.08	34.06	7926.99	29.04	172.69	32.07	132.08	25.25	3228.71	21.21	128.2	0.231360
4	33.41	127.9	19.77	2755.84	30.00	178.16	28.30	150.00	16.73	1669.78	25.20	150.9	0.231360

Additional Steel

							Intermediate Connectors		Termination Connectors			
Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Description	Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty
0.00	1.00	3	SOL 2 1/4" William R71	128	150	5.62	5/8" Hollo Bolt	12.00	5/8" Hollo Bolt	3.00		
1.00	18.00	3	LNP LP6X125-B-20T	65	80	0.00	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt	3.00		12

Load Summary

Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

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Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	150.00	Cci TPA65R-BU6DA-K	1	67.50	12.87	0.72	465.58	14.835	0.72	0.00	0.00
2	150.00	Cci OPA65R-BU6DA	1	63.30	12.71	0.73	465.49	14.724	0.73	0.00	0.00
3	150.00	Cci TPA65R-BU8DA-K	2	82.50	17.87	0.72	611.27	20.265	0.72	0.00	0.00
4	150.00	Cci OPA65R-BU8DA	2	69.00	11.20	0.89	423.45	13.421	0.89	0.00	0.00
5	150.00	Ericsson AIR6419 B77G	3	66.10	3.80	0.76	194.38	4.861	0.76	0.00	1.75
6	150.00	Cci DTMABP7819VG12A TMA	6	19.20	1.14	0.67	53.23	2.166	0.67	0.00	0.00
7	150.00	CCI TPX-070821	6	9.50	0.61	0.67	26.76	1.426	0.67	0.00	0.00
8	150.00	Ericsson 4426 B66	3	48.50	1.15	0.67	107.06	1.808	0.67	0.00	0.00
9	150.00	Ericsson RRUS32	3	77.00	1.65	0.67	149.00	2.448	0.67	0.00	0.00
10	150.00	Ericsson RRUS 32 B2	3	53.00	2.74	0.67	179.89	3.737	0.67	0.00	0.00
11	150.00	Ericsson RRUS 4478 B14	3	59.40	1.65	0.67	114.69	2.341	0.67	0.00	0.00
12	150.00	Ericsson RRUS 4449 B5/B12	3	71.00	1.97	0.67	142.17	2.700	0.67	0.00	0.00
13	150.00	CSS DBC-750	3	4.80	0.51	0.67	17.69	1.216	0.67	0.00	0.00
14	150.00	Raycap DC6-48-60-18-8F	2	31.80	0.92	1.00	114.23	1.504	1.00	0.00	0.00
15	150.00	Raycap DC9-48-60-24-8C-EV	1	26.20	1.14	1.00	167.52	3.256	1.00	0.00	0.00
16	150.00	Commscope ABT-DRDM-ADBH	3	1.10	0.05	0.67	4.07	0.307	0.67	0.00	0.00
17	150.00	LMU Antenna unknown	1	1.50	0.13	0.67	7.43	0.525	0.67	0.00	0.00
18	150.00	Proposed SitePro1 VFA14-H10-2120	1	2500.00	62.50	1.00	5408.69	29.400	1.00	0.00	0.00
19	148.75	Ericsson AIR6449 B77D	3	88.00	4.13	0.85	282.75	5.298	0.85	0.00	0.00
20	140.00	Antel BXA-70080-4CF-EDIN-0	3	30.30	3.56	0.88	325.74	6.005	0.88	0.00	0.00
21	140.00	Andrew SBNHH-1D65B	6	72.70	8.08	0.78	355.83	9.800	0.78	0.00	0.00
22	140.00	Low Profile Platform	1	1500.00	22.00	1.00	3233.22	45.387	1.00	0.00	0.00
23	140.00	XXDWMM-12.5-65-8T-CBRS	3	23.10	1.18	0.50	107.36	2.213	0.50	0.00	0.00
24	140.00	BSAMNT-SBS-2-2	3	67.00	3.50	1.00	190.87	8.353	1.00	0.00	0.00
25	140.00	B2/B66A RRHBR049	3	132.20	6.51	0.50	391.04	8.087	0.50	0.00	0.00
26	140.00	B5/B13 RRHBR04C	3	70.40	1.88	0.50	139.51	2.610	0.50	0.00	0.00
27	140.00	RVZDC-6627-PF48	2	32.00	3.79	1.00	209.98	4.887	1.00	0.00	0.00
28	140.00	SamsungMT6407-77A	1	79.40	4.69	0.70	248.68	5.963	0.75	0.00	0.00
29	140.00	CBRS RRH-RT4401	3	15.20	0.85	0.50	41.25	1.762	0.50	0.00	0.00
30	131.00	APXVAALL24-43-U-NA20	3	122.80	20.24	0.70	707.75	22.769	0.70	0.00	0.00
31	131.00	AIR6449 B41	3	103.00	5.65	0.71	283.37	6.900	0.71	0.00	0.00
32	131.00	AIR32 KRD901146-1_B66A_B2A	3	132.20	6.51	0.87	388.92	8.076	0.87	0.00	0.00
33	131.00	PV-LPPGS-12M-HR2-AP3	1	2155.00	34.10	1.00	5123.28	65.413	1.00	0.00	0.00
34	131.00	KRY 112 144-1 Double	3	11.00	0.41	0.50	25.18	1.035	0.50	0.00	0.00
35	131.00	ATMAA1412D-1A20 TMA	3	13.00	1.17	0.50	47.96	2.199	0.50	0.00	0.00
36	131.00	SDX1926Q-43 Diplexer	3	6.00	0.29	0.50	18.89	0.842	0.50	0.00	0.00
37	131.00	Radio 4449 B71+B85	3	73.20	1.97	0.50	149.15	2.719	0.50	0.00	0.00
38	131.00	Ericsson 4415 B25	3	46.00	1.64	0.50	100.07	2.318	0.50	0.00	0.00
39	131.00	Bias-T 782 11056	3	1.50	0.13	0.50	7.35	0.520	0.50	0.00	0.00
40	123.00	ALU - 800 MHz RRH - RRU	3	53.00	2.49	0.50	149.68	3.985	0.50	0.00	0.00
41	123.00	RFS - ACU-A20-N - RET	4	1.00	0.14	0.50	6.62	0.528	0.50	0.00	0.00
42	123.00	APXVSPP18-C-A20 (50 lb)	1	50.00	8.02	1.00	248.19	11.672	1.00	0.00	0.00
43	123.00	ALU - 800 MHz Filter	3	8.80	0.78	0.67	31.86	1.626	0.67	0.00	0.00
44	123.00	APXVTM14-C-I20	3	55.00	6.34	0.79	277.88	7.824	0.79	0.00	0.00
45	123.00	APXVSPP18-C-A20	2	57.00	8.02	0.83	282.94	11.672	0.83	0.00	0.00
46	123.00	ALU - TD-RRH8x20-25 - RRU	3	70.00	4.05	0.50	223.81	5.138	0.50	0.00	0.00
47	123.00	ALU - 1900 MHz RRH - RRU	3	60.00	2.71	0.50	165.56	4.362	0.50	0.00	0.00
48	123.00	Platform w/ HRK Handrail Kit	1	1600.00	32.00	1.00	3424.98	65.580	1.00	0.00	0.00
49	110.00	JMA Wireless MX08FRO665-21	3	64.50	12.49	0.74	440.48	14.383	0.74	0.00	0.00
50	110.00	MC-PK8-DSH	1	1727.00	37.59	1.00	3908.72	98.645	1.00	0.00	0.00

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
51	110.00	Fujitsu TA08025-B605 RRU	3	75.00	1.96	0.50	142.61	2.685	0.50	0.00	0.00
52	110.00	Fujitsu TA08025-B604 RRU	3	63.90	1.96	0.50	129.34	2.685	0.50	0.00	0.00
53	110.00	Raycap RDIDC-9181-PF-48-OVP	1	21.90	2.01	1.00	90.73	2.745	1.00	0.00	0.00
		Totals:	**140**	**16,246.80**			**45,749.63**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	150.00	(3) 0.92" DC	0.00	Inside
0.00	150.00	(6) 1 5/8" Coax	0.00	Inside
0.00	150.00	(1) 1/2" Fiber	0.00	Inside
0.00	150.00	(1) 3" Conduit	0.00	Inside
0.00	150.00	(4) 3/4" DC	0.00	Inside
0.00	150.00	(3) 3/8" Fiber	0.00	Inside
0.00	141.00	(12) 1 5/8" Coax	0.00	Inside
0.00	141.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	141.00	(1) 1/2" Coax	0.00	Inside
0.00	131.00	(3) 1 5/8" Hybrid	0.00	Inside
0.00	131.00	(12) 7/8" Coax	0.00	Inside
0.00	123.00	(4) 1-1/4" Fiber	0.00	Inside
0.00	110.00	(1) 1.60" Hybrid	1.60	Outside
0.00	20.00	(3) 1.25" Reinforcing plate	1.25	Outside

Shaft Section Properties

Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Increment Length: **5 (ft)**

											Additional Reinforcing			
Elev (ft)	**Description**	**Thick (in)**	**Flat Dia (in)**	**Area (in^2)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Fy (ksi)**	**Fb (ksi)**	**Weight (lb)**	**Area (in^2)**	**Ixp (in^4)**	**Iyp (in^4)**	**Weight (lb)**
0.00	RB1	0.3125	61.500	60.688	28706.7	33.29	196.80	65	62	0.0	12.24	10534.3	6610.2	
1.00	RT1 RB2	0.3125	61.269	60.459	28382.2	33.16	196.06	65	62	206.1	22.50	13463.4	8454.7	76.6
5.00		0.3125	60.343	59.541	27109.1	32.64	193.10	65	63	816.7	22.50	13068.1	8206.7	306.2
10.00		0.3125	59.186	58.393	25571.9	31.99	189.40	65	64	1003.3	22.50	12582.3	7901.9	382.8
15.00		0.3125	58.030	57.246	24093.9	31.33	185.69	65	65	983.7	22.50	12105.7	7603.0	382.8
18.00	RT2	0.3125	57.336	56.558	23235.1	30.94	183.47	65	65	580.9	22.50	11824.2	7426.4	229.7
20.00		0.3125	56.873	56.099	22674.1	30.68	181.99	65	65	383.3				
25.00		0.3125	55.716	54.951	21311.1	30.03	178.29	65	66	944.7				
30.00		0.3125	54.559	53.804	20003.9	29.37	174.59	65	67	925.2				
35.00		0.3125	53.402	52.657	18751.2	28.72	170.89	65	68	905.7				
40.00		0.3125	52.246	51.509	17552.0	28.07	167.19	65	68	886.1				
41.50	Bot - Section 2	0.3125	51.899	51.165	17202.5	27.87	166.08	65	69	262.0				
45.00		0.3125	51.089	50.362	16405.0	27.42	163.48	65	69	1216.5				
48.00	Top - Section 1	0.3125	51.020	50.293	16338.2	27.38	163.26	65	69	1027.5				
50.00		0.3125	50.557	49.834	15895.0	27.12	161.78	65	70	340.7				
55.00		0.3125	49.400	48.687	14822.2	26.46	158.08	65	70	838.1				
60.00		0.3125	48.243	47.540	13798.8	25.81	154.38	65	71	818.6				
65.00		0.3125	47.087	46.392	12823.6	25.16	150.68	65	72	799.1				
70.00		0.3125	45.930	45.245	11895.5	24.51	146.98	65	73	779.6				
75.00		0.3125	44.773	44.098	11013.3	23.85	143.27	65	73	760.0				
80.00		0.3125	43.616	42.950	10175.8	23.20	139.57	65	74	740.5				
84.08	Bot - Section 3	0.3125	42.671	42.013	9524.3	22.67	136.55	65	75	590.3				
85.00		0.3125	42.459	41.803	9381.9	22.55	135.87	65	75	236.7				
89.50	Top - Section 2	0.2500	41.918	33.063	7252.7	28.15	167.67	65	68	1144.8				
90.00		0.2500	41.803	32.971	7192.5	28.07	167.21	65	68	56.2				
95.00		0.2500	40.646	32.053	6608.3	27.26	162.58	65	69	553.2				
100.00		0.2500	39.489	31.135	6056.7	26.44	157.96	65	70	537.5				
105.00		0.2500	38.332	30.217	5536.7	25.63	153.33	65	71	521.9				
110.00		0.2500	37.175	29.299	5047.3	24.81	148.70	65	72	506.3				
115.00		0.2500	36.019	28.381	4587.6	23.99	144.07	65	73	490.7				
120.00		0.2500	34.862	27.463	4156.8	23.18	139.45	65	74	475.1				
123.00		0.2500	34.168	26.913	3911.7	22.69	136.67	65	75	277.5				
125.00		0.2500	33.705	26.546	3753.8	22.36	134.82	65	75	181.9				
127.92	Bot - Section 4	0.2500	33.030	26.010	3531.2	21.89	132.12	65	76	260.8				
130.00		0.2500	32.548	25.628	3377.7	21.55	130.19	65	76	322.2				
131.00		0.2500	32.317	25.444	3305.6	21.38	129.27	65	76	152.9				
132.08	Top - Section 3	0.1875	32.441	19.194	2522.8	29.10	173.02	65	67	164.5				
135.00		0.1875	31.766	18.793	2367.8	28.46	169.42	65	68	188.5				
140.00		0.1875	30.610	18.104	2117.0	27.37	163.25	65	69	313.9				
145.00		0.1875	29.453	17.416	1884.5	26.29	157.08	65	70	302.2				
148.75		0.1875	28.585	16.900	1721.8	25.47	152.45	65	71	218.9				
150.00		0.1875	28.296	16.727	1669.8	25.20	150.91	65	72	71.5				
									Total Weight	**22785.8**				**1378.1**

Wind Loading - Shaft

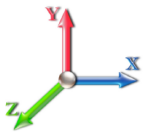
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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	RB1	1.00	0.85	17.879	19.67	446.21	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1 RB2	1.00	0.85	17.879	19.67	444.53	0.650	0.000	1.00	5.194	3.38	106.2	0.0	247.3
5.00		1.00	0.85	17.879	19.67	437.81	0.650	0.000	4.00	20.581	13.38	421.0	0.0	980.0
10.00		1.00	0.85	17.879	19.67	429.42	0.650	0.000	5.00	25.286	16.44	517.2	0.0	1203.9
15.00		1.00	0.85	17.879	19.67	421.03	0.650	0.000	5.00	24.797	16.12	507.2	0.0	1180.5
18.00	RT2	1.00	0.88	18.554	20.41	423.77	0.650	0.000	3.00	14.643	9.52	310.8	0.0	697.0
20.00		1.00	0.90	18.971	20.87	425.04	0.650	0.000	2.00	9.664	6.28	209.7	0.0	460.0
25.00		1.00	0.95	19.883	21.87	426.29	0.650	0.000	5.00	23.818	15.48	541.8	0.0	1133.6
30.00		1.00	0.98	20.661	22.73	425.53	0.650	0.000	5.00	23.328	15.16	551.4	0.0	1110.2
35.00		1.00	1.01	21.343	23.48	423.32	0.650	0.000	5.00	22.839	14.85	557.6	0.0	1086.8
40.00		1.00	1.04	21.951	24.15	420.01	0.650	0.000	5.00	22.350	14.53	561.2	0.0	1063.4
41.50	Bot - Section 2	1.00	1.05	22.122	24.33	418.84	0.650	0.000	1.50	6.609	4.30	167.3	0.0	314.4
45.00		1.00	1.07	22.502	24.75	415.84	0.650	0.000	3.50	15.436	10.03	397.4	0.0	1459.8
48.00	Top - Section 1	1.00	1.08	22.810	25.09	412.98	0.650	0.000	3.00	13.040	8.48	340.3	0.0	1233.0
50.00		1.00	1.09	23.007	25.31	416.10	0.650	0.000	2.00	8.595	5.59	226.2	0.0	408.9
55.00		1.00	1.12	23.473	25.82	410.68	0.650	0.000	5.00	21.146	13.74	567.8	0.0	1005.7
60.00		1.00	1.14	23.907	26.30	404.75	0.650	0.000	5.00	20.656	13.43	564.9	0.0	982.3
65.00		1.00	1.16	24.313	26.74	398.39	0.650	0.000	5.00	20.167	13.11	560.9	0.0	958.9
70.00		1.00	1.17	24.696	27.17	391.64	0.650	0.000	5.00	19.677	12.79	555.9	0.0	935.5
75.00		1.00	1.19	25.057	27.56	384.56	0.650	0.000	5.00	19.188	12.47	550.0	0.0	912.0
80.00		1.00	1.21	25.400	27.94	377.18	0.650	0.000	5.00	18.698	12.15	543.3	0.0	888.6
84.08	Bot - Section 3	1.00	1.22	25.667	28.23	370.95	0.650	0.000	4.08	14.907	9.69	437.7	0.0	708.3
85.00		1.00	1.22	25.726	28.30	369.53	0.650	0.000	0.92	3.340	2.17	98.3	0.0	284.0
89.50	Top - Section 2	1.00	1.24	26.007	28.61	362.43	0.650	0.000	4.50	16.160	10.50	480.8	0.0	1373.8
90.00		1.00	1.24	26.037	28.64	366.01	0.650	0.000	0.50	1.771	1.15	52.8	0.0	67.4
95.00		1.00	1.25	26.336	28.97	357.91	0.650	0.000	5.00	17.442	11.34	525.5	0.0	663.8
100.00		1.00	1.27	26.621	29.28	349.61	0.650	0.000	5.00	16.952	11.02	516.3	0.0	645.0
105.00		1.00	1.28	26.896	29.59	341.11	0.650	0.000	5.00	16.463	10.70	506.6	0.0	626.3
110.00	Appurtenance(s)	1.00	1.29	27.161	29.88	332.44	0.650	0.000	5.00	15.973	10.38	496.3	0.0	607.6
115.00		1.00	1.30	27.416	30.16	323.61	0.650	0.000	5.00	15.484	10.06	485.6	0.0	588.8
120.00		1.00	1.32	27.663	30.43	314.62	0.650	0.000	5.00	14.995	9.75	474.5	0.0	570.1
123.00	Appurtenance(s)	1.00	1.32	27.807	30.59	309.16	0.650	0.000	3.00	8.762	5.70	278.7	0.0	333.1
125.00		1.00	1.33	27.902	30.69	305.49	0.650	0.000	2.00	5.743	3.73	183.3	0.0	218.3
127.92	Bot - Section 4	1.00	1.33	28.038	30.84	300.10	0.650	0.000	2.92	8.235	5.35	264.1	0.0	313.0
130.00		1.00	1.34	28.133	30.95	296.23	0.650	0.000	2.08	5.846	3.80	188.2	0.0	386.6
131.00	Appurtenance(s)	1.00	1.34	28.179	31.00	294.36	0.650	0.000	1.00	2.776	1.80	89.5	0.0	183.5
132.08	Top - Section 3	1.00	1.34	28.228	31.05	292.33	0.650	0.000	1.08	2.985	1.94	96.4	0.0	197.4
135.00		1.00	1.35	28.358	31.19	290.26	0.650	0.000	2.92	7.923	5.15	257.0	0.0	226.2
140.00	Appurtenance(s)	1.00	1.36	28.576	31.43	280.76	0.650	0.000	5.00	13.195	8.58	431.4	0.0	376.7
145.00		1.00	1.37	28.788	31.67	271.15	0.650	0.000	5.00	12.706	8.26	418.4	0.0	362.6
148.75	Appurtenance(s)	1.00	1.38	28.943	31.84	263.87	0.650	0.000	3.75	9.208	5.99	304.9	0.0	262.7
150.00	Appurtenance(s)	1.00	1.38	28.994	31.89	261.43	0.650	0.000	1.25	3.008	1.96	99.8	0.0	85.8
								Totals:	**150.00**			**15,444.5**		**27,342.9**

Discrete Appurtenance Forces

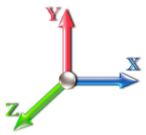
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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	150.00	Ericsson RRUS32	3	28.994	31.893	0.54	0.80	2.65	277.20	0.000	0.000	135.39	0.00	0.00
2	150.00	Cci TPA65R-BU6DA-K	1	28.994	31.893	0.58	0.80	7.41	81.00	0.000	0.000	378.28	0.00	0.00
3	150.00	Cci OPA65R-BU6DA	1	28.994	31.893	0.58	0.80	7.42	75.96	0.000	0.000	378.77	0.00	0.00
4	150.00	Cci TPA65R-BU8DA-K	2	28.994	31.893	0.58	0.80	20.59	198.00	0.000	0.000	1050.49	0.00	0.00
5	150.00	Cci OPA65R-BU8DA	2	28.994	31.893	0.71	0.80	15.95	165.60	0.000	0.000	813.85	0.00	0.00
6	150.00	Ericsson AIR6419 B77G	3	29.065	31.971	0.61	0.80	6.93	237.96	0.000	1.750	354.56	0.00	620.47
7	150.00	Cci DTMABP7819VG12A	6	28.994	31.893	0.54	0.80	3.67	138.24	0.000	0.000	187.08	0.00	0.00
8	150.00	CCI TPX-070821	6	28.994	31.893	0.54	0.80	1.96	68.40	0.000	0.000	100.11	0.00	0.00
9	150.00	Ericsson 4426 B66	3	28.994	31.893	0.54	0.80	1.85	174.60	0.000	0.000	94.36	0.00	0.00
10	150.00	Proposed SitePro1	1	28.994	31.893	0.75	0.75	46.88	3000.00	0.000	0.000	2391.98	0.00	0.00
11	150.00	Raycap DC6-48-60-18-8F	2	28.994	31.893	0.80	0.80	1.47	76.32	0.000	0.000	75.11	0.00	0.00
12	150.00	LMU Antenna unknown	1	28.994	31.893	0.54	0.80	0.07	1.80	0.000	0.000	3.56	0.00	0.00
13	150.00	Commscope	3	28.994	31.893	0.54	0.80	0.08	3.96	0.000	0.000	4.10	0.00	0.00
14	150.00	Raycap	1	28.994	31.893	0.80	0.80	0.91	31.44	0.000	0.000	46.54	0.00	0.00
15	150.00	Ericsson RRUS 32 B2	3	28.994	31.893	0.54	0.80	4.41	190.80	0.000	0.000	224.83	0.00	0.00
16	150.00	Ericsson RRUS 4449	3	28.994	31.893	0.54	0.80	3.17	255.60	0.000	0.000	161.65	0.00	0.00
17	150.00	Ericsson RRUS 4478 B14	3	28.994	31.893	0.54	0.80	2.65	213.84	0.000	0.000	135.39	0.00	0.00
18	150.00	CSS DBC-750	3	28.994	31.893	0.54	0.80	0.82	17.28	0.000	0.000	41.85	0.00	0.00
19	148.75	Ericsson AIR6449 B77D	3	28.943	31.837	0.68	0.80	8.43	316.80	0.000	0.000	429.17	0.00	0.00
20	140.00	B2/B66A RRHBR049	3	28.576	31.433	0.38	0.75	7.32	475.92	0.000	0.000	368.33	0.00	0.00
21	140.00	XXDWMM-12.5-65-8T-CB	3	28.576	31.433	0.38	0.75	1.33	83.16	0.000	0.000	66.76	0.00	0.00
22	140.00	BSAMNT-SBS-2-2	3	28.576	31.433	1.00	1.00	10.50	241.20	0.000	0.000	528.08	0.00	0.00
23	140.00	SamsungMT6407-77A	1	28.576	31.433	0.52	0.75	2.46	95.28	0.000	0.000	123.83	0.00	0.00
24	140.00	B5/B13 RRHBR04C	3	28.576	31.433	0.38	0.75	2.11	253.44	0.000	0.000	106.37	0.00	0.00
25	140.00	RVZDC-6627-PF48	2	28.576	31.433	1.00	1.00	7.58	76.80	0.000	0.000	381.22	0.00	0.00
26	140.00	CBRS RRH-RT4401	3	28.576	31.433	0.38	0.75	0.96	54.72	0.000	0.000	48.09	0.00	0.00
27	140.00	Low Profile Platform	1	28.576	31.433	1.00	1.00	22.00	1800.00	0.000	0.000	1106.45	0.00	0.00
28	140.00	Antel	3	28.576	31.433	0.66	0.75	7.05	109.08	0.000	0.000	354.51	0.00	0.00
29	140.00	Andrew SBNHH-1D65B	6	28.576	31.433	0.58	0.75	28.36	523.44	0.000	0.000	1426.35	0.00	0.00
30	131.00	KRY 112 144-1 Double	3	28.179	30.997	0.38	0.75	0.46	39.60	0.000	0.000	22.88	0.00	0.00
31	131.00	APXVAALL24-43-U-NA20	3	28.179	30.997	0.52	0.75	31.88	442.08	0.000	0.000	1580.97	0.00	0.00
32	131.00	AIR6449 B41	3	28.179	30.997	0.53	0.75	9.03	370.80	0.000	0.000	447.63	0.00	0.00
33	131.00	AIR32	3	28.179	30.997	0.65	0.75	12.74	475.92	0.000	0.000	632.00	0.00	0.00
34	131.00	PV-LPPGS-12M-HR2-AP3	1	28.179	30.997	1.00	1.00	34.10	2586.00	0.000	0.000	1691.17	0.00	0.00
35	131.00	ATMAA1412D-1A20 TMA	3	28.179	30.997	0.38	0.75	1.32	46.80	0.000	0.000	65.28	0.00	0.00
36	131.00	SDX1926Q-43 Diplexer	3	28.179	30.997	0.38	0.75	0.33	21.60	0.000	0.000	16.18	0.00	0.00
37	131.00	Radio 4449 B71+B85	3	28.179	30.997	0.38	0.75	2.22	263.52	0.000	0.000	109.91	0.00	0.00
38	131.00	Ericsson 4415 B25	3	28.179	30.997	0.38	0.75	1.84	165.60	0.000	0.000	91.50	0.00	0.00
39	131.00	Bias-T 782 11056	3	28.179	30.997	0.38	0.75	0.15	5.40	0.000	0.000	7.25	0.00	0.00
40	123.00	APXVSPP18-C-A20 (50	1	27.807	30.588	0.75	0.75	6.01	60.00	0.000	0.000	294.38	0.00	0.00
41	123.00	RFS - ACU-A20-N - RET	4	27.807	30.588	0.38	0.75	0.21	4.80	0.000	0.000	10.28	0.00	0.00
42	123.00	ALU - 800 MHz Filter	3	27.807	30.588	0.50	0.75	1.18	31.68	0.000	0.000	57.55	0.00	0.00
43	123.00	ALU - 800 MHz RRH -	3	27.807	30.588	0.38	0.75	2.80	190.80	0.000	0.000	137.10	0.00	0.00
44	123.00	Platform w/ HRK Handrail	1	27.807	30.588	1.00	1.00	32.00	1920.00	0.000	0.000	1566.11	0.00	0.00
45	123.00	APXVTM14-C-I20	3	27.807	30.588	0.59	0.75	11.27	198.00	0.000	0.000	551.53	0.00	0.00
46	123.00	APXVSPP18-C-A20	2	27.807	30.588	0.62	0.75	9.98	136.80	0.000	0.000	488.67	0.00	0.00
47	123.00	ALU - TD-RRH8x20-25 -	3	27.807	30.588	0.38	0.75	4.56	252.00	0.000	0.000	222.99	0.00	0.00

Discrete Appurtenance Forces

Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

48	123.00	ALU - 1900 MHz RRH -	3	27.807	30.588	0.38	0.75	3.05	216.00	0.000	0.000	149.21	0.00	0.00
49	110.00	Raycap	1	27.161	29.877	0.75	0.75	1.51	26.28	0.000	0.000	72.06	0.00	0.00
50	110.00	Fujitsu TA08025-B604	3	27.161	29.877	0.38	0.75	2.21	230.04	0.000	0.000	105.41	0.00	0.00
51	110.00	Fujitsu TA08025-B605	3	27.161	29.877	0.38	0.75	2.21	270.00	0.000	0.000	105.41	0.00	0.00
52	110.00	MC-PK8-DSH	1	27.161	29.877	1.00	1.00	37.59	2072.40	0.000	0.000	1796.93	0.00	0.00
53	110.00	JMA Wireless	3	27.161	29.877	0.55	0.75	20.80	232.20	0.000	0.000	994.11	0.00	0.00
							Totals:		**19,496.16**			**22,733.60**		

Total Applied Force Summary

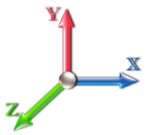
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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
1.00		106.24	295.92	0.00	0.00
5.00		420.97	1174.33	0.00	0.00
10.00		517.20	1446.83	0.00	0.00
15.00		507.19	1423.40	0.00	0.00
18.00		310.82	842.80	0.00	0.00
20.00		209.74	557.18	0.00	0.00
25.00		541.77	1376.55	0.00	0.00
30.00		551.40	1353.13	0.00	0.00
35.00		557.63	1329.70	0.00	0.00
40.00		561.24	1306.28	0.00	0.00
41.50		167.27	387.32	0.00	0.00
45.00		397.36	1629.89	0.00	0.00
48.00		340.27	1378.78	0.00	0.00
50.00		226.23	506.02	0.00	0.00
55.00		567.83	1248.66	0.00	0.00
60.00		564.94	1225.23	0.00	0.00
65.00		560.93	1201.81	0.00	0.00
70.00		555.92	1178.38	0.00	0.00
75.00		550.03	1154.96	0.00	0.00
80.00		543.33	1131.53	0.00	0.00
84.08		437.73	906.71	0.00	0.00
85.00		98.31	328.56	0.00	0.00
89.50		480.79	1592.38	0.00	0.00
90.00		52.76	91.70	0.00	0.00
95.00		525.48	906.70	0.00	0.00
100.00		516.28	887.96	0.00	0.00
105.00		506.55	869.22	0.00	0.00
110.00	(11) attachments	3570.25	3681.40	0.00	0.00
115.00		485.65	825.74	0.00	0.00
120.00		474.53	807.00	0.00	0.00
123.00	(23) attachments	3756.54	3485.28	0.00	0.00
125.00		183.33	303.90	0.00	0.00
127.92		264.15	437.81	0.00	0.00
130.00		188.17	475.76	0.00	0.00
131.00	(28) attachments	4754.28	4643.66	0.00	0.00
132.08		96.41	231.32	0.00	0.00
135.00		257.04	317.66	0.00	0.00
140.00	(28) attachments	4941.37	4246.48	0.00	0.00
145.00		418.45	448.15	0.00	0.00
148.75	(3) attachments	734.06	630.33	0.00	0.00
150.00	(47) attachments	6677.69	5310.75	0.00	620.47
	Totals:	**38,178.10**	**53,577.16**	**0.00**	**620.47**

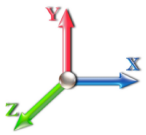
Linear Appurtenance Segment Forces (Factored)

Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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)
1.00	1.60" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.046	0.000	17.879	0.00	1.20
1.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.046	0.000	17.879	0.00	0.00
5.00	1.60" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.046	0.000	17.879	0.00	4.80
5.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	0.42	0.00	0.046	0.000	17.879	0.00	0.00
10.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.047	0.000	17.879	0.00	6.00
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.047	0.000	17.879	0.00	0.00
15.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.048	0.000	17.879	0.00	6.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.048	0.000	17.879	0.00	0.00
18.00	1.60" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.049	0.000	18.554	0.00	3.60
18.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.049	0.000	18.554	0.00	0.00
20.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.049	0.000	18.971	0.00	2.40
20.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.049	0.000	18.971	0.00	0.00
25.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.028	0.000	19.883	0.00	6.00
30.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	20.661	0.00	6.00
35.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	21.343	0.00	6.00
40.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.030	0.000	21.951	0.00	6.00
41.50	1.60" Hybrid	Yes	1.50	0.000	1.60	0.20	0.00	0.030	0.000	22.122	0.00	1.80
45.00	1.60" Hybrid	Yes	3.50	0.000	1.60	0.47	0.00	0.031	0.000	22.502	0.00	4.20
48.00	1.60" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.031	0.000	22.810	0.00	3.60
50.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.031	0.000	23.007	0.00	2.40
55.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	23.473	0.00	6.00
60.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	23.907	0.00	6.00
65.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	24.313	0.00	6.00
70.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.034	0.000	24.696	0.00	6.00
75.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.035	0.000	25.057	0.00	6.00
80.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.036	0.000	25.400	0.00	6.00
84.08	1.60" Hybrid	Yes	4.08	0.000	1.60	0.54	0.00	0.037	0.000	25.667	0.00	4.90
85.00	1.60" Hybrid	Yes	0.92	0.000	1.60	0.12	0.00	0.037	0.000	25.726	0.00	1.10
89.50	1.60" Hybrid	Yes	4.50	0.000	1.60	0.60	0.00	0.038	0.000	26.007	0.00	5.40
90.00	1.60" Hybrid	Yes	0.50	0.000	1.60	0.07	0.00	0.038	0.000	26.037	0.00	0.60
95.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.038	0.000	26.336	0.00	6.00
100.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.039	0.000	26.621	0.00	6.00
105.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.040	0.000	26.896	0.00	6.00
110.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.042	0.000	27.161	0.00	6.00
									Totals:		**0.0**	**132.0**

Calculated Forces

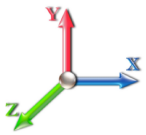
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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	-53.56	-38.20	0.00	-4394.8	0.00	4394.89	3399.80	1699.90	8571.22	4291.98	0.00	0.000	0.000	0.846
1.00	-53.21	-38.17	0.00	-4356.7	0.00	4356.70	3395.30	1697.65	8527.34	4270.01	0.00	-0.035	0.000	0.797
5.00	-51.94	-37.88	0.00	-4204.0	0.00	4204.03	3376.67	1688.33	8351.12	4181.77	0.09	-0.167	0.000	0.783
10.00	-50.39	-37.50	0.00	-4014.6	0.00	4014.64	3351.94	1675.97	8129.40	4070.74	0.36	-0.333	0.000	0.764
15.00	-48.88	-37.10	0.00	-3827.1	0.00	3827.13	3325.63	1662.82	7906.28	3959.02	0.79	-0.499	0.000	0.745
18.00	-47.99	-36.85	0.00	-3715.8	0.00	3715.84	3309.09	1654.54	7771.83	3891.69	1.14	-0.601	0.000	0.734
18.00	-47.99	-36.85	0.00	-3715.8	0.00	3715.84	3309.09	1654.54	7771.83	3891.69	1.14	-0.601	0.000	0.734
20.00	-47.34	-36.76	0.00	-3642.1	0.00	3642.14	3297.74	1648.87	7681.99	3846.70	1.41	-0.669	0.000	0.962
25.00	-45.83	-36.38	0.00	-3458.3	0.00	3458.36	3268.26	1634.13	7456.75	3733.92	2.23	-0.892	0.000	0.941
30.00	-44.34	-35.98	0.00	-3276.4	0.00	3276.49	3237.20	1618.60	7230.79	3620.77	3.28	-1.116	0.000	0.919
35.00	-42.88	-35.56	0.00	-3096.6	0.00	3096.62	3204.54	1602.27	7004.35	3507.38	4.57	-1.343	0.000	0.897
40.00	-41.50	-35.07	0.00	-2918.8	0.00	2918.83	3170.31	1585.15	6777.64	3393.86	6.10	-1.571	0.000	0.874
41.50	-41.05	-34.98	0.00	-2866.2	0.00	2866.22	3159.73	1579.86	6709.61	3359.79	6.61	-1.642	0.000	0.867
45.00	-39.34	-34.64	0.00	-2743.8	0.00	2743.80	3134.49	1567.24	6550.90	3280.32	7.87	-1.804	0.000	0.849
48.00	-37.90	-34.33	0.00	-2639.9	0.00	2639.90	3132.30	1566.15	6537.37	3273.54	9.05	-1.944	0.000	0.819
50.00	-37.31	-34.19	0.00	-2571.2	0.00	2571.24	3117.49	1558.74	6446.72	3228.15	9.89	-2.038	0.000	0.809
55.00	-35.95	-33.71	0.00	-2400.3	0.00	2400.31	3079.35	1539.68	6220.34	3114.79	12.14	-2.261	0.000	0.783
60.00	-34.62	-33.23	0.00	-2231.7	0.00	2231.74	3039.63	1519.81	5994.49	3001.70	14.63	-2.483	0.000	0.755
65.00	-33.32	-32.75	0.00	-2065.5	0.00	2065.58	2998.32	1499.16	5769.39	2888.98	17.35	-2.704	0.000	0.727
70.00	-32.05	-32.26	0.00	-1901.8	0.00	1901.85	2955.43	1477.72	5545.28	2776.76	20.30	-2.924	0.000	0.696
75.00	-30.81	-31.76	0.00	-1740.5	0.00	1740.57	2910.95	1455.48	5322.38	2665.15	23.48	-3.142	0.000	0.664
80.00	-29.60	-31.26	0.00	-1581.7	0.00	1581.76	2864.89	1432.44	5100.92	2554.25	26.89	-3.357	0.000	0.630
84.08	-28.67	-30.82	0.00	-1454.1	0.00	1454.14	2826.09	1413.05	4921.28	2464.30	29.83	-3.530	0.000	0.601
85.00	-28.28	-30.75	0.00	-1425.8	0.00	1425.89	2817.24	1408.62	4881.12	2444.19	30.51	-3.570	0.000	0.594
89.50	-26.67	-30.22	0.00	-1287.5	0.00	1287.50	2031.94	1015.97	3485.43	1745.31	33.97	-3.755	0.000	0.752
90.00	-26.51	-30.22	0.00	-1272.3	0.00	1272.39	2029.15	1014.57	3470.92	1738.04	34.36	-3.776	0.000	0.746
95.00	-25.53	-29.74	0.00	-1121.2	0.00	1121.27	2000.34	1000.17	3325.82	1665.38	38.44	-4.012	0.000	0.687
100.00	-24.57	-29.26	0.00	-972.58	0.00	972.58	1969.95	984.97	3180.92	1592.82	42.76	-4.238	0.000	0.624
105.00	-23.64	-28.77	0.00	-826.30	0.00	826.30	1937.97	968.98	3036.44	1520.48	47.32	-4.449	0.000	0.557
110.00	-20.17	-24.98	0.00	-682.46	0.00	682.46	1904.40	952.20	2892.62	1448.46	52.08	-4.643	0.000	0.482
115.00	-19.32	-24.49	0.00	-557.56	0.00	557.56	1869.25	934.63	2749.69	1376.89	57.03	-4.817	0.000	0.416
120.00	-18.50	-23.98	0.00	-435.13	0.00	435.13	1832.52	916.26	2607.87	1305.87	62.16	-4.971	0.000	0.344
123.00	-15.34	-19.95	0.00	-363.19	0.00	363.19	1809.72	904.86	2523.40	1263.58	65.31	-5.053	0.000	0.296
125.00	-15.03	-19.76	0.00	-323.29	0.00	323.29	1794.20	897.10	2467.38	1235.52	67.43	-5.103	0.000	0.271
127.92	-14.60	-19.47	0.00	-265.66	0.00	265.66	1771.11	885.56	2386.14	1194.84	70.57	-5.168	0.000	0.231
130.00	-14.14	-19.25	0.00	-225.11	0.00	225.11	1754.29	877.15	2328.47	1165.96	72.83	-5.210	0.000	0.202
131.00	-9.94	-14.09	0.00	-205.86	0.00	205.86	1746.12	873.06	2300.89	1152.16	73.92	-5.228	0.000	0.185
132.08	-9.71	-13.98	0.00	-190.60	0.00	190.60	1160.48	580.24	1541.12	771.71	75.11	-5.246	0.000	0.256
135.00	-9.40	-13.70	0.00	-149.82	0.00	149.82	1148.82	574.41	1493.54	747.88	78.32	-5.290	0.000	0.209
140.00	-5.63	-8.40	0.00	-81.30	0.00	81.30	1127.58	563.79	1411.91	707.01	83.90	-5.359	0.000	0.120
145.00	-5.22	-7.94	0.00	-39.33	0.00	39.33	1104.76	552.38	1330.41	666.20	89.53	-5.400	0.000	0.064
148.75	-4.66	-7.15	0.00	-9.56	0.00	9.56	1086.61	543.30	1269.51	635.70	93.77	-5.414	0.000	0.019
150.00	0.00	-6.68	0.00	-0.62	0.00	0.62	1080.36	540.18	1249.27	625.56	95.19	-5.415	0.000	0.001

Wind Loading - Shaft

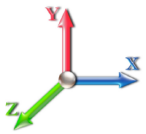
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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	RB1	1.00	0.85	17.879	19.67	446.21	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1 RB2	1.00	0.85	17.879	19.67	444.53	0.650	0.000	1.00	5.194	3.38	106.2	0.0	185.5
5.00		1.00	0.85	17.879	19.67	437.81	0.650	0.000	4.00	20.581	13.38	421.0	0.0	735.0
10.00		1.00	0.85	17.879	19.67	429.42	0.650	0.000	5.00	25.286	16.44	517.2	0.0	902.9
15.00		1.00	0.85	17.879	19.67	421.03	0.650	0.000	5.00	24.797	16.12	507.2	0.0	885.4
18.00	RT2	1.00	0.88	18.554	20.41	423.77	0.650	0.000	3.00	14.643	9.52	310.8	0.0	522.8
20.00		1.00	0.90	18.971	20.87	425.04	0.650	0.000	2.00	9.664	6.28	209.7	0.0	345.0
25.00		1.00	0.95	19.883	21.87	426.29	0.650	0.000	5.00	23.818	15.48	541.8	0.0	850.2
30.00		1.00	0.98	20.661	22.73	425.53	0.650	0.000	5.00	23.328	15.16	551.4	0.0	832.7
35.00		1.00	1.01	21.343	23.48	423.32	0.650	0.000	5.00	22.839	14.85	557.6	0.0	815.1
40.00		1.00	1.04	21.951	24.15	420.01	0.650	0.000	5.00	22.350	14.53	561.2	0.0	797.5
41.50	Bot - Section 2	1.00	1.05	22.122	24.33	418.84	0.650	0.000	1.50	6.609	4.30	167.3	0.0	235.8
45.00		1.00	1.07	22.502	24.75	415.84	0.650	0.000	3.50	15.436	10.03	397.4	0.0	1094.9
48.00	Top - Section 1	1.00	1.08	22.810	25.09	412.98	0.650	0.000	3.00	13.040	8.48	340.3	0.0	924.8
50.00		1.00	1.09	23.007	25.31	416.10	0.650	0.000	2.00	8.595	5.59	226.2	0.0	306.6
55.00		1.00	1.12	23.473	25.82	410.68	0.650	0.000	5.00	21.146	13.74	567.8	0.0	754.3
60.00		1.00	1.14	23.907	26.30	404.75	0.650	0.000	5.00	20.656	13.43	564.9	0.0	736.7
65.00		1.00	1.16	24.313	26.74	398.39	0.650	0.000	5.00	20.167	13.11	560.9	0.0	719.2
70.00		1.00	1.17	24.696	27.17	391.64	0.650	0.000	5.00	19.677	12.79	555.9	0.0	701.6
75.00		1.00	1.19	25.057	27.56	384.56	0.650	0.000	5.00	19.188	12.47	550.0	0.0	684.0
80.00		1.00	1.21	25.400	27.94	377.18	0.650	0.000	5.00	18.698	12.15	543.3	0.0	666.5
84.08	Bot - Section 3	1.00	1.22	25.667	28.23	370.95	0.650	0.000	4.08	14.907	9.69	437.7	0.0	531.2
85.00		1.00	1.22	25.726	28.30	369.53	0.650	0.000	0.92	3.340	2.17	98.3	0.0	213.0
89.50	Top - Section 2	1.00	1.24	26.007	28.61	362.43	0.650	0.000	4.50	16.160	10.50	480.8	0.0	1030.3
90.00		1.00	1.24	26.037	28.64	366.01	0.650	0.000	0.50	1.771	1.15	52.8	0.0	50.6
95.00		1.00	1.25	26.336	28.97	357.91	0.650	0.000	5.00	17.442	11.34	525.5	0.0	497.8
100.00		1.00	1.27	26.621	29.28	349.61	0.650	0.000	5.00	16.952	11.02	516.3	0.0	483.8
105.00		1.00	1.28	26.896	29.59	341.11	0.650	0.000	5.00	16.463	10.70	506.6	0.0	469.7
110.00	Appurtenance(s)	1.00	1.29	27.161	29.88	332.44	0.650	0.000	5.00	15.973	10.38	496.3	0.0	455.7
115.00		1.00	1.30	27.416	30.16	323.61	0.650	0.000	5.00	15.484	10.06	485.6	0.0	441.6
120.00		1.00	1.32	27.663	30.43	314.62	0.650	0.000	5.00	14.995	9.75	474.5	0.0	427.6
123.00	Appurtenance(s)	1.00	1.32	27.807	30.59	309.16	0.650	0.000	3.00	8.762	5.70	278.7	0.0	249.8
125.00		1.00	1.33	27.902	30.69	305.49	0.650	0.000	2.00	5.743	3.73	183.3	0.0	163.7
127.92	Bot - Section 4	1.00	1.33	28.038	30.84	300.10	0.650	0.000	2.92	8.235	5.35	264.1	0.0	234.7
130.00		1.00	1.34	28.133	30.95	296.23	0.650	0.000	2.08	5.846	3.80	188.2	0.0	289.9
131.00	Appurtenance(s)	1.00	1.34	28.179	31.00	294.36	0.650	0.000	1.00	2.776	1.80	89.5	0.0	137.7
132.08	Top - Section 3	1.00	1.34	28.228	31.05	292.33	0.650	0.000	1.08	2.985	1.94	96.4	0.0	148.0
135.00		1.00	1.35	28.358	31.19	290.26	0.650	0.000	2.92	7.923	5.15	257.0	0.0	169.7
140.00	Appurtenance(s)	1.00	1.36	28.576	31.43	280.76	0.650	0.000	5.00	13.195	8.58	431.4	0.0	282.5
145.00		1.00	1.37	28.788	31.67	271.15	0.650	0.000	5.00	12.706	8.26	418.4	0.0	272.0
148.75	Appurtenance(s)	1.00	1.38	28.943	31.84	263.87	0.650	0.000	3.75	9.208	5.99	304.9	0.0	197.0
150.00	Appurtenance(s)	1.00	1.38	28.994	31.89	261.43	0.650	0.000	1.25	3.008	1.96	99.8	0.0	64.4
								Totals:	**150.00**			**15,444.5**		**20,507.2**

Discrete Appurtenance Forces

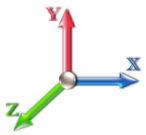
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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	150.00	Ericsson RRUS32	3	28.994	31.893	0.54	0.80	2.65	207.90	0.000	0.000	135.39	0.00	0.00
2	150.00	Cci TPA65R-BU6DA-K	1	28.994	31.893	0.58	0.80	7.41	60.75	0.000	0.000	378.28	0.00	0.00
3	150.00	Cci OPA65R-BU6DA	1	28.994	31.893	0.58	0.80	7.42	56.97	0.000	0.000	378.77	0.00	0.00
4	150.00	Cci TPA65R-BU8DA-K	2	28.994	31.893	0.58	0.80	20.59	148.50	0.000	0.000	1050.49	0.00	0.00
5	150.00	Cci OPA65R-BU8DA	2	28.994	31.893	0.71	0.80	15.95	124.20	0.000	0.000	813.85	0.00	0.00
6	150.00	Ericsson AIR6419 B77G	3	29.065	31.971	0.61	0.80	6.93	178.47	0.000	1.750	354.56	0.00	620.47
7	150.00	Cci DTMABP7819VG12A	6	28.994	31.893	0.54	0.80	3.67	103.68	0.000	0.000	187.08	0.00	0.00
8	150.00	CCI TPX-070821	6	28.994	31.893	0.54	0.80	1.96	51.30	0.000	0.000	100.11	0.00	0.00
9	150.00	Ericsson 4426 B66	3	28.994	31.893	0.54	0.80	1.85	130.95	0.000	0.000	94.36	0.00	0.00
10	150.00	Proposed SitePro1	1	28.994	31.893	0.75	0.75	46.88	2250.00	0.000	0.000	2391.98	0.00	0.00
11	150.00	Raycap DC6-48-60-18-8F	2	28.994	31.893	0.80	0.80	1.47	57.24	0.000	0.000	75.11	0.00	0.00
12	150.00	LMU Antenna unknown	1	28.994	31.893	0.54	0.80	0.07	1.35	0.000	0.000	3.56	0.00	0.00
13	150.00	Commscope	3	28.994	31.893	0.54	0.80	0.08	2.97	0.000	0.000	4.10	0.00	0.00
14	150.00	Raycap	1	28.994	31.893	0.80	0.80	0.91	23.58	0.000	0.000	46.54	0.00	0.00
15	150.00	Ericsson RRUS 32 B2	3	28.994	31.893	0.54	0.80	4.41	143.10	0.000	0.000	224.83	0.00	0.00
16	150.00	Ericsson RRUS 4449	3	28.994	31.893	0.54	0.80	3.17	191.70	0.000	0.000	161.65	0.00	0.00
17	150.00	Ericsson RRUS 4478 B14	3	28.994	31.893	0.54	0.80	2.65	160.38	0.000	0.000	135.39	0.00	0.00
18	150.00	CSS DBC-750	3	28.994	31.893	0.54	0.80	0.82	12.96	0.000	0.000	41.85	0.00	0.00
19	148.75	Ericsson AIR6449 B77D	3	28.943	31.837	0.68	0.80	8.43	237.60	0.000	0.000	429.17	0.00	0.00
20	140.00	B2/B66A RRHBR049	3	28.576	31.433	0.38	0.75	7.32	356.94	0.000	0.000	368.33	0.00	0.00
21	140.00	XXDWMM-12.5-65-8T-CB	3	28.576	31.433	0.38	0.75	1.33	62.37	0.000	0.000	66.76	0.00	0.00
22	140.00	BSAMNT-SBS-2-2	3	28.576	31.433	1.00	1.00	10.50	180.90	0.000	0.000	528.08	0.00	0.00
23	140.00	SamsungMT6407-77A	1	28.576	31.433	0.52	0.75	2.46	71.46	0.000	0.000	123.83	0.00	0.00
24	140.00	B5/B13 RRHBR04C	3	28.576	31.433	0.38	0.75	2.11	190.08	0.000	0.000	106.37	0.00	0.00
25	140.00	RVZDC-6627-PF48	2	28.576	31.433	1.00	1.00	7.58	57.60	0.000	0.000	381.22	0.00	0.00
26	140.00	CBRS RRH-RT4401	3	28.576	31.433	0.38	0.75	0.96	41.04	0.000	0.000	48.09	0.00	0.00
27	140.00	Low Profile Platform	1	28.576	31.433	1.00	1.00	22.00	1350.00	0.000	0.000	1106.45	0.00	0.00
28	140.00	Antel	3	28.576	31.433	0.66	0.75	7.05	81.81	0.000	0.000	354.51	0.00	0.00
29	140.00	Andrew SBNHH-1D65B	6	28.576	31.433	0.58	0.75	28.36	392.58	0.000	0.000	1426.35	0.00	0.00
30	131.00	KRY 112 144-1 Double	3	28.179	30.997	0.38	0.75	0.46	29.70	0.000	0.000	22.88	0.00	0.00
31	131.00	APXVAALL24-43-U-NA20	3	28.179	30.997	0.52	0.75	31.88	331.56	0.000	0.000	1580.97	0.00	0.00
32	131.00	AIR6449 B41	3	28.179	30.997	0.53	0.75	9.03	278.10	0.000	0.000	447.63	0.00	0.00
33	131.00	AIR32	3	28.179	30.997	0.65	0.75	12.74	356.94	0.000	0.000	632.00	0.00	0.00
34	131.00	PV-LPPGS-12M-HR2-AP3	1	28.179	30.997	1.00	1.00	34.10	1939.50	0.000	0.000	1691.17	0.00	0.00
35	131.00	ATMAA1412D-1A20 TMA	3	28.179	30.997	0.38	0.75	1.32	35.10	0.000	0.000	65.28	0.00	0.00
36	131.00	SDX1926Q-43 Diplexer	3	28.179	30.997	0.38	0.75	0.33	16.20	0.000	0.000	16.18	0.00	0.00
37	131.00	Radio 4449 B71+B85	3	28.179	30.997	0.38	0.75	2.22	197.64	0.000	0.000	109.91	0.00	0.00
38	131.00	Ericsson 4415 B25	3	28.179	30.997	0.38	0.75	1.84	124.20	0.000	0.000	91.50	0.00	0.00
39	131.00	Bias-T 782 11056	3	28.179	30.997	0.38	0.75	0.15	4.05	0.000	0.000	7.25	0.00	0.00
40	123.00	APXVSPP18-C-A20 (50	1	27.807	30.588	0.75	0.75	6.01	45.00	0.000	0.000	294.38	0.00	0.00
41	123.00	RFS - ACU-A20-N - RET	4	27.807	30.588	0.38	0.75	0.21	3.60	0.000	0.000	10.28	0.00	0.00
42	123.00	ALU - 800 MHz Filter	3	27.807	30.588	0.50	0.75	1.18	23.76	0.000	0.000	57.55	0.00	0.00
43	123.00	ALU - 800 MHz RRH -	3	27.807	30.588	0.38	0.75	2.80	143.10	0.000	0.000	137.10	0.00	0.00
44	123.00	Platform w/ HRK Handrail	1	27.807	30.588	1.00	1.00	32.00	1440.00	0.000	0.000	1566.11	0.00	0.00
45	123.00	APXVTM14-C-I20	3	27.807	30.588	0.59	0.75	11.27	148.50	0.000	0.000	551.53	0.00	0.00
46	123.00	APXVSPP18-C-A20	2	27.807	30.588	0.62	0.75	9.98	102.60	0.000	0.000	488.67	0.00	0.00
47	123.00	ALU - TD-RRH8x20-25 -	3	27.807	30.588	0.38	0.75	4.56	189.00	0.000	0.000	222.99	0.00	0.00

Discrete Appurtenance Forces

Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 17

48	123.00	ALU - 1900 MHz RRH -	3	27.807	30.588	0.38	0.75	3.05	162.00	0.000	0.000	149.21	0.00	0.00
49	110.00	Raycap	1	27.161	29.877	0.75	0.75	1.51	19.71	0.000	0.000	72.06	0.00	0.00
50	110.00	Fujitsu TA08025-B604	3	27.161	29.877	0.38	0.75	2.21	172.53	0.000	0.000	105.41	0.00	0.00
51	110.00	Fujitsu TA08025-B605	3	27.161	29.877	0.38	0.75	2.21	202.50	0.000	0.000	105.41	0.00	0.00
52	110.00	MC-PK8-DSH	1	27.161	29.877	1.00	1.00	37.59	1554.30	0.000	0.000	1796.93	0.00	0.00
53	110.00	JMA Wireless	3	27.161	29.877	0.55	0.75	20.80	174.15	0.000	0.000	994.11	0.00	0.00
							Totals:		**14,622.12**			**22,733.60**		

Total Applied Force Summary

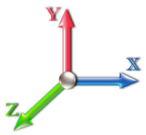
Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 18

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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
1.00		106.24	221.94	0.00	0.00
5.00		420.97	880.75	0.00	0.00
10.00		517.20	1085.12	0.00	0.00
15.00		507.19	1067.55	0.00	0.00
18.00		310.82	632.10	0.00	0.00
20.00		209.74	417.89	0.00	0.00
25.00		541.77	1032.41	0.00	0.00
30.00		551.40	1014.85	0.00	0.00
35.00		557.63	997.28	0.00	0.00
40.00		561.24	979.71	0.00	0.00
41.50		167.27	290.49	0.00	0.00
45.00		397.36	1222.42	0.00	0.00
48.00		340.27	1034.08	0.00	0.00
50.00		226.23	379.52	0.00	0.00
55.00		567.83	936.49	0.00	0.00
60.00		564.94	918.92	0.00	0.00
65.00		560.93	901.35	0.00	0.00
70.00		555.92	883.79	0.00	0.00
75.00		550.03	866.22	0.00	0.00
80.00		543.33	848.65	0.00	0.00
84.08		437.73	680.03	0.00	0.00
85.00		98.31	246.42	0.00	0.00
89.50		480.79	1194.29	0.00	0.00
90.00		52.76	68.78	0.00	0.00
95.00		525.48	680.02	0.00	0.00
100.00		516.28	665.97	0.00	0.00
105.00		506.55	651.91	0.00	0.00
110.00	(11) attachments	3570.25	2761.05	0.00	0.00
115.00		485.65	619.30	0.00	0.00
120.00		474.53	605.25	0.00	0.00
123.00	(23) attachments	3756.54	2613.96	0.00	0.00
125.00		183.33	227.92	0.00	0.00
127.92		264.15	328.36	0.00	0.00
130.00		188.17	356.82	0.00	0.00
131.00	(28) attachments	4754.28	3482.75	0.00	0.00
132.08		96.41	173.49	0.00	0.00
135.00		257.04	238.25	0.00	0.00
140.00	(28) attachments	4941.37	3184.86	0.00	0.00
145.00		418.45	336.11	0.00	0.00
148.75	(3) attachments	734.06	472.75	0.00	0.00
150.00	(47) attachments	6677.69	3983.07	0.00	620.47
	Totals:	**38,178.10**	**40,182.87**	**0.00**	**620.47**

Linear Appurtenance Segment Forces (Factored)

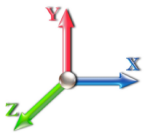
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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)
1.00	1.60" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.046	0.000	17.879	0.00	0.90
1.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.046	0.000	17.879	0.00	0.00
5.00	1.60" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.046	0.000	17.879	0.00	3.60
5.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	0.42	0.00	0.046	0.000	17.879	0.00	0.00
10.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.047	0.000	17.879	0.00	4.50
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.047	0.000	17.879	0.00	0.00
15.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.048	0.000	17.879	0.00	4.50
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.048	0.000	17.879	0.00	0.00
18.00	1.60" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.049	0.000	18.554	0.00	2.70
18.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.049	0.000	18.554	0.00	0.00
20.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.049	0.000	18.971	0.00	1.80
20.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.049	0.000	18.971	0.00	0.00
25.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.028	0.000	19.883	0.00	4.50
30.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	20.661	0.00	4.50
35.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	21.343	0.00	4.50
40.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.030	0.000	21.951	0.00	4.50
41.50	1.60" Hybrid	Yes	1.50	0.000	1.60	0.20	0.00	0.030	0.000	22.122	0.00	1.35
45.00	1.60" Hybrid	Yes	3.50	0.000	1.60	0.47	0.00	0.031	0.000	22.502	0.00	3.15
48.00	1.60" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.031	0.000	22.810	0.00	2.70
50.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.031	0.000	23.007	0.00	1.80
55.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	23.473	0.00	4.50
60.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	23.907	0.00	4.50
65.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	24.313	0.00	4.50
70.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.034	0.000	24.696	0.00	4.50
75.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.035	0.000	25.057	0.00	4.50
80.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.036	0.000	25.400	0.00	4.50
84.08	1.60" Hybrid	Yes	4.08	0.000	1.60	0.54	0.00	0.037	0.000	25.667	0.00	3.67
85.00	1.60" Hybrid	Yes	0.92	0.000	1.60	0.12	0.00	0.037	0.000	25.726	0.00	0.83
89.50	1.60" Hybrid	Yes	4.50	0.000	1.60	0.60	0.00	0.038	0.000	26.007	0.00	4.05
90.00	1.60" Hybrid	Yes	0.50	0.000	1.60	0.07	0.00	0.038	0.000	26.037	0.00	0.45
95.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.038	0.000	26.336	0.00	4.50
100.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.039	0.000	26.621	0.00	4.50
105.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.040	0.000	26.896	0.00	4.50
110.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.042	0.000	27.161	0.00	4.50
									Totals:		**0.0**	**99.0**

Calculated Forces

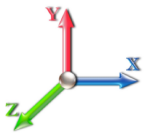
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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	-40.17	-38.19	0.00	-4343.9	0.00	4343.90	3399.80	1699.90	8571.22	4291.98	0.00	0.000	0.000	0.833
1.00	-39.89	-38.14	0.00	-4305.7	0.00	4305.71	3395.30	1697.65	8527.34	4270.01	0.00	-0.035	0.000	0.785
5.00	-38.92	-37.82	0.00	-4153.1	0.00	4153.14	3376.67	1688.33	8351.12	4181.77	0.09	-0.165	0.000	0.771
10.00	-37.73	-37.41	0.00	-3964.0	0.00	3964.05	3351.94	1675.97	8129.40	4070.74	0.35	-0.329	0.000	0.752
15.00	-36.58	-36.98	0.00	-3777.0	0.00	3777.02	3325.63	1662.82	7906.28	3959.02	0.78	-0.493	0.000	0.733
18.00	-35.89	-36.71	0.00	-3666.0	0.00	3666.09	3309.09	1654.54	7771.83	3891.69	1.13	-0.593	0.000	0.721
18.00	-35.89	-36.71	0.00	-3666.0	0.00	3666.09	3309.09	1654.54	7771.83	3891.69	1.13	-0.593	0.000	0.721
20.00	-35.39	-36.59	0.00	-3592.6	0.00	3592.67	3297.74	1648.87	7681.99	3846.70	1.39	-0.660	0.000	0.945
25.00	-34.22	-36.16	0.00	-3409.7	0.00	3409.74	3268.26	1634.13	7456.75	3733.92	2.20	-0.880	0.000	0.924
30.00	-33.08	-35.72	0.00	-3228.9	0.00	3228.93	3237.20	1618.60	7230.79	3620.77	3.24	-1.102	0.000	0.902
35.00	-31.96	-35.27	0.00	-3050.3	0.00	3050.32	3204.54	1602.27	7004.35	3507.38	4.52	-1.325	0.000	0.880
40.00	-30.90	-34.76	0.00	-2873.9	0.00	2873.98	3170.31	1585.15	6777.64	3393.86	6.02	-1.550	0.000	0.857
41.50	-30.55	-34.65	0.00	-2821.8	0.00	2821.83	3159.73	1579.86	6709.61	3359.79	6.52	-1.619	0.000	0.850
45.00	-29.25	-34.29	0.00	-2700.5	0.00	2700.57	3134.49	1567.24	6550.90	3280.32	7.77	-1.779	0.000	0.833
48.00	-28.16	-33.97	0.00	-2597.6	0.00	2597.69	3132.30	1566.15	6537.37	3273.54	8.93	-1.917	0.000	0.803
50.00	-27.69	-33.81	0.00	-2529.7	0.00	2529.75	3117.49	1558.74	6446.72	3228.15	9.76	-2.009	0.000	0.793
55.00	-26.65	-33.31	0.00	-2360.6	0.00	2360.69	3079.35	1539.68	6220.34	3114.79	11.98	-2.228	0.000	0.767
60.00	-25.63	-32.81	0.00	-2194.1	0.00	2194.14	3039.63	1519.81	5994.49	3001.70	14.43	-2.447	0.000	0.740
65.00	-24.63	-32.30	0.00	-2030.1	0.00	2030.11	2998.32	1499.16	5769.39	2888.98	17.11	-2.664	0.000	0.711
70.00	-23.66	-31.79	0.00	-1868.6	0.00	1868.61	2955.43	1477.72	5545.28	2776.76	20.02	-2.881	0.000	0.681
75.00	-22.71	-31.28	0.00	-1709.6	0.00	1709.66	2910.95	1455.48	5322.38	2665.15	23.15	-3.095	0.000	0.650
80.00	-21.79	-30.76	0.00	-1553.2	0.00	1553.26	2864.89	1432.44	5100.92	2554.25	26.50	-3.305	0.000	0.616
84.08	-21.08	-30.32	0.00	-1427.6	0.00	1427.65	2826.09	1413.05	4921.28	2464.30	29.40	-3.475	0.000	0.587
85.00	-20.78	-30.25	0.00	-1399.8	0.00	1399.85	2817.24	1408.62	4881.12	2444.19	30.07	-3.514	0.000	0.581
89.50	-19.57	-29.73	0.00	-1263.7	0.00	1263.72	2031.94	1015.97	3485.43	1745.31	33.47	-3.696	0.000	0.735
90.00	-19.44	-29.72	0.00	-1248.8	0.00	1248.85	2029.15	1014.57	3470.92	1738.04	33.86	-3.716	0.000	0.729
95.00	-18.68	-29.22	0.00	-1100.2	0.00	1100.27	2000.34	1000.17	3325.82	1665.38	37.88	-3.949	0.000	0.671
100.00	-17.94	-28.73	0.00	-954.16	0.00	954.16	1969.95	984.97	3180.92	1592.82	42.13	-4.170	0.000	0.609
105.00	-17.23	-28.23	0.00	-810.53	0.00	810.53	1937.97	968.98	3036.44	1520.48	46.61	-4.377	0.000	0.543
110.00	-14.68	-24.50	0.00	-669.36	0.00	669.36	1904.40	952.20	2892.62	1448.46	51.30	-4.567	0.000	0.470
115.00	-14.04	-24.01	0.00	-546.84	0.00	546.84	1869.25	934.63	2749.69	1376.89	56.17	-4.739	0.000	0.405
120.00	-13.43	-23.51	0.00	-426.79	0.00	426.79	1832.52	916.26	2607.87	1305.87	61.21	-4.890	0.000	0.335
123.00	-11.12	-19.56	0.00	-356.26	0.00	356.26	1809.72	904.86	2523.40	1263.58	64.31	-4.970	0.000	0.289
125.00	-10.89	-19.37	0.00	-317.14	0.00	317.14	1794.20	897.10	2467.38	1235.52	66.40	-5.019	0.000	0.263
127.92	-10.57	-19.08	0.00	-260.66	0.00	260.66	1771.11	885.56	2386.14	1194.84	69.48	-5.083	0.000	0.225
130.00	-10.22	-18.87	0.00	-220.90	0.00	220.90	1754.29	877.15	2328.47	1165.96	71.71	-5.123	0.000	0.196
131.00	-7.18	-13.83	0.00	-202.03	0.00	202.03	1746.12	873.06	2300.89	1152.16	72.78	-5.141	0.000	0.180
132.08	-7.00	-13.72	0.00	-187.05	0.00	187.05	1160.48	580.24	1541.12	771.71	73.95	-5.159	0.000	0.249
135.00	-6.78	-13.45	0.00	-147.04	0.00	147.04	1148.82	574.41	1493.54	747.88	77.11	-5.202	0.000	0.203
140.00	-4.05	-8.24	0.00	-79.81	0.00	79.81	1127.58	563.79	1411.91	707.01	82.59	-5.270	0.000	0.117
145.00	-3.75	-7.79	0.00	-38.62	0.00	38.62	1104.76	552.38	1330.41	666.20	88.13	-5.310	0.000	0.062
148.75	-3.35	-7.02	0.00	-9.39	0.00	9.39	1086.61	543.30	1269.51	635.70	92.30	-5.324	0.000	0.018
150.00	0.00	-6.68	0.00	-0.62	0.00	0.62	1080.36	540.18	1249.27	625.56	93.69	-5.325	0.000	0.001

Wind Loading - Shaft

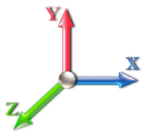
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

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	RB1	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
1.00	RT1 RB2	1.00	0.85	5.168	5.68	0.00	1.200	1.410	1.00	5.429	6.52	37.0	110.7	358.1
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	4.00	21.685	26.02	147.9	514.5	1494.5
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	26.765	32.12	182.6	677.8	1881.7
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	26.337	31.60	179.7	693.2	1873.7
18.00	RT2	1.00	0.88	5.363	5.90	0.00	1.200	1.882	3.00	15.584	18.70	110.3	418.9	1116.0
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	2.00	10.298	12.36	74.5	280.1	740.1
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	25.439	30.53	193.0	702.5	1836.2
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	24.979	29.98	196.9	701.5	1811.8
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	24.515	29.42	199.6	698.2	1785.0
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	24.049	28.86	201.4	693.2	1756.5
41.50	Bot - Section 2	1.00	1.05	6.394	7.03	0.00	1.200	2.046	1.50	7.121	8.55	60.1	207.4	521.9
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	3.50	16.639	19.97	142.9	486.4	1946.2
48.00	Top - Section 1	1.00	1.08	6.593	7.25	0.00	1.200	2.076	3.00	14.078	16.89	122.5	414.3	1647.3
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	2.00	9.290	11.15	81.6	274.9	683.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	5.00	22.900	27.48	205.1	678.9	1684.7
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	22.426	26.91	204.6	669.7	1652.0
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	21.950	26.34	203.6	659.8	1618.7
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	21.474	25.77	202.3	649.3	1584.8
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	20.997	25.20	200.7	638.3	1550.3
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	20.519	24.62	198.9	626.7	1515.4
84.08	Bot - Section 3	1.00	1.22	7.419	8.16	0.00	1.200	2.196	4.08	16.402	19.68	160.6	503.9	1212.2
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	0.92	3.676	4.41	36.1	114.0	398.0
89.50	Top - Section 2	1.00	1.24	7.517	8.27	0.00	1.200	2.210	4.50	17.817	21.38	176.8	549.6	1923.3
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	0.50	1.955	2.35	19.4	60.9	128.3
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	5.00	19.294	23.15	193.9	596.7	1260.5
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	5.00	18.814	22.58	191.1	583.8	1228.8
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	18.334	22.00	188.1	570.5	1196.8
110.00	Appurtenance(s)	1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	17.853	21.42	185.0	557.0	1164.5
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	17.372	20.85	181.7	543.1	1132.0
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	16.891	20.27	178.3	529.1	1099.2
123.00	Appurtenance(s)	1.00	1.32	8.038	8.84	0.00	1.200	2.281	3.00	9.902	11.88	105.1	312.3	645.4
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	2.00	6.505	7.81	69.3	205.9	424.2
127.92	Bot - Section 4	1.00	1.33	8.104	8.91	0.00	1.200	2.290	2.92	9.349	11.22	100.0	295.4	608.4
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	2.08	6.643	7.97	71.3	210.7	597.3
131.00	Appurtenance(s)	1.00	1.34	8.145	8.96	0.00	1.200	2.296	1.00	3.159	3.79	34.0	100.6	284.1
132.08	Top - Section 3	1.00	1.34	8.159	8.98	0.00	1.200	2.298	1.08	3.400	4.08	36.6	108.3	305.6
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	2.92	9.043	10.85	97.8	286.5	512.7
140.00	Appurtenance(s)	1.00	1.36	8.260	9.09	0.00	1.200	2.311	5.00	15.121	18.15	164.9	476.2	852.9
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	14.639	17.57	160.8	461.2	823.8
148.75	Appurtenance(s)	1.00	1.38	8.366	9.20	0.00	1.200	2.325	3.75	10.661	12.79	117.7	337.4	600.1
150.00	Appurtenance(s)	1.00	1.38	8.381	9.22	0.00	1.200	2.327	1.25	3.493	4.19	38.6	111.5	197.3
								Totals:	**150.00**			**5,652.5**		**45,654.2**

Discrete Appurtenance Forces

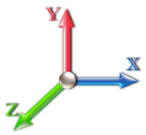
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

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	150.00	Ericsson RRUS32	3	8.381	9.219	0.54	0.80	3.94	493.19	0.000	0.000	36.28	0.00	0.00
2	150.00	Cci TPA65R-BU6DA-K	1	8.381	9.219	0.58	0.80	8.54	410.78	0.000	0.000	78.77	0.00	0.00
3	150.00	Cci OPA65R-BU6DA	1	8.381	9.219	0.58	0.80	8.60	478.15	0.000	0.000	79.27	0.00	0.00
4	150.00	Cci TPA65R-BU8DA-K	2	8.381	9.219	0.58	0.80	23.35	1073.94	0.000	0.000	215.22	0.00	0.00
5	150.00	Cci OPA65R-BU8DA	2	8.381	9.219	0.71	0.80	19.11	862.70	0.000	0.000	176.18	0.00	0.00
6	150.00	Ericsson AIR6419 B77G	3	8.401	9.241	0.61	0.80	8.87	554.70	0.000	1.750	81.94	0.00	143.39
7	150.00	Cci DTMABP7819VG12A	6	8.381	9.219	0.54	0.80	6.97	298.60	0.000	0.000	64.22	0.00	0.00
8	150.00	CCI TPX-070821	6	8.381	9.219	0.54	0.80	4.59	150.36	0.000	0.000	42.27	0.00	0.00
9	150.00	Ericsson 4426 B66	3	8.381	9.219	0.54	0.80	2.91	350.28	0.000	0.000	26.79	0.00	0.00
10	150.00	Proposed SitePro1	1	8.381	9.219	0.75	0.75	97.05	6608.69	0.000	0.000	894.68	0.00	0.00
11	150.00	Raycap DC6-48-60-18-8F	2	8.381	9.219	0.80	0.80	2.41	205.79	0.000	0.000	22.18	0.00	0.00
12	150.00	LMU Antenna unknown	1	8.381	9.219	0.54	0.80	0.28	6.53	0.000	0.000	2.59	0.00	0.00
13	150.00	Commscope	3	8.381	9.219	0.54	0.80	0.49	10.78	0.000	0.000	4.55	0.00	0.00
14	150.00	Raycap	1	8.381	9.219	0.80	0.80	2.60	155.66	0.000	0.000	24.01	0.00	0.00
15	150.00	Ericsson RRUS 32 B2	3	8.381	9.219	0.54	0.80	6.01	571.48	0.000	0.000	55.40	0.00	0.00
16	150.00	Ericsson RRUS 4449	3	8.381	9.219	0.54	0.80	4.34	428.32	0.000	0.000	40.02	0.00	0.00
17	150.00	Ericsson RRUS 4478 B14	3	8.381	9.219	0.54	0.80	3.76	351.51	0.000	0.000	34.70	0.00	0.00
18	150.00	CSS DBC-750	3	8.381	9.219	0.54	0.80	1.96	47.25	0.000	0.000	18.02	0.00	0.00
19	148.75	Ericsson AIR6449 B77D	3	8.366	9.203	0.68	0.80	10.81	901.04	0.000	0.000	99.45	0.00	0.00
20	140.00	B2/B66A RRHBR049	3	8.260	9.086	0.38	0.75	9.10	1252.43	0.000	0.000	82.66	0.00	0.00
21	140.00	XXDWMM-12.5-65-8T-CB	3	8.260	9.086	0.38	0.75	2.49	358.14	0.000	0.000	22.62	0.00	0.00
22	140.00	BSAMNT-SBS-2-2	3	8.260	9.086	1.00	1.00	25.06	-659.20	0.000	0.000	227.68	0.00	0.00
23	140.00	SamsungMT6407-77A	1	8.260	9.086	0.56	0.75	3.35	264.56	0.000	0.000	30.48	0.00	0.00
24	140.00	B5/B13 RRHBR04C	3	8.260	9.086	0.38	0.75	2.94	421.47	0.000	0.000	26.68	0.00	0.00
25	140.00	RVZDC-6627-PF48	2	8.260	9.086	1.00	1.00	9.77	432.75	0.000	0.000	88.80	0.00	0.00
26	140.00	CBRS RRH-RT4401	3	8.260	9.086	0.38	0.75	1.98	116.07	0.000	0.000	18.01	0.00	0.00
27	140.00	Low Profile Platform	1	8.260	9.086	1.00	1.00	45.39	3233.22	0.000	0.000	412.38	0.00	0.00
28	140.00	Antel	3	8.260	9.086	0.66	0.75	11.89	900.29	0.000	0.000	108.03	0.00	0.00
29	140.00	Andrew SBNHH-1D65B	6	8.260	9.086	0.58	0.75	34.40	2222.22	0.000	0.000	312.54	0.00	0.00
30	131.00	KRY 112 144-1 Double	3	8.145	8.960	0.38	0.75	1.16	72.84	0.000	0.000	10.43	0.00	0.00
31	131.00	APXVAALL24-43-U-NA20	3	8.145	8.960	0.52	0.75	35.86	2196.94	0.000	0.000	321.30	0.00	0.00
32	131.00	AIR6449 B41	3	8.145	8.960	0.53	0.75	11.02	816.80	0.000	0.000	98.76	0.00	0.00
33	131.00	AIR32	3	8.145	8.960	0.65	0.75	15.81	1246.09	0.000	0.000	141.64	0.00	0.00
34	131.00	PV-LPPGS-12M-HR2-AP3	1	8.145	8.960	1.00	1.00	65.41	4859.28	0.000	0.000	586.07	0.00	0.00
35	131.00	ATMAA1412D-1A20 TMA	3	8.145	8.960	0.38	0.75	2.47	128.89	0.000	0.000	22.17	0.00	0.00
36	131.00	SDX1926Q-43 Diplexer	3	8.145	8.960	0.38	0.75	0.95	51.86	0.000	0.000	8.49	0.00	0.00
37	131.00	Radio 4449 B71+B85	3	8.145	8.960	0.38	0.75	3.06	316.18	0.000	0.000	27.41	0.00	0.00
38	131.00	Ericsson 4415 B25	3	8.145	8.960	0.38	0.75	2.61	299.60	0.000	0.000	23.36	0.00	0.00
39	131.00	Bias-T 782 11056	3	8.145	8.960	0.38	0.75	0.58	19.36	0.000	0.000	5.24	0.00	0.00
40	123.00	APXVSPP18-C-A20 (50	1	8.038	8.842	0.75	0.75	8.75	172.99	0.000	0.000	77.40	0.00	0.00
41	123.00	RFS - ACU-A20-N - RET	4	8.038	8.842	0.38	0.75	0.79	22.06	0.000	0.000	7.00	0.00	0.00
42	123.00	ALU - 800 MHz Filter	3	8.038	8.842	0.50	0.75	2.45	85.87	0.000	0.000	21.67	0.00	0.00
43	123.00	ALU - 800 MHz RRH -	3	8.038	8.842	0.38	0.75	4.48	417.53	0.000	0.000	39.64	0.00	0.00
44	123.00	Platform w/ HRK Handrail	1	8.038	8.842	1.00	1.00	65.58	3544.98	0.000	0.000	579.82	0.00	0.00
45	123.00	APXVTM14-C-I20	3	8.038	8.842	0.59	0.75	13.91	866.62	0.000	0.000	122.96	0.00	0.00
46	123.00	APXVSPP18-C-A20	2	8.038	8.842	0.62	0.75	14.53	432.28	0.000	0.000	128.48	0.00	0.00
47	123.00	ALU - TD-RRH8x20-25 -	3	8.038	8.842	0.38	0.75	5.78	713.44	0.000	0.000	51.11	0.00	0.00

Discrete Appurtenance Forces

Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 23

48	123.00	ALU - 1900 MHz RRH -	3	8.038	8.842	0.38	0.75	4.91	463.37	0.000	0.000	43.39	0.00	0.00
49	110.00	Raycap	1	7.851	8.636	0.75	0.75	2.06	82.41	0.000	0.000	17.78	0.00	0.00
50	110.00	Fujitsu TA08025-B604	3	7.851	8.636	0.38	0.75	3.02	390.07	0.000	0.000	26.09	0.00	0.00
51	110.00	Fujitsu TA08025-B605	3	7.851	8.636	0.38	0.75	3.02	435.03	0.000	0.000	26.09	0.00	0.00
52	110.00	MC-PK8-DSH	1	7.851	8.636	1.00	1.00	98.65	3881.12	0.000	0.000	851.90	0.00	0.00
53	110.00	JMA Wireless	3	7.851	8.636	0.55	0.75	23.95	1158.55	0.000	0.000	206.82	0.00	0.00
							Totals:		**45,175.89**			**6,771.42**		

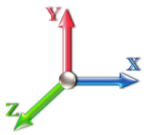
Total Applied Force Summary

Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

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
1.00		37.04	417.97	0.00	0.00
5.00		147.93	1745.65	0.00	0.00
10.00		182.59	2203.03	0.00	0.00
15.00		179.66	2199.87	0.00	0.00
18.00		110.33	1313.01	0.00	0.00
20.00		74.54	872.03	0.00	0.00
25.00		192.99	2115.38	0.00	0.00
30.00		196.92	2092.03	0.00	0.00
35.00		199.63	2066.25	0.00	0.00
40.00		201.42	2038.61	0.00	0.00
41.50		60.11	606.54	0.00	0.00
45.00		142.86	2144.20	0.00	0.00
48.00		122.52	1817.25	0.00	0.00
50.00		81.55	797.20	0.00	0.00
55.00		205.09	1968.82	0.00	0.00
60.00		204.56	1936.77	0.00	0.00
65.00		203.63	1903.99	0.00	0.00
70.00		202.34	1870.57	0.00	0.00
75.00		200.74	1836.59	0.00	0.00
80.00		198.86	1802.10	0.00	0.00
84.08		160.63	1446.69	0.00	0.00
85.00		36.09	450.65	0.00	0.00
89.50		176.80	2182.14	0.00	0.00
90.00		19.43	157.11	0.00	0.00
95.00		193.87	1548.53	0.00	0.00
100.00		191.10	1517.20	0.00	0.00
105.00		188.15	1485.56	0.00	0.00
110.00	(11) attachments	1313.69	7400.80	0.00	0.00
115.00		181.73	1368.88	0.00	0.00
120.00		178.28	1336.10	0.00	0.00
123.00	(23) attachments	1176.52	7506.69	0.00	0.00
125.00		69.25	509.83	0.00	0.00
127.92		100.01	733.21	0.00	0.00
130.00		71.31	686.49	0.00	0.00
131.00	(28) attachments	1278.82	10334.76	0.00	0.00
132.08		36.62	339.58	0.00	0.00
135.00		97.84	604.13	0.00	0.00
140.00	(28) attachments	1494.74	9551.64	0.00	0.00
145.00		160.79	909.37	0.00	0.00
148.75	(3) attachments	217.19	1551.96	0.00	0.00
150.00	(47) attachments	1935.74	13272.97	0.00	143.39
	Totals:	**12,423.89**	**98,642.17**	**0.00**	**143.39**

Linear Appurtenance Segment Forces (Factored)

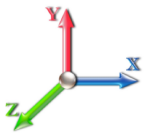
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

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)
1.00	1.60" Hybrid	Yes	1.00	0.000	1.60	0.37	0.00	0.046	0.000	5.168	0.00	5.60
1.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.34	0.00	0.046	0.000	5.168	0.00	6.93
5.00	1.60" Hybrid	Yes	4.00	0.000	1.60	1.64	0.00	0.046	0.000	5.168	0.00	27.30
5.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	1.52	0.00	0.046	0.000	5.168	0.00	34.29
10.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.15	0.00	0.047	0.000	5.168	0.00	37.36
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	2.00	0.00	0.047	0.000	5.168	0.00	47.08
15.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.21	0.00	0.048	0.000	5.168	0.00	39.44
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	2.06	0.00	0.048	0.000	5.168	0.00	49.78
18.00	1.60" Hybrid	Yes	3.00	0.000	1.60	1.34	0.00	0.049	0.000	5.363	0.00	24.26
18.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	1.25	0.00	0.049	0.000	5.363	0.00	30.63
20.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.90	0.00	0.049	0.000	5.483	0.00	16.40
20.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.84	0.00	0.049	0.000	5.483	0.00	20.72
25.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.29	0.00	0.028	0.000	5.747	0.00	42.29
30.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.32	0.00	0.029	0.000	5.972	0.00	43.37
35.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.34	0.00	0.029	0.000	6.169	0.00	44.31
40.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.37	0.00	0.030	0.000	6.345	0.00	45.15
41.50	1.60" Hybrid	Yes	1.50	0.000	1.60	0.71	0.00	0.030	0.000	6.394	0.00	13.61
45.00	1.60" Hybrid	Yes	3.50	0.000	1.60	1.67	0.00	0.031	0.000	6.504	0.00	32.13
48.00	1.60" Hybrid	Yes	3.00	0.000	1.60	1.44	0.00	0.031	0.000	6.593	0.00	27.79
50.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.96	0.00	0.031	0.000	6.650	0.00	18.64
55.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.42	0.00	0.032	0.000	6.785	0.00	47.23
60.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.44	0.00	0.032	0.000	6.910	0.00	47.82
65.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.45	0.00	0.033	0.000	7.028	0.00	48.37
70.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.46	0.00	0.034	0.000	7.138	0.00	48.88
75.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.48	0.00	0.035	0.000	7.243	0.00	49.37
80.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.49	0.00	0.036	0.000	7.342	0.00	49.83
84.08	1.60" Hybrid	Yes	4.08	0.000	1.60	2.04	0.00	0.037	0.000	7.419	0.00	40.99
85.00	1.60" Hybrid	Yes	0.92	0.000	1.60	0.46	0.00	0.037	0.000	7.436	0.00	9.22
89.50	1.60" Hybrid	Yes	4.50	0.000	1.60	2.26	0.00	0.038	0.000	7.517	0.00	45.58
90.00	1.60" Hybrid	Yes	0.50	0.000	1.60	0.25	0.00	0.038	0.000	7.526	0.00	5.07
95.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.52	0.00	0.038	0.000	7.612	0.00	51.09
100.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.53	0.00	0.039	0.000	7.695	0.00	51.47
105.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.54	0.00	0.040	0.000	7.774	0.00	51.84
110.00	1.60" Hybrid	Yes	5.00	0.000	1.60	2.55	0.00	0.042	0.000	7.851	0.00	52.19
										Totals:	**0.0**	**1,206.0**

Calculated Forces

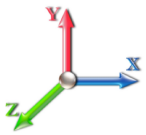
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

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	-98.64	-12.43	0.00	-1467.8	0.00	1467.80	3399.80	1699.90	8571.22	4291.98	0.00	0.000	0.000	0.302
1.00	-98.22	-12.45	0.00	-1455.3	0.00	1455.36	3395.30	1697.65	8527.34	4270.01	0.00	-0.012	0.000	0.284
5.00	-96.46	-12.38	0.00	-1405.5	0.00	1405.58	3376.67	1688.33	8351.12	4181.77	0.03	-0.056	0.000	0.279
10.00	-94.25	-12.29	0.00	-1343.6	0.00	1343.68	3351.94	1675.97	8129.40	4070.74	0.12	-0.111	0.000	0.272
15.00	-92.04	-12.17	0.00	-1282.2	0.00	1282.25	3325.63	1662.82	7906.28	3959.02	0.27	-0.167	0.000	0.266
18.00	-90.72	-12.10	0.00	-1245.7	0.00	1245.73	3309.09	1654.54	7771.83	3891.69	0.38	-0.201	0.000	0.262
18.00	-90.72	-12.10	0.00	-1245.7	0.00	1245.73	3309.09	1654.54	7771.83	3891.69	0.38	-0.201	0.000	0.262
20.00	-89.84	-12.10	0.00	-1221.5	0.00	1221.53	3297.74	1648.87	7681.99	3846.70	0.47	-0.224	0.000	0.345
25.00	-87.71	-12.02	0.00	-1161.0	0.00	1161.01	3268.26	1634.13	7456.75	3733.92	0.75	-0.299	0.000	0.338
30.00	-85.60	-11.92	0.00	-1100.9	0.00	1100.94	3237.20	1618.60	7230.79	3620.77	1.10	-0.374	0.000	0.331
35.00	-83.52	-11.82	0.00	-1041.3	0.00	1041.35	3204.54	1602.27	7004.35	3507.38	1.53	-0.450	0.000	0.323
40.00	-81.47	-11.67	0.00	-982.27	0.00	982.27	3170.31	1585.15	6777.64	3393.86	2.04	-0.527	0.000	0.315
41.50	-80.86	-11.66	0.00	-964.76	0.00	964.76	3159.73	1579.86	6709.61	3359.79	2.21	-0.551	0.000	0.313
45.00	-78.71	-11.56	0.00	-923.96	0.00	923.96	3134.49	1567.24	6550.90	3280.32	2.64	-0.605	0.000	0.307
48.00	-76.88	-11.47	0.00	-889.27	0.00	889.27	3132.30	1566.15	6537.37	3273.54	3.03	-0.653	0.000	0.296
50.00	-76.07	-11.45	0.00	-866.33	0.00	866.33	3117.49	1558.74	6446.72	3228.15	3.31	-0.684	0.000	0.293
55.00	-74.09	-11.32	0.00	-809.06	0.00	809.06	3079.35	1539.68	6220.34	3114.79	4.07	-0.759	0.000	0.284
60.00	-72.15	-11.18	0.00	-752.45	0.00	752.45	3039.63	1519.81	5994.49	3001.70	4.91	-0.834	0.000	0.274
65.00	-70.23	-11.04	0.00	-696.53	0.00	696.53	2998.32	1499.16	5769.39	2888.98	5.82	-0.909	0.000	0.265
70.00	-68.35	-10.90	0.00	-641.32	0.00	641.32	2955.43	1477.72	5545.28	2776.76	6.81	-0.983	0.000	0.254
75.00	-66.50	-10.75	0.00	-586.84	0.00	586.84	2910.95	1455.48	5322.38	2665.15	7.88	-1.056	0.000	0.243
80.00	-64.69	-10.59	0.00	-533.09	0.00	533.09	2864.89	1432.44	5100.92	2554.25	9.03	-1.129	0.000	0.231
84.08	-63.24	-10.44	0.00	-489.85	0.00	489.85	2826.09	1413.05	4921.28	2464.30	10.02	-1.187	0.000	0.221
85.00	-62.79	-10.44	0.00	-480.29	0.00	480.29	2817.24	1408.62	4881.12	2444.19	10.25	-1.200	0.000	0.219
89.50	-60.60	-10.25	0.00	-433.33	0.00	433.33	2031.94	1015.97	3485.43	1745.31	11.41	-1.263	0.000	0.278
90.00	-60.44	-10.27	0.00	-428.21	0.00	428.21	2029.15	1014.57	3470.92	1738.04	11.54	-1.270	0.000	0.276
95.00	-58.88	-10.12	0.00	-376.85	0.00	376.85	2000.34	1000.17	3325.82	1665.38	12.92	-1.349	0.000	0.256
100.00	-57.36	-9.97	0.00	-326.24	0.00	326.24	1969.95	984.97	3180.92	1592.82	14.37	-1.425	0.000	0.234
105.00	-55.86	-9.81	0.00	-276.41	0.00	276.41	1937.97	968.98	3036.44	1520.48	15.90	-1.496	0.000	0.211
110.00	-48.49	-8.35	0.00	-227.37	0.00	227.37	1904.40	952.20	2892.62	1448.46	17.51	-1.561	0.000	0.183
115.00	-47.12	-8.17	0.00	-185.63	0.00	185.63	1869.25	934.63	2749.69	1376.89	19.17	-1.619	0.000	0.160
120.00	-45.79	-7.99	0.00	-144.76	0.00	144.76	1832.52	916.26	2607.87	1305.87	20.90	-1.670	0.000	0.136
123.00	-38.31	-6.61	0.00	-120.79	0.00	120.79	1809.72	904.86	2523.40	1263.58	21.96	-1.697	0.000	0.117
125.00	-37.80	-6.53	0.00	-107.58	0.00	107.58	1794.20	897.10	2467.38	1235.52	22.67	-1.714	0.000	0.108
127.92	-37.07	-6.42	0.00	-88.52	0.00	88.52	1771.11	885.56	2386.14	1194.84	23.73	-1.736	0.000	0.095
130.00	-36.39	-6.34	0.00	-75.14	0.00	75.14	1754.29	877.15	2328.47	1165.96	24.49	-1.749	0.000	0.085
131.00	-26.10	-4.75	0.00	-68.80	0.00	68.80	1746.12	873.06	2300.89	1152.16	24.85	-1.755	0.000	0.075
132.08	-25.76	-4.70	0.00	-63.66	0.00	63.66	1160.48	580.24	1541.12	771.71	25.25	-1.762	0.000	0.105
135.00	-25.15	-4.60	0.00	-49.94	0.00	49.94	1148.82	574.41	1493.54	747.88	26.33	-1.776	0.000	0.089
140.00	-15.65	-2.81	0.00	-26.96	0.00	26.96	1127.58	563.79	1411.91	707.01	28.21	-1.799	0.000	0.052
145.00	-14.75	-2.62	0.00	-12.92	0.00	12.92	1104.76	552.38	1330.41	666.20	30.10	-1.813	0.000	0.033
148.75	-13.20	-2.36	0.00	-3.09	0.00	3.09	1086.61	543.30	1269.51	635.70	31.53	-1.817	0.000	0.017
150.00	0.00	-1.94	0.00	-0.14	0.00	0.14	1080.36	540.18	1249.27	625.56	32.00	-1.818	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E					**Iterations**	21
Gust Response Factor	1.10			**Sds**	0.19	**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10	**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32	**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	RB1	0.00	0.00	0.00	0.00	0.00	
1.00	RT1 RB2	206.12	0.00	0.01	0.00	1.12	
5.00		816.66	0.00	0.03	0.02	15.60	
10.00		1003.2	0.01	0.05	0.03	27.54	
15.00		983.74	0.02	0.06	0.04	31.00	
18.00	RT2	580.87	0.03	0.07	0.04	19.12	
20.00		383.34	0.03	0.07	0.04	12.88	
25.00		944.70	0.05	0.07	0.04	32.87	
30.00		925.18	0.08	0.07	0.04	33.03	
35.00		905.65	0.10	0.07	0.04	33.12	
40.00		886.13	0.13	0.07	0.03	33.16	
41.50	Bot - Section 2	262.03	0.14	0.07	0.03	9.86	
45.00		1216.5	0.17	0.07	0.03	46.28	
48.00	Top - Section 1	1027.5	0.19	0.06	0.02	39.20	
50.00		340.71	0.21	0.06	0.02	12.96	
55.00		838.12	0.25	0.05	0.02	30.85	
60.00		818.60	0.30	0.04	0.01	27.47	
65.00		799.08	0.35	0.03	0.01	21.92	
70.00		779.55	0.41	0.01	0.01	13.93	
75.00		760.03	0.47	-0.01	0.01	3.90	
80.00		740.51	0.54	-0.03	0.01	-6.83	
84.08	Bot - Section 3	590.27	0.59	-0.05	0.01	-12.04	
85.00		236.69	0.61	-0.06	0.02	-5.37	
89.50	Top - Section 2	1144.8	0.67	-0.08	0.02	-36.66	
90.00		56.17	0.68	-0.08	0.03	-1.85	
95.00		553.15	0.76	-0.10	0.04	-21.18	
100.00		537.54	0.84	-0.12	0.07	-20.70	
105.00		521.92	0.93	-0.12	0.10	-17.49	
110.00	Appurtenance(s)	2865.4	1.02	-0.11	0.14	-67.14	
115.00		490.69	1.11	-0.06	0.19	-4.10	
120.00		475.07	1.21	0.01	0.26	5.54	
123.00	Appurtenance(s)	2785.9	1.27	0.08	0.31	72.57	
125.00		181.91	1.31	0.14	0.35	6.67	
127.92	Bot - Section 4	260.80	1.37	0.24	0.41	13.97	
130.00		322.15	1.42	0.32	0.45	21.48	
131.00	Appurtenance(s)	3834.0	1.44	0.37	0.48	281.09	
132.08	Top - Section 3	164.46	1.47	0.42	0.50	13.28	
135.00		188.51	1.53	0.58	0.58	19.21	
140.00	Appurtenance(s)	3408.0	1.65	0.93	0.73	485.14	
145.00		302.17	1.77	1.39	0.92	56.87	
148.75	Appurtenance(s)	482.94	1.86	1.82	1.08	109.25	
150.00	Appurtenance(s)	4411.5	1.89	1.98	1.14	1056.97	
	Totals:	**39,032.6**				**2,394.5**	**Total Wind:** **38,178.1**

Calculated Forces

Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	21
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32	**SA**	0.03	**Seismic Importance Factor**			1.00

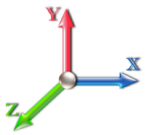
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-53.58	-2.59	0.00	-340.37	0.00	340.37	3399.80	1699.90	8571.22	4291.98		0.00	0.00	0.078
1.00	-53.28	-2.59	0.00	-337.78	0.00	337.78	3395.30	1697.65	8527.34	4270.01		0.00	0.00	0.072
5.00	-52.11	-2.59	0.00	-327.41	0.00	327.41	3376.67	1688.33	8351.12	4181.77		0.01	-0.01	0.071
10.00	-50.66	-2.57	0.00	-314.46	0.00	314.46	3351.94	1675.97	8129.40	4070.74		0.03	-0.03	0.070
15.00	-49.23	-2.55	0.00	-301.61	0.00	301.61	3325.63	1662.82	7906.28	3959.02		0.06	-0.04	0.068
18.00	-48.39	-2.53	0.00	-293.96	0.00	293.96	3309.09	1654.54	7771.83	3891.69		0.09	-0.05	0.068
18.00	-48.39	-2.53	0.00	-293.96	0.00	293.96	3309.09	1654.54	7771.83	3891.69		0.09	-0.05	0.068
20.00	-47.83	-2.53	0.00	-288.89	0.00	288.89	3297.74	1648.87	7681.99	3846.70		0.11	-0.05	0.090
25.00	-46.46	-2.51	0.00	-276.24	0.00	276.24	3268.26	1634.13	7456.75	3733.92		0.17	-0.07	0.088
30.00	-45.10	-2.49	0.00	-263.68	0.00	263.68	3237.20	1618.60	7230.79	3620.77		0.26	-0.09	0.087
35.00	-43.77	-2.47	0.00	-251.23	0.00	251.23	3204.54	1602.27	7004.35	3507.38		0.36	-0.11	0.085
40.00	-42.47	-2.44	0.00	-238.88	0.00	238.88	3170.31	1585.15	6777.64	3393.86		0.48	-0.13	0.084
41.50	-42.08	-2.44	0.00	-235.21	0.00	235.21	3159.73	1579.86	6709.61	3359.79		0.52	-0.13	0.083
45.00	-40.45	-2.40	0.00	-226.68	0.00	226.68	3134.49	1567.24	6550.90	3280.32		0.62	-0.14	0.082
48.00	-39.07	-2.36	0.00	-219.49	0.00	219.49	3132.30	1566.15	6537.37	3273.54		0.72	-0.16	0.080
50.00	-38.56	-2.36	0.00	-214.76	0.00	214.76	3117.49	1558.74	6446.72	3228.15		0.78	-0.16	0.079
55.00	-37.31	-2.33	0.00	-202.98	0.00	202.98	3079.35	1539.68	6220.34	3114.79		0.96	-0.18	0.077
60.00	-36.09	-2.31	0.00	-191.32	0.00	191.32	3039.63	1519.81	5994.49	3001.70		1.17	-0.20	0.076
65.00	-34.88	-2.30	0.00	-179.75	0.00	179.75	2998.32	1499.16	5769.39	2888.98		1.39	-0.22	0.074
70.00	-33.71	-2.29	0.00	-168.25	0.00	168.25	2955.43	1477.72	5545.28	2776.76		1.63	-0.24	0.072
75.00	-32.55	-2.29	0.00	-156.79	0.00	156.79	2910.95	1455.48	5322.38	2665.15		1.89	-0.26	0.070
80.00	-31.42	-2.30	0.00	-145.32	0.00	145.32	2864.89	1432.44	5100.92	2554.25		2.17	-0.28	0.068
84.08	-30.51	-2.30	0.00	-135.93	0.00	135.93	2826.09	1413.05	4921.28	2464.30		2.42	-0.29	0.066
85.00	-30.18	-2.30	0.00	-133.82	0.00	133.82	2817.24	1408.62	4881.12	2444.19		2.47	-0.30	0.065
89.50	-28.59	-2.30	0.00	-123.46	0.00	123.46	2031.94	1015.97	3485.43	1745.31		2.76	-0.32	0.085
90.00	-28.50	-2.31	0.00	-122.31	0.00	122.31	2029.15	1014.57	3470.92	1738.04		2.80	-0.32	0.084
95.00	-27.59	-2.31	0.00	-110.78	0.00	110.78	2000.34	1000.17	3325.82	1665.38		3.14	-0.34	0.080
100.00	-26.70	-2.32	0.00	-99.22	0.00	99.22	1969.95	984.97	3180.92	1592.82		3.51	-0.36	0.076
105.00	-25.83	-2.32	0.00	-87.64	0.00	87.64	1937.97	968.98	3036.44	1520.48		3.90	-0.39	0.071
110.00	-22.15	-2.30	0.00	-76.04	0.00	76.04	1904.40	952.20	2892.62	1448.46		4.32	-0.41	0.064
115.00	-21.32	-2.30	0.00	-64.53	0.00	64.53	1869.25	934.63	2749.69	1376.89		4.76	-0.43	0.058
120.00	-20.51	-2.30	0.00	-53.01	0.00	53.01	1832.52	916.26	2607.87	1305.87		5.21	-0.44	0.052
123.00	-17.03	-2.20	0.00	-46.12	0.00	46.12	1809.72	904.86	2523.40	1263.58		5.50	-0.45	0.046
125.00	-16.72	-2.19	0.00	-41.72	0.00	41.72	1794.20	897.10	2467.38	1235.52		5.69	-0.46	0.043
127.92	-16.29	-2.18	0.00	-35.32	0.00	35.32	1771.11	885.56	2386.14	1194.84		5.97	-0.47	0.039
130.00	-15.81	-2.15	0.00	-30.79	0.00	30.79	1754.29	877.15	2328.47	1165.96		6.18	-0.48	0.035
131.00	-11.17	-1.83	0.00	-28.63	0.00	28.63	1746.12	873.06	2300.89	1152.16		6.28	-0.48	0.031
132.08	-10.94	-1.82	0.00	-26.65	0.00	26.65	1160.48	580.24	1541.12	771.71		6.39	-0.48	0.044
135.00	-10.62	-1.80	0.00	-21.34	0.00	21.34	1148.82	574.41	1493.54	747.88		6.68	-0.49	0.038
140.00	-6.38	-1.28	0.00	-12.34	0.00	12.34	1127.58	563.79	1411.91	707.01		7.20	-0.50	0.023
145.00	-5.93	-1.22	0.00	-5.95	0.00	5.95	1104.76	552.38	1330.41	666.20		7.72	-0.50	0.014
148.75	-5.30	-1.10	0.00	-1.38	0.00	1.38	1086.61	543.30	1269.51	635.70		8.12	-0.50	0.007
150.00	0.00	-1.06	0.00	0.00	0.00	0.00	1080.36	540.18	1249.27	625.56		8.25	-0.50	0.000

Seismic Segment Forces (Factored)

Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

IES Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	21
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32		**SA**	0.03	**Seismic Importance Factor**		1.00



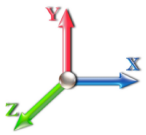
Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	0.00	
1.00	RT1 RB2	206.12	0.00	0.01	0.00	1.12	
5.00		816.66	0.00	0.03	0.02	15.60	
10.00		1003.2	0.01	0.05	0.03	27.54	
15.00		983.74	0.02	0.06	0.04	31.00	
18.00	RT2	580.87	0.03	0.07	0.04	19.12	
20.00		383.34	0.03	0.07	0.04	12.88	
25.00		944.70	0.05	0.07	0.04	32.87	
30.00		925.18	0.08	0.07	0.04	33.03	
35.00		905.65	0.10	0.07	0.04	33.12	
40.00		886.13	0.13	0.07	0.03	33.16	
41.50	Bot - Section 2	262.03	0.14	0.07	0.03	9.86	
45.00		1216.5	0.17	0.07	0.03	46.28	
48.00	Top - Section 1	1027.5	0.19	0.06	0.02	39.20	
50.00		340.71	0.21	0.06	0.02	12.96	
55.00		838.12	0.25	0.05	0.02	30.85	
60.00		818.60	0.30	0.04	0.01	27.47	
65.00		799.08	0.35	0.03	0.01	21.92	
70.00		779.55	0.41	0.01	0.01	13.93	
75.00		760.03	0.47	-0.01	0.01	3.90	
80.00		740.51	0.54	-0.03	0.01	-6.83	
84.08	Bot - Section 3	590.27	0.59	-0.05	0.01	-12.04	
85.00		236.69	0.61	-0.06	0.02	-5.37	
89.50	Top - Section 2	1144.8	0.67	-0.08	0.02	-36.66	
90.00		56.17	0.68	-0.08	0.03	-1.85	
95.00		553.15	0.76	-0.10	0.04	-21.18	
100.00		537.54	0.84	-0.12	0.07	-20.70	
105.00		521.92	0.93	-0.12	0.10	-17.49	
110.00	Appurtenance(s)	2865.4	1.02	-0.11	0.14	-67.14	
115.00		490.69	1.11	-0.06	0.19	-4.10	
120.00		475.07	1.21	0.01	0.26	5.54	
123.00	Appurtenance(s)	2785.9	1.27	0.08	0.31	72.57	
125.00		181.91	1.31	0.14	0.35	6.67	
127.92	Bot - Section 4	260.80	1.37	0.24	0.41	13.97	
130.00		322.15	1.42	0.32	0.45	21.48	
131.00	Appurtenance(s)	3834.0	1.44	0.37	0.48	281.09	
132.08	Top - Section 3	164.46	1.47	0.42	0.50	13.28	
135.00		188.51	1.53	0.58	0.58	19.21	
140.00	Appurtenance(s)	3408.0	1.65	0.93	0.73	485.14	
145.00		302.17	1.77	1.39	0.92	56.87	
148.75	Appurtenance(s)	482.94	1.86	1.82	1.08	109.25	
150.00	Appurtenance(s)	4411.5	1.89	1.98	1.14	1056.97	
	Totals:	**39,032.6**				**2,394.5**	**Total Wind:** **38,178.1**

Calculated Forces

Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 30

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	21
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32	**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	-40.18	-2.59	0.00	-336.05	0.00	336.05	3399.80	1699.90	8571.22	4291.98		0.00	0.00	0.073
1.00	-39.96	-2.59	0.00	-333.46	0.00	333.46	3395.30	1697.65	8527.34	4270.01		0.00	0.00	0.069
5.00	-39.08	-2.58	0.00	-323.09	0.00	323.09	3376.67	1688.33	8351.12	4181.77		0.01	-0.01	0.068
10.00	-37.99	-2.56	0.00	-310.17	0.00	310.17	3351.94	1675.97	8129.40	4070.74		0.03	-0.03	0.066
15.00	-36.93	-2.54	0.00	-297.35	0.00	297.35	3325.63	1662.82	7906.28	3959.02		0.06	-0.04	0.065
18.00	-36.29	-2.52	0.00	-289.73	0.00	289.73	3309.09	1654.54	7771.83	3891.69		0.09	-0.05	0.064
18.00	-36.29	-2.52	0.00	-289.73	0.00	289.73	3309.09	1654.54	7771.83	3891.69		0.09	-0.05	0.064
20.00	-35.87	-2.52	0.00	-284.69	0.00	284.69	3297.74	1648.87	7681.99	3846.70		0.11	-0.05	0.085
25.00	-34.84	-2.49	0.00	-272.10	0.00	272.10	3268.26	1634.13	7456.75	3733.92		0.17	-0.07	0.084
30.00	-33.83	-2.47	0.00	-259.62	0.00	259.62	3237.20	1618.60	7230.79	3620.77		0.25	-0.09	0.082
35.00	-32.83	-2.45	0.00	-247.27	0.00	247.27	3204.54	1602.27	7004.35	3507.38		0.35	-0.10	0.081
40.00	-31.85	-2.42	0.00	-235.04	0.00	235.04	3170.31	1585.15	6777.64	3393.86		0.47	-0.12	0.079
41.50	-31.56	-2.41	0.00	-231.41	0.00	231.41	3159.73	1579.86	6709.61	3359.79		0.51	-0.13	0.079
45.00	-30.33	-2.37	0.00	-222.97	0.00	222.97	3134.49	1567.24	6550.90	3280.32		0.61	-0.14	0.078
48.00	-29.30	-2.33	0.00	-215.86	0.00	215.86	3132.30	1566.15	6537.37	3273.54		0.71	-0.15	0.075
50.00	-28.92	-2.33	0.00	-211.19	0.00	211.19	3117.49	1558.74	6446.72	3228.15		0.77	-0.16	0.075
55.00	-27.98	-2.30	0.00	-199.57	0.00	199.57	3079.35	1539.68	6220.34	3114.79		0.95	-0.18	0.073
60.00	-27.06	-2.28	0.00	-188.06	0.00	188.06	3039.63	1519.81	5994.49	3001.70		1.15	-0.20	0.072
65.00	-26.16	-2.26	0.00	-176.66	0.00	176.66	2998.32	1499.16	5769.39	2888.98		1.37	-0.22	0.070
70.00	-25.28	-2.25	0.00	-165.35	0.00	165.35	2955.43	1477.72	5545.28	2776.76		1.60	-0.24	0.068
75.00	-24.41	-2.25	0.00	-154.08	0.00	154.08	2910.95	1455.48	5322.38	2665.15		1.86	-0.26	0.066
80.00	-23.56	-2.26	0.00	-142.81	0.00	142.81	2864.89	1432.44	5100.92	2554.25		2.14	-0.27	0.064
84.08	-22.88	-2.26	0.00	-133.59	0.00	133.59	2826.09	1413.05	4921.28	2464.30		2.38	-0.29	0.062
85.00	-22.63	-2.26	0.00	-131.52	0.00	131.52	2817.24	1408.62	4881.12	2444.19		2.44	-0.29	0.062
89.50	-21.44	-2.26	0.00	-121.35	0.00	121.35	2031.94	1015.97	3485.43	1745.31		2.72	-0.31	0.080
90.00	-21.37	-2.26	0.00	-120.22	0.00	120.22	2029.15	1014.57	3470.92	1738.04		2.75	-0.31	0.080
95.00	-20.69	-2.27	0.00	-108.91	0.00	108.91	2000.34	1000.17	3325.82	1665.38		3.09	-0.34	0.076
100.00	-20.02	-2.27	0.00	-97.57	0.00	97.57	1969.95	984.97	3180.92	1592.82		3.46	-0.36	0.071
105.00	-19.37	-2.27	0.00	-86.22	0.00	86.22	1937.97	968.98	3036.44	1520.48		3.84	-0.38	0.067
110.00	-16.61	-2.26	0.00	-74.85	0.00	74.85	1904.40	952.20	2892.62	1448.46		4.25	-0.40	0.060
115.00	-15.99	-2.26	0.00	-63.55	0.00	63.55	1869.25	934.63	2749.69	1376.89		4.68	-0.42	0.055
120.00	-15.38	-2.26	0.00	-52.24	0.00	52.24	1832.52	916.26	2607.87	1305.87		5.13	-0.44	0.048
123.00	-12.77	-2.16	0.00	-45.48	0.00	45.48	1809.72	904.86	2523.40	1263.58		5.41	-0.45	0.043
125.00	-12.54	-2.16	0.00	-41.15	0.00	41.15	1794.20	897.10	2467.38	1235.52		5.60	-0.45	0.040
127.92	-12.21	-2.14	0.00	-34.86	0.00	34.86	1771.11	885.56	2386.14	1194.84		5.88	-0.46	0.036
130.00	-11.85	-2.12	0.00	-30.39	0.00	30.39	1754.29	877.15	2328.47	1165.96		6.08	-0.47	0.033
131.00	-8.37	-1.81	0.00	-28.28	0.00	28.28	1746.12	873.06	2300.89	1152.16		6.18	-0.47	0.029
132.08	-8.20	-1.80	0.00	-26.32	0.00	26.32	1160.48	580.24	1541.12	771.71		6.29	-0.47	0.041
135.00	-7.96	-1.78	0.00	-21.08	0.00	21.08	1148.82	574.41	1493.54	747.88		6.58	-0.48	0.035
140.00	-4.78	-1.26	0.00	-12.20	0.00	12.20	1127.58	563.79	1411.91	707.01		7.09	-0.49	0.022
145.00	-4.45	-1.20	0.00	-5.88	0.00	5.88	1104.76	552.38	1330.41	666.20		7.60	-0.49	0.013
148.75	-3.97	-1.09	0.00	-1.36	0.00	1.36	1086.61	543.30	1269.51	635.70		7.99	-0.50	0.006
150.00	0.00	-1.06	0.00	0.00	0.00	0.00	1080.36	540.18	1249.27	625.56		8.12	-0.50	0.000

Wind Loading - Shaft

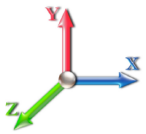
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	RB1	1.00	0.85	7.442	8.19	287.87	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1 RB2	1.00	0.85	7.442	8.19	286.79	0.650	0.000	1.00	5.194	3.38	27.6	0.0	206.1
5.00		1.00	0.85	7.442	8.19	282.46	0.650	0.000	4.00	20.581	13.38	109.5	0.0	816.7
10.00		1.00	0.85	7.442	8.19	277.04	0.650	0.000	5.00	25.286	16.44	134.5	0.0	1003.3
15.00		1.00	0.85	7.442	8.19	271.63	0.650	0.000	5.00	24.797	16.12	131.9	0.0	983.7
18.00	RT2	1.00	0.88	7.723	8.50	273.40	0.650	0.000	3.00	14.643	9.52	80.9	0.0	580.9
20.00		1.00	0.90	7.896	8.69	274.22	0.650	0.000	2.00	9.664	6.28	54.6	0.0	383.3
25.00		1.00	0.95	8.276	9.10	275.03	0.650	0.000	5.00	23.818	15.48	140.9	0.0	944.7
30.00		1.00	0.98	8.600	9.46	274.54	0.650	0.000	5.00	23.328	15.16	143.4	0.0	925.2
35.00		1.00	1.01	8.883	9.77	273.11	0.650	0.000	5.00	22.839	14.85	145.1	0.0	905.7
40.00		1.00	1.04	9.137	10.05	270.98	0.650	0.000	5.00	22.350	14.53	146.0	0.0	886.1
41.50	Bot - Section 2	1.00	1.05	9.208	10.13	270.22	0.650	0.000	1.50	6.609	4.30	43.5	0.0	262.0
45.00		1.00	1.07	9.366	10.30	268.28	0.650	0.000	3.50	15.436	10.03	103.4	0.0	1216.5
48.00	Top - Section 1	1.00	1.08	9.494	10.44	266.44	0.650	0.000	3.00	13.040	8.48	88.5	0.0	1027.5
50.00		1.00	1.09	9.576	10.53	268.45	0.650	0.000	2.00	8.595	5.59	58.9	0.0	340.7
55.00		1.00	1.12	9.770	10.75	264.95	0.650	0.000	5.00	21.146	13.74	147.7	0.0	838.1
60.00		1.00	1.14	9.951	10.95	261.13	0.650	0.000	5.00	20.656	13.43	147.0	0.0	818.6
65.00		1.00	1.16	10.120	11.13	257.02	0.650	0.000	5.00	20.167	13.11	145.9	0.0	799.1
70.00		1.00	1.17	10.279	11.31	252.67	0.650	0.000	5.00	19.677	12.79	144.6	0.0	779.6
75.00		1.00	1.19	10.430	11.47	248.10	0.650	0.000	5.00	19.188	12.47	143.1	0.0	760.0
80.00		1.00	1.21	10.572	11.63	243.34	0.650	0.000	5.00	18.698	12.15	141.3	0.0	740.5
84.08	Bot - Section 3	1.00	1.22	10.684	11.75	239.32	0.650	0.000	4.08	14.907	9.69	113.9	0.0	590.3
85.00		1.00	1.22	10.708	11.78	238.40	0.650	0.000	0.92	3.340	2.17	25.6	0.0	236.7
89.50	Top - Section 2	1.00	1.24	10.825	11.91	233.82	0.650	0.000	4.50	16.160	10.50	125.1	0.0	1144.8
90.00		1.00	1.24	10.838	11.92	236.13	0.650	0.000	0.50	1.771	1.15	13.7	0.0	56.2
95.00		1.00	1.25	10.962	12.06	230.91	0.650	0.000	5.00	17.442	11.34	136.7	0.0	553.2
100.00		1.00	1.27	11.081	12.19	225.55	0.650	0.000	5.00	16.952	11.02	134.3	0.0	537.5
105.00		1.00	1.28	11.195	12.31	220.07	0.650	0.000	5.00	16.463	10.70	131.8	0.0	521.9
110.00	Appurtenance(s)	1.00	1.29	11.305	12.44	214.48	0.650	0.000	5.00	15.973	10.38	129.1	0.0	506.3
115.00		1.00	1.30	11.412	12.55	208.78	0.650	0.000	5.00	15.484	10.06	126.3	0.0	490.7
120.00		1.00	1.32	11.514	12.67	202.98	0.650	0.000	5.00	14.995	9.75	123.4	0.0	475.1
123.00	Appurtenance(s)	1.00	1.32	11.574	12.73	199.46	0.650	0.000	3.00	8.762	5.70	72.5	0.0	277.5
125.00		1.00	1.33	11.614	12.78	197.09	0.650	0.000	2.00	5.743	3.73	47.7	0.0	181.9
127.92	Bot - Section 4	1.00	1.33	11.670	12.84	193.61	0.650	0.000	2.92	8.235	5.35	68.7	0.0	260.8
130.00		1.00	1.34	11.710	12.88	191.11	0.650	0.000	2.08	5.846	3.80	49.0	0.0	322.2
131.00	Appurtenance(s)	1.00	1.34	11.729	12.90	189.91	0.650	0.000	1.00	2.776	1.80	23.3	0.0	152.9
132.08	Top - Section 3	1.00	1.34	11.749	12.92	188.60	0.650	0.000	1.08	2.985	1.94	25.1	0.0	164.5
135.00		1.00	1.35	11.803	12.98	187.27	0.650	0.000	2.92	7.923	5.15	66.9	0.0	188.5
140.00	Appurtenance(s)	1.00	1.36	11.894	13.08	181.14	0.650	0.000	5.00	13.195	8.58	112.2	0.0	313.9
145.00		1.00	1.37	11.982	13.18	174.94	0.650	0.000	5.00	12.706	8.26	108.9	0.0	302.2
148.75	Appurtenance(s)	1.00	1.38	12.047	13.25	170.24	0.650	0.000	3.75	9.208	5.99	79.3	0.0	218.9
150.00	Appurtenance(s)	1.00	1.38	12.068	13.27	168.67	0.650	0.000	1.25	3.008	1.96	26.0	0.0	71.5
								Totals:	**150.00**			**4,017.8**		**22,785.8**

Discrete Appurtenance Forces

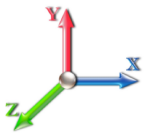
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	150.00	Ericsson RRUS32	3	12.068	13.275	0.54	0.80	2.65	231.00	0.000	0.000	35.22	0.00	0.00
2	150.00	Cci TPA65R-BU6DA-K	1	12.068	13.275	0.58	0.80	7.41	67.50	0.000	0.000	98.41	0.00	0.00
3	150.00	Cci OPA65R-BU6DA	1	12.068	13.275	0.58	0.80	7.42	63.30	0.000	0.000	98.54	0.00	0.00
4	150.00	Cci TPA65R-BU8DA-K	2	12.068	13.275	0.58	0.80	20.59	165.00	0.000	0.000	273.28	0.00	0.00
5	150.00	Cci OPA65R-BU8DA	2	12.068	13.275	0.71	0.80	15.95	138.00	0.000	0.000	211.72	0.00	0.00
6	150.00	Ericsson AIR6419 B77G	3	12.098	13.307	0.61	0.80	6.93	198.30	0.000	1.750	92.24	0.00	161.41
7	150.00	Cci DTMABP7819VG12A	6	12.068	13.275	0.54	0.80	3.67	115.20	0.000	0.000	48.67	0.00	0.00
8	150.00	CCI TPX-070821	6	12.068	13.275	0.54	0.80	1.96	57.00	0.000	0.000	26.04	0.00	0.00
9	150.00	Ericsson 4426 B66	3	12.068	13.275	0.54	0.80	1.85	145.50	0.000	0.000	24.55	0.00	0.00
10	150.00	Proposed SitePro1	1	12.068	13.275	0.75	0.75	46.88	2500.00	0.000	0.000	622.26	0.00	0.00
11	150.00	Raycap DC6-48-60-18-8F	2	12.068	13.275	0.80	0.80	1.47	63.60	0.000	0.000	19.54	0.00	0.00
12	150.00	LMU Antenna unknown	1	12.068	13.275	0.54	0.80	0.07	1.50	0.000	0.000	0.92	0.00	0.00
13	150.00	Commscope	3	12.068	13.275	0.54	0.80	0.08	3.30	0.000	0.000	1.07	0.00	0.00
14	150.00	Raycap	1	12.068	13.275	0.80	0.80	0.91	26.20	0.000	0.000	12.11	0.00	0.00
15	150.00	Ericsson RRUS 32 B2	3	12.068	13.275	0.54	0.80	4.41	159.00	0.000	0.000	58.49	0.00	0.00
16	150.00	Ericsson RRUS 4449	3	12.068	13.275	0.54	0.80	3.17	213.00	0.000	0.000	42.05	0.00	0.00
17	150.00	Ericsson RRUS 4478 B14	3	12.068	13.275	0.54	0.80	2.65	178.20	0.000	0.000	35.22	0.00	0.00
18	150.00	CSS DBC-750	3	12.068	13.275	0.54	0.80	0.82	14.40	0.000	0.000	10.89	0.00	0.00
19	148.75	Ericsson AIR6449 B77D	3	12.047	13.252	0.68	0.80	8.43	264.00	0.000	0.000	111.65	0.00	0.00
20	140.00	B2/B66A RRHBR049	3	11.894	13.084	0.38	0.75	7.32	396.60	0.000	0.000	95.82	0.00	0.00
21	140.00	XXDWMM-12.5-65-8T-CB	3	11.894	13.084	0.38	0.75	1.33	69.30	0.000	0.000	17.37	0.00	0.00
22	140.00	BSAMNT-SBS-2-2	3	11.894	13.084	1.00	1.00	10.50	201.00	0.000	0.000	137.38	0.00	0.00
23	140.00	SamsungMT6407-77A	1	11.894	13.084	0.52	0.75	2.46	79.40	0.000	0.000	32.21	0.00	0.00
24	140.00	B5/B13 RRHBR04C	3	11.894	13.084	0.38	0.75	2.11	211.20	0.000	0.000	27.67	0.00	0.00
25	140.00	RVZDC-6627-PF48	2	11.894	13.084	1.00	1.00	7.58	64.00	0.000	0.000	99.17	0.00	0.00
26	140.00	CBRS RRH-RT4401	3	11.894	13.084	0.38	0.75	0.96	45.60	0.000	0.000	12.51	0.00	0.00
27	140.00	Low Profile Platform	1	11.894	13.084	1.00	1.00	22.00	1500.00	0.000	0.000	287.84	0.00	0.00
28	140.00	Antel	3	11.894	13.084	0.66	0.75	7.05	90.90	0.000	0.000	92.22	0.00	0.00
29	140.00	Andrew SBNHH-1D65B	6	11.894	13.084	0.58	0.75	28.36	436.20	0.000	0.000	371.06	0.00	0.00
30	131.00	KRY 112 144-1 Double	3	11.729	12.902	0.38	0.75	0.46	33.00	0.000	0.000	5.95	0.00	0.00
31	131.00	APXVAALL24-43-U-NA20	3	11.729	12.902	0.52	0.75	31.88	368.40	0.000	0.000	411.28	0.00	0.00
32	131.00	AIR6449 B41	3	11.729	12.902	0.53	0.75	9.03	309.00	0.000	0.000	116.45	0.00	0.00
33	131.00	AIR32	3	11.729	12.902	0.65	0.75	12.74	396.60	0.000	0.000	164.41	0.00	0.00
34	131.00	PV-LPPGS-12M-HR2-AP3	1	11.729	12.902	1.00	1.00	34.10	2155.00	0.000	0.000	439.95	0.00	0.00
35	131.00	ATMAA1412D-1A20 TMA	3	11.729	12.902	0.38	0.75	1.32	39.00	0.000	0.000	16.98	0.00	0.00
36	131.00	SDX1926Q-43 Diplexer	3	11.729	12.902	0.38	0.75	0.33	18.00	0.000	0.000	4.21	0.00	0.00
37	131.00	Radio 4449 B71+B85	3	11.729	12.902	0.38	0.75	2.22	219.60	0.000	0.000	28.59	0.00	0.00
38	131.00	Ericsson 4415 B25	3	11.729	12.902	0.38	0.75	1.84	138.00	0.000	0.000	23.80	0.00	0.00
39	131.00	Bias-T 782 11056	3	11.729	12.902	0.38	0.75	0.15	4.50	0.000	0.000	1.89	0.00	0.00
40	123.00	APXVSPP18-C-A20 (50	1	11.574	12.732	0.75	0.75	6.01	50.00	0.000	0.000	76.58	0.00	0.00
41	123.00	RFS - ACU-A20-N - RET	4	11.574	12.732	0.38	0.75	0.21	4.00	0.000	0.000	2.67	0.00	0.00
42	123.00	ALU - 800 MHz Filter	3	11.574	12.732	0.50	0.75	1.18	26.40	0.000	0.000	14.97	0.00	0.00
43	123.00	ALU - 800 MHz RRH -	3	11.574	12.732	0.38	0.75	2.80	159.00	0.000	0.000	35.66	0.00	0.00
44	123.00	Platform w/ HRK Handrail	1	11.574	12.732	1.00	1.00	32.00	1600.00	0.000	0.000	407.42	0.00	0.00
45	123.00	APXVTM14-C-I20	3	11.574	12.732	0.59	0.75	11.27	165.00	0.000	0.000	143.48	0.00	0.00
46	123.00	APXVSPP18-C-A20	2	11.574	12.732	0.62	0.75	9.98	114.00	0.000	0.000	127.13	0.00	0.00
47	123.00	ALU - TD-RRH8x20-25 -	3	11.574	12.732	0.38	0.75	4.56	210.00	0.000	0.000	58.01	0.00	0.00

Discrete Appurtenance Forces

Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

48	123.00	ALU - 1900 MHz RRH -	3	11.574	12.732	0.38	0.75	3.05	180.00	0.000	0.000	38.82	0.00	0.00
49	110.00	Raycap	1	11.305	12.436	0.75	0.75	1.51	21.90	0.000	0.000	18.75	0.00	0.00
50	110.00	Fujitsu TA08025-B604	3	11.305	12.436	0.38	0.75	2.21	191.70	0.000	0.000	27.42	0.00	0.00
51	110.00	Fujitsu TA08025-B605	3	11.305	12.436	0.38	0.75	2.21	225.00	0.000	0.000	27.42	0.00	0.00
52	110.00	MC-PK8-DSH	1	11.305	12.436	1.00	1.00	37.59	1727.00	0.000	0.000	467.46	0.00	0.00
53	110.00	JMA Wireless	3	11.305	12.436	0.55	0.75	20.80	193.50	0.000	0.000	258.61	0.00	0.00
							Totals:		**16,246.80**			**5,914.05**		

Total Applied Force Summary

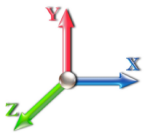
Structure:	CT10022-A-SBA		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 34

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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
1.00		27.64	246.60	0.00	0.00
5.00		109.51	978.61	0.00	0.00
10.00		134.55	1205.69	0.00	0.00
15.00		131.94	1186.17	0.00	0.00
18.00		80.86	702.33	0.00	0.00
20.00		54.56	464.32	0.00	0.00
25.00		140.94	1147.13	0.00	0.00
30.00		143.44	1127.61	0.00	0.00
35.00		145.07	1108.08	0.00	0.00
40.00		146.00	1088.56	0.00	0.00
41.50		43.51	322.76	0.00	0.00
45.00		103.37	1358.24	0.00	0.00
48.00		88.52	1148.98	0.00	0.00
50.00		58.85	421.68	0.00	0.00
55.00		147.72	1040.55	0.00	0.00
60.00		146.97	1021.03	0.00	0.00
65.00		145.92	1001.51	0.00	0.00
70.00		144.62	981.98	0.00	0.00
75.00		143.09	962.46	0.00	0.00
80.00		141.34	942.94	0.00	0.00
84.08		113.87	755.59	0.00	0.00
85.00		25.58	273.80	0.00	0.00
89.50		125.08	1326.98	0.00	0.00
90.00		13.72	76.42	0.00	0.00
95.00		136.70	755.58	0.00	0.00
100.00		134.31	739.97	0.00	0.00
105.00		131.78	724.35	0.00	0.00
110.00	(11) attachments	928.79	3067.83	0.00	0.00
115.00		126.34	688.12	0.00	0.00
120.00		123.45	672.50	0.00	0.00
123.00	(23) attachments	977.25	2904.40	0.00	0.00
125.00		47.69	253.25	0.00	0.00
127.92		68.72	364.84	0.00	0.00
130.00		48.95	396.47	0.00	0.00
131.00	(28) attachments	1236.80	3869.72	0.00	0.00
132.08		25.08	192.77	0.00	0.00
135.00		66.87	264.72	0.00	0.00
140.00	(28) attachments	1285.48	3538.73	0.00	0.00
145.00		108.86	373.46	0.00	0.00
148.75	(3) attachments	190.96	525.28	0.00	0.00
150.00	(47) attachments	1737.17	4425.63	0.00	161.41
	Totals:	**9,931.87**	**44,647.63**	**0.00**	**161.41**

Linear Appurtenance Segment Forces (Factored)

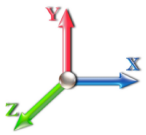
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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)
1.00	1.60" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.046	0.000	7.442	0.00	1.00
1.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.046	0.000	7.442	0.00	0.00
5.00	1.60" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.046	0.000	7.442	0.00	4.00
5.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	0.42	0.00	0.046	0.000	7.442	0.00	0.00
10.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.047	0.000	7.442	0.00	5.00
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.047	0.000	7.442	0.00	0.00
15.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.048	0.000	7.442	0.00	5.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.048	0.000	7.442	0.00	0.00
18.00	1.60" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.049	0.000	7.723	0.00	3.00
18.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.049	0.000	7.723	0.00	0.00
20.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.049	0.000	7.896	0.00	2.00
20.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.049	0.000	7.896	0.00	0.00
25.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.028	0.000	8.276	0.00	5.00
30.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	8.600	0.00	5.00
35.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	8.883	0.00	5.00
40.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.030	0.000	9.137	0.00	5.00
41.50	1.60" Hybrid	Yes	1.50	0.000	1.60	0.20	0.00	0.030	0.000	9.208	0.00	1.50
45.00	1.60" Hybrid	Yes	3.50	0.000	1.60	0.47	0.00	0.031	0.000	9.366	0.00	3.50
48.00	1.60" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.031	0.000	9.494	0.00	3.00
50.00	1.60" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.031	0.000	9.576	0.00	2.00
55.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	9.770	0.00	5.00
60.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	9.951	0.00	5.00
65.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	10.120	0.00	5.00
70.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.034	0.000	10.279	0.00	5.00
75.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.035	0.000	10.430	0.00	5.00
80.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.036	0.000	10.572	0.00	5.00
84.08	1.60" Hybrid	Yes	4.08	0.000	1.60	0.54	0.00	0.037	0.000	10.684	0.00	4.08
85.00	1.60" Hybrid	Yes	0.92	0.000	1.60	0.12	0.00	0.037	0.000	10.708	0.00	0.92
89.50	1.60" Hybrid	Yes	4.50	0.000	1.60	0.60	0.00	0.038	0.000	10.825	0.00	4.50
90.00	1.60" Hybrid	Yes	0.50	0.000	1.60	0.07	0.00	0.038	0.000	10.838	0.00	0.50
95.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.038	0.000	10.962	0.00	5.00
100.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.039	0.000	11.081	0.00	5.00
105.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.040	0.000	11.195	0.00	5.00
110.00	1.60" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.042	0.000	11.305	0.00	5.00
										Totals:	**0.0**	**110.0**

Calculated Forces

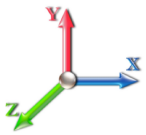
Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	-44.65	-9.94	0.00	-1135.8	0.00	1135.89	3399.80	1699.90	8571.22	4291.98	0.00	0.000	0.000	0.226
1.00	-44.40	-9.92	0.00	-1125.9	0.00	1125.96	3395.30	1697.65	8527.34	4270.01	0.00	-0.009	0.000	0.213
5.00	-43.41	-9.84	0.00	-1086.2	0.00	1086.26	3376.67	1688.33	8351.12	4181.77	0.02	-0.043	0.000	0.209
10.00	-42.20	-9.74	0.00	-1037.0	0.00	1037.05	3351.94	1675.97	8129.40	4070.74	0.09	-0.086	0.000	0.204
15.00	-41.01	-9.63	0.00	-988.35	0.00	988.35	3325.63	1662.82	7906.28	3959.02	0.21	-0.129	0.000	0.198
18.00	-40.30	-9.56	0.00	-959.46	0.00	959.46	3309.09	1654.54	7771.83	3891.69	0.29	-0.155	0.000	0.195
18.00	-40.30	-9.56	0.00	-959.46	0.00	959.46	3309.09	1654.54	7771.83	3891.69	0.29	-0.155	0.000	0.195
20.00	-39.83	-9.53	0.00	-940.34	0.00	940.34	3297.74	1648.87	7681.99	3846.70	0.36	-0.173	0.000	0.257
25.00	-38.67	-9.43	0.00	-892.67	0.00	892.67	3268.26	1634.13	7456.75	3733.92	0.58	-0.230	0.000	0.251
30.00	-37.54	-9.32	0.00	-845.54	0.00	845.54	3237.20	1618.60	7230.79	3620.77	0.85	-0.288	0.000	0.245
35.00	-36.42	-9.20	0.00	-798.96	0.00	798.96	3204.54	1602.27	7004.35	3507.38	1.18	-0.347	0.000	0.239
40.00	-35.33	-9.07	0.00	-752.94	0.00	752.94	3170.31	1585.15	6777.64	3393.86	1.58	-0.406	0.000	0.233
41.50	-35.00	-9.05	0.00	-739.34	0.00	739.34	3159.73	1579.86	6709.61	3359.79	1.71	-0.424	0.000	0.231
45.00	-33.64	-8.95	0.00	-707.68	0.00	707.68	3134.49	1567.24	6550.90	3280.32	2.03	-0.466	0.000	0.226
48.00	-32.48	-8.87	0.00	-680.81	0.00	680.81	3132.30	1566.15	6537.37	3273.54	2.34	-0.502	0.000	0.218
50.00	-32.06	-8.83	0.00	-663.07	0.00	663.07	3117.49	1558.74	6446.72	3228.15	2.55	-0.526	0.000	0.216
55.00	-31.01	-8.71	0.00	-618.90	0.00	618.90	3079.35	1539.68	6220.34	3114.79	3.14	-0.583	0.000	0.209
60.00	-29.98	-8.58	0.00	-575.36	0.00	575.36	3039.63	1519.81	5994.49	3001.70	3.78	-0.641	0.000	0.202
65.00	-28.97	-8.45	0.00	-532.47	0.00	532.47	2998.32	1499.16	5769.39	2888.98	4.48	-0.698	0.000	0.194
70.00	-27.98	-8.32	0.00	-490.22	0.00	490.22	2955.43	1477.72	5545.28	2776.76	5.24	-0.755	0.000	0.186
75.00	-27.02	-8.19	0.00	-448.61	0.00	448.61	2910.95	1455.48	5322.38	2665.15	6.06	-0.811	0.000	0.178
80.00	-26.07	-8.06	0.00	-407.66	0.00	407.66	2864.89	1432.44	5100.92	2554.25	6.94	-0.866	0.000	0.169
84.08	-25.31	-7.94	0.00	-374.75	0.00	374.75	2826.09	1413.05	4921.28	2464.30	7.70	-0.911	0.000	0.161
85.00	-25.03	-7.93	0.00	-367.47	0.00	367.47	2817.24	1408.62	4881.12	2444.19	7.88	-0.921	0.000	0.159
89.50	-23.71	-7.79	0.00	-331.80	0.00	331.80	2031.94	1015.97	3485.43	1745.31	8.77	-0.969	0.000	0.202
90.00	-23.62	-7.79	0.00	-327.90	0.00	327.90	2029.15	1014.57	3470.92	1738.04	8.87	-0.974	0.000	0.200
95.00	-22.86	-7.66	0.00	-288.95	0.00	288.95	2000.34	1000.17	3325.82	1665.38	9.92	-1.035	0.000	0.185
100.00	-22.12	-7.54	0.00	-250.63	0.00	250.63	1969.95	984.97	3180.92	1592.82	11.04	-1.093	0.000	0.169
105.00	-21.39	-7.41	0.00	-212.94	0.00	212.94	1937.97	968.98	3036.44	1520.48	12.21	-1.147	0.000	0.151
110.00	-18.34	-6.44	0.00	-175.88	0.00	175.88	1904.40	952.20	2892.62	1448.46	13.44	-1.197	0.000	0.131
115.00	-17.65	-6.31	0.00	-143.70	0.00	143.70	1869.25	934.63	2749.69	1376.89	14.72	-1.242	0.000	0.114
120.00	-16.97	-6.18	0.00	-112.16	0.00	112.16	1832.52	916.26	2607.87	1305.87	16.05	-1.282	0.000	0.095
123.00	-14.09	-5.14	0.00	-93.63	0.00	93.63	1809.72	904.86	2523.40	1263.58	16.86	-1.303	0.000	0.082
125.00	-13.84	-5.09	0.00	-83.35	0.00	83.35	1794.20	897.10	2467.38	1235.52	17.41	-1.316	0.000	0.075
127.92	-13.47	-5.02	0.00	-68.50	0.00	68.50	1771.11	885.56	2386.14	1194.84	18.22	-1.333	0.000	0.065
130.00	-13.08	-4.96	0.00	-58.05	0.00	58.05	1754.29	877.15	2328.47	1165.96	18.80	-1.343	0.000	0.057
131.00	-9.24	-3.63	0.00	-53.09	0.00	53.09	1746.12	873.06	2300.89	1152.16	19.08	-1.348	0.000	0.051
132.08	-9.04	-3.60	0.00	-49.16	0.00	49.16	1160.48	580.24	1541.12	771.71	19.39	-1.353	0.000	0.072
135.00	-8.78	-3.53	0.00	-38.64	0.00	38.64	1148.82	574.41	1493.54	747.88	20.22	-1.364	0.000	0.059
140.00	-5.27	-2.17	0.00	-20.97	0.00	20.97	1127.58	563.79	1411.91	707.01	21.66	-1.382	0.000	0.034
145.00	-4.90	-2.05	0.00	-10.15	0.00	10.15	1104.76	552.38	1330.41	666.20	23.11	-1.393	0.000	0.020
148.75	-4.38	-1.84	0.00	-2.47	0.00	2.47	1086.61	543.30	1269.51	635.70	24.21	-1.396	0.000	0.008
150.00	0.00	-1.74	0.00	-0.16	0.00	0.16	1080.36	540.18	1249.27	625.56	24.58	-1.396	0.000	0.000

Final Analysis Summary

Structure:	CT10022-A-SBA	**Code:**	TIA-222-G	7/18/2022	
Site Name:	Simsbury 2, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 37	

Tower Engineering Solutions

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	38.2	0.00	53.56	0.00	0.00	4394.89
0.9D + 1.6W 93 mph Wind	38.2	0.00	40.17	0.00	0.00	4343.90
1.2D + 1.0Di + 1.0Wi 50 mph Wind	12.4	0.00	98.64	0.00	0.00	1467.80
1.2D + 1.0E	2.6	0.00	53.58	0.00	0.00	340.37
0.9D + 1.0E	2.6	0.00	40.18	0.00	0.00	336.05
1.0D + 1.0W 60 mph Wind	9.9	0.00	44.65	0.00	0.00	1135.89

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	-47.34	-36.76	0.00	-3642.1	0.00	-3642.1	3297.74	1648.8	7681.99	3846.70	20.00	0.962
0.9D + 1.6W 93 mph Wind	-35.39	-36.59	0.00	-3592.6	0.00	-3592.6	3297.74	1648.8	7681.99	3846.70	20.00	0.945
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-89.84	-12.10	0.00	-1221.5	0.00	-1221.5	3297.74	1648.8	7681.99	3846.70	20.00	0.345
1.2D + 1.0E	-47.83	-2.53	0.00	-288.89	0.00	-288.89	3297.74	1648.8	7681.99	3846.70	20.00	0.090
0.9D + 1.0E	-35.87	-2.52	0.00	-284.69	0.00	-284.69	3297.74	1648.8	7681.99	3846.70	20.00	0.085
1.0D + 1.0W 60 mph Wind	-39.83	-9.53	0.00	-940.34	0.00	-940.34	3297.74	1648.8	7681.99	3846.70	20.00	0.257

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	Lower Termination MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Upper Termination MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Max Member Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
0.0	1.0	(3) SOL-2 1/4" William R71	231.2	2.77	25.3	220.5	25.3	9	0	316.7	25.3			220.53	459.1	468.91	0.480
1.0	18.0	(3) LNP-LP6X125-B-20T	250.7	6.02	25.3	316.7	25.3			303.4	25.3	13	12	316.68	395.0	360.94	0.877

Base Plate Summary

Structure:	CT10022-A-SB		**Code:**	TIA-222-G	7/18/2022
Site Name:	Simsbury 2, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 38

Tower Engineering Solutions

Reactions	
Original Design	
Moment (kip-ft):	3324.00
Axial (kip):	65.60
Shear (kip):	26.40
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	4394.89
Axial (kip):	53.56
Shear (kip):	38.20

Base Plate	
Yield (ksi):	50.00
Width (in):	73.50
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	22.56
Moment (kip-in):	704.49
Allow Stress (ksi):	67.50
Applied Stress (ksi):	46.58
Stress Ratio:	0.69

Anchor Bolts	
Bolt Circle:	67.63
Number Bolts:	14.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00
Compression	
Force (kip):	180.56
Allowable (kip):	260.00
Ratio:	0.72
Tension	
Force (kip):	166.46
Allowable (kip):	260.00
Ratio:	0.66

Monopole Mat Foundation Design

				Date
				7/15/2022
	Customer Name:	AT&T	**TIA Standard:**	TIA-222-G
	Site Name:		**Structure Height (Ft.):**	150
	Site Number:	CT10022-A-SBA	**Engineer Name:**	K. Azisllari
	Engr. Number:	131668	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

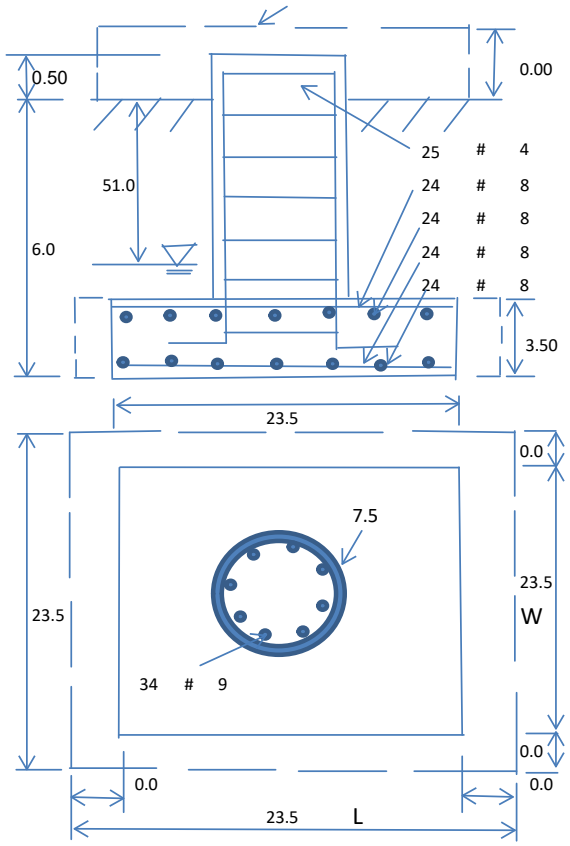
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	53.6	Shear Force (Kips):	38.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4394.9
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.5	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	3.50
Length of Pad (ft.):	23.5	Width of Pad (ft.):	23.5
Final Length of pad (ft)	23.5	Final width of pad (ft):	23.5



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	34	Tie Spacing (in):	3.0	
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):	24	Qty. of Rebar in Pad (W):	24	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	24	Qty. of Rebar in Pad (W):	24	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	60.0	Pcf		
Water Table B.G.S. (ft):	51.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	14000	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		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	1270.18	Total Dry Soil Weight (Kips):	158.77
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	158.77	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2065.41	Total Dry Concrete Weight (Kips):	309.81
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	309.81	Total Vertical Load on Base (Kips):	522.18

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	4350	<	Allowable Factored Soil Bearing (psf):	10500	0.41	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5585.1	>	Design Factored Momont (kips-ft):	4643	0.83	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.20	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	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):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	6126.5	>	Design Factored Moment (Mu, Kips-F	4509.5	0.74	OK!
Calculated Shear Capacity (Kips):	1098.7	>	Design Factored Shear (Kips):	38.2	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	1836.0	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	8390.6	>	Design Factored Axial Load (Pu Kips):	53.6	0.01	OK!
Moment & Axial Strength Combination:	0.74	OK!	Check Tie Spacing (Design/Required):		0.25	OK!
Pier Reinforcement Ratio:	0.005		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	892.0	>	One-Way Factored Shear (L-D. Kips):	260.8	0.29	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	892.0	>	One-Way Factored Shear (W-D., Kips)	260.8	0.29	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	733.2	>	One-Way Factored Shear (C-C, Kips):	256.1	0.35	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0017	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0017		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	3217.3	>	Moment at Bottom (L-Dir. K-Ft):	1333.8	0.41	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	3217.3	>	Moment at Bottom (W-Dir. K-Ft):	1333.8	0.41	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	4522.2	>	Moment at Bottom (C-C Dir. K-Ft):	1886.3	0.42	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0017	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0017		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	3217.3	>	Moment at the top (L-Dir K-Ft):	628.3	0.20	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	3217.3	>	Moment at the top (W-Dir K-Ft):	628.3	0.20	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	4522.2	>	Moment at the top (C-C Dir. K-Ft):	593.3	0.13	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1758.0	k-ft.	Max. factored shear stress v_{u_CD}:		3.6	Psi
Max. factored shear stress v_{u_AB}:	8.9	Psi	Factored shear Strength ϕv_n:		164.3	Psi
Max. factored shear stress v_u:	8.9	Psi	Check Usage of Punching Shear Capacity:		0.05	OK!

EXHIBIT 4

May 25, 2022
June 15, 2022 (Rev.1)

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

RE:		
	Site Number:	CT1151
	FA Number:	10035290
	PACE Number:	MRCTB057007
	PT Number:	2051A11XNP
	Site Name:	SIMSBURY CENTRAL
	Site Address:	Grist Mill Road Simsbury, CT 06070

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) RRUS-32 B2 RRH's (27.2"x12.1"x7.0" – Wt. = 60 lbs. /each)
- (3) 4426 B66 RRH's (14.9"x13.2"x5.8" – Wt. = 49 lbs. /each)
- (3) RRUS-32 B30 RRH's (27.2"x12.1"x7.0" – Wt. = 60 lbs. /each)
- (2) DC6-48-60-18 Surge Arrestor (24.0"x9.7"Ø – Wt. = 33 lbs.)
- **(2) TPA65R-BU8DA-K Antennas (96.0"x20.7"x7.7" – Wt. = 87 lbs. /each)**
- **(1) TPA65R-BU6DA-K Antennas (71.2"x20.7"x7.7" – Wt. = 69 lbs. /each)**
- **(2) OPA65R-BU8DA Antennas (96.0"x21.0"x7.8" – Wt. = 77 lbs. /each)**
- **(1) OPA65R-BU6DA Antennas (71.2"x21.0"x7.8" – Wt. = 64 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) B14 4478 RRH's (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each)**
- **(3) B5/B12 4449 RRH's (17.9"x13.2"x9.4" – Wt. = 73 lbs. /each)**
- **(1) DC9-48-60-24-8C-EV Surge Arrestor (24.0"x9.7"Ø – Wt. = 33 lbs.)**

**Proposed equipment shown in bold.*

Mount fabrication drawings prepared by SitePro1 P/N VFA14-H10-2120, dated December 7, 2020, P/N LWRM, dated August 24, 2012, and P/N MM01, dated May 10, 2010, were used to perform this analysis.

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 1.5 in. An escalated ice thickness of 1.75 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 0.179 and a spectral response acceleration parameter at a period of 1 second, S_1, of 0.064.
- 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 2.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The proposed mounts are 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 (3) Proposed SitePro1 VFA14-H10-2120 mounts, (2) Proposed SitePro1 LWRM ring mounts, (6) Proposed SitePro1 MM01 standoffs **ARE CAPABLE** of supporting the proposed installation.

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Proposed Mount Rating	142	LC30	59%	**PASS**

Reference Documents:

- Fabrication drawings prepared by SitePro1 P/N VFA14-H10-2120, dated December 7, 2020.
- Fabrication drawings prepared by SitePro1 P/N LWRM, dated August 24, 2012.
- Fabrication drawings prepared by SitePro1 P/N MM01, dated May 10, 2010.

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 proposed 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 mount to be removed and replced*


06/14/2022


06/14/2022


06/14/2022


06/14/2022


06/14/2022

HUDSON
Design Group LLC

Wind & Ice
Calculations

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM **Checked By:** MSC

HUDSON Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

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

z=	150	(ft)
z_g=	900	(ft)
α=	9.5	
K_z=	**1.378**	

Kzmin ≤ Kz ≤ 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

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

$K_h = e^{(f*z/H)}$

K_{zt}=	**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=	150	
z_s=	276	(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=	0.99	(from 2.6.8)

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

Category= **1**

2.6.10 Design Ice Thickness

Max Ice Thickness = t_i =	1.50	in
Importance Factor = I=	1.0	(from Table 2-3)
K_{iz} =	1.16	(from Sec. 2.6.10)

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

t_{iz} = 1.75 in

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM Checked By: MSC

HUDSON Design Group LLC

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=	150	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
(Cantilivered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

G_h=	1.35	**Gh=**	**1.00**

2.6.11.2 Design Wind Force on Appurtenances

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

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

		K_z=	1.378	(from 2.6.5.2)
		K_{zt}=	1.0	(from 2.6.6.2.1)
		K_s=	1.0	(from 2.6.7)
q_z=	**47.79**	K_e=	0.99	(from 2.6.8)
$q_{z\ (ice)}$=	**8.30**	K_d=	0.95	(from Table 2-2)
$q_{z\ (30)}$=	**2.99**	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, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

Date: 6/15/2022
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HUDSON Design Group LLC

Determine Ca:

Table 2-9

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

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
(Aspect ratio is independent of the spacing between support points of a linear appurtenance,

Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = **1.75** **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)
TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	4.64	1.30	**854**	**180**	**53**
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.44	1.24	**607**	**129**	**38**
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	4.57	1.29	**865**	**181**	**54**
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.39	1.24	**615**	**131**	**38**
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.93	1.20	**199**	**47**	**12**
AIR6449 Antenna	30.6	15.9	10.6	3.38	1.92	1.20	**194**	**46**	**12**
B14 4478 RRH	18.1	13.4	8.3	1.68	1.35	1.20	**97**	**25**	**6**
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	2.25	1.20	**131**	**33**	**8**
RRUS-32 B2 RRH (Side)	27.2	7.0	12.1	1.32	3.89	1.26	**80**	**23**	**5**
4426 B66 RRH	14.9	13.2	5.8	1.37	1.13	1.20	**78**	**21**	**5**
4426 B66 RRH (Side)	14.9	5.8	13.2	0.60	2.57	1.20	**35**	**12**	**2**
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.36	1.20	**94**	**25**	**6**
B5/B12 4449 RRH (Side)	17.9	9.4	13.2	1.17	1.90	1.20	**67**	**19**	**4**
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	2.25	1.20	**131**	**33**	**8**
RRUS-32 B30 RRH (Side)	27.2	7.0	12.1	1.32	3.89	1.26	**80**	**23**	**5**

Date: 6/15/2022
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HUDSON Design Group LLC

Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	**54**	**15**	**3**
PL 11-1/4x5/8	0.6	12.0	-	0.05	0.05	1.25	**3**		
PL 3-1/2x5/8	0.6	12.0	-	0.05	0.05	1.25	**3**		
HSS 4x4	4.0	12.0	-	0.33	0.33	1.25	**20**		
3" Pipe	3.5	12.0	-	0.29	0.29	1.20	**17**		
2-1/2" Pipe	2.9	12.0	-	0.24	0.24	1.20	**14**		
2" Pipe	2.4	12.0	-	0.20	0.20	1.20	**11**		
3/4" Round Bar	0.8	12.0	-	0.06	0.06	1.20	**4**		
5/8" Round Bar	0.6	12.0	-	0.05	0.05	1.20	**3**		

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle = 30 (deg) | Ice Thickness = 1.75 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)
TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	854	388	738
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	607	268	523
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	865	392	746
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	615	271	529
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	199	96	174
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	194	131	178
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	97	60	87
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	118
RRUS-32 B2 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	70	131	86
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	78	35	67
4426 B66 RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	39	78	49
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	94	67	87
B5/B12 4449 RRH (Side)	17.9	6.6	13.2	0.82	1.64	2.71	1.36	1.21	1.20	47	94	59
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	118
RRUS-32 B30 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	70	131	86

WIND LOADS WITH ICE:

TPA65R-BU8DA-K Antenna	99.5	24.2	11.2	16.71	7.73	4.11	8.89	1.27	1.46	176	94	156
TPA65R-BU6DA-K Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	128	67	112
OPA65R-BU8DA Antenna	99.5	24.5	11.3	16.92	7.80	4.06	8.81	1.27	1.46	178	95	157
OPA65R-BU6DA Antenna	74.7	24.5	11.3	12.70	5.86	3.05	6.62	1.22	1.38	129	67	114
AIR6419 Antenna	34.6	19.6	10.8	4.71	2.59	1.77	3.21	1.20	1.23	47	26	42
AIR6449 Antenna	34.1	19.4	14.1	4.59	3.34	1.76	2.42	1.20	1.20	46	33	43
B14 4478 RRH	21.6	16.9	11.8	2.53	1.77	1.28	1.83	1.20	1.20	25	18	23
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	30
RRUS-32 B2 RRH (Side)	30.7	7.8	15.6	1.66	3.32	3.94	1.97	1.26	1.20	17	33	21
4426 B66 RRH	18.4	16.7	9.3	2.13	1.19	1.10	1.98	1.20	1.20	21	12	19
4426 B66 RRH (Side)	18.4	8.3	16.7	1.07	2.13	2.20	1.10	1.20	1.20	11	21	13
B5/B12 4449 RRH	21.4	16.7	12.9	2.48	1.91	1.28	1.66	1.20	1.20	25	19	23
B5/B12 4449 RRH (Side)	21.4	8.3	16.7	1.24	2.48	2.56	1.28	1.20	1.20	12	25	15
RRUS-32 B30 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	30
RRUS-32 B30 RRH (Side)	30.7	7.8	15.6	1.66	3.32	3.94	1.97	1.26	1.20	17	33	21

WIND LOADS AT 30 MPH:

TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	53	24	46
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	38	17	33
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	54	24	47
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	33
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	12	6	11
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	12	8	11
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	4	5
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	7
RRUS-32 B2 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	4	8	5
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 (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	2	5	3
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	6	4	5
B5/B12 4449 RRH (Side)	17.9	6.6	13.2	0.82	1.64	2.71	1.36	1.21	1.20	3	6	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	7
RRUS-32 B30 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	4	8	5

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	60	(deg)	Ice Thickness =	1.75	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)
TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	854	388	505
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	607	268	353
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	865	392	510
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	615	271	357
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	199	96	122
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	194	131	147
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	97	60	69
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	93
RRUS-32 B2 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	100	131	123
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	78	35	45
4426 B66 RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	59	78	73
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	94	67	74
B5/B12 4449 RRH (Side)	17.9	9.9	13.2	1.23	1.64	1.81	1.36	1.20	1.20	71	94	88
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	93
RRUS-32 B30 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	100	131	123

WIND LOADS WITH ICE:

TPA65R-BU8DA-K Antenna	99.5	24.2	11.2	16.71	7.73	4.11	8.89	1.27	1.46	176	94	114
TPA65R-BU6DA-K Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	128	67	82
OPA65R-BU8DA Antenna	99.5	24.5	11.3	16.92	7.80	4.06	8.81	1.27	1.46	178	95	115
OPA65R-BU6DA Antenna	74.7	24.5	11.3	12.70	5.86	3.05	6.62	1.22	1.38	129	67	83
AIR6419 Antenna	34.6	19.6	10.8	4.71	2.59	1.77	3.21	1.20	1.23	47	26	32
AIR6449 Antenna	34.1	19.4	14.1	4.59	3.34	1.76	2.42	1.20	1.20	46	33	36
B14 4478 RRH	21.6	16.9	11.8	2.53	1.77	1.28	1.83	1.20	1.20	25	18	20
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	25
RRUS-32 B2 RRH (Side)	30.7	11.7	15.6	2.49	3.32	2.62	1.97	1.21	1.20	25	33	31
4426 B66 RRH	18.4	16.7	9.3	2.13	1.19	1.10	1.98	1.20	1.20	21	12	14
4426 B66 RRH (Side)	18.4	12.5	16.7	1.60	2.13	1.47	1.10	1.20	1.20	16	21	20
B5/B12 4449 RRH	21.4	16.7	12.9	2.48	1.91	1.28	1.66	1.20	1.20	25	19	20
B5/B12 4449 RRH (Side)	21.4	12.5	16.7	1.86	2.48	1.71	1.28	1.20	1.20	19	25	23
RRUS-32 B30 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	25
RRUS-32 B30 RRH (Side)	30.7	11.7	15.6	2.49	3.32	2.62	1.97	1.21	1.20	25	33	31

WIND LOADS AT 30 MPH:

TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	53	24	32
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	38	17	22
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	54	24	32
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	22
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	12	6	8
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	12	8	9
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	4	4
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	6
RRUS-32 B2 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	6	8	8
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 (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	4	5	5
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	6	4	5
B5/B12 4449 RRH (Side)	17.9	9.9	13.2	1.23	1.64	1.81	1.36	1.20	1.20	4	6	6
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	6
RRUS-32 B30 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	6	8	8

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	90	(deg)	Ice Thickness =	1.75	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)
TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	854	388	388
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	607	268	268
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	865	392	392
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	615	271	271
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	199	96	96
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	194	131	131
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	97	60	60
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	80
RRUS-32 B2 RRH (Side)	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	80	131	131
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	78	35	35
4426 B66 RRH (Side)	14.9	5.8	13.2	0.60	1.37	2.57	1.13	1.20	1.20	35	78	78
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	94	67	67
B5/B12 4449 RRH (Side)	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	67	94	94
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	80
RRUS-32 B30 RRH (Side)	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	80	131	131

WIND LOADS WITH ICE:

TPA65R-BU8DA-K Antenna	99.5	24.2	11.2	16.71	7.73	4.11	8.89	1.27	1.46	176	94	94
TPA65R-BU6DA-K Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	128	67	67
OPA65R-BU8DA Antenna	99.5	24.5	11.3	16.92	7.80	4.06	8.81	1.27	1.46	178	95	95
OPA65R-BU6DA Antenna	74.7	24.5	11.3	12.70	5.86	3.05	6.62	1.22	1.38	129	67	67
AIR6419 Antenna	34.6	19.6	10.8	4.71	2.59	1.77	3.21	1.20	1.23	47	26	26
AIR6449 Antenna	34.1	19.4	14.1	4.59	3.34	1.76	2.42	1.20	1.20	46	33	33
B14 4478 RRH	21.6	16.9	11.8	2.53	1.77	1.28	1.83	1.20	1.20	25	18	18
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	23
RRUS-32 B2 RRH (Side)	30.7	10.5	15.6	2.24	3.32	2.93	1.97	1.22	1.20	23	33	33
4426 B66 RRH	18.4	16.7	9.3	2.13	1.19	1.10	1.98	1.20	1.20	21	12	12
4426 B66 RRH (Side)	18.4	9.3	16.7	1.19	2.13	1.98	1.10	1.20	1.20	12	21	21
B5/B12 4449 RRH	21.4	16.7	12.9	2.48	1.91	1.28	1.66	1.20	1.20	25	19	19
B5/B12 4449 RRH (Side)	21.4	12.9	16.7	1.91	2.48	1.66	1.28	1.20	1.20	19	25	25
RRUS-32 B30 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	23
RRUS-32 B30 RRH (Side)	30.7	10.5	15.6	2.24	3.32	2.93	1.97	1.22	1.20	23	33	33

WIND LOADS AT 30 MPH:

TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	53	24	24
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	38	17	17
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	54	24	24
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	17
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	12	6	6
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	12	8	8
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	4	4
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	5
RRUS-32 B2 RRH (Side)	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	5	8	8
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 (Side)	14.9	5.8	13.2	0.60	1.37	2.57	1.13	1.20	1.20	2	5	5
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	6	4	4
B5/B12 4449 RRH (Side)	17.9	9.4	13.2	1.17	1.64	1.90	1.36	1.20	1.20	4	6	6
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	5
RRUS-32 B30 RRH (Side)	27.2	7.0	12.1	1.32	2.29	3.89	2.25	1.26	1.20	5	8	8

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle = 120 (deg) | Ice Thickness = 1.75 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)
TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	854	388	505
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	607	268	353
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	865	392	510
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	615	271	357
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	199	96	122
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	194	131	147
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	97	60	69
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	93
RRUS-32 B2 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	100	131	123
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	78	35	45
4426 B66 RRH (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	59	78	73
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	94	67	74
B5/B12 4449 RRH (Side)	17.9	9.9	13.2	1.23	1.64	1.81	1.36	1.20	1.20	71	94	88
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	93
RRUS-32 B30 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	100	131	123

WIND LOADS WITH ICE:

TPA65R-BU8DA-K Antenna	99.5	24.2	11.2	16.71	7.73	4.11	8.89	1.27	1.46	176	94	114
TPA65R-BU6DA-K Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	128	67	82
OPA65R-BU8DA Antenna	99.5	24.5	11.3	16.92	7.80	4.06	8.81	1.27	1.46	178	95	115
OPA65R-BU6DA Antenna	74.7	24.5	11.3	12.70	5.86	3.05	6.62	1.22	1.38	129	67	83
AIR6419 Antenna	34.6	19.6	10.8	4.71	2.59	1.77	3.21	1.20	1.23	47	26	32
AIR6449 Antenna	34.1	19.4	14.1	4.59	3.34	1.76	2.42	1.20	1.20	46	33	36
B14 4478 RRH	21.6	16.9	11.8	2.53	1.77	1.28	1.83	1.20	1.20	25	18	20
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	25
RRUS-32 B2 RRH (Side)	30.7	11.7	15.6	2.49	3.32	2.62	1.97	1.21	1.20	25	33	31
4426 B66 RRH	18.4	16.7	9.3	2.13	1.19	1.10	1.98	1.20	1.20	21	12	14
4426 B66 RRH (Side)	18.4	12.5	16.7	1.60	2.13	1.47	1.10	1.20	1.20	16	21	20
B5/B12 4449 RRH	21.4	16.7	12.9	2.48	1.91	1.28	1.66	1.20	1.20	25	19	20
B5/B12 4449 RRH (Side)	21.4	12.5	16.7	1.86	2.48	1.71	1.28	1.20	1.20	19	25	23
RRUS-32 B30 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	25
RRUS-32 B30 RRH (Side)	30.7	11.7	15.6	2.49	3.32	2.62	1.97	1.21	1.20	25	33	31

WIND LOADS AT 30 MPH:

TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	53	24	32
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	38	17	22
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	54	24	32
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	22
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	12	6	8
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	12	8	9
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	4	4
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	6
RRUS-32 B2 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	6	8	8
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 (Side)	14.9	9.9	13.2	1.02	1.37	1.51	1.13	1.20	1.20	4	5	5
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	6	4	5
B5/B12 4449 RRH (Side)	17.9	9.9	13.2	1.23	1.64	1.81	1.36	1.20	1.20	4	6	6
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	6
RRUS-32 B30 RRH (Side)	27.2	9.1	12.1	1.71	2.29	3.00	2.25	1.22	1.20	6	8	8

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle = 150 (deg) | Ice Thickness = 1.75 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)
TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	854	388	738
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	607	268	523
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	865	392	746
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	615	271	529
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	199	96	174
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	194	131	178
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	97	60	87
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	118
RRUS-32 B2 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	70	131	86
4426 B66 RRH	14.9	13.2	5.8	1.37	0.60	1.13	2.57	1.20	1.20	78	35	67
4426 B66 RRH (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	39	78	49
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	94	67	87
B5/B12 4449 RRH (Side)	17.9	6.6	13.2	0.82	1.64	2.71	1.36	1.21	1.20	47	94	59
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	131	80	118
RRUS-32 B30 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	70	131	86

WIND LOADS WITH ICE:

TPA65R-BU8DA-K Antenna	99.5	24.2	11.2	16.71	7.73	4.11	8.89	1.27	1.46	176	94	156
TPA65R-BU6DA-K Antenna	74.7	24.2	11.2	12.55	5.80	3.09	6.67	1.23	1.39	128	67	112
OPA65R-BU8DA Antenna	99.5	24.5	11.3	16.92	7.80	4.06	8.81	1.27	1.46	178	95	157
OPA65R-BU6DA Antenna	74.7	24.5	11.3	12.70	5.86	3.05	6.62	1.22	1.38	129	67	114
AIR6419 Antenna	34.6	19.6	10.8	4.71	2.59	1.77	3.21	1.20	1.23	47	26	42
AIR6449 Antenna	34.1	19.4	14.1	4.59	3.34	1.76	2.42	1.20	1.20	46	33	43
B14 4478 RRH	21.6	16.9	11.8	2.53	1.77	1.28	1.83	1.20	1.20	25	18	23
RRUS-32 B2 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	30
RRUS-32 B2 RRH (Side)	30.7	7.8	15.6	1.66	3.32	3.94	1.97	1.26	1.20	17	33	21
4426 B66 RRH	18.4	16.7	9.3	2.13	1.19	1.10	1.98	1.20	1.20	21	12	19
4426 B66 RRH (Side)	18.4	8.3	16.7	1.07	2.13	2.20	1.10	1.20	1.20	11	21	13
B5/B12 4449 RRH	21.4	16.7	12.9	2.48	1.91	1.28	1.66	1.20	1.20	25	19	23
B5/B12 4449 RRH (Side)	21.4	8.3	16.7	1.24	2.48	2.56	1.28	1.20	1.20	12	25	15
RRUS-32 B30 RRH	30.7	15.6	10.5	3.32	2.24	1.97	2.93	1.20	1.22	33	23	30
RRUS-32 B30 RRH (Side)	30.7	7.8	15.6	1.66	3.32	3.94	1.97	1.26	1.20	17	33	21

WIND LOADS AT 30 MPH:

TPA65R-BU8DA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	53	24	46
TPA65R-BU6DA-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	38	17	33
OPA65R-BU8DA Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	54	24	47
OPA65R-BU6DA Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	33
AIR6419 Antenna	31.1	16.1	7.3	3.48	1.58	1.93	4.26	1.20	1.28	12	6	11
AIR6449 Antenna	30.6	15.9	10.6	3.38	2.25	1.92	2.89	1.20	1.22	12	8	11
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	6	4	5
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	7
RRUS-32 B2 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	4	8	5
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 (Side)	14.9	6.6	13.2	0.68	1.37	2.26	1.13	1.20	1.20	2	5	3
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	6	4	5
B5/B12 4449 RRH (Side)	17.9	6.6	13.2	0.82	1.64	2.71	1.36	1.21	1.20	3	6	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	8	5	7
RRUS-32 B30 RRH (Side)	27.2	6.1	12.1	1.14	2.29	4.50	2.25	1.29	1.20	4	8	5

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM **Checked By:** MSC

HUDSON Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 1.75 in.
Density of ice: 56 pcf

TPA65R-BU8DA-K Antenna

Weight of ice based on total radial SF area:

Height (in):	96.0	
Width (in):	20.7	
Depth (in):	7.7	
Total weight of ice on object:		408 lbs
Weight of object:	87.0 lbs	
Combined weight of ice and object:		495 lbs

TPA65R-BU6DA-K 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:		302 lbs
Weight of object:	69.0 lbs	
Combined weight of ice and object:		371 lbs

OPA65R-BU8DA Antenna

Weight of ice based on total radial SF area:

Height (in):	96.0	
Width (in):	21.0	
Depth (in):	7.8	
Total weight of ice on object:		413 lbs
Weight of object:	77.0 lbs	
Combined weight of ice and object:		490 lbs

OPA65R-BU6DA Antenna

Weight of ice based on total radial SF area:

Height (in):	71.2	
Width (in):	21.0	
Depth (in):	7.8	
Total weight of ice on object:		306 lbs
Weight of object:	64.0 lbs	
Combined weight of ice and object:		370 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:		108 lbs
Weight of object:	66.0 lbs	
Combined weight of ice and object:		174 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:		114 lbs
Weight of object:	82.0 lbs	
Combined weight of ice and object:		196 lbs

B14 4478 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:		56 lbs
Weight of object:	60.0 lbs	
Combined weight of ice and object:		116 lbs

RRUS-32 B2 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:		76 lbs
Weight of object:	60.0 lbs	
Combined weight of ice and object:		136 lbs

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM **Checked By:** MSC

HUDSON Design Group LLC

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:		43 lbs
Weight of object:	49.0	lbs
Combined weight of ice and object:		92 lbs

B5/B12 4449 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:		57 lbs
Weight of object:	73.0	lbs
Combined weight of ice and object:		130 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:		76 lbs
Weight of object:	60.0	lbs
Combined weight of ice and object:		136 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:

Depth (in):	24.0	
Diameter(in):	9.7	
Total weight of ice on object:		49 lbs
Weight of object:	33	lbs
Combined weight of ice and object:		82 lbs

PL 11-1/4x5/8

Weight of ice based on total radial SF area:

Height (in):	11.25	
Width (in):	0.625	
Per foot weight of ice on object:		28 plf

PL 3-1/2x5/8

Weight of ice based on total radial SF area:

Height (in):	3.5	
Width (in):	0.625	
Per foot weight of ice on object:		11 plf

HSS 4x4

Weight of ice based on total radial SF area:

Height (in):	4	
Width (in):	4	
Per foot weight of ice on object:		16 plf

3" Pipe

Per foot weight of ice:

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

2-1/2" pipe

Per foot weight of ice:

diameter (in):	2.88	
Per foot weight of ice on object:		10 plf

2" pipe

Per foot weight of ice:

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

3/4" Round Bar

Per foot weight of ice:

diameter (in):	0.75	
Per foot weight of ice on object:		5 plf

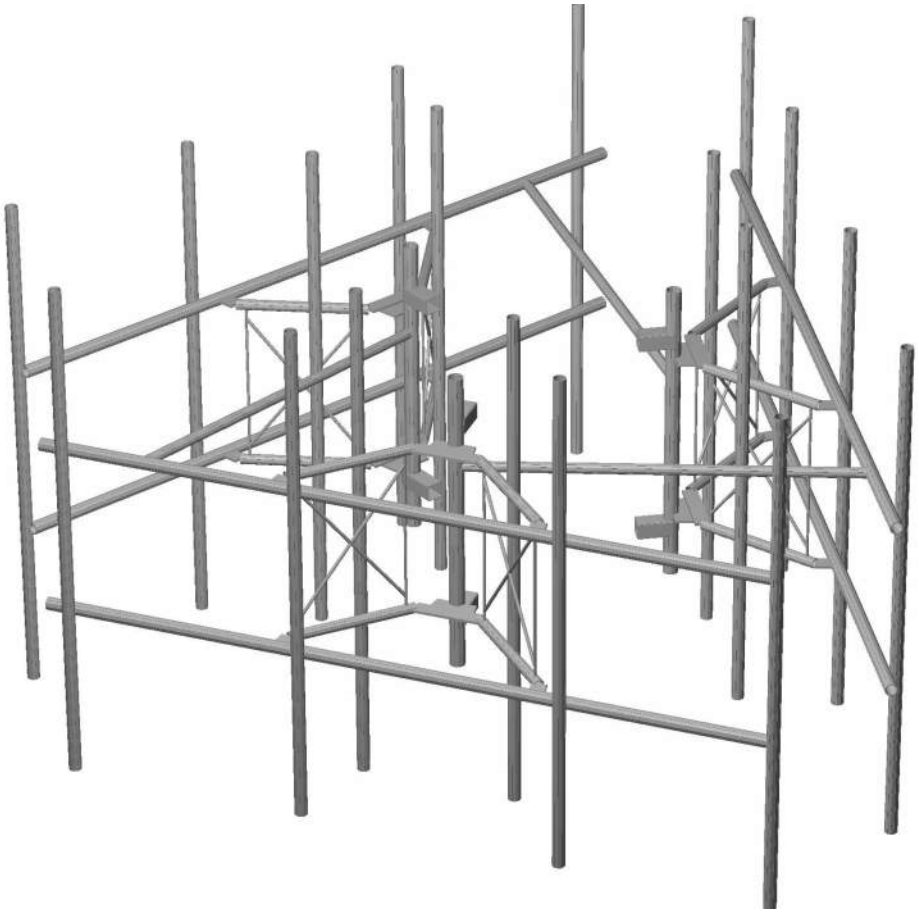
5/8" Round Bar

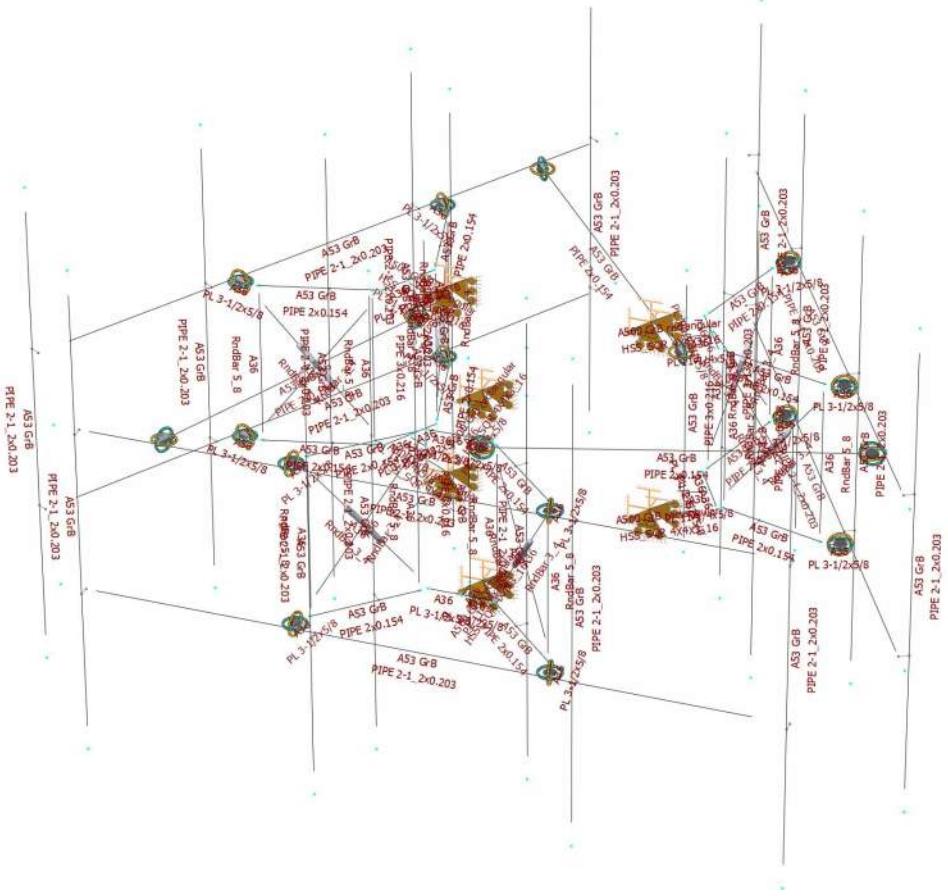
Per foot weight of ice:

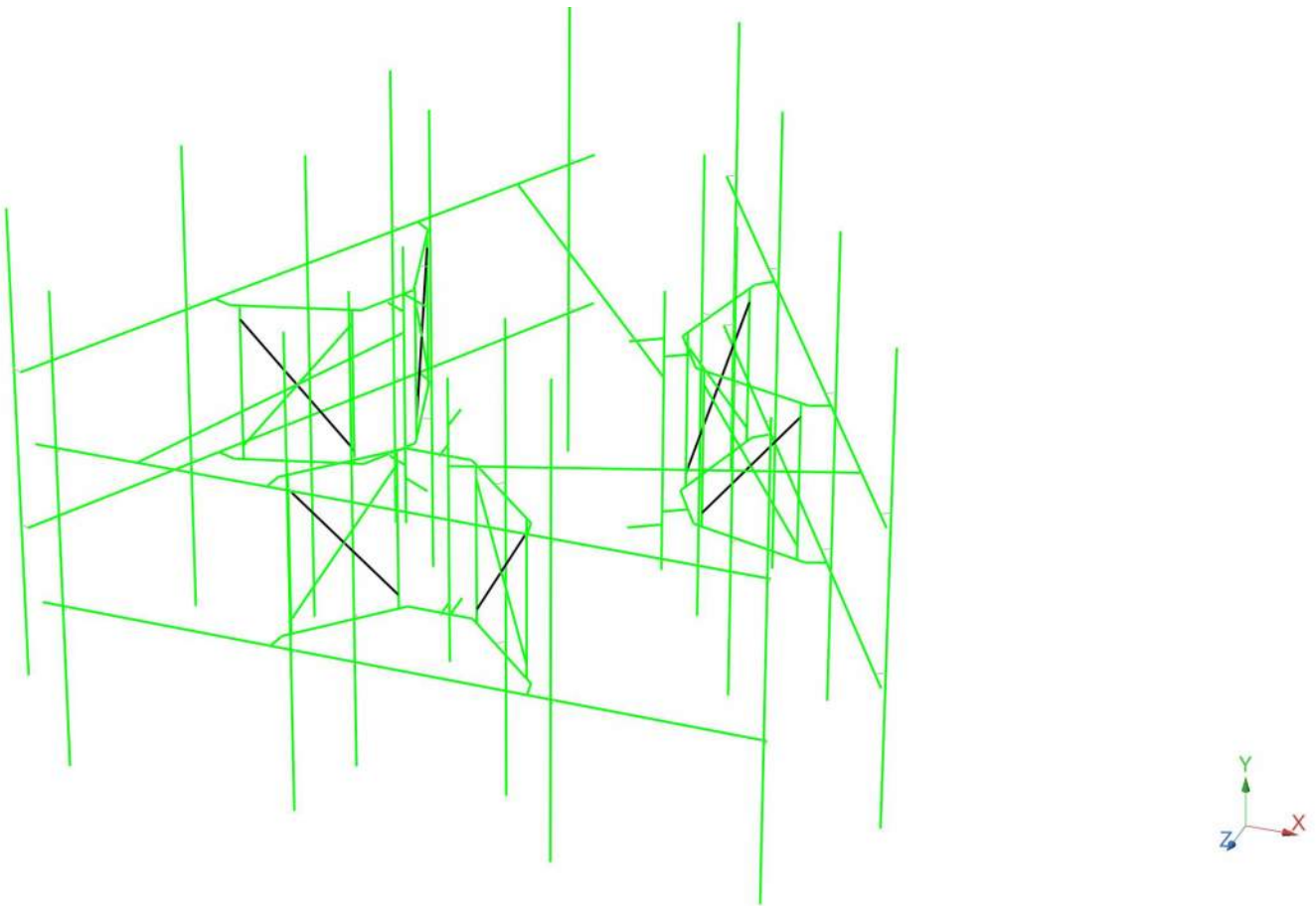
diameter (in):	0.625	
Per foot weight of ice on object:		5 plf

HUDSON
Design Group LLC

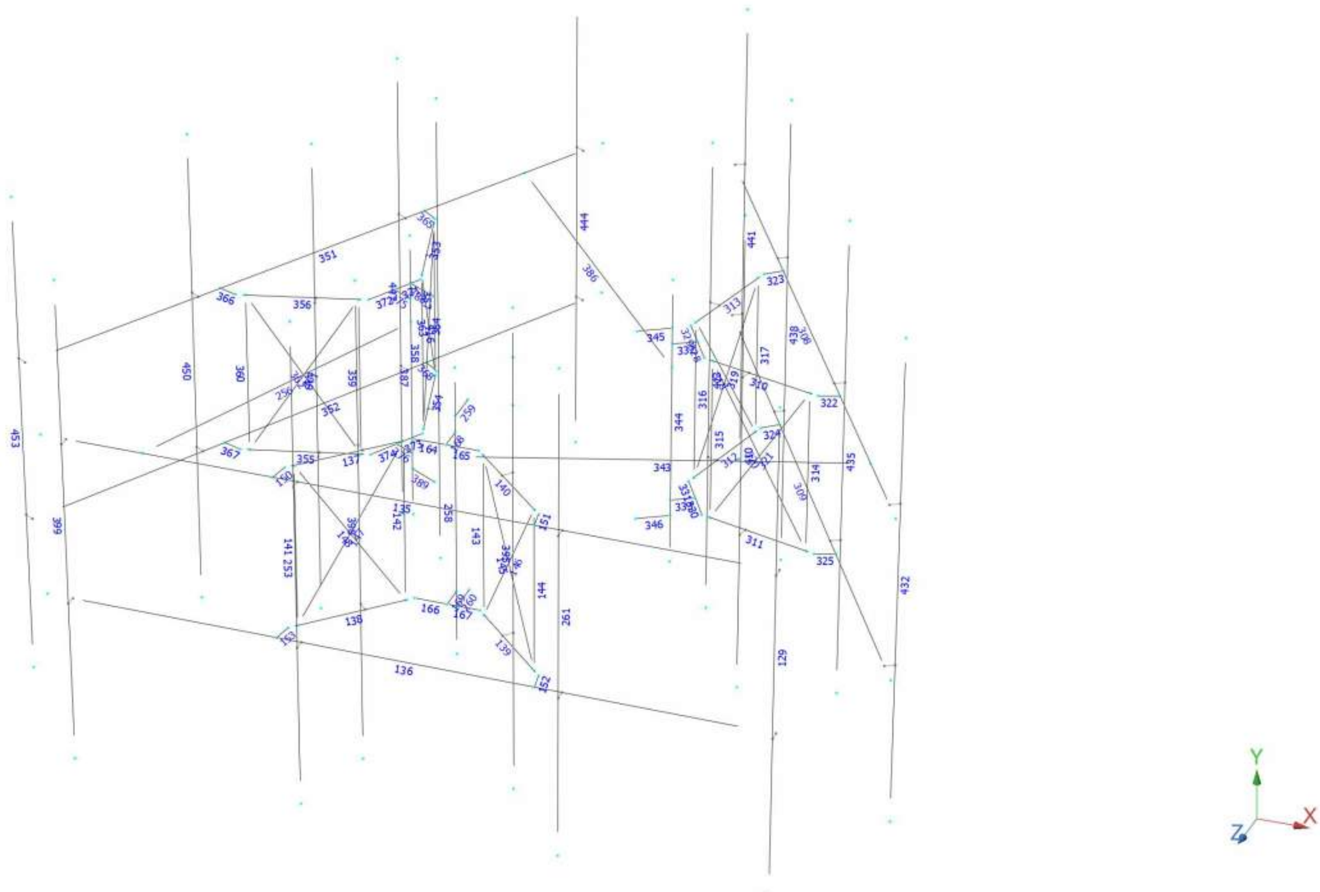
Mount Calculations
(Proposed Conditions)


Y
X
Z


A53 Gr.B
PIPE 2-1_2x0.203
PIPE 2x0.154
PL 3-1/2x5/8
RndBar 5_8
A36
HSS6x6x5/16
Y
X
Z


Design status
Not designed
Error on design
Design O.K.
With warnings
Y
X
Z

Current Date: 6/15/2022 8:49 AM
Units system: English



Current Date: 6/15/2022 8:49 AM
Units system: English

Load data

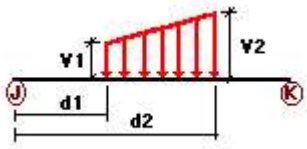
GLOSSARY

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

Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
W0	129	z	-0.014	-0.014	0.00	No	100.00	Yes
	135	z	-0.014	-0.014	0.00	No	100.00	Yes
	136	z	-0.014	-0.014	0.00	No	100.00	Yes
	137	z	-0.011	-0.011	0.00	No	100.00	Yes
	138	z	-0.011	-0.011	0.00	No	100.00	Yes
	139	z	-0.011	-0.011	0.00	No	100.00	Yes
	140	z	-0.011	-0.011	0.00	No	100.00	Yes
	141	z	-0.003	-0.003	0.00	No	100.00	Yes
	142	z	-0.003	-0.003	0.00	No	100.00	Yes
	143	z	-0.003	-0.003	0.00	No	100.00	Yes
	144	z	-0.003	-0.003	0.00	No	100.00	Yes
	145	z	-0.004	-0.004	0.00	No	100.00	Yes
	146	z	-0.004	-0.004	0.00	No	100.00	Yes
	147	z	-0.004	-0.004	0.00	No	100.00	Yes
	148	z	-0.004	-0.004	0.00	No	100.00	Yes
	150	z	-0.003	-0.003	0.00	No	100.00	Yes

151	z	-0.003	-0.003	0.00	No	100.00	Yes
152	z	-0.003	-0.003	0.00	No	100.00	Yes
153	z	-0.003	-0.003	0.00	No	100.00	Yes
164	z	-0.003	-0.003	0.00	No	100.00	Yes
165	z	-0.003	-0.003	0.00	No	100.00	Yes
166	z	-0.003	-0.003	0.00	No	100.00	Yes
167	z	-0.003	-0.003	0.00	No	100.00	Yes
256	z	-0.011	-0.011	0.00	No	100.00	Yes
258	z	-0.017	-0.017	0.00	No	100.00	Yes
259	z	-0.02	-0.02	0.00	No	100.00	Yes
260	z	-0.02	-0.02	0.00	No	100.00	Yes
308	z	-0.014	-0.014	0.00	No	100.00	Yes
309	z	-0.014	-0.014	0.00	No	100.00	Yes
310	z	-0.011	-0.011	0.00	No	100.00	Yes
311	z	-0.011	-0.011	0.00	No	100.00	Yes
312	z	-0.011	-0.011	0.00	No	100.00	Yes
313	z	-0.011	-0.011	0.00	No	100.00	Yes
314	z	-0.003	-0.003	0.00	No	100.00	Yes
315	z	-0.003	-0.003	0.00	No	100.00	Yes
316	z	-0.003	-0.003	0.00	No	100.00	Yes
317	z	-0.003	-0.003	0.00	No	100.00	Yes
318	z	-0.004	-0.004	0.00	No	100.00	Yes
319	z	-0.004	-0.004	0.00	No	100.00	Yes
320	z	-0.004	-0.004	0.00	No	100.00	Yes
321	z	-0.004	-0.004	0.00	No	100.00	Yes
322	z	-0.003	-0.003	0.00	No	100.00	Yes
323	z	-0.003	-0.003	0.00	No	100.00	Yes
324	z	-0.003	-0.003	0.00	No	100.00	Yes
325	z	-0.003	-0.003	0.00	No	100.00	Yes
328	z	-0.003	-0.003	0.00	No	100.00	Yes
329	z	-0.003	-0.003	0.00	No	100.00	Yes
330	z	-0.003	-0.003	0.00	No	100.00	Yes
331	z	-0.003	-0.003	0.00	No	100.00	Yes
332	z	-0.003	-0.003	0.00	No	100.00	Yes
333	z	-0.003	-0.003	0.00	No	100.00	Yes
343	z	-0.011	-0.011	0.00	No	100.00	Yes
344	z	-0.017	-0.017	0.00	No	100.00	Yes
345	z	-0.02	-0.02	0.00	No	100.00	Yes
346	z	-0.02	-0.02	0.00	No	100.00	Yes
351	z	-0.014	-0.014	0.00	No	100.00	Yes
352	z	-0.014	-0.014	0.00	No	100.00	Yes
353	z	-0.011	-0.011	0.00	No	100.00	Yes
354	z	-0.011	-0.011	0.00	No	100.00	Yes
355	z	-0.011	-0.011	0.00	No	100.00	Yes
356	z	-0.011	-0.011	0.00	No	100.00	Yes
357	z	-0.003	-0.003	0.00	No	100.00	Yes
358	z	-0.003	-0.003	0.00	No	100.00	Yes
359	z	-0.003	-0.003	0.00	No	100.00	Yes
360	z	-0.003	-0.003	0.00	No	100.00	Yes
361	z	-0.004	-0.004	0.00	No	100.00	Yes
362	z	-0.004	-0.004	0.00	No	100.00	Yes
363	z	-0.004	-0.004	0.00	No	100.00	Yes
364	z	-0.004	-0.004	0.00	No	100.00	Yes
365	z	-0.003	-0.003	0.00	No	100.00	Yes
366	z	-0.003	-0.003	0.00	No	100.00	Yes
367	z	-0.003	-0.003	0.00	No	100.00	Yes
368	z	-0.003	-0.003	0.00	No	100.00	Yes
371	z	-0.003	-0.003	0.00	No	100.00	Yes
372	z	-0.003	-0.003	0.00	No	100.00	Yes
373	z	-0.003	-0.003	0.00	No	100.00	Yes

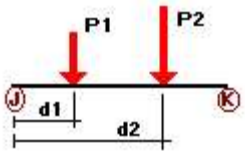
	374	z	-0.003	-0.003	0.00	No	100.00	Yes
	375	z	-0.003	-0.003	0.00	No	100.00	Yes
	376	z	-0.003	-0.003	0.00	No	100.00	Yes
	386	z	-0.011	-0.011	0.00	No	100.00	Yes
	387	z	-0.017	-0.017	0.00	No	100.00	Yes
	388	z	-0.02	-0.02	0.00	No	100.00	Yes
	389	z	-0.02	-0.02	0.00	No	100.00	Yes
	395	z	-0.014	-0.014	0.00	No	100.00	Yes
	398	z	-0.014	-0.014	0.00	No	100.00	Yes
	410	z	-0.014	-0.014	0.00	No	100.00	Yes
	413	z	-0.014	-0.014	0.00	No	100.00	Yes
	416	z	-0.014	-0.014	0.00	No	100.00	Yes
	419	z	-0.014	-0.014	0.00	No	100.00	Yes
	432	z	-0.014	-0.014	0.00	No	100.00	Yes
	435	z	-0.014	-0.014	0.00	No	100.00	Yes
	438	z	-0.014	-0.014	0.00	No	100.00	Yes
	441	z	-0.014	-0.014	0.00	No	100.00	Yes
	444	z	-0.014	-0.014	0.00	No	100.00	Yes
	447	z	-0.014	-0.014	0.00	No	100.00	Yes
	450	z	-0.014	-0.014	0.00	No	100.00	Yes
	453	z	-0.014	-0.014	0.00	No	100.00	Yes
W30	129	x	-0.014	-0.014	0.00	No	100.00	Yes
	137	x	-0.011	-0.011	0.00	No	100.00	Yes
	138	x	-0.011	-0.011	0.00	No	100.00	Yes
	139	x	-0.011	-0.011	0.00	No	100.00	Yes
	140	x	-0.011	-0.011	0.00	No	100.00	Yes
	141	x	-0.004	-0.004	0.00	No	100.00	Yes
	142	x	-0.004	-0.004	0.00	No	100.00	Yes
	143	x	-0.004	-0.004	0.00	No	100.00	Yes
	144	x	-0.004	-0.004	0.00	No	100.00	Yes
	145	x	-0.004	-0.004	0.00	No	100.00	Yes
	146	x	-0.004	-0.004	0.00	No	100.00	Yes
	147	x	-0.004	-0.004	0.00	No	100.00	Yes
	148	x	-0.004	-0.004	0.00	No	100.00	Yes
	150	x	-0.003	-0.003	0.00	No	100.00	Yes
	151	x	-0.003	-0.003	0.00	No	100.00	Yes
	152	x	-0.003	-0.003	0.00	No	100.00	Yes
	153	x	-0.003	-0.003	0.00	No	100.00	Yes
	164	x	-0.003	-0.003	0.00	No	100.00	Yes
	165	x	-0.003	-0.003	0.00	No	100.00	Yes
	166	x	-0.003	-0.003	0.00	No	100.00	Yes
	167	x	-0.003	-0.003	0.00	No	100.00	Yes
	168	x	-0.003	-0.003	0.00	No	100.00	Yes
	169	x	-0.003	-0.003	0.00	No	100.00	Yes
	253	x	-0.014	-0.014	0.00	No	100.00	Yes
	256	x	-0.011	-0.011	0.00	No	100.00	Yes
	258	x	-0.017	-0.017	0.00	No	100.00	Yes
	259	x	-0.02	-0.02	0.00	No	100.00	Yes
	260	x	-0.02	-0.02	0.00	No	100.00	Yes
	261	x	-0.014	-0.014	0.00	No	100.00	Yes
	308	x	-0.014	-0.014	0.00	No	100.00	Yes
	309	x	-0.014	-0.014	0.00	No	100.00	Yes
	310	x	-0.011	-0.011	0.00	No	100.00	Yes
	311	x	-0.011	-0.011	0.00	No	100.00	Yes
	312	x	-0.011	-0.011	0.00	No	100.00	Yes
	313	x	-0.011	-0.011	0.00	No	100.00	Yes
	314	x	-0.004	-0.004	0.00	No	100.00	Yes
	315	x	-0.004	-0.004	0.00	No	100.00	Yes
	316	x	-0.004	-0.004	0.00	No	100.00	Yes
	317	x	-0.004	-0.004	0.00	No	100.00	Yes

	318	x	-0.004	-0.004	0.00	No	100.00	Yes
	319	x	-0.004	-0.004	0.00	No	100.00	Yes
	320	x	-0.004	-0.004	0.00	No	100.00	Yes
	321	x	-0.004	-0.004	0.00	No	100.00	Yes
	322	x	-0.003	-0.003	0.00	No	100.00	Yes
	323	x	-0.003	-0.003	0.00	No	100.00	Yes
	324	x	-0.003	-0.003	0.00	No	100.00	Yes
	325	x	-0.003	-0.003	0.00	No	100.00	Yes
	328	x	-0.003	-0.003	0.00	No	100.00	Yes
	329	x	-0.003	-0.003	0.00	No	100.00	Yes
	330	x	-0.003	-0.003	0.00	No	100.00	Yes
	331	x	-0.003	-0.003	0.00	No	100.00	Yes
	332	x	-0.003	-0.003	0.00	No	100.00	Yes
	333	x	-0.003	-0.003	0.00	No	100.00	Yes
	343	x	-0.011	-0.011	0.00	No	100.00	Yes
	344	x	-0.017	-0.017	0.00	No	100.00	Yes
	345	x	-0.02	-0.02	0.00	No	100.00	Yes
	346	x	-0.02	-0.02	0.00	No	100.00	Yes
	351	x	-0.014	-0.014	0.00	No	100.00	Yes
	352	x	-0.014	-0.014	0.00	No	100.00	Yes
	353	x	-0.011	-0.011	0.00	No	100.00	Yes
	354	x	-0.011	-0.011	0.00	No	100.00	Yes
	355	x	-0.011	-0.011	0.00	No	100.00	Yes
	356	x	-0.011	-0.011	0.00	No	100.00	Yes
	357	x	-0.004	-0.004	0.00	No	100.00	Yes
	358	x	-0.004	-0.004	0.00	No	100.00	Yes
	359	x	-0.004	-0.004	0.00	No	100.00	Yes
	360	x	-0.004	-0.004	0.00	No	100.00	Yes
	361	x	-0.004	-0.004	0.00	No	100.00	Yes
	362	x	-0.004	-0.004	0.00	No	100.00	Yes
	363	x	-0.004	-0.004	0.00	No	100.00	Yes
	364	x	-0.004	-0.004	0.00	No	100.00	Yes
	365	x	-0.003	-0.003	0.00	No	100.00	Yes
	366	x	-0.003	-0.003	0.00	No	100.00	Yes
	367	x	-0.003	-0.003	0.00	No	100.00	Yes
	368	x	-0.003	-0.003	0.00	No	100.00	Yes
	371	x	-0.003	-0.003	0.00	No	100.00	Yes
	372	x	-0.003	-0.003	0.00	No	100.00	Yes
	373	x	-0.003	-0.003	0.00	No	100.00	Yes
	374	x	-0.003	-0.003	0.00	No	100.00	Yes
	375	x	-0.003	-0.003	0.00	No	100.00	Yes
	376	x	-0.003	-0.003	0.00	No	100.00	Yes
	386	x	-0.011	-0.011	0.00	No	100.00	Yes
	387	x	-0.017	-0.017	0.00	No	100.00	Yes
	388	x	-0.02	-0.02	0.00	No	100.00	Yes
	389	x	-0.02	-0.02	0.00	No	100.00	Yes
	395	x	-0.014	-0.014	0.00	No	100.00	Yes
	398	x	-0.014	-0.014	0.00	No	100.00	Yes
	399	x	-0.014	-0.014	0.00	No	100.00	Yes
	410	x	-0.014	-0.014	0.00	No	100.00	Yes
	413	x	-0.014	-0.014	0.00	No	100.00	Yes
	416	x	-0.014	-0.014	0.00	No	100.00	Yes
	419	x	-0.014	-0.014	0.00	No	100.00	Yes
	441	x	-0.014	-0.014	0.00	No	100.00	Yes
	444	x	-0.014	-0.014	0.00	No	100.00	Yes
	447	x	-0.014	-0.014	0.00	No	100.00	Yes
	450	x	-0.014	-0.014	0.00	No	100.00	Yes
	453	x	-0.014	-0.014	0.00	No	100.00	Yes
Di	129	y	-0.01	-0.01	0.00	No	100.00	Yes
	135	y	-0.01	-0.01	0.00	No	100.00	Yes

136	y	-0.01	-0.01	0.00	No	100.00	Yes
137	y	-0.009	-0.009	0.00	No	100.00	Yes
138	y	-0.009	-0.009	0.00	No	100.00	Yes
139	y	-0.009	-0.009	0.00	No	100.00	Yes
140	y	-0.009	-0.009	0.00	No	100.00	Yes
141	y	-0.005	-0.005	0.00	No	100.00	Yes
142	y	-0.005	-0.005	0.00	No	100.00	Yes
143	y	-0.005	-0.005	0.00	No	100.00	Yes
144	y	-0.005	-0.005	0.00	No	100.00	Yes
145	y	-0.005	-0.005	0.00	No	100.00	Yes
146	y	-0.005	-0.005	0.00	No	100.00	Yes
147	y	-0.005	-0.005	0.00	No	100.00	Yes
148	y	-0.005	-0.005	0.00	No	100.00	Yes
150	y	-0.011	-0.011	0.00	No	100.00	Yes
151	y	-0.011	-0.011	0.00	No	100.00	Yes
152	y	-0.011	-0.011	0.00	No	100.00	Yes
153	y	-0.011	-0.011	0.00	No	100.00	Yes
164	y	-0.011	-0.011	0.00	No	100.00	Yes
165	y	-0.011	-0.011	0.00	No	100.00	Yes
166	y	-0.011	-0.011	0.00	No	100.00	Yes
167	y	-0.011	-0.011	0.00	No	100.00	Yes
168	y	-0.028	-0.028	0.00	No	100.00	Yes
169	y	-0.028	-0.028	0.00	No	100.00	Yes
253	y	-0.01	-0.01	0.00	No	100.00	Yes
256	y	-0.009	-0.009	0.00	No	100.00	Yes
258	y	-0.011	-0.011	0.00	No	100.00	Yes
259	y	-0.016	-0.016	0.00	No	100.00	Yes
260	y	-0.016	-0.016	0.00	No	100.00	Yes
261	y	-0.01	-0.01	0.00	No	100.00	Yes
308	y	-0.01	-0.01	0.00	No	100.00	Yes
309	y	-0.01	-0.01	0.00	No	100.00	Yes
310	y	-0.009	-0.009	0.00	No	100.00	Yes
311	y	-0.009	-0.009	0.00	No	100.00	Yes
312	y	-0.009	-0.009	0.00	No	100.00	Yes
313	y	-0.009	-0.009	0.00	No	100.00	Yes
314	y	-0.005	-0.005	0.00	No	100.00	Yes
315	y	-0.005	-0.005	0.00	No	100.00	Yes
316	y	-0.005	-0.005	0.00	No	100.00	Yes
317	y	-0.005	-0.005	0.00	No	100.00	Yes
318	y	-0.005	-0.005	0.00	No	100.00	Yes
319	y	-0.005	-0.005	0.00	No	100.00	Yes
320	y	-0.005	-0.005	0.00	No	100.00	Yes
321	y	-0.005	-0.005	0.00	No	100.00	Yes
322	y	-0.011	-0.011	0.00	No	100.00	Yes
323	y	-0.011	-0.011	0.00	No	100.00	Yes
324	y	-0.011	-0.011	0.00	No	100.00	Yes
325	y	-0.011	-0.011	0.00	No	100.00	Yes
328	y	-0.011	-0.011	0.00	No	100.00	Yes
329	y	-0.011	-0.011	0.00	No	100.00	Yes
330	y	-0.011	-0.011	0.00	No	100.00	Yes
331	y	-0.011	-0.011	0.00	No	100.00	Yes
332	y	-0.028	-0.028	0.00	No	100.00	Yes
333	y	-0.028	-0.028	0.00	No	100.00	Yes
343	y	-0.009	-0.009	0.00	No	100.00	Yes
344	y	-0.011	-0.011	0.00	No	100.00	Yes
345	y	-0.016	-0.016	0.00	No	100.00	Yes
346	y	-0.016	-0.016	0.00	No	100.00	Yes
351	y	-0.01	-0.01	0.00	No	100.00	Yes
352	y	-0.01	-0.01	0.00	No	100.00	Yes
353	y	-0.009	-0.009	0.00	No	100.00	Yes

354	y	-0.009	-0.009	0.00	No	100.00	Yes
355	y	-0.009	-0.009	0.00	No	100.00	Yes
356	y	-0.009	-0.009	0.00	No	100.00	Yes
357	y	-0.005	-0.005	0.00	No	100.00	Yes
358	y	-0.005	-0.005	0.00	No	100.00	Yes
359	y	-0.005	-0.005	0.00	No	100.00	Yes
360	y	-0.005	-0.005	0.00	No	100.00	Yes
361	y	-0.005	-0.005	0.00	No	100.00	Yes
362	y	-0.005	-0.005	0.00	No	100.00	Yes
363	y	-0.005	-0.005	0.00	No	100.00	Yes
364	y	-0.005	-0.005	0.00	No	100.00	Yes
365	y	-0.011	-0.011	0.00	No	100.00	Yes
366	y	-0.011	-0.011	0.00	No	100.00	Yes
367	y	-0.011	-0.011	0.00	No	100.00	Yes
368	y	-0.011	-0.011	0.00	No	100.00	Yes
371	y	-0.011	-0.011	0.00	No	100.00	Yes
372	y	-0.011	-0.011	0.00	No	100.00	Yes
373	y	-0.011	-0.011	0.00	No	100.00	Yes
374	y	-0.011	-0.011	0.00	No	100.00	Yes
375	y	-0.028	-0.028	0.00	No	100.00	Yes
376	y	-0.028	-0.028	0.00	No	100.00	Yes
386	y	-0.009	-0.009	0.00	No	100.00	Yes
387	y	-0.011	-0.011	0.00	No	100.00	Yes
388	y	-0.016	-0.016	0.00	No	100.00	Yes
389	y	-0.016	-0.016	0.00	No	100.00	Yes
395	y	-0.01	-0.01	0.00	No	100.00	Yes
398	y	-0.01	-0.01	0.00	No	100.00	Yes
399	y	-0.01	-0.01	0.00	No	100.00	Yes
410	y	-0.01	-0.01	0.00	No	100.00	Yes
413	y	-0.01	-0.01	0.00	No	100.00	Yes
416	y	-0.01	-0.01	0.00	No	100.00	Yes
419	y	-0.01	-0.01	0.00	No	100.00	Yes
432	y	-0.01	-0.01	0.00	No	100.00	Yes
435	y	-0.01	-0.01	0.00	No	100.00	Yes
438	y	-0.01	-0.01	0.00	No	100.00	Yes
441	y	-0.01	-0.01	0.00	No	100.00	Yes
444	y	-0.01	-0.01	0.00	No	100.00	Yes
447	y	-0.01	-0.01	0.00	No	100.00	Yes
450	y	-0.01	-0.01	0.00	No	100.00	Yes
453	y	-0.01	-0.01	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	253	y	-0.033	1.50	No
		y	-0.033	3.50	No
		y	-0.041	5.50	No
		y	-0.041	7.50	No
	261	y	-0.044	1.50	No

		y	-0.044	8.50	No
	395	y	-0.06	3.00	No
		y	-0.06	6.00	No
		y	-0.049	6.00	No
	398	y	-0.033	2.00	No
		y	-0.06	6.00	No
		y	-0.073	6.00	No
	399	y	-0.039	1.50	No
		y	-0.039	8.50	No
	410	y	-0.033	2.00	No
		y	-0.06	6.00	No
		y	-0.073	6.00	No
	413	y	-0.06	3.00	No
		y	-0.06	6.00	No
		y	-0.049	6.00	No
	416	y	-0.033	2.00	No
		y	-0.06	6.00	No
		y	-0.073	6.00	No
	419	y	-0.06	3.00	No
		y	-0.06	6.00	No
		y	-0.049	6.00	No
	432	y	-0.039	1.50	No
		y	-0.039	8.50	No
	435	y	-0.033	1.50	No
		y	-0.033	3.50	No
		y	-0.041	5.50	No
		y	-0.041	7.50	No
	438	y	-0.044	1.50	No
		y	-0.044	8.50	No
	444	y	-0.032	2.50	No
		y	-0.032	7.50	No
	447	y	-0.033	1.50	No
		y	-0.033	3.50	No
		y	-0.041	5.50	No
		y	-0.041	7.50	No
	450	y	-0.035	2.50	No
		y	-0.035	7.50	No
W0	253	z	-0.10	1.50	No
		z	-0.10	3.50	No
		z	-0.097	5.50	No
		z	-0.097	7.50	No
	261	z	-0.427	1.50	No
		z	-0.427	8.50	No
	395	z	-0.097	3.00	No
		z	-0.08	6.00	No
		z	-0.035	6.00	No
	398	z	-0.054	2.00	No
		z	-0.067	6.00	No
		z	-0.08	6.00	No
	399	z	-0.433	1.50	No
		z	-0.433	8.50	No
	410	z	-0.054	2.00	No
		z	-0.123	6.00	No
	413	z	-0.069	3.00	No
		z	-0.123	6.00	No
	416	z	-0.054	2.00	No
		z	-0.123	6.00	No
	419	z	-0.069	3.00	No
		z	-0.123	6.00	No
	432	z	-0.255	1.50	No

		z	-0.255	8.50	No
	435	z	-0.061	1.50	No
		z	-0.061	3.50	No
		z	-0.074	5.50	No
		z	-0.074	7.50	No
	438	z	-0.253	1.50	No
		z	-0.253	8.50	No
	444	z	-0.179	2.50	No
		z	-0.179	7.50	No
	447	z	-0.061	1.50	No
		z	-0.061	3.50	No
		z	-0.074	5.50	No
		z	-0.074	7.50	No
	450	z	-0.177	2.50	No
		z	-0.177	7.50	No
W30	253	x	-0.048	1.50	No
		x	-0.048	3.50	No
		x	-0.066	5.50	No
		x	-0.066	7.50	No
	261	x	-0.194	1.50	No
		x	-0.194	8.50	No
	395	x	-0.06	3.00	No
		x	-0.131	6.00	No
	398	x	-0.054	2.00	No
		x	-0.131	6.00	No
	399	x	-0.196	1.50	No
		x	-0.196	8.50	No
	410	x	-0.054	2.00	No
		x	-0.086	6.00	No
	413	x	-0.087	3.00	No
		x	-0.086	6.00	No
	416	x	-0.054	2.00	No
		x	-0.086	6.00	No
	419	x	-0.087	3.00	No
		x	-0.086	6.00	No
	432	x	-0.373	1.50	No
		x	-0.373	8.50	No
	435	x	-0.087	1.50	No
		x	-0.087	3.50	No
		x	-0.089	5.50	No
		x	-0.089	7.50	No
	438	x	-0.369	1.50	No
		x	-0.369	8.50	No
	444	x	-0.265	2.50	No
		x	-0.265	7.50	No
	447	x	-0.087	1.50	No
		x	-0.087	3.50	No
		x	-0.089	5.50	No
		x	-0.089	7.50	No
	450	x	-0.262	2.50	No
		x	-0.262	7.50	No
Di	253	y	-0.054	1.50	No
		y	-0.054	3.50	No
		y	-0.057	5.50	No
		y	-0.057	7.50	No
	261	y	-0.204	1.50	No
		y	-0.204	8.50	No
	395	y	-0.056	3.00	No
		y	-0.076	6.00	No
		y	-0.043	6.00	No

	398	y	-0.049	2.00	No
		y	-0.076	6.00	No
		y	-0.057	6.00	No
	399	y	-0.207	1.50	No
		y	-0.207	8.50	No
	410	y	-0.049	2.00	No
		y	-0.076	6.00	No
		y	-0.057	6.00	No
	413	y	-0.056	3.00	No
		y	-0.076	6.00	No
		y	-0.043	6.00	No
	416	y	-0.049	2.00	No
		y	-0.076	6.00	No
		y	-0.057	6.00	No
	419	y	-0.056	3.00	No
		y	-0.076	6.00	No
		y	-0.043	6.00	No
	432	y	-0.207	1.50	No
		y	-0.207	8.50	No
	435	y	-0.054	1.50	No
		y	-0.054	3.50	No
		y	-0.057	5.50	No
		y	-0.057	7.50	No
	438	y	-0.204	1.50	No
		y	-0.204	8.50	No
	444	y	-0.153	2.50	No
		y	-0.153	7.50	No
	447	y	-0.054	1.50	No
		y	-0.054	3.50	No
		y	-0.057	5.50	No
		y	-0.057	7.50	No
	450	y	-0.151	2.50	No
		y	-0.151	7.50	No
Wi0	253	z	-0.024	1.50	No
		z	-0.024	3.50	No
		z	-0.023	5.50	No
		z	-0.023	7.50	No
	261	z	-0.09	1.50	No
		z	-0.09	8.50	No
	395	z	-0.025	3.00	No
		z	-0.023	6.00	No
		z	-0.012	6.00	No
	398	z	-0.015	2.00	No
		z	-0.019	6.00	No
		z	-0.023	6.00	No
	399	z	-0.091	1.50	No
		z	-0.091	8.50	No
	410	z	-0.015	2.00	No
		z	-0.031	6.00	No
	413	z	-0.02	3.00	No
		z	-0.031	6.00	No
	416	z	-0.015	2.00	No
		z	-0.031	6.00	No
	419	z	-0.02	3.00	No
		z	-0.031	6.00	No
	432	z	-0.058	1.50	No
		z	-0.058	8.50	No
	435	z	-0.016	1.50	No
		z	-0.016	3.50	No
		z	-0.018	5.50	No

		z	-0.018	7.50	No
	438	z	-0.057	1.50	No
		z	-0.057	8.50	No
	444	z	-0.042	2.50	No
		z	-0.042	7.50	No
	447	z	-0.016	1.50	No
		z	-0.016	3.50	No
		z	-0.018	5.50	No
		z	-0.018	7.50	No
	450	z	-0.041	2.50	No
		z	-0.041	7.50	No
Wi30	253	x	-0.013	1.50	No
		x	-0.013	3.50	No
		x	-0.017	5.50	No
		x	-0.017	7.50	No
	261	x	-0.047	1.50	No
		x	-0.047	8.50	No
	395	x	-0.018	3.00	No
		x	-0.033	6.00	No
	398	x	-0.015	2.00	No
		x	-0.033	6.00	No
	399	x	-0.048	1.50	No
		x	-0.048	8.50	No
	410	x	-0.015	2.00	No
		x	-0.021	6.00	No
	413	x	-0.023	3.00	No
		x	-0.021	6.00	No
	416	x	-0.015	2.00	No
		x	-0.021	6.00	No
	419	x	-0.023	3.00	No
		x	-0.021	6.00	No
	432	x	-0.079	1.50	No
		x	-0.079	8.50	No
	435	x	-0.021	1.50	No
		x	-0.021	3.50	No
		x	-0.022	5.50	No
		x	-0.022	7.50	No
	438	x	-0.078	1.50	No
		x	-0.078	8.50	No
	444	x	-0.057	2.50	No
		x	-0.057	7.50	No
	447	x	-0.021	1.50	No
		x	-0.021	3.50	No
		x	-0.022	5.50	No
		x	-0.022	7.50	No
	450	x	-0.056	2.50	No
		x	-0.056	7.50	No
WL0	253	z	-0.006	1.50	No
		z	-0.006	3.50	No
		z	-0.006	5.50	No
		z	-0.006	7.50	No
	261	z	-0.027	1.50	No
		z	-0.027	8.50	No
	395	z	-0.006	3.00	No
		z	-0.005	6.00	No
		z	-0.002	6.00	No
	398	z	-0.003	2.00	No
		z	-0.004	6.00	No
		z	-0.005	6.00	No
	399	z	-0.027	1.50	No

		z	-0.027	8.50	No
	410	z	-0.003	2.00	No
		z	-0.008	6.00	No
	413	z	-0.004	3.00	No
		z	-0.008	6.00	No
	416	z	-0.003	2.00	No
		z	-0.008	6.00	No
	419	z	-0.004	3.00	No
		z	-0.008	6.00	No
	432	z	-0.016	1.50	No
		z	-0.016	8.50	No
	435	z	-0.004	1.50	No
		z	-0.004	3.50	No
		z	-0.005	5.50	No
		z	-0.005	7.50	No
	438	z	-0.016	1.50	No
		z	-0.016	8.50	No
	444	z	-0.011	2.50	No
		z	-0.011	7.50	No
	447	z	-0.004	1.50	No
		z	-0.004	3.50	No
		z	-0.005	5.50	No
		z	-0.005	7.50	No
	450	z	-0.011	2.50	No
		z	-0.011	7.50	No
WL30	253	x	-0.003	1.50	No
		x	-0.003	3.50	No
		x	-0.004	5.50	No
		x	-0.004	7.50	No
	261	x	-0.012	1.50	No
		x	-0.012	8.50	No
	395	x	-0.004	3.00	No
		x	-0.008	6.00	No
	398	x	-0.003	2.00	No
		x	-0.008	6.00	No
	399	x	-0.012	1.50	No
		x	-0.012	8.50	No
	410	x	-0.003	2.00	No
		x	-0.005	6.00	No
	413	x	-0.005	3.00	No
		x	-0.005	6.00	No
	416	x	-0.003	2.00	No
		x	-0.005	6.00	No
	419	x	-0.005	3.00	No
		x	-0.005	6.00	No
	432	x	-0.024	1.50	No
		x	-0.024	8.50	No
	435	x	-0.006	1.50	No
		x	-0.006	3.50	No
		x	-0.006	5.50	No
		x	-0.006	7.50	No
	438	x	-0.023	1.50	No
		x	-0.023	8.50	No
	444	x	-0.017	2.50	No
		x	-0.017	7.50	No
	447	x	-0.006	1.50	No
		x	-0.006	3.50	No
		x	-0.006	5.50	No
		x	-0.006	7.50	No
	450	x	-0.017	2.50	No

		x	-0.017	7.50	No
LL1	135	y	-0.25	50.00	Yes
LL2	135	y	-0.25	100.00	Yes
LLa1	129	y	-0.50	50.00	Yes
LLa2	261	y	-0.50	50.00	Yes
LLa3	253	y	-0.50	50.00	Yes
LLa4	399	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 Antenna 1	No	0.00	0.00	0.00
LLa2	500 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	500 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	500 lb Live Load Antenna 4	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

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

Current Date: 6/15/2022 8:49 AM
Units system: English

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2DL+W0
LC2=1.2DL+W30
LC3=1.2DL-W0
LC4=1.2DL-W30
LC5=0.9DL+W0
LC6=0.9DL+W30
LC7=0.9DL-W0
LC8=0.9DL-W30
LC9=1.2DL+Di+Wi0
LC10=1.2DL+Di+Wi30
LC11=1.2DL+Di-Wi0
LC12=1.2DL+Di-Wi30
LC13=1.4DL
LC14=1.2DL+1.6LL1
LC15=1.2DL+1.6LL2
LC16=1.2DL+WL0+1.6LLa1
LC17=1.2DL+WL30+1.6LLa1
LC18=1.2DL-WL0+1.6LLa1
LC19=1.2DL-WL30+1.6LLa1
LC20=1.2DL+WL0+1.6LLa2
LC21=1.2DL+WL30+1.6LLa2
LC22=1.2DL-WL0+1.6LLa2
LC23=1.2DL-WL30+1.6LLa2
LC24=1.2DL+WL0+1.6LLa3
LC25=1.2DL+WL30+1.6LLa3
LC26=1.2DL-WL0+1.6LLa3
LC27=1.2DL-WL30+1.6LLa3
LC28=1.2DL+WL0+1.6LLa4
LC29=1.2DL+WL30+1.6LLa4
LC30=1.2DL-WL0+1.6LLa4
LC31=1.2DL-WL30+1.6LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X3_16	**259**	LC2 at 100.00%	0.23	OK	
		260	LC4 at 100.00%	0.24	OK	
		345	LC4 at 100.00%	0.24	OK	
		346	LC1 at 100.00%	0.23	OK	
		388	LC1 at 100.00%	**0.25**	**OK**	
		389	LC3 at 100.00%	0.23	OK	
	PIPE 2-1_2x0.203	**129**	LC18 at 33.33%	0.31	OK	
		135	LC29 at 32.14%	0.41	OK	
		136	LC3 at 31.25%	0.40	OK	
		253	LC9 at 64.58%	0.15	OK	
		261	LC3 at 66.67%	0.31	OK	
		308	LC1 at 32.14%	**0.42**	**OK**	
		309	LC2 at 31.25%	0.39	OK	
		351	LC3 at 32.14%	0.40	OK	
		352	LC3 at 31.25%	0.29	OK	
		395	LC16 at 35.42%	0.08	OK	
		398	LC29 at 35.42%	0.09	OK	
		399	LC3 at 33.33%	0.36	OK	

	410	LC11 at 35.42%	0.09	OK
	413	LC2 at 35.42%	0.06	OK
	416	LC12 at 35.42%	0.08	OK
	419	LC3 at 35.42%	0.05	OK
	432	LC11 at 33.33%	0.24	OK
	435	LC11 at 64.58%	0.14	OK
	438	LC4 at 66.67%	0.23	OK
	441	LC12 at 33.33%	0.06	OK
	444	LC2 at 33.33%	0.20	OK
	447	LC4 at 64.58%	0.13	OK
	450	LC4 at 64.58%	0.12	OK
	453	LC10 at 33.33%	0.06	OK
PIPE 2x0.154	**137**	LC2 at 93.75%	0.43	OK
	138	LC4 at 93.75%	0.43	OK
	139	LC2 at 93.75%	0.33	OK
	140	LC19 at 93.75%	0.33	OK
	256	LC2 at 50.00%	0.08	OK
	310	LC4 at 93.75%	**0.47**	**OK**
	311	LC2 at 93.75%	0.43	OK
	312	LC3 at 93.75%	0.36	OK
	313	LC2 at 93.75%	0.28	OK
	343	LC3 at 50.00%	0.09	OK
	353	LC1 at 93.75%	0.45	OK
	354	LC3 at 93.75%	0.44	OK
	355	LC1 at 100.00%	0.30	OK
	356	LC3 at 93.75%	0.28	OK
	386	LC4 at 100.00%	0.07	OK
PIPE 3x0.216	**258**	LC1 at 16.67%	0.13	OK
	344	LC4 at 82.29%	**0.17**	**OK**
	387	LC1 at 82.29%	0.16	OK
PL 11-1/4x5/8	**168**	LC11 at 100.00%	0.32	OK
	169	LC12 at 100.00%	0.25	OK
	332	LC12 at 100.00%	**0.32**	**OK**
	333	LC9 at 100.00%	0.25	OK
	375	LC9 at 100.00%	0.30	OK
	376	LC10 at 100.00%	0.23	OK
PL 3-1/2x5/8	**150**	LC28 at 100.00%	0.35	OK
	151	LC16 at 100.00%	0.32	OK
	152	LC18 at 100.00%	0.38	OK
	153	LC30 at 100.00%	0.42	OK
	164	LC11 at 100.00%	**0.58**	**OK**
	165	LC18 at 0.00%	0.49	OK
	166	LC9 at 100.00%	0.55	OK
	167	LC16 at 0.00%	0.47	OK
	322	LC11 at 100.00%	0.32	OK
	323	LC3 at 100.00%	0.20	OK
	324	LC12 at 100.00%	0.20	OK
	325	LC9 at 100.00%	0.38	OK
	328	LC9 at 100.00%	0.58	OK
	329	LC12 at 0.00%	0.41	OK
	330	LC11 at 100.00%	0.55	OK
	331	LC10 at 0.00%	0.38	OK
	365	LC12 at 100.00%	0.28	OK
	366	LC4 at 100.00%	0.19	OK
	367	LC10 at 100.00%	0.17	OK
	368	LC10 at 100.00%	0.34	OK
	371	LC10 at 100.00%	0.53	OK
	372	LC9 at 0.00%	0.37	OK
	373	LC12 at 100.00%	0.50	OK
	374	LC11 at 0.00%	0.35	OK

RndBar 3_4	**145**	LC19 at 0.00%	0.17	OK
	146	LC16 at 0.00%	0.19	With warnings
	147	LC11 at 100.00%	0.20	OK
	148	LC12 at 100.00%	0.21	With warnings
	318	LC10 at 0.00%	0.12	OK
	319	LC11 at 0.00%	0.13	With warnings
	320	LC12 at 100.00%	0.21	OK
	321	LC9 at 100.00%	**0.21**	**With warnings**
	361	LC11 at 0.00%	0.12	OK
	362	LC12 at 0.00%	0.12	With warnings
	363	LC9 at 100.00%	0.19	OK
	364	LC11 at 100.00%	0.19	With warnings
RndBar 5_8	**141**	LC9 at 87.50%	0.55	OK
	142	LC30 at 87.50%	**0.59**	**OK**
	143	LC16 at 87.50%	0.54	OK
	144	LC16 at 87.50%	0.50	OK
	314	LC10 at 87.50%	0.55	OK
	315	LC9 at 87.50%	0.58	OK
	316	LC11 at 87.50%	0.34	OK
	317	LC10 at 87.50%	0.36	OK
	357	LC11 at 87.50%	0.49	OK
	358	LC10 at 87.50%	0.52	OK
	359	LC12 at 87.50%	0.32	OK
	360	LC12 at 87.50%	0.31	OK

Current Date: 6/15/2022 8:50 AM
Units system: English

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
211	0.00	0.00	2.00	0
212	-0.6362	0.00	2.4783	0
213	0.00	-3.3333	2.00	0
214	-0.6362	-3.3333	2.4783	0
215	0.6362	-3.3333	2.4783	0
216	0.6362	0.00	2.4783	0
217	7.00	-6.6667	4.83	0
218	7.00	3.3333	4.83	0
223	-7.00	0.00	4.63	0
225	-7.00	-3.3333	4.63	0
227	-2.4126	0.00	4.2374	0
228	-2.4126	-3.3333	4.2374	0
229	2.4126	-3.3333	4.2374	0
230	2.4126	0.00	4.2374	0
231	-2.2835	0.00	4.1096	0
232	-2.2835	-3.3333	4.1096	0
233	-0.7653	0.00	2.6062	0
234	-0.7653	-3.3333	2.6062	0
235	0.7653	0.00	2.6062	0
236	0.7653	-3.3333	2.6062	0
237	2.2835	0.00	4.1096	0
238	2.2835	-3.3333	4.1096	0
245	-2.4792	0.00	4.63	0

246	2.4792	0.00	4.63	0
247	2.4792	-3.3333	4.63	0
248	-2.4792	-3.3333	4.63	0
267	0.00	0.00	2.4783	0
268	0.00	-3.3333	2.4783	0
429	-2.00	-6.6667	4.83	0
430	-2.00	3.3333	4.83	0
435	-5.00	0.00	4.63	0
436	-2.5981	-0.50	-2.50	0
440	0.00	-4.6667	2.00	0
441	0.00	1.3333	2.00	0
442	0.00	-3.6667	2.00	0
443	0.00	0.3333	2.00	0
444	0.00	0.3333	1.3333	0
445	0.00	-3.6667	1.3333	0
446	3.00	-6.6667	4.83	0
447	3.00	3.3333	4.83	0
452	0.00	0.00	-1.00	0
515	2.5981	0.00	-2.50	0
516	3.3304	0.00	-2.1882	0
517	2.5981	-3.3333	-2.50	0
518	3.3304	-3.3333	-2.1882	0
519	2.6942	-3.3333	-3.2901	0
520	2.6942	0.00	-3.2901	0
523	8.3757	0.00	2.2472	0
527	5.742	0.00	-1.5293	0
528	5.742	-3.3333	-1.5293	0
529	3.3294	-3.3333	-5.7081	0
530	3.3294	0.00	-5.7081	0
531	5.5668	0.00	-1.5772	0
532	5.5668	-3.3333	-1.5772	0
533	3.5057	0.00	-2.1404	0
534	3.5057	-3.3333	-2.1404	0
535	2.7404	0.00	-3.4658	0
536	2.7404	-3.3333	-3.4658	0
537	3.2833	0.00	-5.5324	0
538	3.2833	-3.3333	-5.5324	0
539	6.1153	0.00	-1.668	0
540	3.6361	0.00	-5.962	0
541	3.6361	-3.3333	-5.962	0
542	6.1153	-3.3333	-1.668	0
545	3.0123	0.00	-2.7392	0
546	3.0123	-3.3333	-2.7392	0
563	7.3757	0.00	0.5151	0
564	0.00	-0.50	2.00	0
565	2.5981	-4.6667	-2.50	0
566	2.5981	1.3333	-2.50	0
567	2.5981	-3.6667	-2.50	0
568	2.5981	0.3333	-2.50	0
569	2.0207	0.3333	-2.1667	0
570	2.0207	-3.6667	-2.1667	0
577	-2.5981	0.00	-2.50	0
578	-2.6942	0.00	-3.2901	0
579	-2.5981	-3.3333	-2.50	0
580	-2.6942	-3.3333	-3.2901	0
581	-3.3304	-3.3333	-2.1882	0
582	-3.3304	0.00	-2.1882	0
585	-1.3757	0.00	-9.8772	0
587	-1.3757	-3.3333	-9.8772	0
589	-3.3294	0.00	-5.7081	0

590	-3.3294	-3.3333	-5.7081	0
591	-5.742	-3.3333	-1.5293	0
592	-5.742	0.00	-1.5293	0
593	-3.2833	0.00	-5.5324	0
594	-3.2833	-3.3333	-5.5324	0
595	-2.7404	0.00	-3.4658	0
596	-2.7404	-3.3333	-3.4658	0
597	-3.5057	0.00	-2.1404	0
598	-3.5057	-3.3333	-2.1404	0
599	-5.5668	0.00	-1.5772	0
600	-5.5668	-3.3333	-1.5772	0
601	-3.6361	0.00	-5.962	0
602	-6.1153	0.00	-1.668	0
603	-6.1153	-3.3333	-1.668	0
604	-3.6361	-3.3333	-5.962	0
607	-3.0123	0.00	-2.7392	0
608	-3.0123	-3.3333	-2.7392	0
625	-2.3757	0.00	-8.1451	0
626	2.5981	-0.50	-2.50	0
627	-2.5981	-4.6667	-2.50	0
628	-2.5981	1.3333	-2.50	0
629	-2.5981	-3.6667	-2.50	0
630	-2.5981	0.3333	-2.50	0
631	-2.0207	0.3333	-2.1667	0
632	-2.0207	-3.6667	-2.1667	0
639	0.00	-1.00	-1.00	0
651	1.4846	-6.6667	3.0199	0
652	1.4846	3.3333	3.0199	0
664	-1.4846	-6.6667	3.0199	0
665	-1.4846	3.3333	3.0199	0
668	-6.50	-6.6667	4.83	0
669	-6.50	3.3333	4.83	0
688	4.2237	-6.6667	-1.7243	0
689	4.2237	3.3333	-1.7243	0
694	2.7391	-6.6667	-4.2957	0
695	2.7391	3.3333	-4.2957	0
700	-2.7391	-6.6667	-4.2957	0
701	-2.7391	3.3333	-4.2957	0
706	-4.2237	-6.6667	-1.7243	0
707	-4.2237	3.3333	-1.7243	0
734	8.2989	-6.6667	1.7142	0
735	8.2989	3.3333	1.7142	0
738	6.0489	-6.6667	-2.1829	0
739	6.0489	3.3333	-2.1829	0
744	3.5489	-6.6667	-6.5131	0
745	3.5489	3.3333	-6.5131	0
750	1.5489	-6.6667	-9.9772	0
751	1.5489	3.3333	-9.9772	0
756	-1.7989	-6.6667	-9.5442	0
757	-1.7989	3.3333	-9.5442	0
760	-4.0489	-6.6667	-5.6471	0
761	-4.0489	3.3333	-5.6471	0
766	-6.5489	-6.6667	-1.3169	0
767	-6.5489	3.3333	-1.3169	0
772	-8.5489	-6.6667	2.1472	0
773	-8.5489	3.3333	2.1472	0
525	8.3757	-3.3333	2.2472	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
444	1	1	1	1	1	1
445	1	1	1	1	1	1
569	1	1	1	1	1	1
570	1	1	1	1	1	1
631	1	1	1	1	1	1
632	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	lg factor
129	218	217		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
135	223	224		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
136	225	226		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
137	227	212		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
138	228	214		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
139	229	215		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
140	230	216		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
141	231	232		RndBar 5_8	A36	0.00	0.00	0.00
142	233	234		RndBar 5_8	A36	0.00	0.00	0.00
143	235	236		RndBar 5_8	A36	0.00	0.00	0.00
144	237	238		RndBar 5_8	A36	0.00	0.00	0.00
145	235	238		RndBar 3_4	A36	0.00	0.00	0.00
146	236	237		RndBar 3_4	A36	0.00	0.00	0.00
147	232	233		RndBar 3_4	A36	0.00	0.00	0.00
148	231	234		RndBar 3_4	A36	0.00	0.00	0.00
150	227	245		PL 3-1/2x5/8	A36	0.00	0.00	0.00
151	230	246		PL 3-1/2x5/8	A36	0.00	0.00	0.00
152	229	247		PL 3-1/2x5/8	A36	0.00	0.00	0.00
153	228	248		PL 3-1/2x5/8	A36	0.00	0.00	0.00
164	212	267		PL 3-1/2x5/8	A36	0.00	0.00	0.00
165	267	216		PL 3-1/2x5/8	A36	0.00	0.00	0.00
166	214	268		PL 3-1/2x5/8	A36	0.00	0.00	0.00
167	268	215		PL 3-1/2x5/8	A36	0.00	0.00	0.00
168	267	211		PL 11-1/4x5/8	A36	11.25	9.25	0.00
169	268	213		PL 11-1/4x5/8	A36	11.25	9.25	0.00
253	430	429		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
256	435	436		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
258	440	441		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
259	443	444		HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
260	442	445		HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
261	447	446		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
308	523	524		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
309	525	526		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
310	527	516		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
311	528	518		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
312	529	519		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
313	530	520		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
314	531	532		RndBar 5_8	A36	0.00	0.00	0.00
315	533	534		RndBar 5_8	A36	0.00	0.00	0.00
316	535	536		RndBar 5_8	A36	0.00	0.00	0.00
317	537	538		RndBar 5_8	A36	0.00	0.00	0.00
318	535	538		RndBar 3_4	A36	0.00	0.00	0.00
319	536	537		RndBar 3_4	A36	0.00	0.00	0.00
320	532	533		RndBar 3_4	A36	0.00	0.00	0.00
321	531	534		RndBar 3_4	A36	0.00	0.00	0.00

322	527	539	PL 3-1/2x5/8	A36	0.00	0.00	0.00
323	530	540	PL 3-1/2x5/8	A36	0.00	0.00	0.00
324	529	541	PL 3-1/2x5/8	A36	0.00	0.00	0.00
325	528	542	PL 3-1/2x5/8	A36	0.00	0.00	0.00
328	516	545	PL 3-1/2x5/8	A36	0.00	0.00	0.00
329	545	520	PL 3-1/2x5/8	A36	0.00	0.00	0.00
330	518	546	PL 3-1/2x5/8	A36	0.00	0.00	0.00
331	546	519	PL 3-1/2x5/8	A36	0.00	0.00	0.00
332	545	515	PL 11-1/4x5/8	A36	11.25	9.25	0.00
333	546	517	PL 11-1/4x5/8	A36	11.25	9.25	0.00
343	563	564	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
344	565	566	PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
345	568	569	HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
346	567	570	HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
351	585	586	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
352	587	588	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
353	589	578	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
354	590	580	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
355	591	581	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
356	592	582	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
357	593	594	RndBar 5_8	A36	0.00	0.00	0.00
358	595	596	RndBar 5_8	A36	0.00	0.00	0.00
359	597	598	RndBar 5_8	A36	0.00	0.00	0.00
360	599	600	RndBar 5_8	A36	0.00	0.00	0.00
361	597	600	RndBar 3_4	A36	0.00	0.00	0.00
362	598	599	RndBar 3_4	A36	0.00	0.00	0.00
363	594	595	RndBar 3_4	A36	0.00	0.00	0.00
364	593	596	RndBar 3_4	A36	0.00	0.00	0.00
365	589	601	PL 3-1/2x5/8	A36	0.00	0.00	0.00
366	592	602	PL 3-1/2x5/8	A36	0.00	0.00	0.00
367	591	603	PL 3-1/2x5/8	A36	0.00	0.00	0.00
368	590	604	PL 3-1/2x5/8	A36	0.00	0.00	0.00
371	578	607	PL 3-1/2x5/8	A36	0.00	0.00	0.00
372	607	582	PL 3-1/2x5/8	A36	0.00	0.00	0.00
373	580	608	PL 3-1/2x5/8	A36	0.00	0.00	0.00
374	608	581	PL 3-1/2x5/8	A36	0.00	0.00	0.00
375	607	577	PL 11-1/4x5/8	A36	11.25	9.25	0.00
376	608	579	PL 11-1/4x5/8	A36	11.25	9.25	0.00
386	625	626	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
387	627	628	PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
388	630	631	HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
389	629	632	HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
395	652	651	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
398	665	664	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
399	669	668	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
410	689	688	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
413	695	694	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
416	701	700	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
419	707	706	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
432	735	734	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
435	739	738	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
438	745	744	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
441	751	750	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
444	757	756	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
447	761	760	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
450	767	766	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
453	773	772	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00

Orientation of local axes

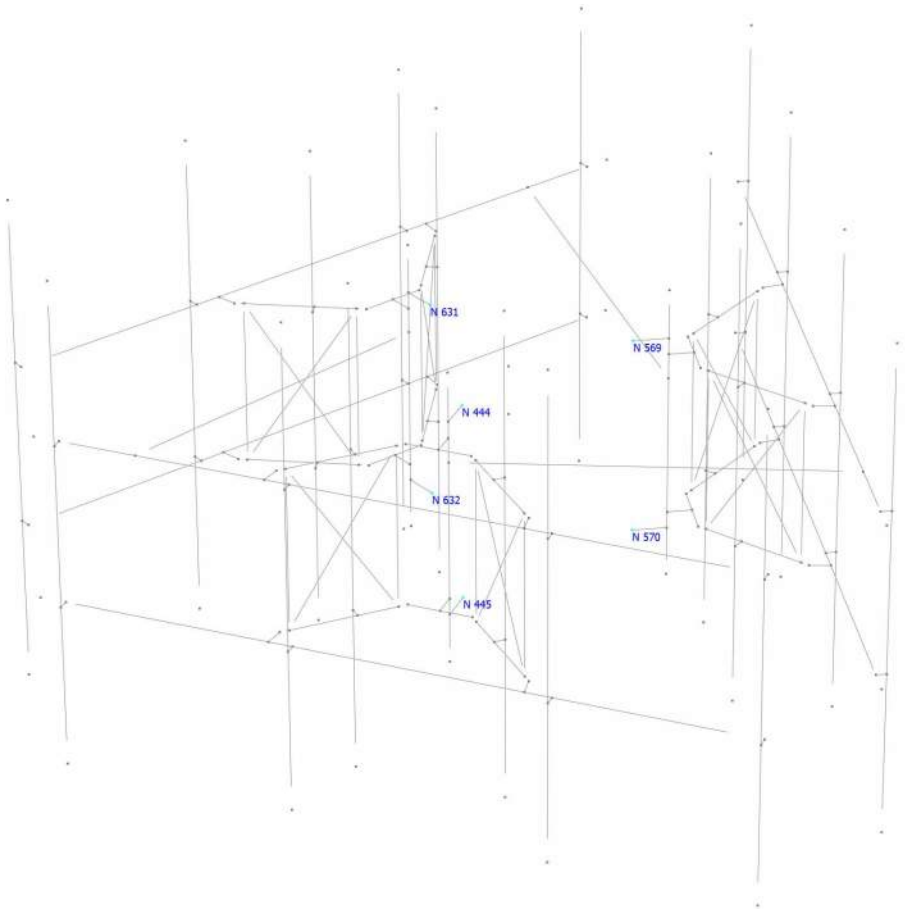
Member	Rotation [Deg]	Axes23	NX	NY	NZ
129	315.00	0	0.00	0.00	0.00
141	0.00	2	0.00	0.00	1.00
142	0.00	2	0.00	0.00	1.00
143	0.00	2	0.00	0.00	1.00
144	0.00	2	0.00	0.00	1.00
150	90.00	0	0.00	0.00	0.00
151	90.00	0	0.00	0.00	0.00
152	90.00	0	0.00	0.00	0.00
153	90.00	0	0.00	0.00	0.00
164	90.00	0	0.00	0.00	0.00
165	90.00	0	0.00	0.00	0.00
166	90.00	0	0.00	0.00	0.00
167	90.00	0	0.00	0.00	0.00
168	90.00	0	0.00	0.00	0.00
169	90.00	0	0.00	0.00	0.00
253	315.00	0	0.00	0.00	0.00
261	315.00	0	0.00	0.00	0.00
314	0.00	2	0.866	0.00	-0.50
315	0.00	2	0.866	0.00	-0.50
316	0.00	2	0.866	0.00	-0.50
317	0.00	2	0.866	0.00	-0.50
322	90.00	0	0.00	0.00	0.00
323	90.00	0	0.00	0.00	0.00
324	90.00	0	0.00	0.00	0.00
325	90.00	0	0.00	0.00	0.00
328	90.00	0	0.00	0.00	0.00
329	90.00	0	0.00	0.00	0.00
330	90.00	0	0.00	0.00	0.00
331	90.00	0	0.00	0.00	0.00
332	90.00	0	0.00	0.00	0.00
333	90.00	0	0.00	0.00	0.00
344	0.00	2	0.50	0.00	0.866
357	0.00	2	-0.866	0.00	-0.50
358	0.00	2	-0.866	0.00	-0.50
359	0.00	2	-0.866	0.00	-0.50
360	0.00	2	-0.866	0.00	-0.50
365	90.00	0	0.00	0.00	0.00
366	90.00	0	0.00	0.00	0.00
367	90.00	0	0.00	0.00	0.00
368	90.00	0	0.00	0.00	0.00
371	90.00	0	0.00	0.00	0.00
372	90.00	0	0.00	0.00	0.00
373	90.00	0	0.00	0.00	0.00
374	90.00	0	0.00	0.00	0.00
375	90.00	0	0.00	0.00	0.00
376	90.00	0	0.00	0.00	0.00
387	0.00	2	0.50	0.00	-0.866
399	315.00	0	0.00	0.00	0.00
410	0.00	2	0.50	0.00	0.866
413	0.00	2	0.50	0.00	0.866
416	0.00	2	0.50	0.00	-0.866
419	0.00	2	0.50	0.00	-0.866
432	0.00	2	-0.9659	0.00	-0.2588
435	0.00	2	-0.9659	0.00	-0.2588
438	0.00	2	-0.9659	0.00	-0.2588
441	0.00	2	-0.9659	0.00	-0.2588
444	0.00	2	0.2588	0.00	0.9659
447	0.00	2	0.2588	0.00	0.9659
450	0.00	2	0.2588	0.00	0.9659
453	0.00	2	0.2588	0.00	0.9659

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
145	0.00	-3.50	0.00	0.00	3.50	0.00
146	0.00	3.50	0.00	0.00	-3.50	0.00
147	0.00	3.50	0.00	0.00	-3.50	0.00
148	0.00	-3.50	0.00	0.00	3.50	0.00
168	0.00	-0.625	0.00	0.00	-0.625	0.00
169	0.00	-0.625	0.00	0.00	-0.625	0.00
318	0.00	-3.50	0.00	0.00	3.50	0.00
319	0.00	3.50	0.00	0.00	-3.50	0.00
320	0.00	3.50	0.00	0.00	-3.50	0.00
321	0.00	-3.50	0.00	0.00	3.50	0.00
332	0.00	-0.625	0.00	0.00	-0.625	0.00
333	0.00	-0.625	0.00	0.00	-0.625	0.00
361	0.00	-3.50	0.00	0.00	3.50	0.00
362	0.00	3.50	0.00	0.00	-3.50	0.00
363	0.00	3.50	0.00	0.00	-3.50	0.00
364	0.00	-3.50	0.00	0.00	3.50	0.00
375	0.00	-0.625	0.00	0.00	-0.625	0.00
376	0.00	-0.625	0.00	0.00	-0.625	0.00

Hinges

	Node-J				Node-K						
Member	M33	M22	V3	V2	M33	M22	V3	V2	TOR	AXL	Axial rigidity
146	0	0	0	0	0	0	0	0	0	0	Tension only
148	0	0	0	0	0	0	0	0	0	0	Tension only
150	1	1	0	0	0	0	0	0	0	0	Full
151	1	1	0	0	0	0	0	0	0	0	Full
152	1	1	0	0	0	0	0	0	0	0	Full
153	1	1	0	0	0	0	0	0	0	0	Full
256	1	1	0	0	1	1	0	0	0	0	Full
319	0	0	0	0	0	0	0	0	0	0	Tension only
321	0	0	0	0	0	0	0	0	0	0	Tension only
322	1	1	0	0	0	0	0	0	0	0	Full
323	1	1	0	0	0	0	0	0	0	0	Full
324	1	1	0	0	0	0	0	0	0	0	Full
325	1	1	0	0	0	0	0	0	0	0	Full
343	1	1	0	0	1	1	0	0	0	0	Full
362	0	0	0	0	0	0	0	0	0	0	Tension only
364	0	0	0	0	0	0	0	0	0	0	Tension only
365	1	1	0	0	0	0	0	0	0	0	Full
366	1	1	0	0	0	0	0	0	0	0	Full
367	1	1	0	0	0	0	0	0	0	0	Full
368	1	1	0	0	0	0	0	0	0	0	Full
386	1	1	0	0	1	1	0	0	0	0	Full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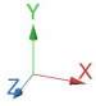
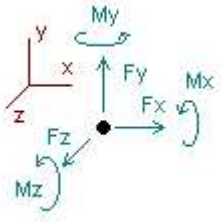

Y
X
Z

Current Date: 6/15/2022 8:50 AM
Units system: English

Analysis result

Reactions



Direction of positive forces and moments

	Forces [Kip]			Moments [Kip*ft]		
Node	**FX**	**FY**	**FZ**	**MX**	**MY**	**MZ**
Condition **LC1=1.2DL+W0**						
444	-0.55409	0.23017	0.47691	-0.48548	-0.94509	-0.29867
445	-0.24353	1.23582	2.49318	-0.29196	-0.48293	0.17060
569	-0.02101	0.94857	1.36850	0.03155	-1.91834	0.59319
570	0.87988	0.75396	1.17295	0.48950	-2.43128	0.33941
631	0.58706	1.15414	2.95479	-0.40855	2.80782	-0.60582
632	-0.64831	0.45084	0.97767	0.56629	2.22813	-0.17138
SUM	0.00000	4.77350	9.44400	-0.09866	-0.74169	0.02733
Condition **LC2=1.2DL+W30**						
444	1.83993	0.92155	-1.46363	-0.35043	2.46957	0.45221
445	1.19674	0.65059	0.74795	-0.38675	2.25441	-0.32007
569	1.40662	0.27163	1.06395	-0.21843	-2.39222	0.76289
570	2.39171	1.24137	-0.14235	0.49338	-1.99434	0.13088
631	1.43837	1.16579	0.34583	0.26674	-0.79381	-0.37874
632	0.82638	0.52256	-0.55175	0.19794	-1.40852	-0.52517
SUM	9.09976	4.77350	0.00000	0.00245	-1.86491	0.12200
Condition **LC3=1.2DL-W0**						
444	0.86613	1.38860	-2.10698	-0.40902	1.15237	0.32262
445	-0.06274	0.35412	-0.86114	-0.57236	0.25961	-0.15650
569	-1.55348	0.67208	-0.82197	0.43512	2.13117	0.16778
570	0.68701	0.83222	-1.72401	-0.04530	2.21155	0.40122
631	0.63517	0.42677	-1.91854	0.82910	-2.62408	-0.16216
632	-0.57209	1.09972	-2.01136	-0.15481	-2.43312	-0.56866
SUM	0.00000	4.77350	-9.44400	0.08272	0.69750	0.00430
Condition **LC4=1.2DL-W30**						
444	-1.52881	0.69876	-0.17445	-0.54226	-2.26302	-0.42940
445	-1.50329	0.93638	0.88468	-0.47681	-2.47837	0.33469
569	-2.97436	1.34888	-0.51721	0.68505	2.59237	0.00014
570	-0.82569	0.34704	-0.40736	-0.04832	1.76460	0.61043
631	-0.21970	0.41418	0.69531	0.15124	0.99086	-0.39056
632	-2.04792	1.02826	-0.48097	0.21445	1.21408	-0.21401
SUM	-9.09976	4.77350	0.00000	-0.01666	1.82052	-0.08871

Condition **LC5=0.9DL+W0**

444	-0.59270	0.02733	0.68189	-0.37360	-0.97114	-0.30149
445	-0.20536	1.03717	2.28883	-0.18387	-0.45562	0.16881
569	0.17500	0.74609	1.29957	-0.02655	-1.94407	0.49797
570	0.68433	0.55581	1.24209	0.43407	-2.40385	0.24682
631	0.43496	0.95658	2.82467	-0.46081	2.78349	-0.50964
632	-0.49623	0.25714	1.10696	0.51486	2.25308	-0.07893
SUM	0.00000	3.58013	9.44400	-0.09590	-0.73811	0.02355

Condition **LC6=0.9DL+W30**

444	1.80056	0.71892	-1.25921	-0.23866	2.44300	0.44915
445	1.23548	0.45212	0.54415	-0.27876	2.28219	-0.32197
569	1.60303	0.06879	0.99462	-0.27662	-2.41796	0.66743
570	2.19583	1.04292	-0.07303	0.43784	-1.96714	0.03816
631	1.28601	0.96839	0.21640	0.21436	-0.81751	-0.28279
632	0.97885	0.32898	-0.42293	0.14642	-1.38376	-0.43286
SUM	9.09976	3.58013	0.00000	0.00459	-1.86117	0.11714

Condition **LC7=0.9DL-W0**

444	0.82702	1.18599	-1.90278	-0.29873	1.12572	0.32052
445	-0.02438	0.15624	-1.06484	-0.46362	0.28826	-0.15906
569	-1.35681	0.46921	-0.89026	0.37665	2.10464	0.07240
570	0.49109	0.63376	-1.65570	-0.10104	2.23931	0.30861
631	0.48210	0.22908	-2.04800	0.77655	-2.64768	-0.06608
632	-0.41902	0.90584	-1.88242	-0.20643	-2.40865	-0.47626
SUM	0.00000	3.58013	-9.44400	0.08338	0.70160	0.00013

Condition **LC8=0.9DL-W30**

444	-1.56716	0.49626	0.03009	-0.43063	-2.28879	-0.43215
445	-1.46542	0.73800	0.68052	-0.36888	-2.45100	0.33302
569	-2.77809	1.14636	-0.58510	0.62667	2.56583	-0.09499
570	-1.02129	0.14888	-0.33922	-0.10392	1.79258	0.51793
631	-0.37252	0.21633	0.56525	0.09876	0.96669	-0.29427
632	-1.89528	0.83429	-0.35154	0.16297	1.23876	-0.12145
SUM	-9.09976	3.58013	0.00000	-0.01504	1.82407	-0.09192

Condition **LC9=1.2DL+Di+Wi0**

444	0.60180	1.72611	-1.87059	-0.96664	0.38908	0.01471
445	-0.68352	1.82782	2.25169	-0.90484	-0.53772	0.05704
569	-1.95814	1.82339	0.55474	0.50174	0.18989	0.84482
570	2.08358	1.76885	-0.22726	0.53130	-0.88617	0.78594
631	1.24668	1.73134	1.79592	0.30720	0.78695	-0.85573
632	-1.29040	1.60722	-1.20550	0.47173	-0.17548	-0.73842
SUM	0.00000	10.48474	1.29900	-0.05951	-0.23345	0.10836

Condition **LC10=1.2DL+Di+Wi30**

444	0.97341	1.82959	-2.12362	-0.95362	0.85939	0.13719
445	-0.48677	1.74792	1.98626	-0.92388	-0.21223	-0.02043
569	-1.79471	1.73622	0.54225	0.46253	0.15166	0.86290
570	2.29122	1.82543	-0.39258	0.53431	-0.77902	0.75185
631	1.35816	1.71901	1.38836	0.41797	0.26645	-0.81738
632	-1.12032	1.62657	-1.40068	0.41761	-0.65326	-0.78790
SUM	1.22100	10.48474	0.00000	-0.04507	-0.36701	0.12623

Condition **LC11=1.2DL+Di-Wi0**

444	0.79325	1.88889	-2.16656	-0.97105	0.60064	0.10195
445	-0.66587	1.71524	1.74489	-0.95607	-0.56605	0.00661
569	-2.22461	1.79834	0.25752	0.56319	0.79785	0.77595
570	2.04845	1.76685	-0.59682	0.45701	-0.21811	0.79341
631	1.31941	1.62364	1.04558	0.51707	0.03803	-0.76992
632	-1.27064	1.69179	-1.58360	0.35810	-0.72383	-0.80052
SUM	0.00000	10.48474	-1.29900	-0.03176	-0.07147	0.10748

Condition **LC12=1.2DL+Di-Wi30**

444	0.42168	1.78545	-1.91365	-0.98405	0.13020	-0.02053
445	-0.86263	1.79508	2.01034	-0.93703	-0.89173	0.08409
569	-2.38794	1.88552	0.27005	0.60239	0.83578	0.75790
570	1.84076	1.71031	-0.43149	0.45402	-0.32543	0.82752
631	1.20788	1.63593	1.45318	0.40626	0.55883	-0.80827
632	-1.44074	1.67244	-1.38843	0.41223	-0.24583	-0.75102
SUM	-1.22100	10.48474	0.00000	-0.04617	0.06181	0.08967

Condition **LC13=1.4DL**

444	0.18133	0.94519	-0.95428	-0.52115	0.12216	0.01355
445	-0.17873	0.92610	0.95196	-0.50394	-0.12858	0.00833
569	-0.91626	0.94571	0.32022	0.27193	0.12201	0.44462
570	0.91348	0.92554	-0.32076	0.25939	-0.12863	0.43223
631	0.71215	0.92214	0.60544	0.24460	0.11170	-0.44847
632	-0.71198	0.90441	-0.60258	0.24041	-0.11527	-0.43145
SUM	0.00000	5.56908	0.00000	-0.00875	-0.01661	0.01882

Condition **LC14=1.2DL+1.6LL1**

444	0.15504	1.01323	-1.09505	-0.54750	0.10714	0.01091
445	-0.15401	0.99097	1.09659	-0.52836	-0.09903	0.00695
569	-0.78536	0.81058	0.27447	0.23307	0.10462	0.38108
570	0.78300	0.79335	-0.27492	0.22235	-0.11023	0.37051
631	0.61082	0.79072	0.51577	0.21079	0.09399	-0.38359
632	-0.60949	0.77465	-0.51686	0.20556	-0.09925	-0.37024
SUM	0.00000	5.17350	0.00000	-0.20409	-0.00276	0.01564

Condition **LC15=1.2DL+1.6LL2**

444	-0.56831	1.01186	-1.07887	-0.54828	-0.42017	-0.03940
445	0.56507	0.99375	1.09837	-0.52754	0.50354	-0.03153
569	-0.78701	0.81082	0.27490	0.23306	0.10080	0.38080
570	0.78278	0.79298	-0.27493	0.22229	-0.11364	0.37041
631	0.61423	0.79079	0.49972	0.21671	0.08446	-0.37997
632	-0.60677	0.77331	-0.51919	0.20289	-0.10166	-0.37201
SUM	0.00000	5.17350	0.00000	-0.20086	0.05333	-0.07170

Condition **LC16=1.2DL+WL0+1.6LLa1**

444	-1.31804	1.19282	-1.34962	-0.64007	-0.96348	-0.10486
445	1.28303	1.20690	1.49440	-0.60775	1.09738	-0.06590
569	-0.75219	0.81429	0.31260	0.22514	0.01763	0.38996
570	0.78736	0.79316	-0.22377	0.23237	-0.20845	0.36947
631	0.60644	0.80594	0.58349	0.19396	0.17371	-0.38830
632	-0.60660	0.76040	-0.47010	0.21585	-0.03071	-0.36549
SUM	0.00000	5.57350	0.34700	-0.38050	0.08608	-0.16512

Condition **LC17=1.2DL+WL30+1.6LLa1**

444	-1.22148	1.22078	-1.41319	-0.63749	-0.83937	-0.07216
445	1.33264	1.18632	1.42186	-0.61355	1.18033	-0.08652
569	-0.70704	0.78999	0.31568	0.21267	-0.00154	0.39509
570	0.84727	0.80838	-0.26920	0.23371	-0.18267	0.35908
631	0.63718	0.80220	0.46907	0.22614	0.03255	-0.37714
632	-0.55757	0.76584	-0.52422	0.20042	-0.16252	-0.37971
SUM	0.33100	5.57350	0.00000	-0.37810	0.02677	-0.16136

Condition **LC18=1.2DL-WL0+1.6LLa1**

444	-1.26790	1.23655	-1.42265	-0.64272	-0.89809	-0.08191
445	1.28704	1.17793	1.35528	-0.62262	1.09360	-0.07969
569	-0.82510	0.80781	0.23802	0.24096	0.17645	0.37107
570	0.77778	0.79207	-0.32606	0.21210	-0.02561	0.37113
631	0.62886	0.77637	0.38152	0.25212	-0.02501	-0.36374
632	-0.60068	0.78277	-0.57311	0.18421	-0.17779	-0.38242
SUM	0.00000	5.57350	-0.34700	-0.37594	0.14355	-0.16556

Condition **LC19=1.2DL-WL30+1.6LLa1**

444	-1.36446	1.20861	-1.35909	-0.64530	-1.02220	-0.11461
445	1.23743	1.19851	1.42782	-0.61682	1.01064	-0.05907
569	-0.87024	0.83211	0.23495	0.25344	0.19560	0.36595
570	0.71786	0.77685	-0.28063	0.21076	-0.05141	0.38152
631	0.59811	0.78010	0.49594	0.21994	0.11618	-0.37490
632	-0.64971	0.77733	-0.51899	0.19964	-0.04596	-0.36819
SUM	-0.33100	5.57350	0.00000	-0.37834	0.20284	-0.16931

Condition **LC20=1.2DL+WL0+1.6LLa2**

444	-0.48588	1.19741	-1.38120	-0.63661	-0.31691	-0.03683
445	0.46022	1.19974	1.49150	-0.60806	0.30690	-0.01660
569	-0.75011	0.81399	0.31202	0.22517	0.02253	0.39032
570	0.78764	0.79363	-0.22377	0.23245	-0.20410	0.36961
631	0.59985	0.80588	0.61407	0.18267	0.19190	-0.39517
632	-0.61171	0.76286	-0.46563	0.22092	-0.02613	-0.36213
SUM	0.00000	5.57350	0.34700	-0.38346	-0.02582	-0.05079

Condition **LC21=1.2DL+WL30+1.6LLa2**

444	-0.38931	1.22536	-1.44473	-0.63403	-0.19269	-0.00413
445	0.50983	1.17914	1.41888	-0.61386	0.38981	-0.03722
569	-0.70496	0.78969	0.31510	0.21269	0.00336	0.39544
570	0.84754	0.80885	-0.26920	0.23378	-0.17831	0.35922
631	0.63059	0.80216	0.49969	0.21484	0.05076	-0.38402
632	-0.56269	0.76830	-0.51974	0.20550	-0.15793	-0.37635
SUM	0.33100	5.57350	0.00000	-0.38107	-0.08501	-0.04705

Condition **LC22=1.2DL-WL0+1.6LLa2**

444	-0.43574	1.24113	-1.45427	-0.63923	-0.25135	-0.01386
445	0.46422	1.17072	1.35234	-0.62291	0.30322	-0.03038
569	-0.82301	0.80751	0.23744	0.24099	0.18135	0.37143
570	0.77805	0.79254	-0.32606	0.21217	-0.02125	0.37127
631	0.62228	0.77636	0.41217	0.24082	-0.00678	-0.37063
632	-0.60580	0.78524	-0.56862	0.18930	-0.17320	-0.37905
SUM	0.00000	5.57350	-0.34700	-0.37887	0.03199	-0.05123

Condition **LC23=1.2DL-WL30+1.6LLa2**

444	-0.53230	1.21319	-1.39075	-0.64181	-0.37558	-0.04656
445	0.41461	1.19131	1.42496	-0.61710	0.22029	-0.00976
569	-0.86816	0.83180	0.23437	0.25346	0.20049	0.36631
570	0.71814	0.77732	-0.28063	0.21083	-0.04705	0.38166
631	0.59153	0.78008	0.52656	0.20865	0.13438	-0.38178
632	-0.65482	0.77980	-0.51451	0.20472	-0.04138	-0.36483
SUM	-0.33100	5.57350	0.00000	-0.38125	0.09116	-0.05497

Condition **LC24=1.2DL+WL0+1.6LLa3**

444	0.53963	1.19745	-1.38175	-0.63736	0.32778	0.02194
445	-0.56713	1.19950	1.49120	-0.60924	-0.34543	0.03345
569	-0.74809	0.81370	0.31155	0.22515	0.02705	0.39067
570	0.78790	0.79407	-0.22375	0.23253	-0.20005	0.36973
631	0.59997	0.80537	0.61535	0.18223	0.19248	-0.39556
632	-0.61229	0.76343	-0.46559	0.22114	-0.02591	-0.36190
SUM	0.00000	5.57350	0.34700	-0.38556	-0.02407	0.05833

Condition **LC25=1.2DL+WL30+1.6LLa3**

444	0.63623	1.22537	-1.44511	-0.63482	0.45204	0.05465
445	-0.51755	1.17890	1.41839	-0.61506	-0.26254	0.01284
569	-0.70295	0.78940	0.31462	0.21268	0.00789	0.39580
570	0.84781	0.80929	-0.26918	0.23387	-0.17426	0.35934
631	0.63071	0.80166	0.50097	0.21440	0.05135	-0.38441
632	-0.56327	0.76888	-0.51970	0.20572	-0.15772	-0.37613
SUM	0.33100	5.57350	0.00000	-0.38322	-0.08325	0.06209

Condition **LC26=1.2DL-WL0+1.6LLa3**

444	0.58979	1.24113	-1.45475	-0.63997	0.39338	0.04492
445	-0.56315	1.17044	1.35195	-0.62408	-0.34910	0.01968
569	-0.82100	0.80722	0.23696	0.24097	0.18588	0.37178
570	0.77832	0.79298	-0.32603	0.21225	-0.01720	0.37139
631	0.62241	0.77590	0.41345	0.24038	-0.00619	-0.37104
632	-0.60638	0.78583	-0.56858	0.18952	-0.17299	-0.37885
SUM	0.00000	5.57350	-0.34700	-0.38092	0.03378	0.05789

Condition **LC27=1.2DL-WL30+1.6LLa3**

444	0.49320	1.21321	-1.39140	-0.64252	0.26911	0.01221
445	-0.61274	1.19103	1.42475	-0.61825	-0.43199	0.04029
569	-0.86614	0.83151	0.23389	0.25345	0.20502	0.36666
570	0.71841	0.77776	-0.28060	0.21092	-0.04300	0.38178
631	0.59166	0.77960	0.52784	0.20821	0.13497	-0.38219
632	-0.65540	0.78038	-0.51447	0.20494	-0.04116	-0.36462
SUM	-0.33100	5.57350	0.00000	-0.38325	0.09294	0.05414

Condition **LC28=1.2DL+WL0+1.6LLa4**

444	1.45633	1.20273	-1.43035	-0.62730	1.00165	0.09436
445	-1.47206	1.19140	1.49782	-0.60017	-1.18439	0.08650
569	-0.74582	0.81337	0.31103	0.22514	0.03212	0.39107
570	0.78821	0.79457	-0.22373	0.23262	-0.19550	0.36987
631	0.60990	0.78243	0.65854	0.16788	0.20901	-0.41035
632	-0.63657	0.78901	-0.46632	0.22848	-0.01936	-0.35373
SUM	0.00000	5.57350	0.34700	-0.37335	-0.15647	0.17773

Condition **LC29=1.2DL+WL30+1.6LLa4**

444	1.55273	1.23059	-1.49351	-0.62476	1.12569	0.12707
445	-1.42229	1.17077	1.42486	-0.60599	-1.10137	0.06589
569	-0.70068	0.78907	0.31411	0.21266	0.01295	0.39620
570	0.84812	0.80979	-0.26915	0.23396	-0.16971	0.35948
631	0.64065	0.77878	0.54413	0.20008	0.06785	-0.39923
632	-0.58754	0.79450	-0.52044	0.21307	-0.15117	-0.36798
SUM	0.33100	5.57350	0.00000	-0.37098	-0.21576	0.18144

Condition **LC30=1.2DL-WL0+1.6LLa4**

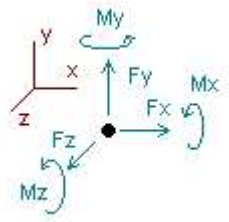
444	1.50626	1.24621	-1.50289	-0.62987	1.06711	0.11732
445	-1.46794	1.16223	1.35835	-0.61494	-1.18809	0.07274
569	-0.81872	0.80689	0.23645	0.24096	0.19094	0.37219
570	0.77863	0.79348	-0.32601	0.21235	-0.01265	0.37153
631	0.63243	0.75312	0.45646	0.22616	0.01020	-0.38589
632	-0.63065	0.81157	-0.56935	0.19687	-0.16646	-0.37076
SUM	0.00000	5.57350	-0.34700	-0.36847	-0.09894	0.17713

Condition **LC31=1.2DL-WL30+1.6LLa4**

444	1.40986	1.21836	-1.43975	-0.63240	0.94307	0.08461
445	-1.51771	1.18285	1.43132	-0.60912	-1.27112	0.09335
569	-0.86386	0.83118	0.23337	0.25343	0.21008	0.36706
570	0.71871	0.77826	-0.28058	0.21101	-0.03846	0.38192
631	0.60167	0.75677	0.57087	0.19396	0.15138	-0.39701
632	-0.67968	0.80608	-0.51523	0.21228	-0.03463	-0.35651
SUM	-0.33100	5.57350	0.00000	-0.37084	-0.03968	0.17342

Envelope for nodal reactions

Note.- **Ic** is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

LC1=1.2DL+W0
LC2=1.2DL+W30
LC3=1.2DL-W0
LC4=1.2DL-W30
LC5=0.9DL+W0
LC6=0.9DL+W30
LC7=0.9DL-W0
LC8=0.9DL-W30
LC9=1.2DL+Di+Wi0
LC10=1.2DL+Di+Wi30
LC11=1.2DL+Di-Wi0
LC12=1.2DL+Di-Wi30
LC13=1.4DL

LC14=1.2DL+1.6LL1
LC15=1.2DL+1.6LL2
LC16=1.2DL+WL0+1.6LLa1
LC17=1.2DL+WL30+1.6LLa1
LC18=1.2DL-WL0+1.6LLa1
LC19=1.2DL-WL30+1.6LLa1
LC20=1.2DL+WL0+1.6LLa2
LC21=1.2DL+WL30+1.6LLa2
LC22=1.2DL-WL0+1.6LLa2
LC23=1.2DL-WL30+1.6LLa2
LC24=1.2DL+WL0+1.6LLa3
LC25=1.2DL+WL30+1.6LLa3
LC26=1.2DL-WL0+1.6LLa3
LC27=1.2DL-WL30+1.6LLa3
LC28=1.2DL+WL0+1.6LLa4
LC29=1.2DL+WL30+1.6LLa4
LC30=1.2DL-WL0+1.6LLa4
LC31=1.2DL-WL30+1.6LLa4

		Forces						Moments					
Node		**Fx** [Kip]	**lc**	**Fy** [Kip]	**lc**	**Fz** [Kip]	**lc**	**Mx** [Kip*ft]	**lc**	**My** [Kip*ft]	**lc**	**Mz** [Kip*ft]	**lc**
444	Max	1.840	LC2	1.889	LC11	0.682	LC5	-0.23866	LC6	2.46957	LC2	0.45221	LC2
	Min	-1.567	LC8	0.027	LC5	-2.167	LC11	-0.98405	LC12	-2.28879	LC8	-0.43215	LC8
445	Max	1.333	LC17	1.828	LC9	2.493	LC1	-0.18387	LC5	2.28219	LC6	0.33469	LC4
	Min	-1.518	LC31	0.156	LC7	-1.065	LC7	-0.95607	LC11	-2.47837	LC4	-0.32197	LC6
569	Max	1.603	LC6	1.886	LC12	1.368	LC1	0.68505	LC4	2.59237	LC4	0.86290	LC10
	Min	-2.974	LC4	0.069	LC6	-0.890	LC7	-0.27662	LC6	-2.41796	LC6	-0.09499	LC8
570	Max	2.392	LC2	1.825	LC10	1.242	LC5	0.53431	LC10	2.23931	LC7	0.82752	LC12
	Min	-1.021	LC8	0.149	LC8	-1.724	LC3	-0.10392	LC8	-2.43128	LC1	0.03816	LC6
631	Max	1.438	LC2	1.731	LC9	2.955	LC1	0.82910	LC3	2.80782	LC1	-0.06608	LC7
	Min	-0.373	LC8	0.216	LC8	-2.048	LC7	-0.46081	LC5	-2.64768	LC7	-0.85573	LC9
632	Max	0.979	LC6	1.692	LC11	1.107	LC5	0.56629	LC1	2.25308	LC5	-0.07893	LC5
	Min	-2.048	LC4	0.257	LC5	-2.011	LC3	-0.20643	LC7	-2.43312	LC3	-0.80052	LC11

Date: 6/15/2022
Project Name: SIMSBURY CENTRAL
Project No.: CT1151
Designed By: KM **Checked By:** MSC

HUDSON Design Group LLC

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 =** 1368 lbs. (See Bentley Output)

SHEAR FORCES

Reactions in X direction: 2974 lbs. (See Bentley Output)
Reactions in Y direction: 1886 lbs. (See Bentley Output)

Resultant: 3522 lbs.

No. of Supports = 1
No. of Bolts / Support = 3

Tension Design Load /Bolts =

f_t= 456.00 lbs. < 6673 lbs. **Therefore, OK !**

Shear Design Load / Bolts=

f_v= 1173.87 lbs. < 4004 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

f_t / F_T	+	f_v / F_V	≤	1.0			
0.068	+	0.293	=	0.362	<	1.0	**Therefore, OK !**

EXHIBIT 5

Radio Frequency Exposure Analysis Report

August 5, 2022

Centerline on behalf of AT&T
Centerline Communications Project Number: N/A

AT&T Site Name: SIMSBURY CENTRAL
Site Number: CTL01151
FA#: 10035290
USID: 25937

Site Address: GRIST MILL ROAD, SIMSBURY, CT 06070

Site Compliance Summary

AT&T Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	41.66305 µW/cm^2
Cumulative General Population % MPE (Ground Level):	4.1664099999999999%

August 5, 2022

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

RF Exposure Analysis for Site: **SIMSBURY CENTRAL**

Centerline Communications, LLC ("Centerline") was contracted to analyze the proposed AT&T facility at **GRIST MILL ROAD, SIMSBURY, CT 06070** 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 ($\mu W/cm^2$). 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 ($f_{MHz}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of 1 mW/cm^2 (1000 $\mu W/cm^2$). 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 370' south 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 ($\mu W/cm^2$)	General Population MPE Limit ($\mu W/cm^2$)	General Population % MPE
AT&T A 1	CCI TPA65R-BU6D	700	11.75	150.00	4.00	30.00	1795.48	0.00000	466.67	0.00000
AT&T A 1	CCI TPA65R-BU6D	1900	15.05	150.00	4.00	30.00	3838.67	0.00000	1000.00	0.00000
AT&T A 1	CCI TPA65R-BU6D	2100	15.95	150.00	4.00	45.00	7083.90	0.00000	1000.00	0.00000
AT&T A 2	Ericsson AIR6449	3700	23.45	148.50	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T A 3	Ericsson AIR6419	3450	23.45	151.50	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T A 4	CCI OPA65R-BU6D	700	11.35	150.00	4.00	30.00	1637.50	0.00000	466.67	0.00000
AT&T A 4	CCI OPA65R-BU6D	850	11.95	150.00	4.00	30.00	1880.10	0.00000	566.67	0.00000
AT&T A 4	CCI OPA65R-BU6D	2300	15.25	150.00	4.00	18.00	2411.75	0.00000	1000.00	0.00000
AT&T B 5	CCI TPA65R-BU8D	700	12.95	150.00	4.00	30.00	2366.91	0.00012	466.67	0.00003
AT&T B 5	CCI TPA65R-BU8D	1900	15.15	150.00	4.00	30.00	3928.09	0.00012	1000.00	0.00001
AT&T B 5	CCI TPA65R-BU8D	2100	15.85	150.00	4.00	45.00	6922.65	0.00024	1000.00	0.00002
AT&T B 6	Ericsson AIR6449	3700	23.45	148.50	1.00	108.40	23989.95	0.00080	1000.00	0.00008
AT&T B 7	Ericsson AIR6419	3450	23.45	151.50	1.00	108.40	23989.95	0.00061	1000.00	0.00006
AT&T B 8	CCI OPA65R-BU8D	700	12.95	150.00	4.00	30.00	2366.91	0.00019	466.67	0.00004
AT&T B 8	CCI OPA65R-BU8D	850	13.75	150.00	4.00	30.00	2845.65	0.00013	566.67	0.00002
AT&T B 8	CCI OPA65R-BU8D	2300	16.05	150.00	4.00	18.00	2899.56	0.00010	1000.00	0.00001
AT&T C 9	CCI TPA65R-BU8D	700	12.95	150.00	4.00	30.00	2366.91	0.00000	466.67	0.00000
AT&T C 9	CCI TPA65R-BU8D	1900	15.15	150.00	4.00	30.00	3928.09	0.00000	1000.00	0.00000
AT&T C 9	CCI TPA65R-BU8D	2100	15.85	150.00	4.00	45.00	6922.65	0.00000	1000.00	0.00000
AT&T C 10	Ericsson AIR6449	3700	23.45	148.50	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T C 11	Ericsson AIR6419	3450	23.45	151.50	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T C 12	CCI OPA65R-BU8D	700	12.95	150.00	4.00	30.00	2366.91	0.00000	466.67	0.00000
AT&T C 12	CCI OPA65R-BU8D	850	13.75	150.00	4.00	30.00	2845.65	0.00000	566.67	0.00000
AT&T C 12	CCI OPA65R-BU8D	2300	16.05	150.00	4.00	18.00	2899.56	0.00000	1000.00	0.00000
Verizon A 13	COMMSCOPE SBNHH-1D65B	700	12.38	140.00	2.00	40.00	1383.85	0.00000	466.67	0.00000
Verizon A 13	COMMSCOPE SBNHH-1D65B	1900	15.89	140.00	4.00	40.00	6210.41	0.00000	1000.00	0.00000
Verizon A 14	COMMSCOPE SBNHH-1D65B	850	12.67	140.00	2.00	40.00	1479.41	0.00000	566.67	0.00000
Verizon A 14	COMMSCOPE SBNHH-1D65B	2100	16.44	140.00	4.00	40.00	7048.88	0.00000	1000.00	0.00000
Verizon A 15	AMPHENOL BXA-70080-4CF	850	12.00	140.00	7.00	20.00	2218.85	0.00000	566.67	0.00000
Verizon A 16	SAMSUNG XXDWMM-12.5-65-8T	3600	10.55	140.00	4.00	5.00	227.00	0.00000	1000.00	0.00000
Verizon A 17	SAMSUNG MT6407	3700	23.35	140.00	4.00	50.00	43254.37	0.00004	1000.00	0.00000
Verizon B 18	COMMSCOPE SBNHH-1D65B	700	12.38	140.00	2.00	40.00	1383.85	0.00006	466.67	0.00001
Verizon B 18	COMMSCOPE SBNHH-1D65B	1900	15.89	140.00	4.00	40.00	6210.41	0.00013	1000.00	0.00001
Verizon B 19	COMMSCOPE SBNHH-1D65B	850	12.67	140.00	2.00	40.00	1479.41	0.00007	566.67	0.00001
Verizon B 19	COMMSCOPE SBNHH-1D65B	2100	16.44	140.00	4.00	40.00	7048.88	0.00014	1000.00	0.00001

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (μW/cm²)	General Population MPE Limit (μW/cm²)	General Population % MPE
Verizon B 20	AMPHENOL BXA-70080-4CF	850	12.00	140.00	7.00	20.00	2218.85	0.00009	566.67	0.00002
Verizon B 21	SAMSUNG XXDWMM-12.5-65-8T	3600	10.55	140.00	4.00	5.00	227.00	0.00005	1000.00	0.00001
Verizon B 22	SAMSUNG MT6407	3700	23.35	140.00	4.00	50.00	43254.37	0.00169	1000.00	0.00017
Verizon C 23	COMMSCOPE SBNHH-1D65B	700	12.38	140.00	2.00	40.00	1383.85	0.00000	466.67	0.00000
Verizon C 23	COMMSCOPE SBNHH-1D65B	1900	15.89	140.00	4.00	40.00	6210.41	0.00000	1000.00	0.00000
Verizon C 24	COMMSCOPE SBNHH-1D65B	850	12.67	140.00	2.00	40.00	1479.41	0.00000	566.67	0.00000
Verizon C 24	COMMSCOPE SBNHH-1D65B	2100	16.44	140.00	4.00	40.00	7048.88	0.00000	1000.00	0.00000
Verizon C 25	AMPHENOL BXA-70080-4CF-	850	12.00	140.00	7.00	20.00	2218.85	0.00000	566.67	0.00000
Verizon C 26	SAMSUNG XXDWMM-12.5-65-8T	3600	10.55	140.00	4.00	5.00	227.00	0.00000	1000.00	0.00000
Verizon C 27	SAMSUNG MT6407	3700	23.35	140.00	4.00	50.00	43254.37	0.00003	1000.00	0.00000
T-Mobile A 28	ERICSSON AIR6449	2500	17.30	131.00	1.00	60.00	3222.19	0.00318	1000.00	0.00032
T-Mobile A 28	ERICSSON AIR6449	2500	22.35	131.00	1.00	90.00	15461.18	0.12729	1000.00	0.01273
T-Mobile A 28	ERICSSON AIR6449	2500	22.35	131.00	1.00	90.00	15461.18	0.12729	1000.00	0.01273
T-Mobile A 29	RFS APXVAALL24 43-U-NA20	700	13.65	131.00	4.00	40.00	3707.83	0.00000	466.67	0.00000
T-Mobile A 29	RFS APXVAALL24 43-U-NA20	600	12.95	131.00	2.00	40.00	1577.94	0.00000	400.00	0.00000
T-Mobile A 29	RFS APXVAALL24 43-U-NA20	600	12.95	131.00	2.00	30.00	1183.45	0.00000	400.00	0.00000
T-Mobile A 30	ERICSSON AIR 32	2100	15.55	131.00	4.00	30.00	4307.06	0.00000	1000.00	0.00000
T-Mobile A 30	ERICSSON AIR 32	1900	15.65	131.00	4.00	30.00	4407.39	0.00000	1000.00	0.00000
T-Mobile B 31	ERICSSON AIR6449	2500	17.30	131.00	1.00	60.00	3222.19	1.82913	1000.00	0.18291
T-Mobile B 31	ERICSSON AIR6449	2500	22.35	131.00	1.00	90.00	15461.18	13.08572	1000.00	1.30857
T-Mobile B 31	ERICSSON AIR6449	2500	22.35	131.00	1.00	90.00	15461.18	13.08572	1000.00	1.30857
T-Mobile B 32	RFS APXVAALL24 43-U-NA20	700	13.65	131.00	4.00	40.00	3707.83	0.00016	466.67	0.00004
T-Mobile B 32	RFS APXVAALL24 43-U-NA20	600	12.95	131.00	2.00	40.00	1577.94	0.00007	400.00	0.00002
T-Mobile B 32	RFS APXVAALL24 43-U-NA20	600	12.95	131.00	2.00	30.00	1183.45	0.00005	400.00	0.00001
T-Mobile B 33	ERICSSON AIR 32	2100	15.55	131.00	4.00	30.00	4307.06	0.00019	1000.00	0.00002
T-Mobile B 33	ERICSSON AIR 32	1900	15.65	131.00	4.00	30.00	4407.39	0.00034	1000.00	0.00003
T-Mobile C 34	ERICSSON AIR6449	2500	17.30	131.00	1.00	60.00	3222.19	0.00514	1000.00	0.00051
T-Mobile C 34	ERICSSON AIR6449	2500	22.35	131.00	1.00	90.00	15461.18	0.24820	1000.00	0.02482
T-Mobile C 34	ERICSSON AIR6449	2500	22.35	131.00	1.00	90.00	15461.18	0.24820	1000.00	0.02482
T-Mobile C 35	RFS APXVAALL24 43-U-NA20	700	13.65	131.00	4.00	40.00	3707.83	0.00000	466.67	0.00000
T-Mobile C 35	RFS APXVAALL24 43-U-NA20	600	12.95	131.00	2.00	40.00	1577.94	0.00000	400.00	0.00000
T-Mobile C 35	RFS APXVAALL24 43-U-NA20	600	12.95	131.00	2.00	30.00	1183.45	0.00000	400.00	0.00000
T-Mobile C 36	ERICSSON AIR 32	2100	15.55	131.00	4.00	30.00	4307.06	0.00000	1000.00	0.00000
T-Mobile C 36	ERICSSON AIR 32	1900	15.65	131.00	4.00	30.00	4407.39	0.00000	1000.00	0.00000
Sprint A 37	RFS APXVTM14-C-I20 BC	2500	15.85	123.00	8.00	20.00	6153.47	0.00000	1000.00	0.00000
Sprint A 38	RFS APXVSPP18-C-A20	850	13.35	123.00	2.00	40.00	1730.17	0.00000	566.67	0.00000

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (µW/cm²)	General Population MPE Limit (µW/cm²)	General Population % MPE
Sprint A 38	RFS APXVSPP18-C-A20-	1900	15.85	123.00	2.00	60.00	4615.10	0.00000	1000.00	0.00000
Sprint B 39	RFS APXVTM14-C-I20 BC	2500	15.85	123.00	8.00	20.00	6153.47	0.00011	1000.00	0.00001
Sprint B 40	RFS APXVSPP18-C-A20	850	13.35	123.00	2.00	40.00	1730.17	0.00008	566.67	0.00002
Sprint B 40	RFS APXVSPP18-C-A20-	1900	15.85	123.00	2.00	60.00	4615.10	0.00013	1000.00	0.00001
Sprint C 41	RFS APXVTM14-C-I20 BC	2500	15.85	123.00	8.00	20.00	6153.47	0.00000	1000.00	0.00000
Sprint C 42	RFS APXVSPP18-C-A20	850	13.35	123.00	2.00	40.00	1730.17	0.00000	566.67	0.00000
Sprint C 42	RFS APXVSPP18-C-A20-	1900	15.85	123.00	2.00	60.00	4615.10	0.00000	1000.00	0.00000
Dish A 43	JMA MX08FRO665-21	1900	15.75	110.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish A 43	JMA MX08FRO665-21	2000	15.75	110.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish A 43	JMA MX08FRO665-21	2100	16.75	110.00	4.00	40.00	7570.42	0.00000	1000.00	0.00000
Dish B 44	JMA MX08FRO665-21	1900	15.75	110.00	4.00	40.00	6013.40	0.00031	1000.00	0.00003
Dish B 44	JMA MX08FRO665-21	2000	15.75	110.00	4.00	40.00	6013.40	0.00027	1000.00	0.00003
Dish B 44	JMA MX08FRO665-21	2100	16.75	110.00	4.00	40.00	7570.42	0.00025	1000.00	0.00003
Dish C 45	JMA MX08FRO665-21	1900	15.75	110.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish C 45	JMA MX08FRO665-21	2000	15.75	110.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish C 45	JMA MX08FRO665-21	2100	16.75	110.00	4.00	40.00	7570.42	0.00000	1000.00	0.00000
							Cumulative Power Density:	**41.66305 µW/cm²**	**Cumulative % MPE:**	**4.16641%**

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.

Katrina Styx
RF EME Technical Writer
Centerline Communications, LLC

EXHIBIT 6

Address #225 Grist Mill Rd Permit No. 108897 Date Issued Copied 6/10/02 FG

CO 203183

APPLICATION FOR BUILDING PERMIT

NOTE: All applications must be accompanied with the appropriate completed departmental sign-off card in order to be processed. Applications will be deemed incomplete until the aforementioned completed and submitted to the Building Department, which date shall be deemed to be the date of the application.

Estimated Cost	$	69,000
Fee	$	828
State Education Fee	$	11.04
Occupancy Fee	$	

TO THE BUILDING DEPARTMENT, TOWN OF SIMSBURY, CONN.

The undersigned, hereby applies for a permit to do work ~~according~~ to the following specifications.

DND OK

Type of Building: Single Family 2-Family (Commercial)

(circle) Existing New Addition Alteration

Owner of building Ensign Bickford Realty Corp Address 19 Ensign Drive Avon 06001

Phone

Applicant New England Site Management LLC Address 1515 No. Stone (West Suffield) Zip 06078

Phone 860-614-3060

Architect JR Rosso + Assoc Address 1 Shoham Rd. (East Windsor) Zip 06088

Phone 860-623-0569

Size of Bldg. overall Tower Area 75'x75' Deep overall ____ Area of Largest Floor ____

~~Garage Size~~ ~~No. of stories~~

~~Construction Type~~ ~~No. of rooms:~~ 1st ___ 2nd ___ 3rd ___ Basement ___

Purpose of this Permit (BE SPECIFIC) 150' Galvanized Steel Monopole Tower, Foundation for tower ~~utility conduits~~, 8' Chain Link Fence → (300 L.F Fench)

Aquifer Protection Zone ❑ Comm. ☒ Res. ❑ Sewer ❑ Septic Tank ❑ Over→

Rev. 3/15/02

→ Not Shown?

F-11 - F18

No: 203183 225 GRIST MILL ROAD

CERTIFICATE OF OCCUPANCY

Simsbury Building Department
Simsbury, Connecticut 06070

DATE: 12/31/2002
FEE:$ 5.00
ZONE:

This is to certify that building at 225 GRIST MILL ROAD as described under Permit No. 108897 conforms substantially to the requirements of the State Building Code per 118.4 of the CBBC and the Zoning Regulations of the Town of Simsbury, and is hereby approved for occupancy as indicated below.

OCCUPANCY CLASSIFICATION:
MONOPOLE TOWER (150'); FDN FOR TOWER; 300 LF FENCE
Construction Type: ____ Code Edition: 1998 SBC
Sprinkler Required: Y / N Fire Alarm Required: Y / N
Special Conditions / Modifications: Y / N (See Attached if Yes)

Richard F. Smith
Building Official

EXHIBIT 7

From: UPS
To: Evan Renwick
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030335509453
Date: Tuesday, August 9, 2022 1:38:35 PM

Hello, your package has been delivered.

Delivery Date: Tuesday, 08/09/2022
Delivery Time: 1:30 PM
Signed by: BAZZANO

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030335509453
Ship To:	PLANNING DEPARTMENT 933 HOPMEADOW STREET SIMSBURY, CT 060701822 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT1151-CSC_TOWN PLANNER

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From: UPS
To: Evan Renwick
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030325553629
Date: Tuesday, August 9, 2022 1:38:35 PM

Hello, your package has been delivered.

Delivery Date: Tuesday, 08/09/2022
Delivery Time: 1:32 PM
Signed by: BAZZANO

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030325553629
Ship To:	FIRST SELECTWOMAN'S OFFICE 933 HOPMEADOW STREET SIMSBURY, CT 060701822 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT1151-CSC_FIRST SELECTWOMAN'S OFFI

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From: UPS
To: Evan Renwick
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030325279239
Date: Tuesday, August 9, 2022 1:38:37 PM

Hello, your package has been delivered.

Delivery Date: Tuesday, 08/09/2022
Delivery Time: 1:30 PM
Signed by: BAZZANO

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030325279239
Ship To:	ZONING DEPARTMENT 933 HOPMEADOW STREET SIMSBURY, CT 060701822 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT1151-CSC_ZEO

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From: UPS
To: Evan Renwick
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030336111675
Date: Tuesday, August 9, 2022 10:01:43 AM

Hello, your package has been delivered.

Delivery Date: Tuesday, 08/09/2022
Delivery Time: 9:51 AM
Signed by: BEAULIEU

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030336111675
Ship To:	ENSIGN-BICKFORD REALTY CORPORATION 125 POWDER FOREST DRIVE SIMSBURY, CT 060703182 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT1151-CSC_ENSIGN-BRICKFORD

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Your shipment from

CENTERLINE SITE ACQUISITION

Estimated delivery

Thursday, August 11 between 11:15 A.M. - 3:15 P.M.

- Label Created
- **On the Way**
- Out for Delivery
- Delivery

Ship To

SBA TOWERS II, LLC
PROPERTY MANAGEMENT
8051 CONGRESS AVENUE
BOCA RATON, FL 334871307 US

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