



November 6, 2020

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

Re: Notice of Exempt Modification New Cingular Wireless PCS LLC ("AT&T") Site CT5818
712 Bread and Milk Street, Coventry, CT 06238 (the "Property")
Latitude: 41.818919 N Longitude: 72.3932989 W

Dear Ms. Bachman:

AT&T currently maintains (9) antennas at the 164-foot level on the existing 175' monopole tower ("Tower") at 712 Bread and Milk Street, Coventry, CT. The Tower is owned by SBA Towers, LLC ("SBA") and the property is owned by Jeannine & Ronald R. Nadeau. AT&T intends to modify its facility by replacing (6) antennas with (1) HPA-65R-BU8AA, (1) DMP65R-BU8DA, (2) HPA-65R-BU6AA, and (2) DMP65R-BU6DA antennas, replacing (3) RRUs with (3) B5/B12 4449 RRUs, installing (3) 8843 B2/B66A RRUs. The height of AT&T's existing and proposed antennas & RRUs is 162'.

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

The facility received approval from the Town of Coventry Planning & Zoning Commission on October 23, 2000. There were no conditions that could be feasibility be violated by this modification, including total facility height and mounting restrictions. The AT&T modification complies with the above-mentioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies ("R.C.S.A") §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2). In accordance with to R.C.S.A §16-50j-73, a copy of this letter is being sent the Honorable John A. Elsesser, Town Manager, Town of Coventry, Mr. Eric Trott, Director of Land Use, Town of Coventry and Jeannine & Ronald R. Nadeau, the property owners. SBA Towers V LLC, the tower owner, received a copy by email.

The planned modification of the facility falls 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 modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and foundation can support the proposed loading.

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

Sincerely,

Hollis M. Redding

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

Enclosures

Cc: Honorable John A. Elsesser, Town Manager, Town of Coventry
Mr. Eric Trott, Director of Land Use, Town of Coventry
Jeannine & Ronald R. Nadeau, as property owners
SBA Towers, LLC. as tower owner

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz**)	Limit S (mW/cm ²)	%MPE
Other Carriers*							6.94 %
AT&T	2	565	164	0.0163	880	0.5867	0.28%
AT&T	2	875	164	0.0252	1900	1.0000	0.25%
AT&T	1	283	164	0.0041	880	0.5867	0.07%
AT&T	4	525	164	0.0303	1900	1.0000	0.30%
AT&T	1	1375	164	0.0198	734	0.4893	0.40%
Site Total							8.24%

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

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

Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz**)	Limit S (mW/cm ²)	%MPE
Other Carriers*							6.94%
AT&T LTE	1	2951	162	0.0436	763	0.5087	0.86%
AT&T LTE	3	3664	162	0.1624	1950	1.0000	1.62%
AT&T LTE	1	1476	162	0.0218	725	0.4833	0.45%
AT&T LTE	1	1000	162	0.0148	850	0.5667	0.26%
AT&T LTE	1	3837	162	0.0567	2170	1.0000	0.57%
AT&T 5G	1	1000	162	0.0148	850	0.5667	0.26%
Site Total							10.94%

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

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

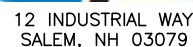
PROJECT INFORMATION	
SCOPE OF WORK:	<u>ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:</u> • NEW AT&T ANTENNA: HPA-65R-BU8AA @ POS. 3 (TOTAL OF 1 FOR ALPHA SECTOR). • NEW AT&T ANTENNA: DMP65R-BU8DA @ POS. 4 (TOTAL OF 1 FOR ALPHA SECTOR). • NEW AT&T ANTENNA: HPA-65R-BU6AA @ POS. 3 (TOTAL OF 1 FOR BETA SECTOR). • NEW AT&T ANTENNA: DMP65R-BU6DA @ POS. 4 (TOTAL OF 1 FOR BETA SECTOR). • NEW AT&T ANTENNA: DMP65R-BU6DA @ POS. 1 (TOTAL OF 1 FOR GAMMA SECTOR). • NEW AT&T ANTENNA: HPA-65R-BU6AA @ POS. 2 (TOTAL OF 1 FOR GAMMA SECTOR). • EXISTING AT&T ANTENNA: 7770 @ POS. 1 (TO BE RELOCATED TO POS. 4) (TOTAL OF 1 FOR GAMMA SECTOR). • NEW AT&T RRUS: B2/B66A 8843 (PCS/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3). • NEW AT&T RRUS: B5/B12 4449 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3). • ADD (6) Y CABLES FOR DUAL BAND RRHS. • ADD (2) 1" DC CABLES TO REPLACE EXISTING (1) CONDUIT & (2) DC POWER LINES WITHIN IT. (1) FIBER LINE INSIDE THE CONDUIT TO BE REUSED. • INSTALL NEW HANDRAIL KIT, SITEPRO1 P/N HRK12 (OR APPROVED EQUAL). HANDRAIL KIT IS REQUIRED PER AT&T TECHNICAL DIRECTIVE TO STABILIZE EXISTING CANTILEVERED ANTENNAS. <u>ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:</u> • NEW AT&T RRUS: B14 4478 (700) (TOTAL OF 2) MOUNTED ON PROPOSED H-FRAME. • ADD SURGE ARRESTOR (TSXDC-4310FM) (TYP. OF 4 ALPHA & GAMMA SECTOR, TOTAL OF 8) • EXISTING RET CONTROL THROUGH UMTS HARDLINES USING EXISTING GSM SBTs. • ADD RBS 6630. • ADD (1) IDLe CABLE • ADD (1) XMU. • ADD (1) PURCELL CABINET. <u>ITEMS TO BE REMOVED:</u> • EXISTING AT&T ANTENNAS: 7770 (TYP. OF 1 PER SECTOR, TOTAL OF 3). • EXISTING AT&T ANTENNAS: SBNH-1D6565C (TOTAL OF 1 FOR ALPHA SECTOR). • EXISTING AT&T ANTENNAS: AM-X-CD-16-65-00T-RET (TYP. OF 1 FOR BETA & GAMMA SECTORS, TOTAL OF 2). • EXISTING AT&T RRUS: RRU-11 (TYP. OF 1 PER SECTOR, TOTAL OF 3). • REMOVE (6) GSM DIPLEXERS. • REMOVE GSM CABINET. • REMOVE (1) CONDUIT & (2) DC POWER LINES WITHIN IT. <u>ITEMS TO REMAIN:</u> • (3) ANTENNAS, (6) TMA'S (1) SURGE ARRESTOR, (12) COAX CABLES & (1) FIBER.
SITE ADDRESS:	21 ROUTE 31 COVENTRY, CT 06238
LATITUDE:	41.8180919" N, 41° 49' 05.13" N
LONGITUDE:	72.3932989" W, 72° 23' 35.87" W
TYPE OF SITE:	MONOPOLE / OUTDOOR EQUIPMENT
STRUCTURE HEIGHT:	175'-0"±
RAD CENTER:	162'-0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	ANTENNA LAYOUTS & ELEVATION	1
A-3	DETAILS	1
SN-1	STRUCTURAL NOTES	1
S-1	MOUNT MODIFICATION DESIGN	1
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1
RF-2	RF PLUMBING DIAGRAM	1

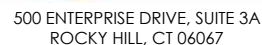
H D G | **HUDSON**
Design Group LLC

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586

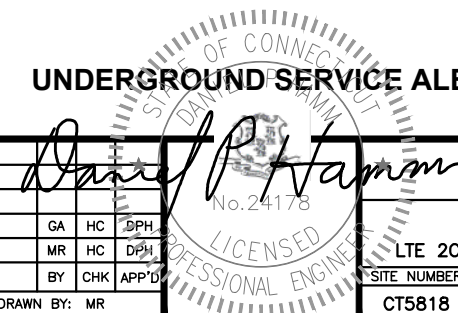


21 ROUTE 31
COVENTRY, CT 06238
TOLLAND COUNTY



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.

UNDERGROUND SERVICE ALERT



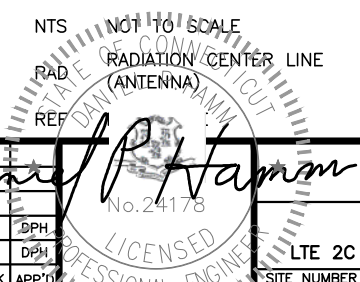
CT5818	T-1	1
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1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUIT 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

- CONTRACTOR — SAI
SUBCONTRACTOR — GENERAL CONTRACTOR (CONSTRUCTION)
OWNER — AT&T MOBILITY
- 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.
- 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.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- "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.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

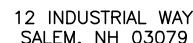
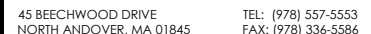
- FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

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						

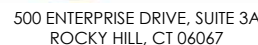



No. 24178
LICENSED PROFESSIONAL ENGINEER

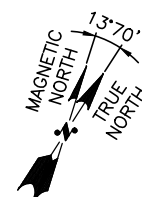
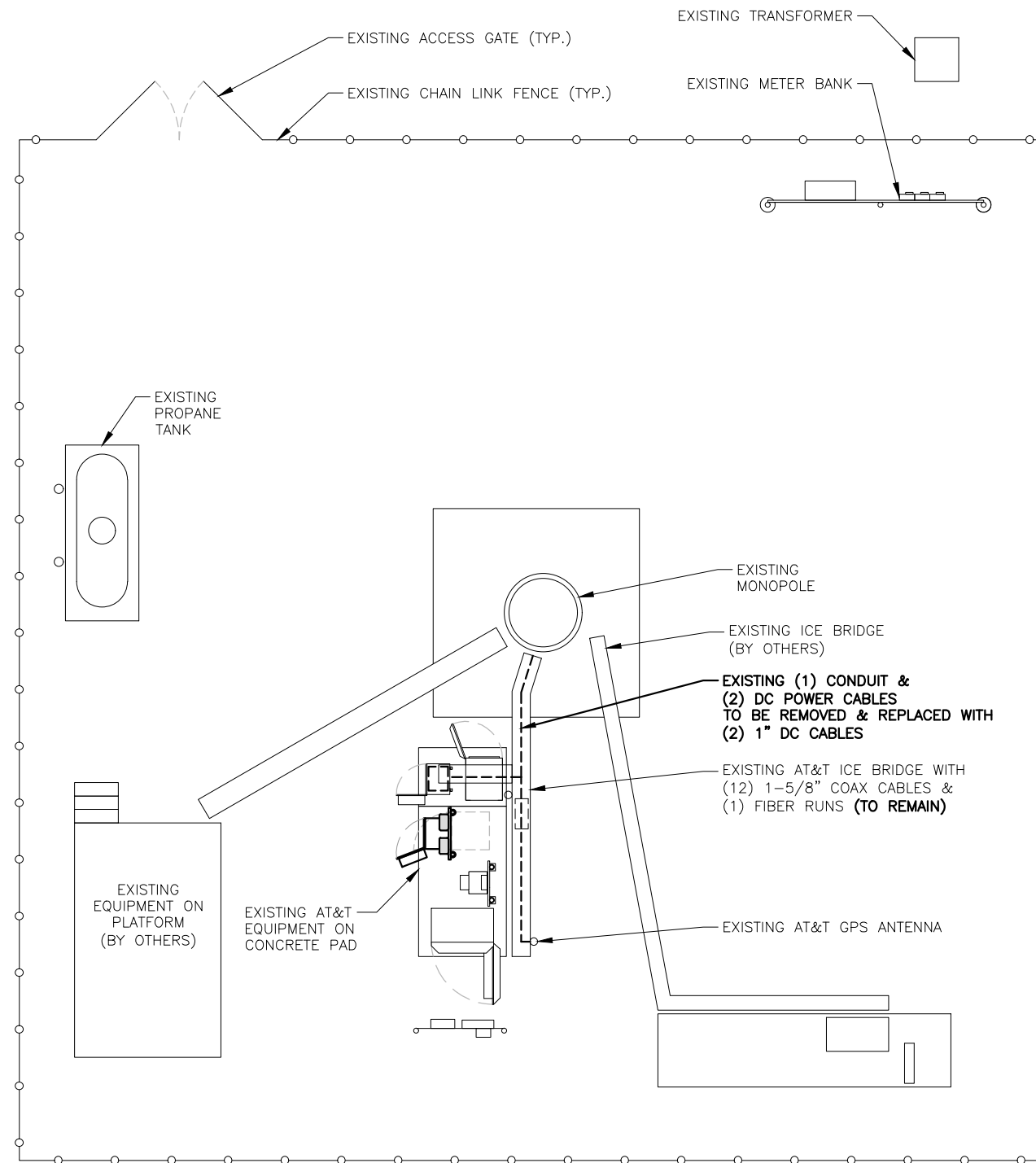
					AT&T				
SUED FOR CONSTRUCTION					GENERAL NOTES				
SUED FOR REVIEW					LTE 2C 3C 4C 5G 4TX4RX 2020 UPGRADE				
REVISIONS					SITE NUMBER				
BY		CHK		APP'D		DRAWING NUMBER			
DESIGNED BY: AT		DRAWN BY: MR		CT5818		GN-1			
IN						RE			



21 ROUTE 31
COVENTRY, CT 06238
TOLLAND COUNTY



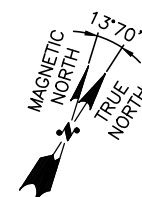
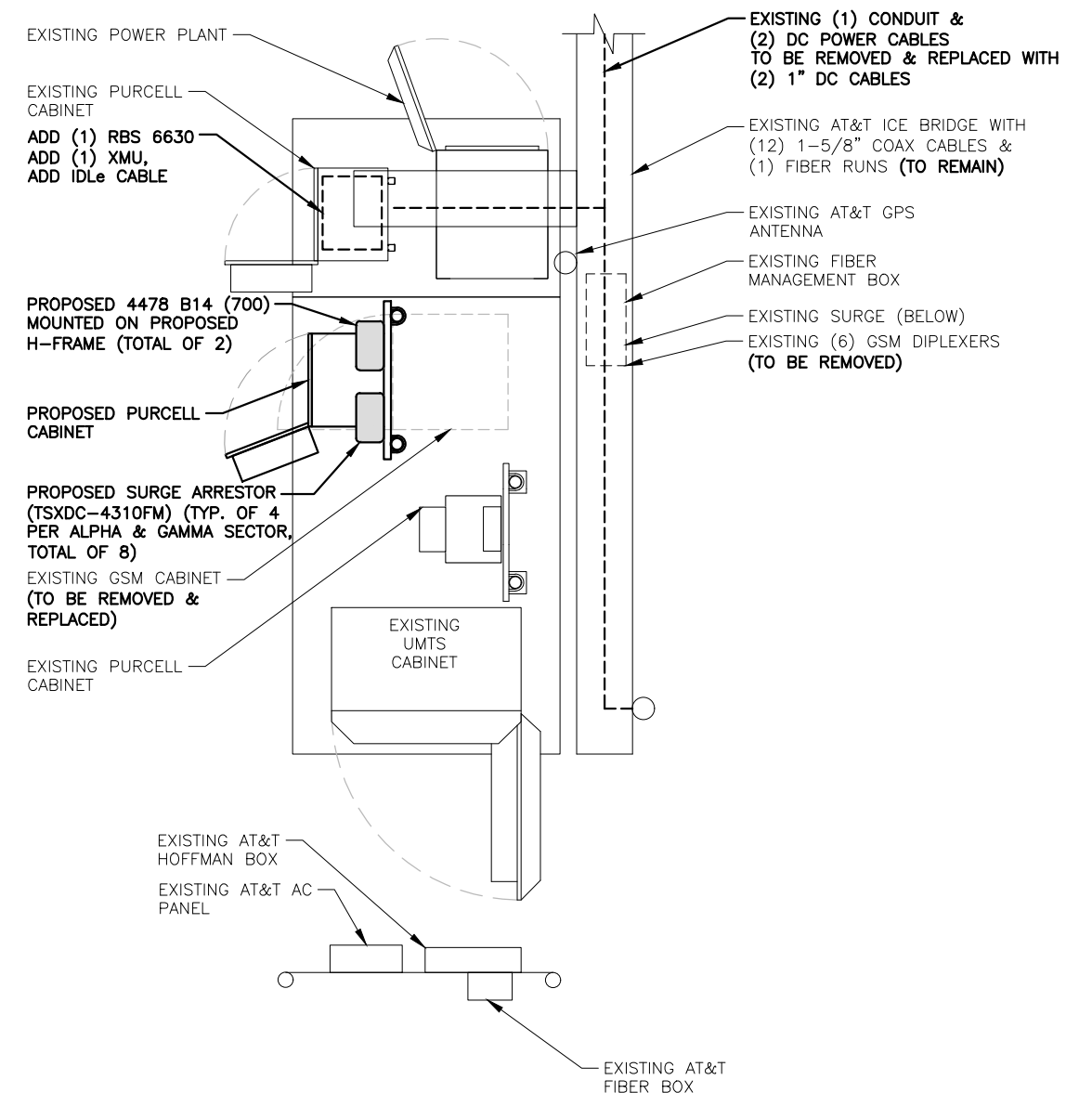
			<i>Daniel P. Hammon</i>					AT&T				
								No. 24178				
1	11/02/20	ISSUED FOR CONSTRUCTION	GA	HC	DPH	GENERAL NOTES						
A	10/14/20	ISSUED FOR REVIEW	MR	HC	DPH	LTE 2C 3C 4C 5G 4TX4RX 2020 UPGRADE						
NO.	DATE	REVISIONS	BY	CHK	APP'D	SITE NUMBER	DRAWING NUMBER			REV		
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: MR			CT5818	GN-1			1		



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

1
A-1

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



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

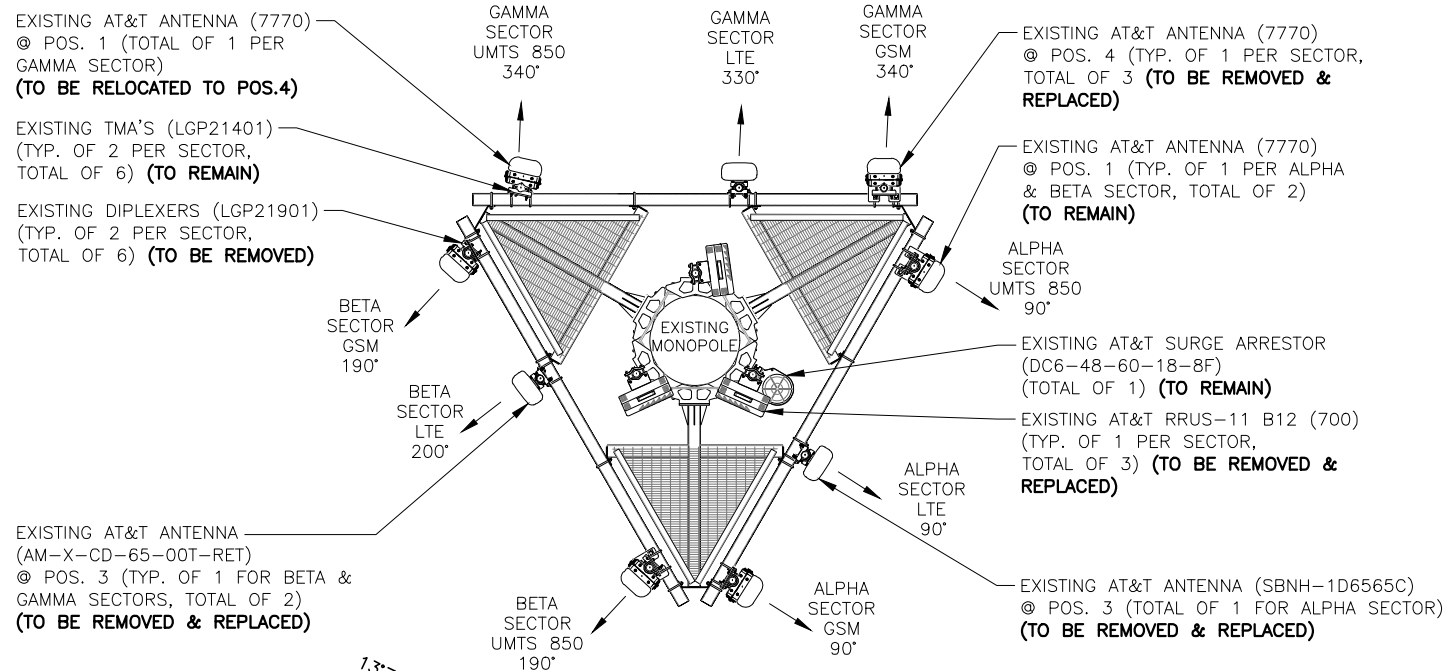
2
A-1

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

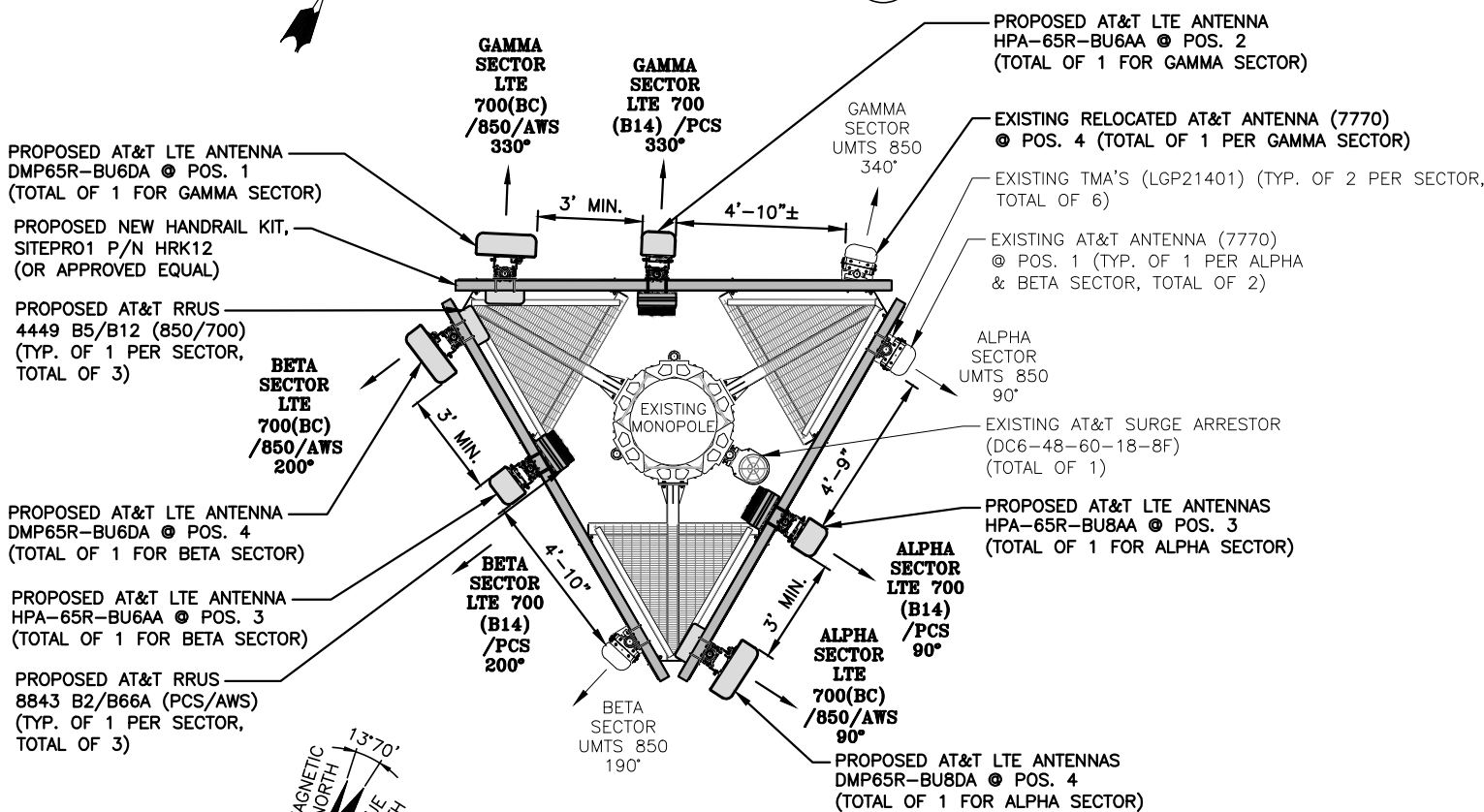
NOTE:
 REFER TO **STRUCTURAL ANALYSIS**
 BY: TOWER ENGINEERING SOLUTIONS
 DATED: OCTOBER 22, 2020.
 FOR THE CAPACITY OF THE EXISTING
 STRUCTURES TO SUPPORT THE
 PROPOSED EQUIPMENT.

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

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



EXISTING ANTENNA LAYOUT
SCALE: N.T.S.



PROPOSED ANTENNA LAYOUT
SCALE: N.T.S.

TOP OF MONOPOLE
ELEV. 175'-0"± (AGL)

OF PROPOSED & EXISTING AT&T ANTENNAS
ELEV. 162'-0"± (AGL)

PROPOSED AT&T RRUS 4449 B5/B12 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED AT&T LTE ANTENNA DMP65R-BU8DA @ POS. 4 (TOTAL OF 1 PER ALPHA SECTOR)

PROPOSED AT&T LTE ANTENNAS HPA-65R-BU8AA @ POS. 3 (TOTAL OF 1 PER ALPHA SECTOR)

EXISTING ANTENNA (BY OTHERS)

EXISTING AT&T ANTENNA (7770) @ POS. 1 (TYP. OF 1 PER ALPHA & BETA SECTOR, TOTAL OF 2) (TO REMAIN)

PROPOSED NEW HANDRAIL KIT, SITEPRO1 P/N HRK12 (OR APPROVED EQUAL)

PROPOSED AT&T RRUS 8843 B2/B66A (PCS/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

EXISTING AT&T SURGE ARRESTOR (DC6-48-60-18-8F) (TOTAL OF 1) (TO REMAIN)

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

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

NOTE:
REFER TO **STRUCTURAL ANALYSIS** BY: TOWER ENGINEERING SOLUTIONS DATED: OCTOBER 22, 2020. FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

GROUND LEVEL
ELEV. 0'-0"± (AGL)

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

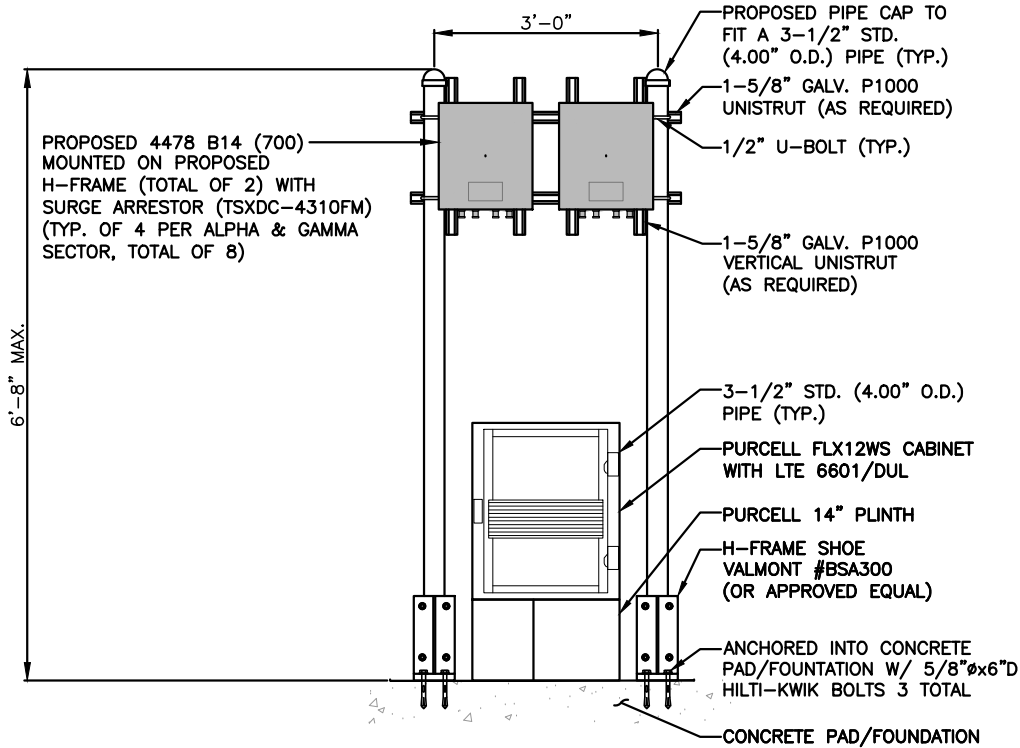
NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586	 12 INDUSTRIAL WAY SALEM, NH 03079	SITE NUMBER: CT5818 SITE NAME: COVENTRY NW SBA SITE #: CT02573 21 ROUTE 31 COVENTRY, CT 06238 TOLLAND COUNTY	 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067	AT&T ANTENNA LAYOUTS & ELEVATION LTE 2C 3C 4C 5G 4TX4RX 2020 UPGRADE									
				SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR									
				1 11/02/20 ISSUED FOR CONSTRUCTION GA HC DPH A 10/14/20 ISSUED FOR REVIEW MR HC DPH NO. DATE REVISIONS BY CHK APP'D SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR									

ANTENNA SCHEDULE											
SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA CL HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	7770	55.0X11.0X5.0	162'-0"±	90°	(2(E) LGP21401	—	—	(2)1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8F
A2	—	—	—	—	—	—	—	—	—	—	
A3	PROPOSED	LTE 700 (B14) /PCS	HPA-65R-BU8AA	96X11.7X7.6	162'-0"±	90°	—	(P)(G) 4478 B14 (700) (P) 8843 B2/B66A (PCS/AWS)	18.1"x13.4"x8.3" 14.9"x13.2"x10.9"	(2)1-5/8 COAX	
A4	PROPOSED	LTE 700(B14) /850/AWS	DMP65R-BU8DA	96X20.7X7.7	162'-0"±	90°	—	(P) 4449 B5/B12 (850/700)	17.9"x13.2"x10.4"	(2)(P) 1" DC LINES & (1)(E) FIBER	
B1	EXISTING	UMTS 850	7770	55.0X11.0X5.0	162'-0"±	190°	(2(E) LGP21401	—	—	(2)1-5/8 COAX	SHARED
B2	—	—	—	—	—	—	—	—	—	—	
B3	PROPOSED	LTE 700 (B14) /PCS	HPA-65R-BU6AA	71.2X11.7X8.4	162'-0"±	200°	—	(P) 8843 B2/B66A (PCS/AWS)	14.9"x13.2"x10.9"	(2)1-5/8 COAX	
B4	PROPOSED	LTE 700(B14) /850/AWS	DMP65R-BU6DA	71.2X20.7X7.7	162'-0"±	200°	—	(P) 4449 B5/B12 (850/700)	17.9"x13.2"x10.4"	—	
C1	PROPOSED	LTE 700(B14) /850/AWS	DMP65R-BU6DA	71.2X20.7X7.7	162'-0"±	330°	—	(P) 4449 B5/B12 (850/700)	17.9"x13.2"x10.4"	—	SHARED
C2	PROPOSED	LTE 700 (B14) /PCS	HPA-65R-BU6AA	71.2X11.7X8.4	162'-0"±	330°	—	(P)(G) 4478 B14 (700) (P) 8843 B2/B66A (PCS/AWS)	18.1"x13.4"x8.3" 14.9"x13.2"x10.9"	(2)1-5/8 COAX	
C3	—	—	—	—	—	—	—	—	—	—	
C4	EXISTING	UMTS 850	7770	55.0X11.0X5.0	162'-0"±	340°	(2(E) LGP21401	—	—	(2)1-5/8 COAX	

FINAL ANTENNA SCHEDULE
SCALE: N.T.S

1
A-3



PROPOSED EQUIPMENT MOUNTING DETAIL

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



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

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:

SEE RFDS FOR RRH
FREQUENCY AND
MODEL NUMBER

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

NOTE:

MOUNT PER MANUFACTURER'S
SPECIFICATIONS.

PROPOSED RRUS DETAIL

SCALE: N.T.S

2
A-3

NOTE:

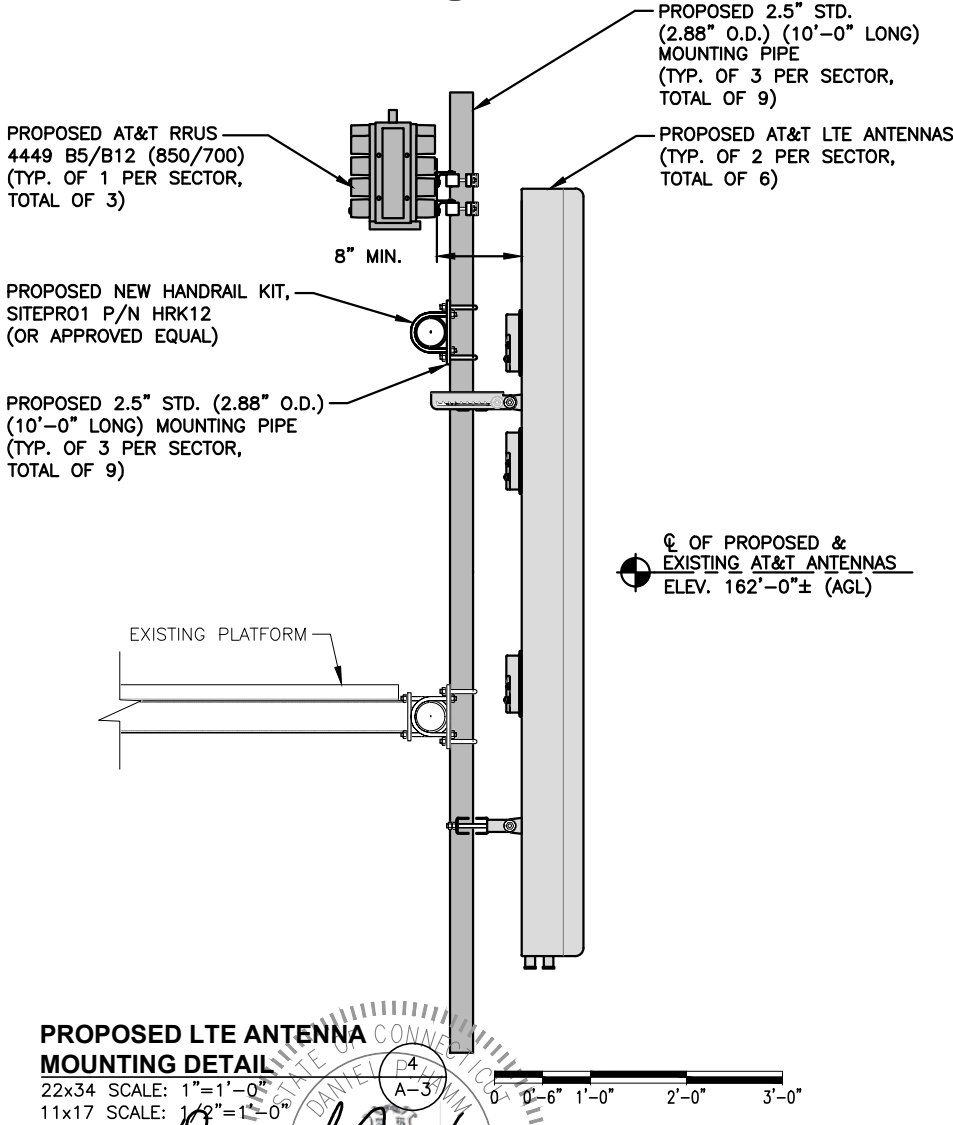
AN ANALYSIS FOR THE CAPACITY OF
THE EXISTING ANTENNA MOUNT TO
SUPPORT THE PROPOSED LOADING
HAS BEEN COMPLETED BY:
HUDSON DESIGN GROUP, PLLC.
DATED: OCTOBER 09, 2020

NOTE:

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

NOTE:

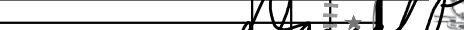
REFER TO **STRUCTURAL ANALYSIS**
BY: TOWER ENGINEERING SOLUTIONS
DATED: OCTOBER 22, 2020.
FOR THE CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.



PROPOSED LTE ANTENNA
MOUNTING DETAIL

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



 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586	 12 INDUSTRIAL WAY SALEM, NH 03079	SITE NUMBER: CT5818 SITE NAME: COVENTRY NW SBA SITE #: CT02573 21 ROUTE 31 COVENTRY, CT 06238 TOLLAND COUNTY	 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067											AT&T			
				1 11/02/20 ISSUED FOR CONSTRUCTION						GA	HC	DPH	DETAILS				
				A 10/14/20 ISSUED FOR REVIEW						MR	HC	DPH	LTE 2C 3C 4C 5G 4TX4RX 2020 UPGRADE				
				NO.	DATE	REVISIONS				BY	CHK	APP'D	SITE NUMBER		DRAWING NUMBER		REV
				SCALE: AS SHOWN		DESIGNED BY: AT		DRAWN BY: MR		CT5818		A-3		1			

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

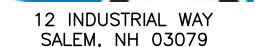
GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

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

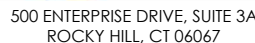
H D G | **HUDSON**
Design Group LLC

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586



21 ROUTE 31
COVENTRY, CT 06238
TOLLAND COUNTY

[illegible]

NOTE:

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

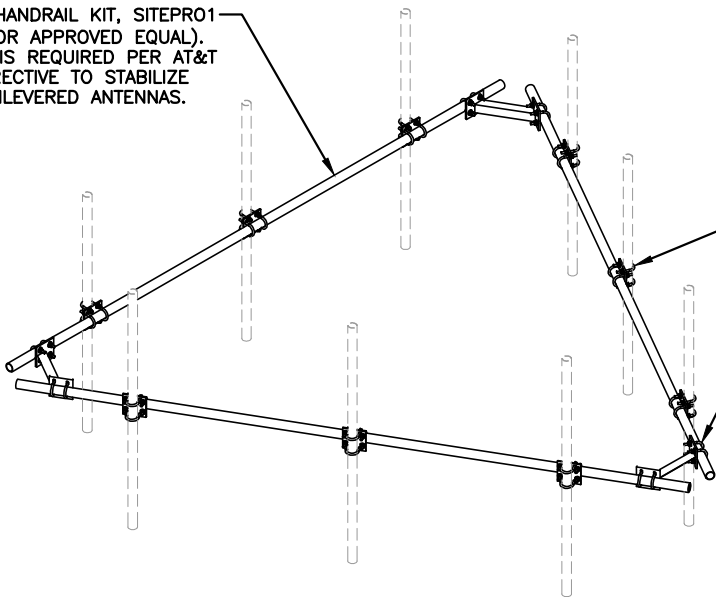
NOTE:

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

NOTE:

REFER TO **STRUCTURAL ANALYSIS** BY: TOWER ENGINEERING SOLUTIONS
DATED: OCTOBER 22, 2020.
FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

INSTALL NEW HANDRAIL KIT, SITEPRO1 P/N HRK12 (OR APPROVED EQUAL). HANDRAIL KIT IS REQUIRED PER AT&T TECHNICAL DIRECTIVE TO STABILIZE EXISTING CANTILEVERED ANTENNAS.



REPLACE PROPOSED CROSSOVER PLATE AT THIS LOCATION PER SECTOR WITH PROPOSED CROSSOVER PLATE KIT (SITE PRO 1 P/N SCX2-K) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

REPLACE PROPOSED BRACE WITH PROPOSED 2.5" STD. (2.88" O.D.) (3'-2" LONG) BRACE PIPE (TOTAL OF 3)

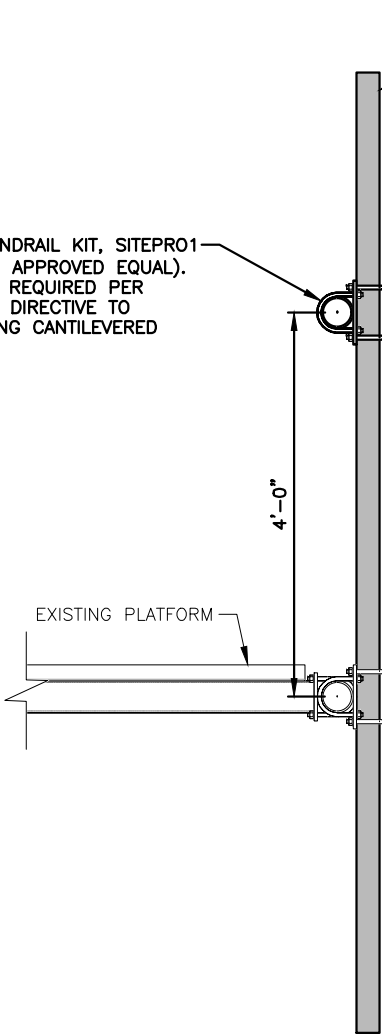
HANDRAIL KIT DETAIL
SCALE: N.T.S.

3
S-1

PROPOSED 2.5" STD. (2.88" O.D.) (10'-0" LONG) MOUNTING PIPE (TYP. OF 3 PER SECTOR, TOTAL OF 9)

PROPOSED AT&T LTE ANTENNAS (TYP. OF 2 PER SECTOR, TOTAL OF 6)

INSTALL NEW HANDRAIL KIT, SITEPRO1 P/N HRK12 (OR APPROVED EQUAL). HANDRAIL KIT IS REQUIRED PER AT&T TECHNICAL DIRECTIVE TO STABILIZE EXISTING CANTILEVERED ANTENNAS.



4'-0"

EXISTING PLATFORM

PROPOSED MOUNT
MODIFICATIONS PLAN

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

1
S-1

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



PROPOSED MOUNT
MODIFICATIONS DETAIL

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

2
S-1

0 6" 1'-0" 2'-0" 3'-0"

HDG HUDSON
Design Group LLC

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

SAI

12 INDUSTRIAL WAY
SALEM, NH 03079

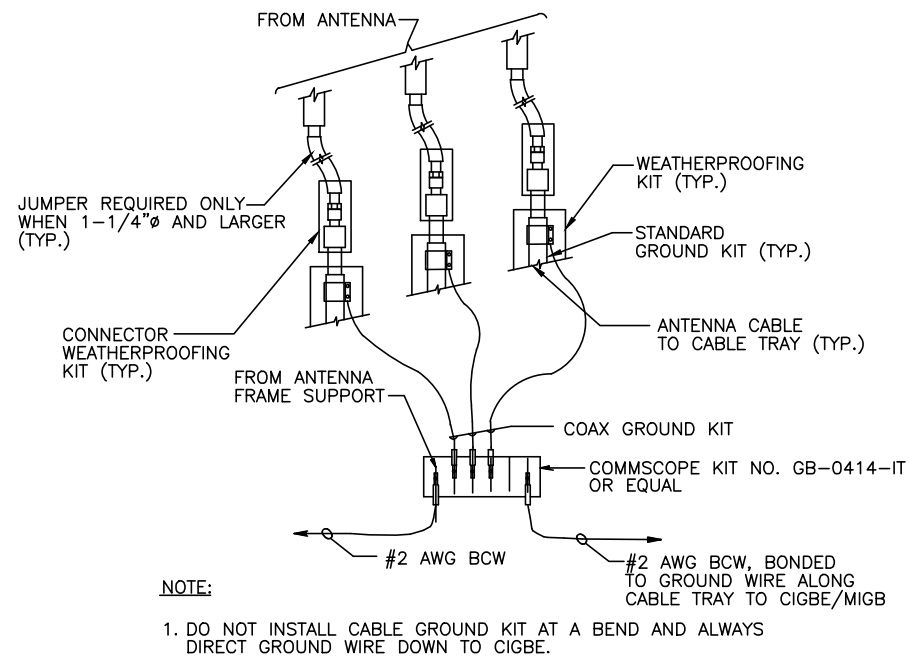
SITE NUMBER: CT5818
SITE NAME: COVENTRY NW
SBA SITE #: CT02573

21 ROUTE 31
COVENTRY, CT 06238
TOLLAND COUNTY

at&t

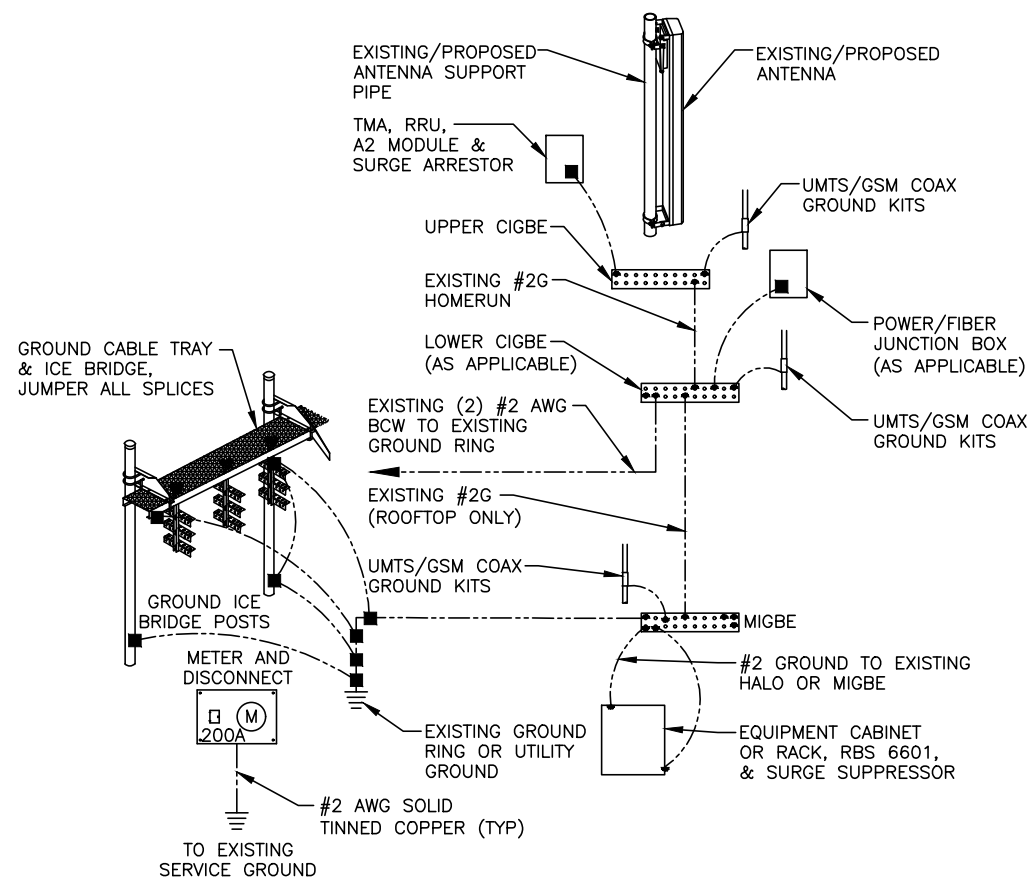
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

				AT&T			
				MOUNT MODIFICATION DESIGN			
				LTE 2C 3C 4C 5G 4TX4RX 2020 UPGRADE			
				SITE NUMBER		DRAWING NUMBER	
				CT5818		S-1	
				SCALE: AS SHOWN		DESIGNED BY: AT	
				DRAWN BY: MR		REV	
				1		1	
				11/02/20		ISSUED FOR CONSTRUCTION	
				10/14/20		ISSUED FOR REVIEW	
				NO.		DATE	
				BY		CHK	
				APP'D		REV	
				GA		HC	
				MR		HC	
				DPH		DPH	
				NO. 24178		LICENSED PROFESSIONAL ENGINEER	



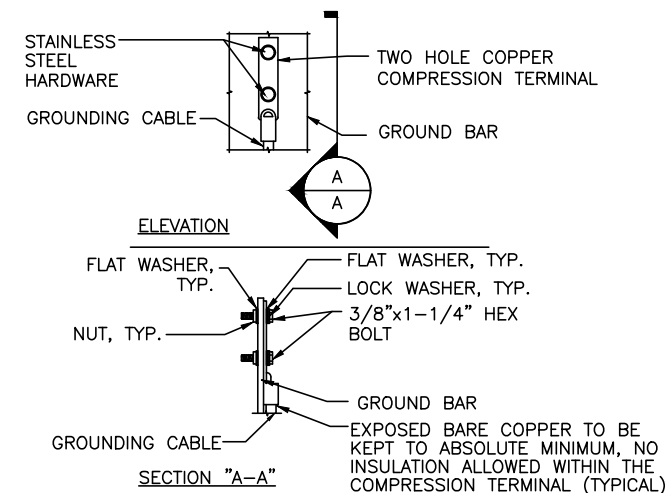
GROUND WIRE TO GROUND BAR CONNECTION DETAIL
SCALE: N.T.S

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

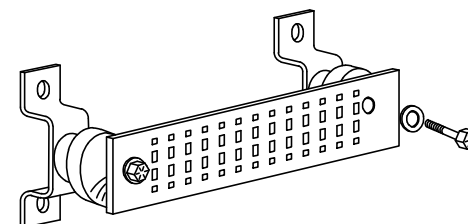
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

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

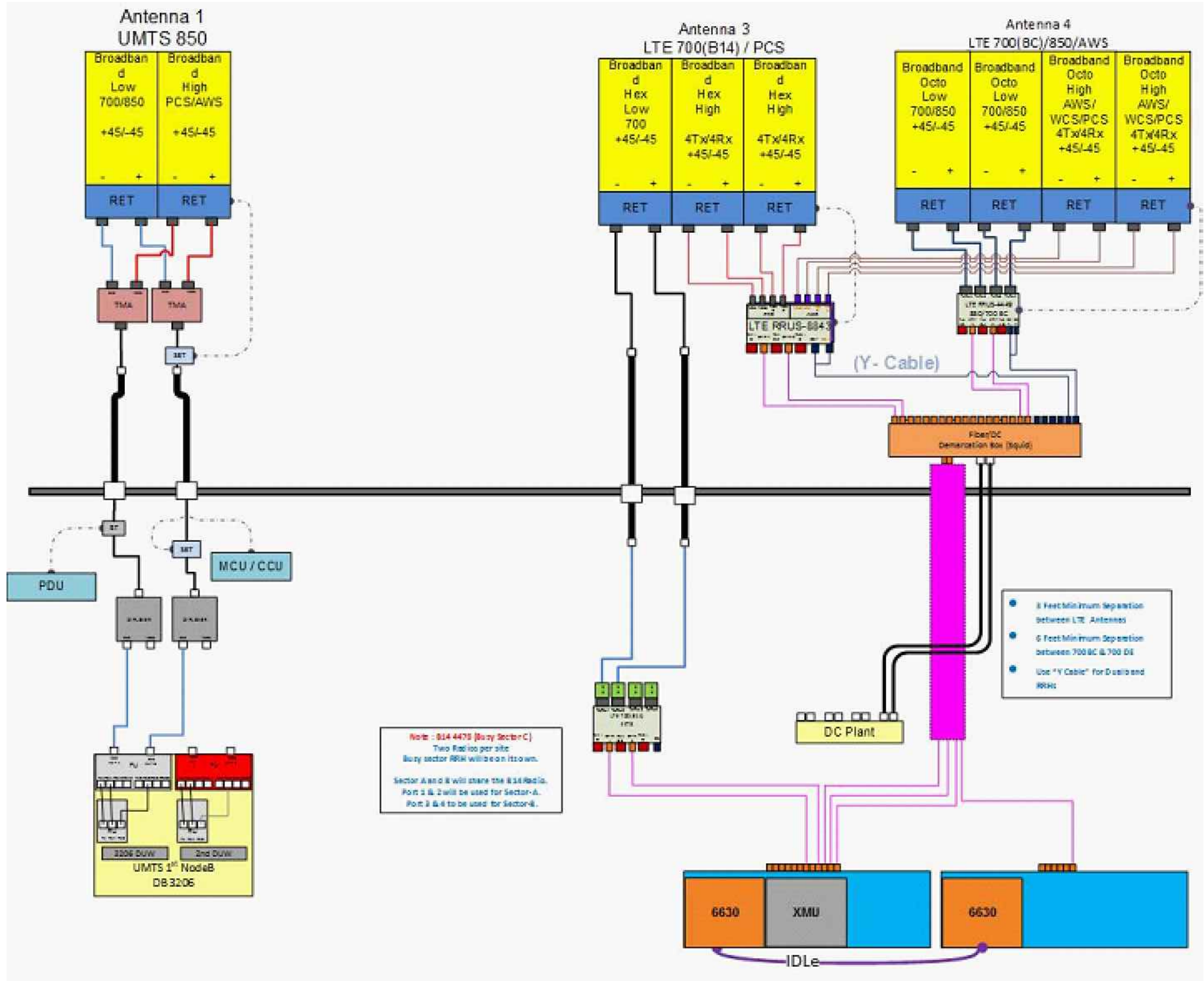
INTERIOR GROUND RING (#2 AWG)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
BUILDING STEEL (IF AVAILABLE) (#2 AWG)



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

4
G-1

ALPHA & BETA SECTOR

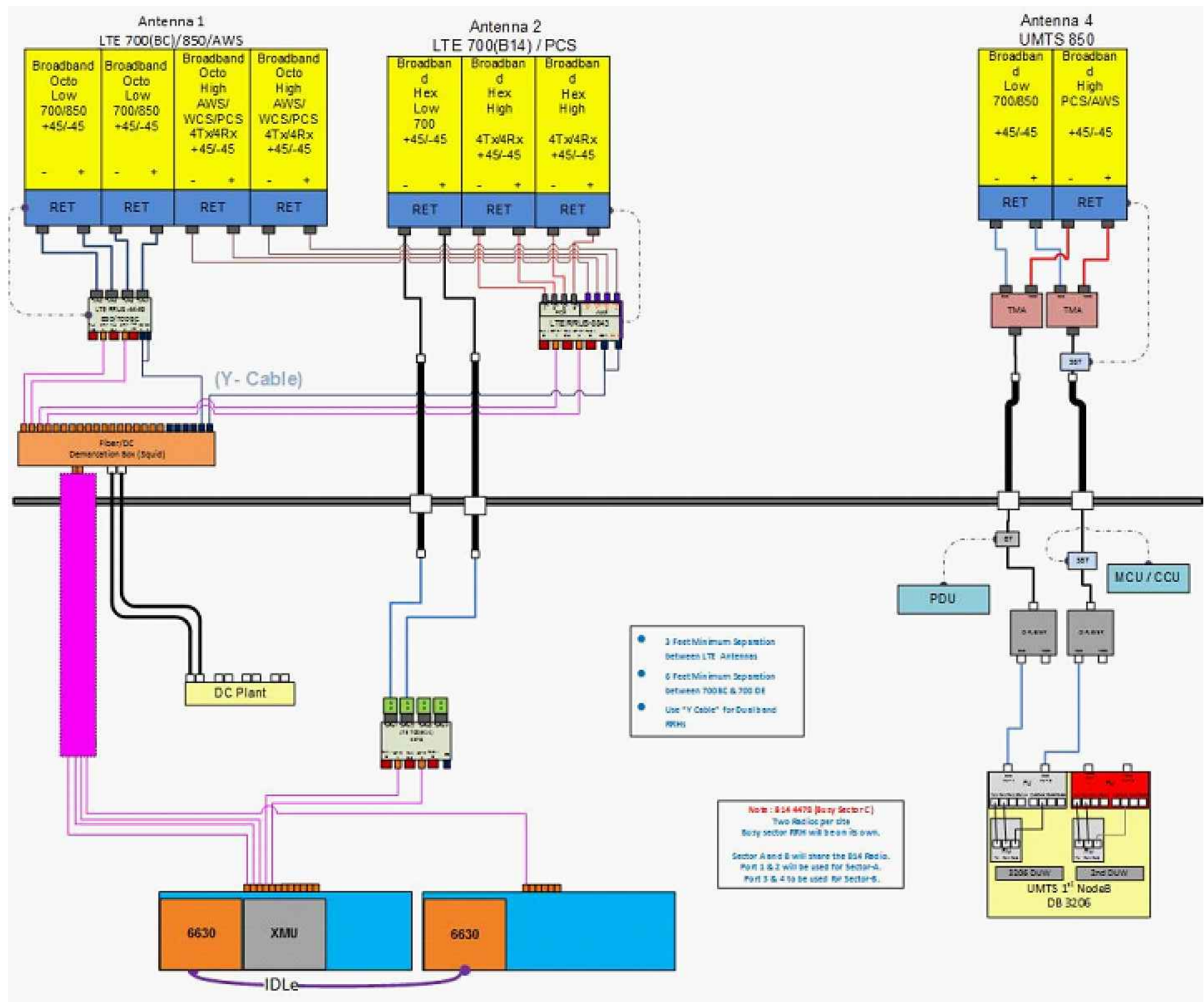


RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1

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

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

GAMMA SECTOR



RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-2

1	11/02/20	ISSUED FOR CONSTRUCTION	GA	HC	DPH
A	10/14/20	ISSUED FOR REVIEW	MR	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: MR		

AT&T					
RF PLUMBING DIAGRAM					
LTE 2C 3C 4C 5G 4TX4RX 2020 UPGRADE					
SITE NUMBER		DRAWING NUMBER		REV	
CT5818		RF-2		1	



Tower Engineering Solutions

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

Structural Analysis Report

Existing 178 ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02573-S

Customer Site Name: Coventry 2 CT

Carrier Name: AT&T (App#: 140944, V1)

Carrier Site ID / Name: CT5818 / AWE - COVENTRY NW

Site Location: 712 Bread & Milk Street

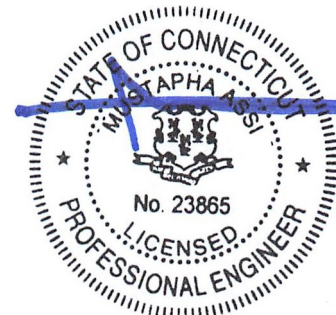
Coventry, Connecticut

Tolland County

Latitude: 41.818091

Longitude: -72.393175

Exp.01/31/2021



Analysis Result:

Max Structural Usage: 99.8% [Pass]

Max Foundation Usage: 36.0% [Pass]

10/22/2020

Additional Usage Caused by New Mount/Mount Modification : +0.8%

Report Prepared By : Linfeng Chen



Tower Engineering Solutions

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

Structural Analysis Report

Existing 178 ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02573-S

Customer Site Name: Coventry 2 CT

Carrier Name: AT&T (App#: 140944, V1)

Carrier Site ID / Name: CT5818 / AWE - COVENTRY NW

Site Location: 712 Bread & Milk Street

Coventry, Connecticut

Tolland County

Latitude: 41.818091

Longitude: -72.393175

Analysis Result:

Max Structural Usage: 99.8% [Pass]

Max Foundation Usage: 36.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification : +0.8%

Report Prepared By : Linfeng Chen

Introduction

The purpose of this report is to summarize the analysis results on the 178 ft Nudd Corporation 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	Fred A. Nudd Corporation Project # 7491R Rev A, dated 10/03/2002; Engineered Tower Solutions Job # 171015 (Mapping), dated 05/12/2017
Foundation Drawing	Fred A. Nudd Corporation, Project # 7491R Rev A Dated 10/03/2002; Engineered Tower Solutions Job # 171015 (Mapping), dated 05/12/2017
Geotechnical Report	Jaworski Geotech Inc., Project # 00214G Dated 06/14/2000
Modification Drawings	N/A
Mount Analysis	N/A

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. 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:	119.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1"1/2 radial ice concurrent
Service Load Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-H / 2018 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.298$, $S_1 = 0.055$

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	172.0	3	EMS - RR90-1702-DP - Panel	Low-Profile Platform w/ Mods*	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
2		3	Ericsson - KRY 112 144/1 - TMA			
3		3	Ericsson - KRY 112 489/2 - TMA			
4		3	Ericsson - Radio 4449 B71+B12 - RRU			
5		3	Kathrein - 782 11056 - Bias T			
6	170.0	3	RFS - APXVAARR24_43-U-NA20 - Panel			
7	163.0	6	Powerwave - 7770 - Panel	Low-Profile Platform	(12) 1 5/8" (6) 1/2" (2) 1/2" DC & (1) 3/8" Fiber Inside (1) 3" Innerduct	AT&T
8		2	KMW - AM-X-CD-16-65-00T - Panel			
9		1	Andrew - SBNH-1D6565C - Panel			
10		6	Powerwave LGP21401 - TMA			
11		6	Ericsson RRUS-11 - RRU			
12		1	Raycap DC6-48-60-18-8F - SP			
13	153.0	3	Comba ODI2-065R18K-GQ - Panel	(3) Commscope SF-SU7-2-96 Sector Frames	(1) 1 1/4" Hybrid	Dish Network
14		2	Ericsson 4415			
15		3	Ericsson 0208			
16	130.0	6	Andrew - SBNHH-1D65B - Panel	14'-6" Platform w/ Hand Rail [PV-LPP14M-HR-B]	(2) 1 5/8" Hybrid	Verizon
17		3	Amphenol - QUAD656C0000x - Panel			
18		3	Alcatel B13 RRH4X30-4R - RRU			
19		3	Alcatel B25 RRH4x30-4R - RRU			
20		3	Alcatel B66A RRH 4X45 - RRU			
21		2	RFS DB-T1-6Z-8AB-0Z			

*Mount modifications taken from TES Job # 81108

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
7	162.0	2	Cci DMP65R-BU6DA - Panel	Platform w/ Hand Rail SitePro HRK12 (Handrail Kit)	(12) 1 5/8" (2) 1" DC Power (4) 1/2" (1) 3/8" Fiber	AT&T
8		1	Cci DMP65R-BU8DA - Panel			
9		1	Cci HPA-65R-BU8AA - Panel			
10		2	Cci HPA-65R-BU6AA - Panel			
11		6	Powerwave 21401 TMA			
12		6	Powerwave 7020.00 RET			
13		3	Ericsson RRUS 8843 B2 B66A RRU			
14		3	Ericsson RRUS 4449 B5/B12 RRU			
15		3	Powerwave 7770 - Panel			
16		1	Raycap DC6-48-60-18-8F			

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:	64.6%	54.1%	99.8%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4855.8	39.7	63.5

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.

Service Load 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 1.0454 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 64.58% at 0.0ft

Structure: CT02573-S-SBA
Site Name: Coventry 2 CT
Height: 177.95 (ft)
Base Elev: 0.000 (ft)

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

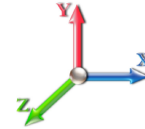
10/22/2020

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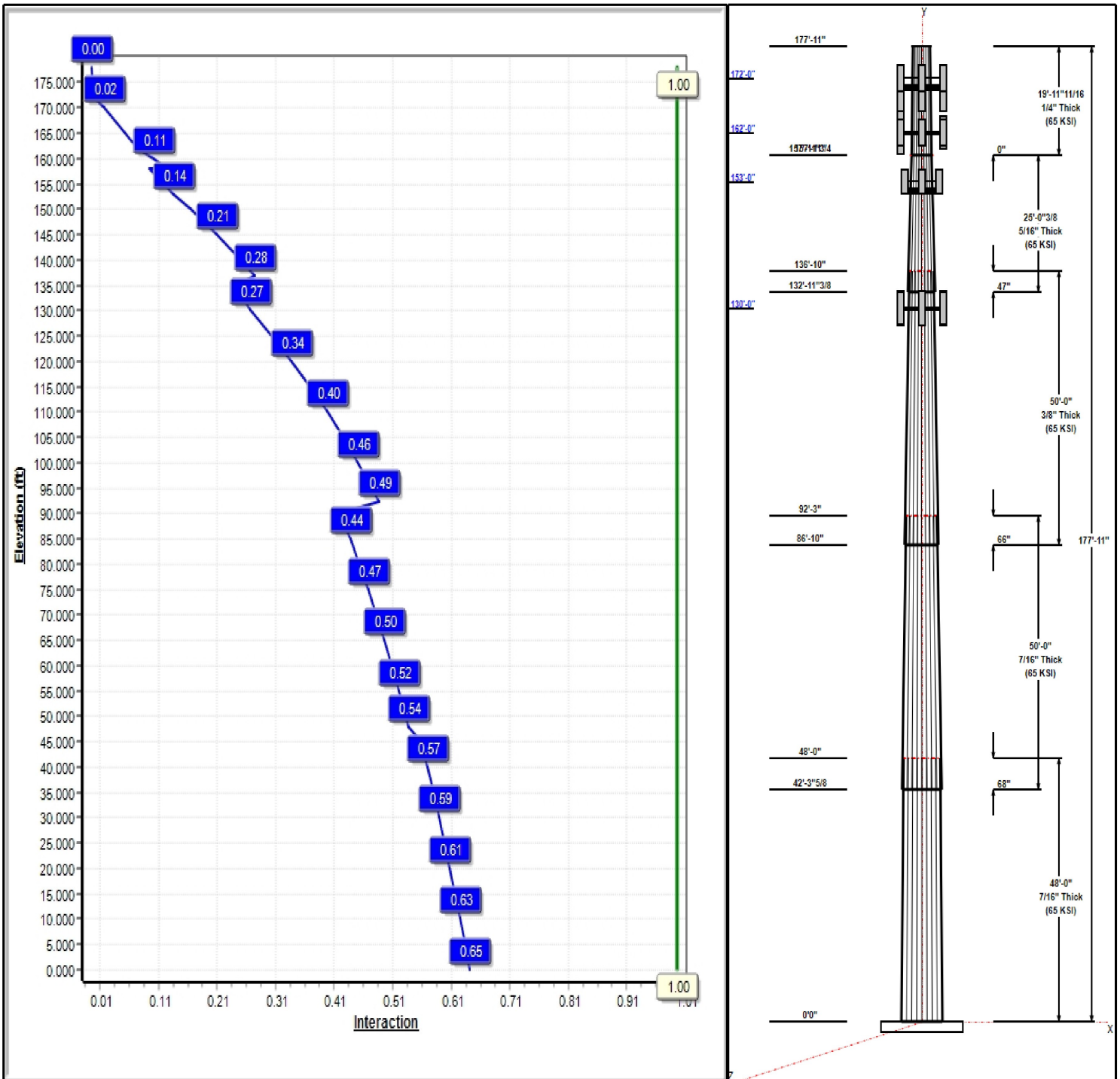
Dead Load Factor: 1.20
Wind Load Factor: 1.00

Load Case : 1.2D + 1.0W 119 mph Wind



Iterations: 24

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Structure: CT02573-S-SBA

Type: Tapered
Site Name: Coventry 2 CT
Height: 177.95 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23391

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Shaft Properties

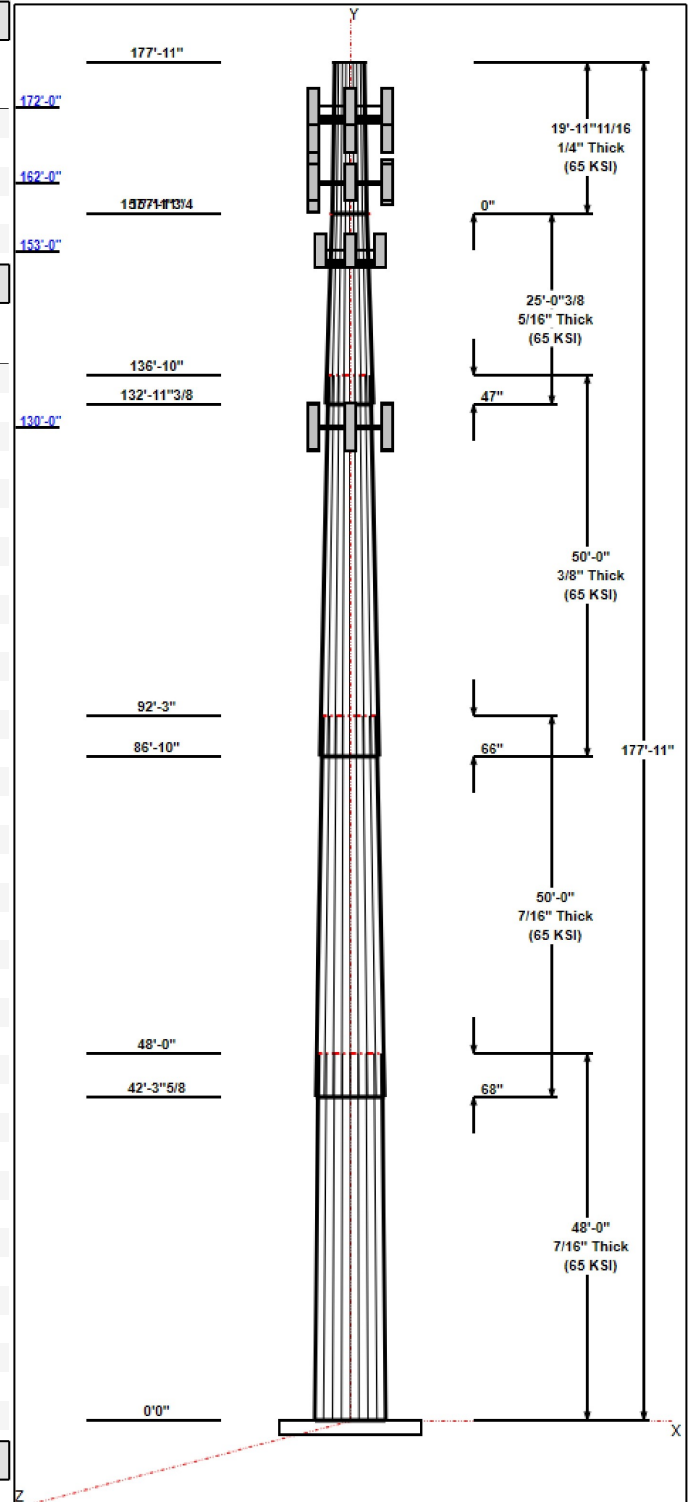
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.27	64.50	0.438		0.23391	65
2	50.00	43.78	55.48	0.438	Slip	0.23391	65
3	50.00	34.12	45.81	0.375	Slip	0.23391	65
4	25.03	29.80	35.65	0.313	Slip	0.23391	65
5	19.97	25.13	29.80	0.250	Butt	0.23391	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
177.95	177.95	1	6' Lightning rod	
172.00	172.00	3	T-Frames w/ Pipe Mount	T-Mobile
172.00	172.00	1	MS-1436 (Light Collar	T-Mobile
172.00	172.00	1	MS-HRECP	T-Mobile
172.00	172.00	1	MS-HR35	T-Mobile
172.00	172.00	1	MS-C1B-2875P	T-Mobile
172.00	172.00	3	RR90-17-02DP	T-Mobile
172.00	172.00	3	KRY 112 144/1	T-Mobile
172.00	172.00	3	KRY 112 89/4	T-Mobile
172.00	172.00	3	4449	T-Mobile
172.00	172.00	3	782 10660	T-Mobile
172.00	170.00	3	APXVAARR24_43-U-NA20	T-Mobile
162.00	162.00	2	Cci DMP65R-BU6DA	AT&T
162.00	162.00	1	Cci DMP65R-BU8DA	AT&T
162.00	162.00	1	Cci HPA-65R-BU8AA	AT&T
162.00	162.00	2	Cci HPA-65R-BU6AA	AT&T
162.00	162.00	6	Powerwave 21401 TMA	AT&T
162.00	162.00	6	Powerwave 7020.00 RET	AT&T
162.00	162.00	3	Ericsson RRUS 8843 B2	AT&T
162.00	162.00	3	Ericsson RRUS 4449	AT&T
162.00	162.00	1	HRK12 (Handrail Kit)	AT&T
162.00	162.00	1	HP Platform w/ Pipe Mount	AT&T
162.00	162.00	3	Powerwave 7770	AT&T
162.00	162.00	1	Raycap DC6-48-60-18-8F	AT&T
153.00	153.00	3	ODI2-065R18K-GQ	Dish Network
153.00	153.00	3	SF-SU7-2-96	Dish Network
153.00	153.00	2	4415	Dish Network
153.00	153.00	3	0208	Dish Network
153.00	153.00	2	Collar Mount (3-Sided)	Dish Network
153.00	153.00	3	3.0" Std Pipe	Dish Network
130.00	130.00	3	B13 RRH4X30-4R	Verizon
130.00	130.00	3	B25 RRH4x30-4R	Verizon
130.00	130.00	3	B66A RRH 4X45	Verizon
130.00	130.00	2	DB-T1-6Z-8AB-0Z	Verizon
130.00	130.00	1	PV-LPP14L-HR-B Platform	Verizon
130.00	130.00	6	SBNHH-1D65B	Verizon
130.00	130.00	3	QUAD656C0000x	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	173.00	Inside	1 5/8" Coax	T-Mobile
0.00	173.00	Inside	1 5/8" Fiber	T-Mobile
0.00	162.00	Inside	1 5/8" Coax	AT&T
0.00	162.00	Inside	1" DC Power	AT&T



Structure: CT02573-S-SBA

Type: Tapered
Site Name: Coventry 2 CT
Height: 177.95 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23391

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0.00	162.00	Inside	1/2" Coax	AT&T
0.00	162.00	Inside	3/8" Fiber	AT&T
0.00	153.00	Inside	1 1/4" Hybrid	Dish Network
0.00	130.00	Inside	1 5/8" Hybrid	Verizon

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.00" F1554 105	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.2500	68.0	50.0	Round

Reactions

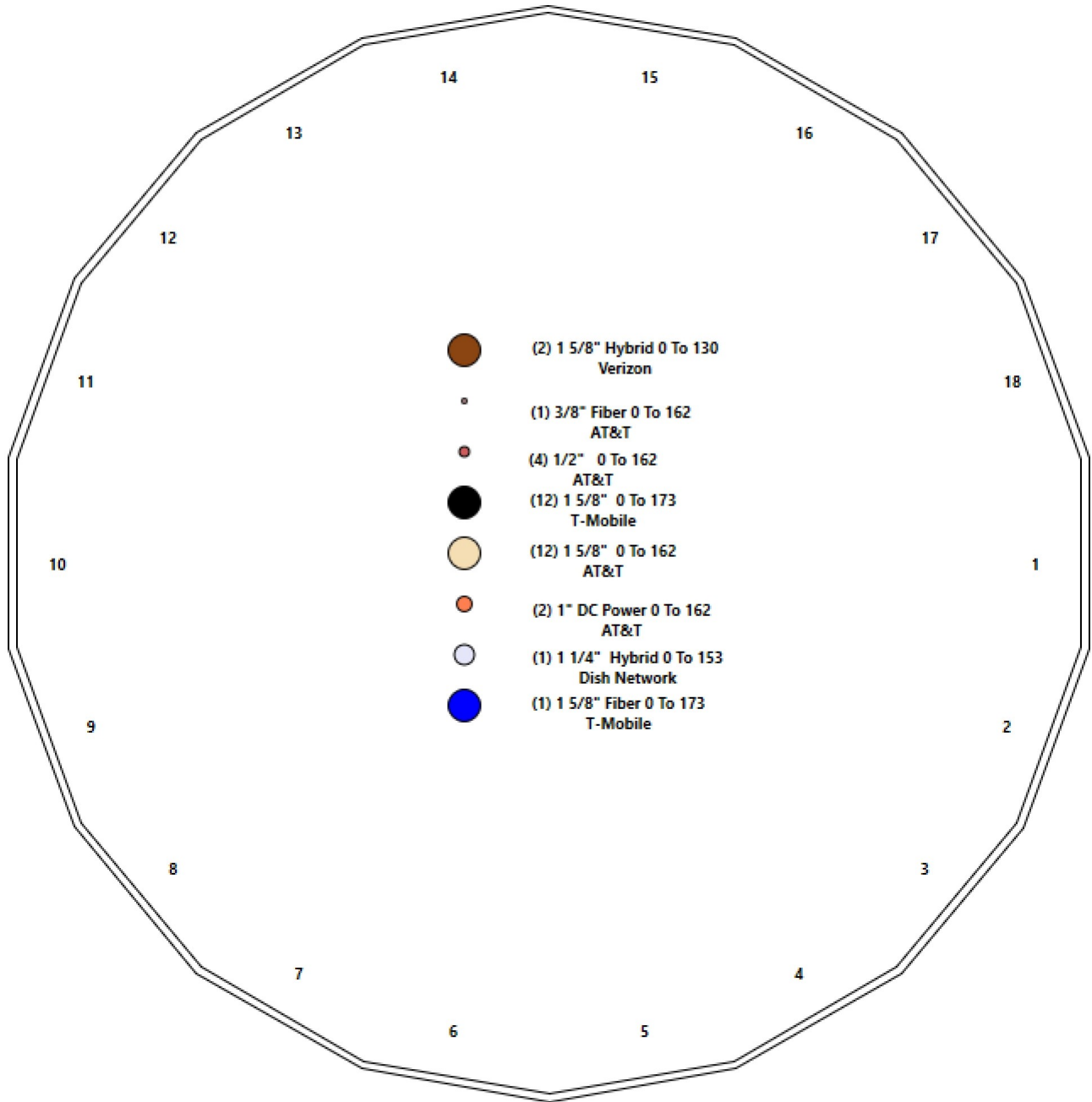
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 119 mph Wind	4855.8	39.7	63.5
0.9D + 1.0W 119 mph Wind	4806.7	39.7	47.6
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1428.9	11.5	94.6
1.2D + 1.0Ev + 1.0Eh	141.0	0.9	66.9
0.9D + 1.0Ev + 1.0Eh	140.0	0.9	50.9
1.0D + 1.0W 60 mph Wind	1098.0	9.0	53.0

Structure: CT02573-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Coventry 2 CT
Height: 177.95 (ft)

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Shaft Properties

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.4375	65		0.00	13,256
2	18	50.000	0.4375	65	Slip	68.38	11,622
3	18	50.000	0.3750	65	Slip	65.63	8,017
4	18	25.030	0.3125	65	Slip	46.63	2,738
5	18	19.972	0.2500	65	Flange	0.00	1,467
Total Shaft Weight:							37,101

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	64.50	0.00	88.96	46124.76	24.59	147.43	53.27	48.00	73.36	25874.8	20.06	121.7	0.233914
2	55.48	42.30	76.43	29256.05	20.95	126.81	43.78	92.30	60.19	14288.6	16.24	100.0	0.233914
3	45.81	86.83	54.08	14107.39	20.13	122.17	34.12	136.83	40.16	5777.20	14.63	90.98	0.233914
4	35.65	132.9	35.05	5530.46	18.71	114.09	29.80	157.98	29.24	3211.92	15.40	95.35	0.233914
5	29.80	157.9	23.44	2585.91	19.61	119.19	25.13	177.95	19.74	1543.03	16.31	100.5	0.233914

Load Summary

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020	
Site Name: Coventry 2 CT	Exposure: C		
Height: 177.95 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 6



Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	177.95	6' Lightning rod	1	6.50	0.38	1.00	43.43	1.486	1.00	0.00	0.00
2	172.00	T-Frames w/ Pipe Mount	3	450.00	16.00	0.75	806.68	24.153	0.75	0.00	0.00
3	172.00	MS-1436 (Light Collar Mount)	1	65.60	1.50	1.00	158.45	3.092	1.00	0.00	0.00
4	172.00	MS-HRECP	1	514.00	12.25	1.00	1132.39	24.387	1.00	0.00	0.00
5	172.00	MS-HR35	1	430.00	8.75	1.00	947.33	17.419	1.00	0.00	0.00
6	172.00	MS-C1B-2875P	1	329.00	10.00	1.00	794.67	20.616	1.00	0.00	0.00
7	172.00	RR90-17-02DP	3	13.50	4.36	0.73	116.85	5.366	0.77	0.00	0.00
8	172.00	KRY 112 144/1	3	11.00	0.41	0.50	21.93	0.892	0.50	0.00	0.00
9	172.00	KRY 112 89/4	3	15.40	0.65	0.50	33.26	1.271	0.50	0.00	0.00
10	172.00	4449	3	70.00	1.65	0.67	169.08	2.234	0.67	0.00	0.00
11	172.00	782 10660	3	2.60	0.28	0.50	9.22	0.687	0.50	0.00	0.00
12	172.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	594.52	22.159	0.72	0.00	-2.00
13	162.00	Cci DMP65R-BU6DA	2	79.40	12.71	0.72	376.22	14.185	0.72	0.00	0.00
14	162.00	Cci DMP65R-BU8DA	1	95.70	17.87	0.72	559.29	19.680	0.72	0.00	0.00
15	162.00	Cci HPA-65R-BU8AA	1	54.00	11.23	0.86	322.98	12.906	0.86	0.00	0.00
16	162.00	Cci HPA-65R-BU6AA	2	43.00	7.92	0.99	287.86	9.209	0.99	0.00	0.00
17	162.00	Powerwave 21401 TMA	6	17.50	0.82	0.50	46.05	1.236	0.50	0.00	0.00
18	162.00	Powerwave 7020.00 RET	6	2.20	0.40	0.50	12.51	0.888	0.50	0.00	0.00
19	162.00	Ericsson RRUS 8843 B2 B66A RRU	3	72.00	1.64	0.67	119.21	2.141	0.67	0.00	0.00
20	162.00	Ericsson RRUS 4449 B5/B12 RRU	3	70.00	1.65	0.67	138.91	2.192	0.67	0.00	0.00
21	162.00	HRK12 (Handrail Kit)	1	261.72	6.75	1.00	574.71	13.398	1.00	0.00	0.00
22	162.00	HP Platform w/ Pipe Mount	1	1600.00	25.00	1.00	3006.96	45.225	1.00	0.00	0.00
23	162.00	Powerwave 7770	3	35.00	5.50	0.73	171.46	6.574	0.75	0.00	0.00
24	162.00	Raycap DC6-48-60-18-8F	1	31.80	0.92	1.00	94.10	1.361	1.00	0.00	0.00
25	153.00	ODI2-065R18K-GQ	3	25.10	4.85	0.70	131.84	5.834	0.70	0.00	0.00
26	153.00	SF-SU7-2-96	3	395.00	15.10	0.75	781.81	34.112	0.75	0.00	0.00
27	153.00	4415	2	44.10	1.86	0.67	91.63	2.434	0.67	0.00	0.00
28	153.00	0208	3	19.80	1.37	0.67	54.81	1.869	0.67	0.00	0.00
29	153.00	Collar Mount (3-Sided)	2	220.00	2.50	1.00	527.77	5.123	0.75	0.00	0.00
30	153.00	3.0" Std Pipe	3	30.00	1.75	1.00	71.97	3.586	0.75	0.00	0.00
31	130.00	B13 RRH4X30-4R	3	57.20	2.16	0.75	118.61	2.762	0.77	0.00	0.00
32	130.00	B25 RRH4x30-4R	3	51.00	2.14	0.75	107.93	2.739	0.77	0.00	0.00
33	130.00	B66A RRH 4X45	3	64.00	2.60	0.75	146.11	3.293	0.77	0.00	0.00
34	130.00	DB-T1-6Z-8AB-0Z	2	18.90	4.80	0.78	160.23	5.660	0.79	0.00	0.00
35	130.00	PV-LPP14L-HR-B Platform w/	1	1641.00	36.80	1.00	3764.05	68.456	1.00	0.00	0.00
36	130.00	SBNHH-1D65B	6	40.00	8.16	0.83	239.70	9.440	0.85	0.00	0.00
37	130.00	QUAD656C0000x	3	54.00	13.24	0.71	340.76	14.748	0.73	0.00	0.00
Totals:			93	10,889.12			27,880.18				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	173.00	(12) 1 5/8" Coax	0.00	Inside
0.00	173.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	162.00	(12) 1 5/8" Coax	0.00	Inside
0.00	162.00	(2) 1" DC Power	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	162.00	(4) 1/2" Coax			0.00	Inside					
0.00	162.00	(1) 3/8" Fiber			0.00	Inside					
0.00	153.00	(1) 1 1/4" Hybrid			0.00	Inside					
0.00	130.00	(2) 1 5/8" Hybrid			0.00	Inside					

Shaft Section Properties

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.4375	64.500	88.956	46124.8	24.59	147.43	72.5	1408.	0.0
5.00		0.4375	63.330	87.332	43644.3	24.11	144.76	73.0	1357.	1499.7
10.00		0.4375	62.161	85.708	41254.5	23.64	142.08	73.6	1307.	1472.0
15.00		0.4375	60.991	84.083	38953.5	23.17	139.41	74.1	1257.	1444.4
20.00		0.4375	59.822	82.459	36739.7	22.70	136.74	74.7	1209.	1416.8
25.00		0.4375	58.652	80.835	34611.4	22.23	134.06	75.3	1162.	1389.1
30.00		0.4375	57.483	79.211	32566.9	21.76	131.39	75.8	1115.	1361.5
35.00		0.4375	56.313	77.587	30604.6	21.29	128.72	76.4	1070.	1333.9
40.00		0.4375	55.143	75.963	28722.7	20.81	126.04	76.9	1025.	1306.2
42.30	Bot - Section 2	0.4375	54.605	75.216	27882.9	20.60	124.81	77.2	1005.	592.1
45.00		0.4375	53.974	74.339	26919.6	20.34	123.37	77.5	982.4	1384.1
48.00	Top - Section 1	0.4375	54.147	74.580	27181.8	20.41	123.76	0.0	0.0	1520.2
50.00		0.4375	53.679	73.930	26477.7	20.22	122.70	77.6	971.5	505.3
55.00		0.4375	52.510	72.306	24770.9	19.75	120.02	78.2	929.1	1244.0
60.00		0.4375	51.340	70.682	23139.0	19.28	117.35	78.7	887.7	1216.4
65.00		0.4375	50.171	69.058	21580.4	18.81	114.68	79.3	847.2	1188.8
70.00		0.4375	49.001	67.434	20093.4	18.34	112.00	79.8	807.7	1161.1
75.00		0.4375	47.831	65.810	18676.3	17.87	109.33	80.4	769.1	1133.5
80.00		0.4375	46.662	64.186	17327.5	17.40	106.66	80.9	731.4	1105.9
85.00		0.4375	45.492	62.562	16045.2	16.92	103.98	81.5	694.7	1078.2
86.83	Bot - Section 3	0.4375	45.063	61.966	15591.4	16.75	103.00	81.7	681.5	388.4
90.00		0.4375	44.323	60.938	14827.8	16.45	101.31	82.0	658.9	1240.2
92.30	Top - Section 2	0.3750	44.534	52.559	12949.1	19.53	118.76	0.0	0.0	888.7
95.00		0.3750	43.903	51.808	12401.9	19.23	117.08	78.8	556.4	479.1
100.00		0.3750	42.734	50.416	11428.8	18.68	113.96	79.4	526.8	869.6
105.00		0.3750	41.564	49.023	10508.0	18.13	110.84	80.1	497.9	845.9
110.00		0.3750	40.394	47.631	9638.1	17.58	107.72	80.7	469.9	822.2
115.00		0.3750	39.225	46.239	8817.5	17.03	104.60	81.4	442.8	798.6
120.00		0.3750	38.055	44.847	8044.9	16.48	101.48	82.0	416.4	774.9
125.00		0.3750	36.886	43.455	7318.8	15.93	98.36	82.5	390.8	751.2
130.00		0.3750	35.716	42.063	6637.7	15.38	95.24	82.5	366.0	727.5
132.95	Bot - Section 4	0.3750	35.027	41.243	6256.7	15.06	93.40	82.5	351.8	417.8
135.00		0.3750	34.547	40.671	6000.3	14.83	92.12	82.5	342.1	529.1
136.83	Top - Section 3	0.3125	34.743	34.149	5114.6	18.19	111.18	0.0	0.0	466.5
140.00		0.3125	34.002	33.415	4791.6	17.77	108.81	80.5	277.6	364.0
145.00		0.3125	32.832	32.255	4309.7	17.11	105.06	81.3	258.5	558.6
150.00		0.3125	31.663	31.095	3861.2	16.46	101.32	82.0	240.2	538.9
153.00		0.3125	30.961	30.399	3607.7	16.06	99.08	82.5	229.5	313.9
155.00		0.3125	30.493	29.935	3445.0	15.80	97.58	82.5	222.5	205.3
157.98	Top - Section 4	0.3125	29.797	29.244	3211.9	15.40	95.35	82.5	212.3	299.8
157.98	Bot - Section 5	0.2500	29.797	23.445	2585.9	19.25	119.19	78.3	170.9	
160.00		0.2500	29.324	23.069	2463.7	19.27	117.30	78.7	165.5	160.0
162.00		0.2500	28.856	22.698	2346.7	18.94	115.42	79.1	160.2	155.7
165.00		0.2500	28.154	22.141	2178.2	18.45	112.62	79.7	152.4	228.9
170.00		0.2500	26.985	21.213	1915.6	17.62	107.94	80.7	139.8	368.8
172.00		0.2500	26.517	20.842	1816.8	17.29	106.07	81.1	134.9	143.1
175.00		0.2500	25.815	20.285	1675.0	16.80	103.26	81.6	127.8	209.9
177.95		0.2500	25.125	19.738	1543.0	16.31	100.50	82.2	121.0	200.9

37100.9

Wind Loading - Shaft

Structure: CT02573-S-SBA

Code: EIA/TIA-222-H

10/22/2020

Site Name: Coventry 2 CT

Exposure: C

Height: 177.95 (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

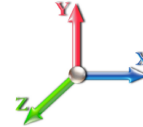


Load Case: 1.2D + 1.0W 119 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	28.415	31.26	589.95	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	28.415	31.26	579.26	0.730	0.000	5.00	27.042	19.74	617.0	0.0	1799.6
10.00		1.00	0.85	28.415	31.26	568.56	0.730	0.000	5.00	26.547	19.38	605.7	0.0	1766.4
15.00		1.00	0.85	28.415	31.26	557.86	0.730	0.000	5.00	26.052	19.02	594.4	0.0	1733.3
20.00		1.00	0.90	30.149	33.16	563.62	0.730	0.000	5.00	25.558	18.66	618.7	0.0	1700.1
25.00		1.00	0.95	31.599	34.76	565.73	0.730	0.000	5.00	25.063	18.30	636.0	0.0	1667.0
30.00		1.00	0.98	32.836	36.12	565.19	0.730	0.000	5.00	24.568	17.93	647.8	0.0	1633.8
35.00		1.00	1.01	33.919	37.31	562.75	0.730	0.000	5.00	24.073	17.57	655.7	0.0	1600.7
40.00		1.00	1.04	34.886	38.37	558.86	0.730	0.000	5.00	23.578	17.21	660.5	0.0	1567.5
42.30	Bot - Section 2	1.00	1.06	35.299	38.83	556.68	0.730	0.000	2.30	10.689	7.80	303.0	0.0	710.6
45.00		1.00	1.07	35.762	39.34	553.83	0.730	0.000	2.70	12.594	9.19	361.7	0.0	1661.0
48.00	Top - Section 1	1.00	1.08	36.251	39.88	550.36	0.730	0.000	3.00	13.835	10.10	402.7	0.0	1824.3
50.00		1.00	1.09	36.564	40.22	556.95	0.730	0.000	2.00	9.124	6.66	267.9	0.0	606.4
55.00		1.00	1.12	37.305	41.04	550.31	0.730	0.000	5.00	22.464	16.40	672.9	0.0	1492.8
60.00		1.00	1.14	37.995	41.79	543.01	0.730	0.000	5.00	21.969	16.04	670.3	0.0	1459.7
65.00		1.00	1.16	38.640	42.50	535.13	0.730	0.000	5.00	21.474	15.68	666.3	0.0	1426.5
70.00		1.00	1.17	39.248	43.17	526.74	0.730	0.000	5.00	20.979	15.32	661.2	0.0	1393.4
75.00		1.00	1.19	39.822	43.80	517.92	0.730	0.000	5.00	20.485	14.95	655.0	0.0	1360.2
80.00		1.00	1.21	40.367	44.40	508.70	0.730	0.000	5.00	19.990	14.59	648.0	0.0	1327.0
85.00		1.00	1.22	40.886	44.97	499.12	0.730	0.000	5.00	19.495	14.23	640.0	0.0	1293.9
86.83	Bot - Section 3	1.00	1.23	41.070	45.18	495.53	0.730	0.000	1.83	7.024	5.13	231.6	0.0	466.1
90.00		1.00	1.24	41.381	45.52	489.23	0.730	0.000	3.17	12.177	8.89	404.6	0.0	1488.2
92.30	Top - Section 2	1.00	1.24	41.601	45.76	484.57	0.730	0.000	2.30	8.728	6.37	291.6	0.0	1066.4
95.00		1.00	1.25	41.854	46.04	487.36	0.730	0.000	2.70	10.095	7.37	339.3	0.0	574.9
100.00		1.00	1.27	42.309	46.54	476.95	0.730	0.000	5.00	18.328	13.38	622.7	0.0	1043.5
105.00		1.00	1.28	42.745	47.02	466.28	0.730	0.000	5.00	17.833	13.02	612.1	0.0	1015.1
110.00		1.00	1.29	43.166	47.48	455.39	0.730	0.000	5.00	17.338	12.66	601.0	0.0	986.7
115.00		1.00	1.30	43.572	47.93	444.27	0.730	0.000	5.00	16.843	12.30	589.3	0.0	958.3
120.00		1.00	1.32	43.964	48.36	432.96	0.730	0.000	5.00	16.348	11.93	577.2	0.0	929.8
125.00		1.00	1.33	44.344	48.78	421.46	0.730	0.000	5.00	15.854	11.57	564.5	0.0	901.4
130.00	Appurtenance(s)	1.00	1.34	44.711	49.18	409.79	0.730	0.000	5.00	15.359	11.21	551.4	0.0	873.0
132.95	Bot - Section 4	1.00	1.34	44.923	49.42	402.83	0.730	0.000	2.95	8.823	6.44	318.3	0.0	501.4
135.00		1.00	1.35	45.068	49.57	397.95	0.730	0.000	2.05	6.149	4.49	222.5	0.0	634.9
136.83	Top - Section 3	1.00	1.35	45.196	49.72	393.57	0.730	0.000	1.83	5.423	3.96	196.8	0.0	559.8
140.00		1.00	1.36	45.414	49.96	393.18	0.730	0.000	3.17	9.210	6.72	335.9	0.0	436.8
145.00		1.00	1.37	45.751	50.33	381.06	0.730	0.000	5.00	14.139	10.32	519.4	0.0	670.4
150.00		1.00	1.38	46.079	50.69	368.80	0.730	0.000	5.00	13.644	9.96	504.8	0.0	646.7
153.00	Appurtenance(s)	1.00	1.38	46.271	50.90	361.38	0.730	0.000	3.00	7.949	5.80	295.3	0.0	376.6
155.00		1.00	1.39	46.398	51.04	356.40	0.730	0.000	2.00	5.200	3.80	193.7	0.0	246.4
157.98	Top - Section 4	1.00	1.39	46.584	51.24	348.96	0.730	0.000	2.98	7.596	5.55	284.2	0.0	359.8
160.00		1.00	1.40	46.709	51.38	343.88	0.730	0.000	2.02	5.058	3.69	189.7	0.0	192.0
162.00	Appurtenance(s)	1.00	1.40	46.831	51.51	338.84	0.730	0.000	2.00	4.923	3.59	185.1	0.0	186.9
165.00		1.00	1.41	47.013	51.71	331.23	0.730	0.000	3.00	7.236	5.28	273.2	0.0	274.6
170.00		1.00	1.42	47.309	52.04	318.47	0.730	0.000	5.00	11.664	8.52	443.1	0.0	442.6
172.00	Appurtenance(s)	1.00	1.42	47.426	52.17	313.34	0.730	0.000	2.00	4.527	3.30	172.4	0.0	171.7
175.00		1.00	1.42	47.599	52.36	305.60	0.730	0.000	3.00	6.642	4.85	253.9	0.0	251.9
177.95	Appurtenance(s)	1.00	1.43	47.766	52.54	297.96	0.730	0.000	2.95	6.358	4.64	243.9	0.0	241.1

Wind Loading - Shaft

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	
		Struct Class:	II	Page: 10



Totals:	177.95	21,002.5	44,521.1
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Discrete Appurtenance Forces

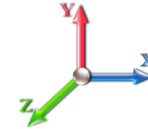
Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0W 119 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

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	177.95	6' Lightning rod	1	47.766	52.543	1.00	1.00	0.38	7.80	0.000	0.000	19.97	0.00	0.00
2	172.00	KRY 112 144/1	3	47.426	52.168	0.38	0.75	0.46	39.60	0.000	0.000	24.06	0.00	0.00
3	172.00	MS-1436 (Light Collar)	1	47.426	52.168	1.00	1.00	1.50	78.72	0.000	0.000	78.25	0.00	0.00
4	172.00	MS-HRECP	1	47.426	52.168	1.00	1.00	12.25	616.80	0.000	0.000	639.06	0.00	0.00
5	172.00	MS-HR35	1	47.426	52.168	1.00	1.00	8.75	516.00	0.000	0.000	456.47	0.00	0.00
6	172.00	RR90-17-02DP	3	47.426	52.168	0.55	0.75	7.15	48.60	0.000	0.000	373.08	0.00	0.00
7	172.00	MS-C1B-2875P	1	47.426	52.168	1.00	1.00	10.00	394.80	0.000	0.000	521.68	0.00	0.00
8	172.00	4449	3	47.426	52.168	0.50	0.75	2.49	252.00	0.000	0.000	129.76	0.00	0.00
9	172.00	782 10660	3	47.426	52.168	0.38	0.75	0.32	9.36	0.000	0.000	16.43	0.00	0.00
10	172.00	APXVAARR24_43-U-NA2	3	47.309	52.040	0.53	0.75	31.97	460.80	0.000	-2.000	1663.67	0.00	-3327.34
11	172.00	T-Frames w/ Pipe Mount	3	47.426	52.168	0.56	0.75	27.00	1620.00	0.000	0.000	1408.54	0.00	0.00
12	172.00	KRY 112 89/4	3	47.426	52.168	0.38	0.75	0.73	55.44	0.000	0.000	38.15	0.00	0.00
13	162.00	HRK12 (Handrail Kit)	1	46.831	51.515	1.00	1.00	6.75	314.06	0.000	0.000	347.72	0.00	0.00
14	162.00	Ericsson RRUS 8843 B2	3	46.831	51.515	0.50	0.75	2.47	259.20	0.000	0.000	127.36	0.00	0.00
15	162.00	Ericsson RRUS 4449	3	46.831	51.515	0.50	0.75	2.49	252.00	0.000	0.000	128.14	0.00	0.00
16	162.00	Raycap DC6-48-60-18-8F	1	46.831	51.515	1.00	1.00	0.92	38.16	0.000	0.000	47.39	0.00	0.00
17	162.00	HP Platform w/ Pipe	1	46.831	51.515	1.00	1.00	25.00	1920.00	0.000	0.000	1287.86	0.00	0.00
18	162.00	Powerwave 7770	3	46.831	51.515	0.58	0.80	9.64	126.00	0.000	0.000	496.39	0.00	0.00
19	162.00	Powerwave 7020.00 RET	6	46.831	51.515	0.38	0.75	0.90	15.84	0.000	0.000	46.36	0.00	0.00
20	162.00	Powerwave 21401 TMA	6	46.831	51.515	0.38	0.75	1.84	126.00	0.000	0.000	95.04	0.00	0.00
21	162.00	Cci HPA-65R-BU6AA	2	46.831	51.515	0.89	0.90	14.11	103.20	0.000	0.000	727.05	0.00	0.00
22	162.00	Cci HPA-65R-BU8AA	1	46.831	51.515	0.86	1.00	9.66	64.80	0.000	0.000	497.52	0.00	0.00
23	162.00	Cci DMP65R-BU8DA	1	46.831	51.515	0.72	1.00	12.87	114.84	0.000	0.000	662.81	0.00	0.00
24	162.00	Cci DMP65R-BU6DA	2	46.831	51.515	0.65	0.90	16.47	190.56	0.000	0.000	848.56	0.00	0.00
25	153.00	ODI2-065R18K-GQ	3	46.271	50.898	0.56	0.80	8.15	90.36	0.000	0.000	414.72	0.00	0.00
26	153.00	SF-SU7-2-96	3	46.271	50.898	0.56	0.75	25.48	1422.00	0.000	0.000	1296.96	0.00	0.00
27	153.00	4415	2	46.271	50.898	0.54	0.80	1.99	105.84	0.000	0.000	101.49	0.00	0.00
28	153.00	0208	3	46.271	50.898	0.54	0.80	2.20	71.28	0.000	0.000	112.13	0.00	0.00
29	153.00	Collar Mount (3-Sided)	2	46.271	50.898	1.00	1.00	5.00	528.00	0.000	0.000	254.49	0.00	0.00
30	153.00	3.0" Std Pipe	3	46.271	50.898	1.00	1.00	5.25	108.00	0.000	0.000	267.22	0.00	0.00
31	130.00	PV-LPP14L-HR-B	1	44.711	49.182	1.00	1.00	36.80	1969.20	0.000	0.000	1809.91	0.00	0.00
32	130.00	DB-T1-6Z-8AB-OZ	2	44.711	49.182	0.70	0.90	6.74	45.36	0.000	0.000	331.45	0.00	0.00
33	130.00	QUAD656C0000x	3	44.711	49.182	0.57	0.80	22.56	194.40	0.000	0.000	1109.60	0.00	0.00
34	130.00	SBNHH-1D65B	6	44.711	49.182	0.66	0.80	32.51	288.00	0.000	0.000	1598.89	0.00	0.00
35	130.00	B66A RRH 4X45	3	44.711	49.182	0.60	0.80	4.68	230.40	0.000	0.000	230.17	0.00	0.00
36	130.00	B25 RRH4x30-4R	3	44.711	49.182	0.60	0.80	3.85	183.60	0.000	0.000	189.45	0.00	0.00
37	130.00	B13 RRH4X30-4R	3	44.711	49.182	0.60	0.80	3.89	205.92	0.000	0.000	191.22	0.00	0.00

Totals: 13,066.94

18,589.05

Total Applied Force Summary

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

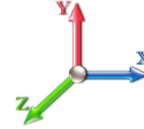


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Load Case: 1.2D + 1.0W 119 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		617.02	1982.12	0.00	0.00
10.00		605.73	1948.96	0.00	0.00
15.00		594.44	1915.80	0.00	0.00
20.00		618.75	1882.65	0.00	0.00
25.00		635.95	1849.49	0.00	0.00
30.00		647.79	1816.33	0.00	0.00
35.00		655.68	1783.17	0.00	0.00
40.00		660.51	1750.02	0.00	0.00
42.30		303.00	794.59	0.00	0.00
45.00		361.65	1759.44	0.00	0.00
48.00		402.72	1933.77	0.00	0.00
50.00		267.89	679.42	0.00	0.00
55.00		672.93	1675.35	0.00	0.00
60.00		670.27	1642.19	0.00	0.00
65.00		666.31	1609.04	0.00	0.00
70.00		661.19	1575.88	0.00	0.00
75.00		655.04	1542.72	0.00	0.00
80.00		647.96	1509.56	0.00	0.00
85.00		640.04	1476.41	0.00	0.00
86.83		231.65	533.04	0.00	0.00
90.00		404.62	1603.81	0.00	0.00
92.30		291.56	1150.42	0.00	0.00
95.00		339.28	673.36	0.00	0.00
100.00		622.66	1226.05	0.00	0.00
105.00		612.11	1197.63	0.00	0.00
110.00		600.98	1169.21	0.00	0.00
115.00		589.32	1140.78	0.00	0.00
120.00		577.15	1112.36	0.00	0.00
125.00		564.51	1083.94	0.00	0.00
130.00	(21) attachments	6012.13	4172.40	0.00	0.00
132.95		318.29	601.22	0.00	0.00
135.00		222.53	704.39	0.00	0.00
136.83		196.82	621.88	0.00	0.00
140.00		335.88	544.06	0.00	0.00
145.00		519.43	839.69	0.00	0.00
150.00		504.84	816.01	0.00	0.00
153.00	(16) attachments	2742.34	2803.72	0.00	0.00
155.00		193.75	312.50	0.00	0.00
157.98		284.15	458.28	0.00	0.00
160.00		189.71	258.90	0.00	0.00
162.00	(30) attachments	5497.34	3777.69	0.00	0.00
165.00		273.18	323.53	0.00	0.00
170.00		443.12	524.06	0.00	0.00
172.00	(25) attachments	5521.58	4296.44	0.00	-3327.34
175.00		253.88	268.20	0.00	0.00
177.95	(1) attachments	263.84	248.85	0.00	0.00

Total Applied Force Summary

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	
		Struct Class:	II	Page: 13



Totals:	39,591.56	63,589.33	0.00	-3,327.34
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Calculated Forces

Structure: CT02573-S-SBA

Code: EIA/TIA-222-H

10/22/2020

Site Name: Coventry 2 CT

Exposure: C

Height: 177.95 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 14

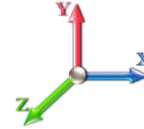


Load Case: 1.2D + 1.0W 119 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-63.54	-39.67	0.00	-4855.8	0.00	4855.80	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.646
5.00	-61.45	-39.21	0.00	-4657.4	0.00	4657.43	5740.73	1532.67	7997.69	7435.53	0.08	-0.147	0.000	0.638
10.00	-59.41	-38.75	0.00	-4461.3	0.00	4461.37	5676.74	1504.17	7703.00	7214.97	0.31	-0.295	0.000	0.629
15.00	-57.39	-38.30	0.00	-4267.6	0.00	4267.61	5611.13	1475.67	7413.85	6995.50	0.70	-0.446	0.000	0.621
20.00	-55.42	-37.81	0.00	-4076.1	0.00	4076.11	5543.90	1447.16	7130.22	6777.22	1.25	-0.598	0.000	0.612
25.00	-53.47	-37.30	0.00	-3887.0	0.00	3887.06	5475.05	1418.66	6852.13	6560.27	1.96	-0.752	0.000	0.603
30.00	-51.57	-36.77	0.00	-3700.5	0.00	3700.56	5404.57	1390.16	6579.57	6344.75	2.83	-0.908	0.000	0.593
35.00	-49.70	-36.22	0.00	-3516.7	0.00	3516.74	5332.48	1361.66	6312.54	6130.79	3.87	-1.066	0.000	0.584
40.00	-47.89	-35.62	0.00	-3335.6	0.00	3335.65	5258.76	1333.16	6051.04	5918.51	5.07	-1.225	0.000	0.573
42.30	-47.05	-35.37	0.00	-3253.6	0.00	3253.66	5224.28	1320.03	5932.50	5821.36	5.68	-1.300	0.000	0.569
45.00	-45.24	-35.04	0.00	-3158.2	0.00	3158.24	5183.43	1304.65	5795.07	5708.01	6.44	-1.388	0.000	0.563
48.00	-43.27	-34.65	0.00	-3053.1	0.00	3053.13	5194.69	1308.88	5832.64	5739.07	7.35	-1.487	0.000	0.541
50.00	-42.53	-34.45	0.00	-2983.8	0.00	2983.84	5164.20	1297.48	5731.48	5655.29	7.98	-1.553	0.000	0.537
55.00	-40.78	-33.84	0.00	-2811.6	0.00	2811.61	5086.83	1268.97	5482.43	5447.20	9.70	-1.709	0.000	0.525
60.00	-39.07	-33.22	0.00	-2642.4	0.00	2642.44	5007.85	1240.47	5238.92	5241.17	11.57	-1.866	0.000	0.513
65.00	-37.39	-32.60	0.00	-2476.3	0.00	2476.33	4927.24	1211.97	5000.94	5037.31	13.61	-2.023	0.000	0.500
70.00	-35.76	-31.98	0.00	-2313.3	0.00	2313.31	4845.02	1183.47	4768.49	4835.75	15.81	-2.181	0.000	0.486
75.00	-34.15	-31.36	0.00	-2153.3	0.00	2153.39	4761.17	1154.97	4541.58	4636.60	18.18	-2.339	0.000	0.472
80.00	-32.59	-30.74	0.00	-1996.5	0.00	1996.57	4675.70	1126.46	4320.19	4439.97	20.71	-2.497	0.000	0.457
85.00	-31.09	-30.10	0.00	-1842.8	0.00	1842.86	4588.61	1097.96	4104.34	4245.99	23.41	-2.655	0.000	0.442
86.83	-30.52	-29.88	0.00	-1787.6	0.00	1787.69	4556.28	1087.51	4026.58	4175.55	24.45	-2.714	0.000	0.436
90.00	-28.90	-29.44	0.00	-1693.0	0.00	1693.06	4499.90	1069.46	3894.02	4054.78	26.28	-2.814	0.000	0.425
92.30	-27.72	-29.13	0.00	-1625.2	0.00	1625.28	3709.97	922.40	3379.54	3368.78	27.65	-2.887	0.000	0.491
95.00	-27.00	-28.82	0.00	-1546.6	0.00	1546.68	3673.22	909.22	3283.64	3287.35	29.31	-2.973	0.000	0.479
100.00	-25.73	-28.21	0.00	-1402.5	0.00	1402.58	3603.88	884.79	3109.55	3137.88	32.51	-3.142	0.000	0.455
105.00	-24.49	-27.60	0.00	-1261.5	0.00	1261.54	3532.91	860.36	2940.20	2990.41	35.89	-3.308	0.000	0.430
110.00	-23.28	-27.00	0.00	-1123.5	0.00	1123.54	3460.32	835.93	2775.60	2845.05	39.44	-3.469	0.000	0.403
115.00	-22.11	-26.40	0.00	-988.56	0.00	988.56	3386.11	811.50	2615.74	2701.92	43.16	-3.625	0.000	0.373
120.00	-20.97	-25.80	0.00	-856.58	0.00	856.58	3310.28	787.07	2460.61	2561.13	47.03	-3.774	0.000	0.342
125.00	-19.87	-25.21	0.00	-727.57	0.00	727.57	3228.52	762.64	2310.23	2419.57	51.06	-3.914	0.000	0.308
130.00	-16.09	-18.95	0.00	-601.51	0.00	601.51	3125.09	738.21	2164.59	2266.28	55.23	-4.043	0.000	0.271
132.95	-15.49	-18.61	0.00	-545.64	0.00	545.64	3064.12	723.81	2080.95	2178.25	57.75	-4.115	0.000	0.256
135.00	-14.79	-18.35	0.00	-507.45	0.00	507.45	3021.67	713.78	2023.69	2118.00	59.52	-4.165	0.000	0.245
136.83	-14.17	-18.12	0.00	-473.81	0.00	473.81	2458.83	599.32	1712.04	1739.79	61.13	-4.207	0.000	0.279
140.00	-13.62	-17.77	0.00	-416.43	0.00	416.43	2420.71	586.43	1639.17	1675.64	63.94	-4.277	0.000	0.255
145.00	-12.79	-17.21	0.00	-327.60	0.00	327.60	2359.20	566.07	1527.33	1575.85	68.48	-4.387	0.000	0.214
150.00	-12.00	-16.66	0.00	-241.56	0.00	241.56	2296.08	545.71	1419.45	1478.00	73.12	-4.481	0.000	0.170
153.00	-9.41	-13.71	0.00	-191.59	0.00	191.59	2257.42	533.49	1356.61	1420.27	75.95	-4.529	0.000	0.140
155.00	-9.11	-13.50	0.00	-164.17	0.00	164.17	2223.99	525.35	1315.51	1377.66	77.85	-4.557	0.000	0.124
157.98	-8.67	-13.18	0.00	-123.98	0.00	123.98	2172.66	513.23	1255.49	1314.48	80.71	-4.592	0.000	0.099
157.98	-8.67	-13.18	0.00	-123.98	0.00	123.98	1653.01	411.45	1008.65	1004.33	80.71	-4.592	0.000	0.130
160.00	-8.42	-12.97	0.00	-97.33	0.00	97.33	1634.69	404.86	976.62	977.17	82.65	-4.612	0.000	0.106
162.00	-5.10	-7.19	0.00	-71.38	0.00	71.38	1616.31	398.35	945.44	950.51	84.59	-4.632	0.000	0.079
165.00	-4.79	-6.89	0.00	-49.81	0.00	49.81	1588.26	388.58	899.63	910.90	87.50	-4.654	0.000	0.058
170.00	-4.30	-6.41	0.00	-15.33	0.00	15.33	1540.22	372.29	825.79	845.99	92.39	-4.675	0.000	0.021
172.00	-0.47	-0.56	0.00	-2.51	0.00	2.51	1520.54	365.78	797.14	820.44	94.34	-4.678	0.000	0.003
175.00	-0.23	-0.28	0.00	-0.84	0.00	0.84	1490.55	356.00	755.12	782.56	97.28	-4.678	0.000	0.001
177.95	0.00	-0.26	0.00	0.00	0.00	0.00	1460.49	346.39	714.91	745.88	100.17	-4.679	0.000	0.000

Calculated Forces

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (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



Wind Loading - Shaft

Structure: CT02573-S-SBA

Code: EIA/TIA-222-H

10/22/2020

Site Name: Coventry 2 CT

Exposure: C

Height: 177.95 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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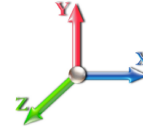


Load Case: 0.9D + 1.0W 119 mph Wind

Iterations 24

Dead Load Factor 0.90

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	28.415	31.26	589.95	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	28.415	31.26	579.26	0.730	0.000	5.00	27.042	19.74	617.0	0.0	1349.7
10.00		1.00	0.85	28.415	31.26	568.56	0.730	0.000	5.00	26.547	19.38	605.7	0.0	1324.8
15.00		1.00	0.85	28.415	31.26	557.86	0.730	0.000	5.00	26.052	19.02	594.4	0.0	1300.0
20.00		1.00	0.90	30.149	33.16	563.62	0.730	0.000	5.00	25.558	18.66	618.7	0.0	1275.1
25.00		1.00	0.95	31.599	34.76	565.73	0.730	0.000	5.00	25.063	18.30	636.0	0.0	1250.2
30.00		1.00	0.98	32.836	36.12	565.19	0.730	0.000	5.00	24.568	17.93	647.8	0.0	1225.4
35.00		1.00	1.01	33.919	37.31	562.75	0.730	0.000	5.00	24.073	17.57	655.7	0.0	1200.5
40.00		1.00	1.04	34.886	38.37	558.86	0.730	0.000	5.00	23.578	17.21	660.5	0.0	1175.6
42.30	Bot - Section 2	1.00	1.06	35.299	38.83	556.68	0.730	0.000	2.30	10.689	7.80	303.0	0.0	532.9
45.00		1.00	1.07	35.762	39.34	553.83	0.730	0.000	2.70	12.594	9.19	361.7	0.0	1245.7
48.00	Top - Section 1	1.00	1.08	36.251	39.88	550.36	0.730	0.000	3.00	13.835	10.10	402.7	0.0	1368.2
50.00		1.00	1.09	36.564	40.22	556.95	0.730	0.000	2.00	9.124	6.66	267.9	0.0	454.8
55.00		1.00	1.12	37.305	41.04	550.31	0.730	0.000	5.00	22.464	16.40	672.9	0.0	1119.6
60.00		1.00	1.14	37.995	41.79	543.01	0.730	0.000	5.00	21.969	16.04	670.3	0.0	1094.8
65.00		1.00	1.16	38.640	42.50	535.13	0.730	0.000	5.00	21.474	15.68	666.3	0.0	1069.9
70.00		1.00	1.17	39.248	43.17	526.74	0.730	0.000	5.00	20.979	15.32	661.2	0.0	1045.0
75.00		1.00	1.19	39.822	43.80	517.92	0.730	0.000	5.00	20.485	14.95	655.0	0.0	1020.2
80.00		1.00	1.21	40.367	44.40	508.70	0.730	0.000	5.00	19.990	14.59	648.0	0.0	995.3
85.00		1.00	1.22	40.886	44.97	499.12	0.730	0.000	5.00	19.495	14.23	640.0	0.0	970.4
86.83	Bot - Section 3	1.00	1.23	41.070	45.18	495.53	0.730	0.000	1.83	7.024	5.13	231.6	0.0	349.6
90.00		1.00	1.24	41.381	45.52	489.23	0.730	0.000	3.17	12.177	8.89	404.6	0.0	1116.2
92.30	Top - Section 2	1.00	1.24	41.601	45.76	484.57	0.730	0.000	2.30	8.728	6.37	291.6	0.0	799.8
95.00		1.00	1.25	41.854	46.04	487.36	0.730	0.000	2.70	10.095	7.37	339.3	0.0	431.2
100.00		1.00	1.27	42.309	46.54	476.95	0.730	0.000	5.00	18.328	13.38	622.7	0.0	782.6
105.00		1.00	1.28	42.745	47.02	466.28	0.730	0.000	5.00	17.833	13.02	612.1	0.0	761.3
110.00		1.00	1.29	43.166	47.48	455.39	0.730	0.000	5.00	17.338	12.66	601.0	0.0	740.0
115.00		1.00	1.30	43.572	47.93	444.27	0.730	0.000	5.00	16.843	12.30	589.3	0.0	718.7
120.00		1.00	1.32	43.964	48.36	432.96	0.730	0.000	5.00	16.348	11.93	577.2	0.0	697.4
125.00		1.00	1.33	44.344	48.78	421.46	0.730	0.000	5.00	15.854	11.57	564.5	0.0	676.1
130.00	Appurtenance(s)	1.00	1.34	44.711	49.18	409.79	0.730	0.000	5.00	15.359	11.21	551.4	0.0	654.8
132.95	Bot - Section 4	1.00	1.34	44.923	49.42	402.83	0.730	0.000	2.95	8.823	6.44	318.3	0.0	376.0
135.00		1.00	1.35	45.068	49.57	397.95	0.730	0.000	2.05	6.149	4.49	222.5	0.0	476.2
136.83	Top - Section 3	1.00	1.35	45.196	49.72	393.57	0.730	0.000	1.83	5.423	3.96	196.8	0.0	419.8
140.00		1.00	1.36	45.414	49.96	393.18	0.730	0.000	3.17	9.210	6.72	335.9	0.0	327.6
145.00		1.00	1.37	45.751	50.33	381.06	0.730	0.000	5.00	14.139	10.32	519.4	0.0	502.8
150.00		1.00	1.38	46.079	50.69	368.80	0.730	0.000	5.00	13.644	9.96	504.8	0.0	485.0
153.00	Appurtenance(s)	1.00	1.38	46.271	50.90	361.38	0.730	0.000	3.00	7.949	5.80	295.3	0.0	282.5
155.00		1.00	1.39	46.398	51.04	356.40	0.730	0.000	2.00	5.200	3.80	193.7	0.0	184.8
157.98	Top - Section 4	1.00	1.39	46.584	51.24	348.96	0.730	0.000	2.98	7.596	5.55	284.2	0.0	269.8
160.00		1.00	1.40	46.709	51.38	343.88	0.730	0.000	2.02	5.058	3.69	189.7	0.0	144.0
162.00	Appurtenance(s)	1.00	1.40	46.831	51.51	338.84	0.730	0.000	2.00	4.923	3.59	185.1	0.0	140.2
165.00		1.00	1.41	47.013	51.71	331.23	0.730	0.000	3.00	7.236	5.28	273.2	0.0	206.0
170.00		1.00	1.42	47.309	52.04	318.47	0.730	0.000	5.00	11.664	8.52	443.1	0.0	331.9
172.00	Appurtenance(s)	1.00	1.42	47.426	52.17	313.34	0.730	0.000	2.00	4.527	3.30	172.4	0.0	128.8
175.00		1.00	1.42	47.599	52.36	305.60	0.730	0.000	3.00	6.642	4.85	253.9	0.0	188.9
177.95	Appurtenance(s)	1.00	1.43	47.766	52.54	297.96	0.730	0.000	2.95	6.358	4.64	243.9	0.0	180.8

Wind Loading - Shaft

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (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



Totals:	177.95	21,002.5	33,390.8
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Discrete Appurtenance Forces

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

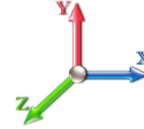


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Load Case: 0.9D + 1.0W 119 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 24

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	177.95	6' Lightning rod	1	47.766	52.543	1.00	1.00	0.38	5.85	0.000	0.000	19.97	0.00	0.00
2	172.00	KRY 112 144/1	3	47.426	52.168	0.38	0.75	0.46	29.70	0.000	0.000	24.06	0.00	0.00
3	172.00	MS-1436 (Light Collar)	1	47.426	52.168	1.00	1.00	1.50	59.04	0.000	0.000	78.25	0.00	0.00
4	172.00	MS-HRECP	1	47.426	52.168	1.00	1.00	12.25	462.60	0.000	0.000	639.06	0.00	0.00
5	172.00	MS-HR35	1	47.426	52.168	1.00	1.00	8.75	387.00	0.000	0.000	456.47	0.00	0.00
6	172.00	RR90-17-02DP	3	47.426	52.168	0.55	0.75	7.15	36.45	0.000	0.000	373.08	0.00	0.00
7	172.00	MS-C1B-2875P	1	47.426	52.168	1.00	1.00	10.00	296.10	0.000	0.000	521.68	0.00	0.00
8	172.00	4449	3	47.426	52.168	0.50	0.75	2.49	189.00	0.000	0.000	129.76	0.00	0.00
9	172.00	782 10660	3	47.426	52.168	0.38	0.75	0.32	7.02	0.000	0.000	16.43	0.00	0.00
10	172.00	APXVAARR24_43-U-NA2	3	47.309	52.040	0.53	0.75	31.97	345.60	0.000	-2.000	1663.67	0.00	-3327.34
11	172.00	T-Frames w/ Pipe Mount	3	47.426	52.168	0.56	0.75	27.00	1215.00	0.000	0.000	1408.54	0.00	0.00
12	172.00	KRY 112 89/4	3	47.426	52.168	0.38	0.75	0.73	41.58	0.000	0.000	38.15	0.00	0.00
13	162.00	HRK12 (Handrail Kit)	1	46.831	51.515	1.00	1.00	6.75	235.55	0.000	0.000	347.72	0.00	0.00
14	162.00	Ericsson RRUS 8843 B2	3	46.831	51.515	0.50	0.75	2.47	194.40	0.000	0.000	127.36	0.00	0.00
15	162.00	Ericsson RRUS 4449	3	46.831	51.515	0.50	0.75	2.49	189.00	0.000	0.000	128.14	0.00	0.00
16	162.00	Raycap DC6-48-60-18-8F	1	46.831	51.515	1.00	1.00	0.92	28.62	0.000	0.000	47.39	0.00	0.00
17	162.00	HP Platform w/ Pipe	1	46.831	51.515	1.00	1.00	25.00	1440.00	0.000	0.000	1287.86	0.00	0.00
18	162.00	Powerwave 7770	3	46.831	51.515	0.58	0.80	9.64	94.50	0.000	0.000	496.39	0.00	0.00
19	162.00	Powerwave 7020.00 RET	6	46.831	51.515	0.38	0.75	0.90	11.88	0.000	0.000	46.36	0.00	0.00
20	162.00	Powerwave 21401 TMA	6	46.831	51.515	0.38	0.75	1.84	94.50	0.000	0.000	95.04	0.00	0.00
21	162.00	Cci HPA-65R-BU6AA	2	46.831	51.515	0.89	0.90	14.11	77.40	0.000	0.000	727.05	0.00	0.00
22	162.00	Cci HPA-65R-BU8AA	1	46.831	51.515	0.86	1.00	9.66	48.60	0.000	0.000	497.52	0.00	0.00
23	162.00	Cci DMP65R-BU8DA	1	46.831	51.515	0.72	1.00	12.87	86.13	0.000	0.000	662.81	0.00	0.00
24	162.00	Cci DMP65R-BU6DA	2	46.831	51.515	0.65	0.90	16.47	142.92	0.000	0.000	848.56	0.00	0.00
25	153.00	ODI2-065R18K-GQ	3	46.271	50.898	0.56	0.80	8.15	67.77	0.000	0.000	414.72	0.00	0.00
26	153.00	SF-SU7-2-96	3	46.271	50.898	0.56	0.75	25.48	1066.50	0.000	0.000	1296.96	0.00	0.00
27	153.00	4415	2	46.271	50.898	0.54	0.80	1.99	79.38	0.000	0.000	101.49	0.00	0.00
28	153.00	0208	3	46.271	50.898	0.54	0.80	2.20	53.46	0.000	0.000	112.13	0.00	0.00
29	153.00	Collar Mount (3-Sided)	2	46.271	50.898	1.00	1.00	5.00	396.00	0.000	0.000	254.49	0.00	0.00
30	153.00	3.0" Std Pipe	3	46.271	50.898	1.00	1.00	5.25	81.00	0.000	0.000	267.22	0.00	0.00
31	130.00	PV-LPP14L-HR-B	1	44.711	49.182	1.00	1.00	36.80	1476.90	0.000	0.000	1809.91	0.00	0.00
32	130.00	DB-T1-6Z-8AB-OZ	2	44.711	49.182	0.70	0.90	6.74	34.02	0.000	0.000	331.45	0.00	0.00
33	130.00	QUAD656C0000x	3	44.711	49.182	0.57	0.80	22.56	145.80	0.000	0.000	1109.60	0.00	0.00
34	130.00	SBNHH-1D65B	6	44.711	49.182	0.66	0.80	32.51	216.00	0.000	0.000	1598.89	0.00	0.00
35	130.00	B66A RRH 4X45	3	44.711	49.182	0.60	0.80	4.68	172.80	0.000	0.000	230.17	0.00	0.00
36	130.00	B25 RRH4x30-4R	3	44.711	49.182	0.60	0.80	3.85	137.70	0.000	0.000	189.45	0.00	0.00
37	130.00	B13 RRH4X30-4R	3	44.711	49.182	0.60	0.80	3.89	154.44	0.000	0.000	191.22	0.00	0.00

Totals: 9,800.21

18,589.05

Total Applied Force Summary

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

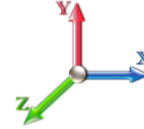


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Load Case: 0.9D + 1.0W 119 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		617.02	1486.59	0.00	0.00
10.00		605.73	1461.72	0.00	0.00
15.00		594.44	1436.85	0.00	0.00
20.00		618.75	1411.98	0.00	0.00
25.00		635.95	1387.12	0.00	0.00
30.00		647.79	1362.25	0.00	0.00
35.00		655.68	1337.38	0.00	0.00
40.00		660.51	1312.51	0.00	0.00
42.30		303.00	595.94	0.00	0.00
45.00		361.65	1319.58	0.00	0.00
48.00		402.72	1450.33	0.00	0.00
50.00		267.89	509.57	0.00	0.00
55.00		672.93	1256.51	0.00	0.00
60.00		670.27	1231.64	0.00	0.00
65.00		666.31	1206.78	0.00	0.00
70.00		661.19	1181.91	0.00	0.00
75.00		655.04	1157.04	0.00	0.00
80.00		647.96	1132.17	0.00	0.00
85.00		640.04	1107.30	0.00	0.00
86.83		231.65	399.78	0.00	0.00
90.00		404.62	1202.86	0.00	0.00
92.30		291.56	862.82	0.00	0.00
95.00		339.28	505.02	0.00	0.00
100.00		622.66	919.54	0.00	0.00
105.00		612.11	898.22	0.00	0.00
110.00		600.98	876.90	0.00	0.00
115.00		589.32	855.59	0.00	0.00
120.00		577.15	834.27	0.00	0.00
125.00		564.51	812.96	0.00	0.00
130.00	(21) attachments	6012.13	3129.30	0.00	0.00
132.95		318.29	450.91	0.00	0.00
135.00		222.53	528.29	0.00	0.00
136.83		196.82	466.41	0.00	0.00
140.00		335.88	408.04	0.00	0.00
145.00		519.43	629.77	0.00	0.00
150.00		504.84	612.01	0.00	0.00
153.00	(16) attachments	2742.34	2102.79	0.00	0.00
155.00		193.75	234.38	0.00	0.00
157.98		284.15	343.71	0.00	0.00
160.00		189.71	194.18	0.00	0.00
162.00	(30) attachments	5497.34	2833.27	0.00	0.00
165.00		273.18	242.65	0.00	0.00
170.00		443.12	393.04	0.00	0.00
172.00	(25) attachments	5521.58	3222.33	0.00	-3327.34
175.00		253.88	201.15	0.00	0.00
177.95	(1) attachments	263.84	186.64	0.00	0.00

Total Applied Force Summary

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (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



Totals:	39,591.56	47,692.00	0.00	-3,327.34
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Calculated Forces

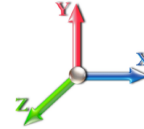
Structure: CT02573-S-SBA **Code:** EIA/TIA-222-H 10/22/2020
Site Name: Coventry 2 CT **Exposure:** C
Height: 177.95 (ft) **Crest Height:** 0.00
Base Elev: 0.000 (ft) **Site Class:** D - Stiff Soil
Gh: 1.1 **Topography:** 1 **Struct Class:** II Page: 21



Load Case: 0.9D + 1.0W 119 mph Wind

Iterations 24

Dead Load Factor 0.90
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.64	-39.65	0.00	-4806.6	0.00	4806.66	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.637
5.00	-46.05	-39.15	0.00	-4608.4	0.00	4608.40	5740.73	1532.67	7997.69	7435.53	0.08	-0.145	0.000	0.628
10.00	-44.50	-38.65	0.00	-4412.6	0.00	4412.65	5676.74	1504.17	7703.00	7214.97	0.31	-0.292	0.000	0.620
15.00	-42.96	-38.16	0.00	-4219.3	0.00	4219.38	5611.13	1475.67	7413.85	6995.50	0.70	-0.441	0.000	0.611
20.00	-41.46	-37.64	0.00	-4028.5	0.00	4028.57	5543.90	1447.16	7130.22	6777.22	1.24	-0.592	0.000	0.603
25.00	-39.98	-37.10	0.00	-3840.3	0.00	3840.36	5475.05	1418.66	6852.13	6560.27	1.94	-0.744	0.000	0.593
30.00	-38.53	-36.53	0.00	-3654.8	0.00	3654.88	5404.57	1390.16	6579.57	6344.75	2.80	-0.898	0.000	0.584
35.00	-37.10	-35.96	0.00	-3472.2	0.00	3472.22	5332.48	1361.66	6312.54	6130.79	3.83	-1.054	0.000	0.574
40.00	-35.73	-35.34	0.00	-3292.4	0.00	3292.44	5258.76	1333.16	6051.04	5918.51	5.02	-1.211	0.000	0.564
42.30	-35.09	-35.08	0.00	-3211.0	0.00	3211.08	5224.28	1320.03	5932.50	5821.36	5.62	-1.285	0.000	0.559
45.00	-33.73	-34.74	0.00	-3116.4	0.00	3116.45	5183.43	1304.65	5795.07	5708.01	6.37	-1.372	0.000	0.553
48.00	-32.24	-34.34	0.00	-3012.2	0.00	3012.24	5194.69	1308.88	5832.64	5739.07	7.26	-1.469	0.000	0.532
50.00	-31.67	-34.12	0.00	-2943.5	0.00	2943.55	5164.20	1297.48	5731.48	5655.29	7.89	-1.535	0.000	0.527
55.00	-30.34	-33.50	0.00	-2772.9	0.00	2772.93	5086.83	1268.97	5482.43	5447.20	9.58	-1.688	0.000	0.516
60.00	-29.05	-32.87	0.00	-2605.4	0.00	2605.44	5007.85	1240.47	5238.92	5241.17	11.44	-1.843	0.000	0.504
65.00	-27.77	-32.24	0.00	-2441.0	0.00	2441.09	4927.24	1211.97	5000.94	5037.31	13.45	-1.998	0.000	0.491
70.00	-26.53	-31.61	0.00	-2279.9	0.00	2279.91	4845.02	1183.47	4768.49	4835.75	15.62	-2.153	0.000	0.478
75.00	-25.32	-30.98	0.00	-2121.8	0.00	2121.88	4761.17	1154.97	4541.58	4636.60	17.96	-2.309	0.000	0.464
80.00	-24.13	-30.35	0.00	-1967.0	0.00	1967.00	4675.70	1126.46	4320.19	4439.97	20.47	-2.465	0.000	0.449
85.00	-23.00	-29.70	0.00	-1815.2	0.00	1815.26	4588.61	1097.96	4104.34	4245.99	23.13	-2.620	0.000	0.433
86.83	-22.57	-29.48	0.00	-1760.8	0.00	1760.81	4556.28	1087.51	4026.58	4175.55	24.15	-2.678	0.000	0.427
90.00	-21.34	-29.05	0.00	-1667.4	0.00	1667.45	4499.90	1069.46	3894.02	4054.78	25.96	-2.777	0.000	0.417
92.30	-20.46	-28.75	0.00	-1600.5	0.00	1600.57	3709.97	922.40	3379.54	3368.78	27.32	-2.850	0.000	0.482
95.00	-19.91	-28.43	0.00	-1523.0	0.00	1523.02	3673.22	909.22	3283.64	3287.35	28.95	-2.933	0.000	0.470
100.00	-18.94	-27.81	0.00	-1380.8	0.00	1380.89	3603.88	884.79	3109.55	3137.88	32.11	-3.100	0.000	0.446
105.00	-18.00	-27.20	0.00	-1241.8	0.00	1241.83	3532.91	860.36	2940.20	2990.41	35.44	-3.263	0.000	0.421
110.00	-17.09	-26.60	0.00	-1105.8	0.00	1105.83	3460.32	835.93	2775.60	2845.05	38.95	-3.422	0.000	0.395
115.00	-16.20	-26.00	0.00	-972.85	0.00	972.85	3386.11	811.50	2615.74	2701.92	42.61	-3.576	0.000	0.366
120.00	-15.34	-25.41	0.00	-842.86	0.00	842.86	3310.28	787.07	2460.61	2561.13	46.44	-3.722	0.000	0.335
125.00	-14.51	-24.82	0.00	-715.82	0.00	715.82	3228.52	762.64	2310.23	2419.57	50.41	-3.860	0.000	0.301
130.00	-11.77	-18.63	0.00	-591.71	0.00	591.71	3125.09	738.21	2164.59	2266.28	54.52	-3.987	0.000	0.265
132.95	-11.32	-18.29	0.00	-536.78	0.00	536.78	3064.12	723.81	2080.95	2178.25	57.00	-4.058	0.000	0.251
135.00	-10.80	-18.04	0.00	-499.24	0.00	499.24	3021.67	713.78	2023.69	2118.00	58.75	-4.107	0.000	0.240
136.83	-10.33	-17.82	0.00	-466.16	0.00	466.16	2458.83	599.32	1712.04	1739.79	60.34	-4.148	0.000	0.273
140.00	-9.92	-17.47	0.00	-409.72	0.00	409.72	2420.71	586.43	1639.17	1675.64	63.11	-4.217	0.000	0.250
145.00	-9.30	-16.93	0.00	-322.35	0.00	322.35	2359.20	566.07	1527.33	1575.85	67.58	-4.325	0.000	0.209
150.00	-8.71	-16.39	0.00	-237.72	0.00	237.72	2296.08	545.71	1419.45	1478.00	72.16	-4.418	0.000	0.166
153.00	-6.82	-13.49	0.00	-188.56	0.00	188.56	2257.42	533.49	1356.61	1420.27	74.95	-4.465	0.000	0.136
155.00	-6.59	-13.29	0.00	-161.57	0.00	161.57	2223.99	525.35	1315.51	1377.66	76.83	-4.493	0.000	0.121
157.98	-6.27	-12.98	0.00	-122.01	0.00	122.01	2172.66	513.23	1255.49	1314.48	79.64	-4.527	0.000	0.096
157.98	-6.27	-12.98	0.00	-122.01	0.00	122.01	1653.01	411.45	1008.65	1004.33	79.64	-4.527	0.000	0.126
160.00	-6.08	-12.78	0.00	-95.76	0.00	95.76	1634.69	404.86	976.62	977.17	81.56	-4.547	0.000	0.103
162.00	-3.69	-7.07	0.00	-70.21	0.00	70.21	1616.31	398.35	945.44	950.51	83.47	-4.566	0.000	0.076
165.00	-3.47	-6.78	0.00	-48.99	0.00	48.99	1588.26	388.58	899.63	910.90	86.34	-4.588	0.000	0.056
170.00	-3.11	-6.31	0.00	-15.08	0.00	15.08	1540.22	372.29	825.79	845.99	91.15	-4.609	0.000	0.020
172.00	-0.34	-0.55	0.00	-2.46	0.00	2.46	1520.54	365.78	797.14	820.44	93.08	-4.611	0.000	0.003
175.00	-0.16	-0.28	0.00	-0.82	0.00	0.82	1490.55	356.00	755.12	782.56	95.98	-4.612	0.000	0.001
177.95	0.00	-0.26	0.00	0.00	0.00	0.00	1460.49	346.39	714.91	745.88	98.82	-4.612	0.000	0.000

Calculated Forces

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (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



Wind Loading - Shaft

Structure: CT02573-S-SBA

Code: EIA/TIA-222-H

10/22/2020

Site Name: Coventry 2 CT

Exposure: C

Height: 177.95 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 23

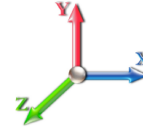


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.016	5.52	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.016	5.52	0.00	1.200	1.242	5.00	28.077	33.69	185.9	502.4	2302.0
10.00		1.00	0.85	5.016	5.52	0.00	1.200	1.331	5.00	27.657	33.19	183.1	529.5	2295.9
15.00		1.00	0.85	5.016	5.52	0.00	1.200	1.386	5.00	27.208	32.65	180.2	541.7	2275.0
20.00		1.00	0.90	5.323	5.85	0.00	1.200	1.427	5.00	26.747	32.10	187.9	547.4	2247.5
25.00		1.00	0.95	5.579	6.14	0.00	1.200	1.459	5.00	26.279	31.53	193.5	549.4	2216.3
30.00		1.00	0.98	5.797	6.38	0.00	1.200	1.486	5.00	25.806	30.97	197.5	548.8	2182.6
35.00		1.00	1.01	5.988	6.59	0.00	1.200	1.509	5.00	25.331	30.40	200.2	546.5	2147.2
40.00		1.00	1.04	6.159	6.77	0.00	1.200	1.529	5.00	24.853	29.82	202.0	542.8	2110.3
42.30	Bot - Section 2	1.00	1.06	6.232	6.85	0.00	1.200	1.538	2.30	11.279	13.54	92.8	249.0	959.5
45.00		1.00	1.07	6.313	6.94	0.00	1.200	1.547	2.70	13.289	15.95	110.8	294.9	1955.9
48.00	Top - Section 1	1.00	1.08	6.400	7.04	0.00	1.200	1.557	3.00	14.613	17.54	123.4	326.0	2150.3
50.00		1.00	1.09	6.455	7.10	0.00	1.200	1.564	2.00	9.645	11.57	82.2	216.4	822.8
55.00		1.00	1.12	6.586	7.24	0.00	1.200	1.579	5.00	23.780	28.54	206.7	534.8	2027.7
60.00		1.00	1.14	6.708	7.38	0.00	1.200	1.592	5.00	23.296	27.96	206.3	528.0	1987.6
65.00		1.00	1.16	6.822	7.50	0.00	1.200	1.605	5.00	22.812	27.37	205.4	520.6	1947.1
70.00		1.00	1.17	6.929	7.62	0.00	1.200	1.617	5.00	22.327	26.79	204.2	512.7	1906.1
75.00		1.00	1.19	7.030	7.73	0.00	1.200	1.628	5.00	21.842	26.21	202.7	504.4	1864.6
80.00		1.00	1.21	7.126	7.84	0.00	1.200	1.639	5.00	21.356	25.63	200.9	495.8	1822.9
85.00		1.00	1.22	7.218	7.94	0.00	1.200	1.649	5.00	20.869	25.04	198.8	486.8	1780.7
86.83	Bot - Section 3	1.00	1.23	7.250	7.98	0.00	1.200	1.652	1.83	7.529	9.03	72.1	177.3	643.4
90.00		1.00	1.24	7.305	8.04	0.00	1.200	1.658	3.17	13.052	15.66	125.9	307.4	1795.6
92.30	Top - Section 2	1.00	1.24	7.344	8.08	0.00	1.200	1.662	2.30	9.366	11.24	90.8	221.5	1287.9
95.00		1.00	1.25	7.389	8.13	0.00	1.200	1.667	2.70	10.845	13.01	105.8	256.8	831.6
100.00		1.00	1.27	7.469	8.22	0.00	1.200	1.676	5.00	19.724	23.67	194.5	466.1	1509.7
105.00		1.00	1.28	7.546	8.30	0.00	1.200	1.684	5.00	19.236	23.08	191.6	456.1	1471.3
110.00		1.00	1.29	7.621	8.38	0.00	1.200	1.692	5.00	18.748	22.50	188.6	446.0	1432.6
115.00		1.00	1.30	7.692	8.46	0.00	1.200	1.699	5.00	18.259	21.91	185.4	435.6	1393.8
120.00		1.00	1.32	7.761	8.54	0.00	1.200	1.707	5.00	17.771	21.32	182.1	425.0	1354.8
125.00		1.00	1.33	7.828	8.61	0.00	1.200	1.714	5.00	17.282	20.74	178.6	414.2	1315.7
130.00	Appurtenance(s)	1.00	1.34	7.893	8.68	0.00	1.200	1.720	5.00	16.792	20.15	175.0	403.3	1276.3
132.95	Bot - Section 4	1.00	1.34	7.931	8.72	0.00	1.200	1.724	2.95	9.671	11.60	101.2	234.0	735.4
135.00		1.00	1.35	7.956	8.75	0.00	1.200	1.727	2.05	6.740	8.09	70.8	163.8	798.7
136.83	Top - Section 3	1.00	1.35	7.979	8.78	0.00	1.200	1.729	1.83	5.951	7.14	62.7	144.8	704.6
140.00		1.00	1.36	8.018	8.82	0.00	1.200	1.733	3.17	10.125	12.15	107.2	245.6	682.5
145.00		1.00	1.37	8.077	8.88	0.00	1.200	1.739	5.00	15.588	18.71	166.2	376.5	1046.9
150.00		1.00	1.38	8.135	8.95	0.00	1.200	1.745	5.00	15.098	18.12	162.1	365.1	1011.8
153.00	Appurtenance(s)	1.00	1.38	8.169	8.99	0.00	1.200	1.749	3.00	8.823	10.59	95.1	214.9	591.5
155.00		1.00	1.39	8.191	9.01	0.00	1.200	1.751	2.00	5.784	6.94	62.5	141.4	387.8
157.98	Top - Section 4	1.00	1.39	8.224	9.05	0.00	1.200	1.754	2.98	8.467	10.16	91.9	206.4	566.2
160.00		1.00	1.40	8.246	9.07	0.00	1.200	1.757	2.02	5.650	6.78	61.5	138.2	330.3
162.00	Appurtenance(s)	1.00	1.40	8.268	9.09	0.00	1.200	1.759	2.00	5.509	6.61	60.1	134.8	321.7
165.00		1.00	1.41	8.300	9.13	0.00	1.200	1.762	3.00	8.117	9.74	88.9	198.0	472.7
170.00		1.00	1.42	8.352	9.19	0.00	1.200	1.767	5.00	13.137	15.76	144.8	318.1	760.7
172.00	Appurtenance(s)	1.00	1.42	8.373	9.21	0.00	1.200	1.769	2.00	5.117	6.14	56.6	125.3	297.1
175.00		1.00	1.42	8.403	9.24	0.00	1.200	1.772	3.00	7.529	9.03	83.5	183.7	435.6
177.95	Appurtenance(s)	1.00	1.43	8.433	9.28	0.00	1.200	1.775	2.95	7.231	8.68	80.5	176.4	417.4

Wind Loading - Shaft

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (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



Totals:	177.95	6,550.4	60,875.7
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Discrete Appurtenance Forces

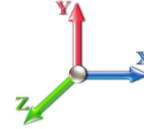
Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

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	177.95	6' Lightning rod	1	8.433	9.276	1.00	1.00	1.49	39.43	0.000	0.000	13.79	0.00	0.00
2	172.00	KRY 112 144/1	3	8.373	9.210	0.38	0.75	1.00	63.09	0.000	0.000	9.24	0.00	0.00
3	172.00	MS-1436 (Light Collar)	1	8.373	9.210	1.00	1.00	3.09	142.67	0.000	0.000	28.48	0.00	0.00
4	172.00	MS-HRECP	1	8.373	9.210	1.00	1.00	24.39	1749.19	0.000	0.000	224.60	0.00	0.00
5	172.00	MS-HR35	1	8.373	9.210	1.00	1.00	17.42	1463.33	0.000	0.000	160.43	0.00	0.00
6	172.00	RR90-17-02DP	3	8.373	9.210	0.58	0.75	9.32	399.14	0.000	0.000	85.84	0.00	0.00
7	172.00	MS-C1B-2875P	1	8.373	9.210	1.00	1.00	20.62	715.47	0.000	0.000	189.87	0.00	0.00
8	172.00	4449	3	8.373	9.210	0.50	0.75	3.37	515.34	0.000	0.000	31.01	0.00	0.00
9	172.00	782 10660	3	8.373	9.210	0.38	0.75	0.77	23.53	0.000	0.000	7.12	0.00	0.00
10	172.00	APXVAARR24_43-U-NA2	3	8.352	9.187	0.54	0.75	35.95	1556.46	0.000	-2.000	330.26	0.00	-660.53
11	172.00	T-Frames w/ Pipe Mount	3	8.373	9.210	0.56	0.75	40.76	2390.05	0.000	0.000	375.37	0.00	0.00
12	172.00	KRY 112 89/4	3	8.373	9.210	0.38	0.75	1.43	94.03	0.000	0.000	13.16	0.00	0.00
13	162.00	HRK12 (Handrail Kit)	1	8.268	9.094	1.00	1.00	13.40	888.78	0.000	0.000	121.85	0.00	0.00
14	162.00	Ericsson RRUS 8843 B2	3	8.268	9.094	0.50	0.75	3.23	364.82	0.000	0.000	29.35	0.00	0.00
15	162.00	Ericsson RRUS 4449	3	8.268	9.094	0.50	0.75	3.30	458.73	0.000	0.000	30.06	0.00	0.00
16	162.00	Raycap DC6-48-60-18-8F	1	8.268	9.094	1.00	1.00	1.36	82.76	0.000	0.000	12.38	0.00	0.00
17	162.00	HP Platform w/ Pipe	1	8.268	9.094	1.00	1.00	45.23	3126.96	0.000	0.000	411.30	0.00	0.00
18	162.00	Powerwave 7770	3	8.268	9.094	0.60	0.80	11.83	535.37	0.000	0.000	107.62	0.00	0.00
19	162.00	Powerwave 7020.00 RET	6	8.268	9.094	0.38	0.75	2.00	60.28	0.000	0.000	18.17	0.00	0.00
20	162.00	Powerwave 21401 TMA	6	8.268	9.094	0.38	0.75	2.78	297.28	0.000	0.000	25.29	0.00	0.00
21	162.00	Cci HPA-65R-BU6AA	2	8.268	9.094	0.89	0.90	16.41	592.92	0.000	0.000	149.24	0.00	0.00
22	162.00	Cci HPA-65R-BU8AA	1	8.268	9.094	0.86	1.00	11.10	333.78	0.000	0.000	100.94	0.00	0.00
23	162.00	Cci DMP65R-BU8DA	1	8.268	9.094	0.72	1.00	14.17	500.83	0.000	0.000	128.87	0.00	0.00
24	162.00	Cci DMP65R-BU6DA	2	8.268	9.094	0.65	0.90	18.38	649.60	0.000	0.000	167.19	0.00	0.00
25	153.00	ODI2-065R18K-GQ	3	8.169	8.986	0.56	0.80	9.80	344.59	0.000	0.000	88.07	0.00	0.00
26	153.00	SF-SU7-2-96	3	8.169	8.986	0.56	0.75	57.56	2117.42	0.000	0.000	517.24	0.00	0.00
27	153.00	4415	2	8.169	8.986	0.54	0.80	2.61	180.51	0.000	0.000	23.44	0.00	0.00
28	153.00	0208	3	8.169	8.986	0.54	0.80	3.01	154.41	0.000	0.000	27.01	0.00	0.00
29	153.00	Collar Mount (3-Sided)	2	8.169	8.986	0.75	1.00	7.68	949.53	0.000	0.000	69.05	0.00	0.00
30	153.00	3.0" Std Pipe	3	8.169	8.986	0.75	1.00	8.07	-627.10	0.000	0.000	72.50	0.00	0.00
31	130.00	PV-LPP14L-HR-B	1	7.893	8.683	1.00	1.00	68.46	3533.25	0.000	0.000	594.38	0.00	0.00
32	130.00	DB-T1-6Z-8AB-OZ	2	7.893	8.683	0.71	0.90	8.05	328.01	0.000	0.000	69.89	0.00	0.00
33	130.00	QUAD656C0000x	3	7.893	8.683	0.58	0.80	25.84	1054.68	0.000	0.000	224.35	0.00	0.00
34	130.00	SBNHH-1D65B	6	7.893	8.683	0.68	0.80	38.52	1486.21	0.000	0.000	334.43	0.00	0.00
35	130.00	B66A RRH 4X45	3	7.893	8.683	0.62	0.80	6.09	476.74	0.000	0.000	52.84	0.00	0.00
36	130.00	B25 RRH4x30-4R	3	7.893	8.683	0.62	0.80	5.06	312.68	0.000	0.000	43.96	0.00	0.00
37	130.00	B13 RRH4X30-4R	3	7.893	8.683	0.62	0.80	5.10	344.24	0.000	0.000	44.32	0.00	0.00

Totals: 27,699.02

4,932.90

Total Applied Force Summary

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020	
Site Name: Coventry 2 CT	Exposure: C		
Height: 177.95 (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

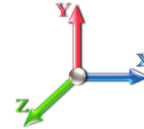


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 24



Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		185.92	2484.57	0.00	0.00
10.00		183.13	2478.45	0.00	0.00
15.00		180.16	2457.51	0.00	0.00
20.00		187.92	2430.06	0.00	0.00
25.00		193.51	2398.86	0.00	0.00
30.00		197.47	2365.16	0.00	0.00
35.00		200.22	2329.69	0.00	0.00
40.00		202.04	2292.86	0.00	0.00
42.30		92.78	1043.57	0.00	0.00
45.00		110.75	2054.37	0.00	0.00
48.00		123.45	2259.80	0.00	0.00
50.00		82.19	895.86	0.00	0.00
55.00		206.72	2210.19	0.00	0.00
60.00		206.27	2170.17	0.00	0.00
65.00		205.41	2129.62	0.00	0.00
70.00		204.21	2088.60	0.00	0.00
75.00		202.69	2047.17	0.00	0.00
80.00		200.89	2005.37	0.00	0.00
85.00		198.83	1963.25	0.00	0.00
86.83		72.06	710.32	0.00	0.00
90.00		125.86	1911.21	0.00	0.00
92.30		90.79	1371.89	0.00	0.00
95.00		105.77	930.13	0.00	0.00
100.00		194.47	1692.17	0.00	0.00
105.00		191.62	1653.77	0.00	0.00
110.00		188.59	1615.16	0.00	0.00
115.00		185.40	1576.35	0.00	0.00
120.00		182.06	1537.35	0.00	0.00
125.00		178.58	1498.19	0.00	0.00
130.00	(21) attachments	1539.12	8994.67	0.00	0.00
132.95		101.24	835.18	0.00	0.00
135.00		70.78	868.16	0.00	0.00
136.83		62.68	766.70	0.00	0.00
140.00		107.16	789.69	0.00	0.00
145.00		166.19	1216.22	0.00	0.00
150.00		162.12	1181.09	0.00	0.00
153.00	(16) attachments	892.45	3812.51	0.00	0.00
155.00		62.54	453.91	0.00	0.00
157.98		91.91	664.69	0.00	0.00
160.00		61.50	397.14	0.00	0.00
162.00	(30) attachments	1362.37	8279.98	0.00	0.00
165.00		88.93	521.54	0.00	0.00
170.00		144.83	842.17	0.00	0.00
172.00	(25) attachments	1511.94	9441.94	0.00	-660.53
175.00		83.51	451.86	0.00	0.00
177.95	(1) attachments	94.28	456.87	0.00	0.00

Total Applied Force Summary

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (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



Totals:	11,483.32	94,575.99	0.00	-660.53
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Calculated Forces

Structure: CT02573-S-SBA

Code: EIA/TIA-222-H

10/22/2020

Site Name: Coventry 2 CT

Exposure: C

Height: 177.95 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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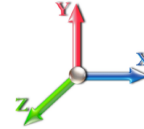


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-94.57	-11.52	0.00	-1428.9	0.00	1428.93	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.203
5.00	-92.08	-11.40	0.00	-1371.3	0.00	1371.34	5740.73	1532.67	7997.69	7435.53	0.02	-0.043	0.000	0.201
10.00	-89.59	-11.29	0.00	-1314.3	0.00	1314.33	5676.74	1504.17	7703.00	7214.97	0.09	-0.087	0.000	0.198
15.00	-87.13	-11.17	0.00	-1257.9	0.00	1257.90	5611.13	1475.67	7413.85	6995.50	0.21	-0.131	0.000	0.195
20.00	-84.69	-11.04	0.00	-1202.0	0.00	1202.06	5543.90	1447.16	7130.22	6777.22	0.37	-0.176	0.000	0.193
25.00	-82.28	-10.90	0.00	-1146.8	0.00	1146.86	5475.05	1418.66	6852.13	6560.27	0.58	-0.222	0.000	0.190
30.00	-79.91	-10.76	0.00	-1092.3	0.00	1092.34	5404.57	1390.16	6579.57	6344.75	0.83	-0.268	0.000	0.187
35.00	-77.57	-10.61	0.00	-1038.5	0.00	1038.53	5332.48	1361.66	6312.54	6130.79	1.14	-0.314	0.000	0.184
40.00	-75.27	-10.44	0.00	-985.47	0.00	985.47	5258.76	1333.16	6051.04	5918.51	1.49	-0.361	0.000	0.181
42.30	-74.23	-10.37	0.00	-961.43	0.00	961.43	5224.28	1320.03	5932.50	5821.36	1.67	-0.383	0.000	0.179
45.00	-72.17	-10.28	0.00	-933.44	0.00	933.44	5183.43	1304.65	5795.07	5708.01	1.90	-0.410	0.000	0.178
48.00	-69.90	-10.17	0.00	-902.59	0.00	902.59	5194.69	1308.88	5832.64	5739.07	2.17	-0.439	0.000	0.171
50.00	-69.00	-10.12	0.00	-882.25	0.00	882.25	5164.20	1297.48	5731.48	5655.29	2.35	-0.458	0.000	0.169
55.00	-66.79	-9.95	0.00	-831.63	0.00	831.63	5086.83	1268.97	5482.43	5447.20	2.86	-0.504	0.000	0.166
60.00	-64.61	-9.78	0.00	-781.86	0.00	781.86	5007.85	1240.47	5238.92	5241.17	3.41	-0.551	0.000	0.162
65.00	-62.47	-9.60	0.00	-732.97	0.00	732.97	4927.24	1211.97	5000.94	5037.31	4.01	-0.597	0.000	0.158
70.00	-60.38	-9.43	0.00	-684.96	0.00	684.96	4845.02	1183.47	4768.49	4835.75	4.66	-0.644	0.000	0.154
75.00	-58.33	-9.25	0.00	-637.83	0.00	637.83	4761.17	1154.97	4541.58	4636.60	5.36	-0.691	0.000	0.150
80.00	-56.32	-9.07	0.00	-591.60	0.00	591.60	4675.70	1126.46	4320.19	4439.97	6.11	-0.738	0.000	0.145
85.00	-54.35	-8.87	0.00	-546.27	0.00	546.27	4588.61	1097.96	4104.34	4245.99	6.91	-0.784	0.000	0.141
86.83	-53.64	-8.81	0.00	-530.01	0.00	530.01	4556.28	1087.51	4026.58	4175.55	7.22	-0.802	0.000	0.139
90.00	-51.73	-8.68	0.00	-502.10	0.00	502.10	4499.90	1069.46	3894.02	4054.78	7.76	-0.832	0.000	0.135
92.30	-50.35	-8.59	0.00	-482.11	0.00	482.11	3709.97	922.40	3379.54	3368.78	8.16	-0.853	0.000	0.157
95.00	-49.42	-8.51	0.00	-458.93	0.00	458.93	3673.22	909.22	3283.64	3287.35	8.65	-0.879	0.000	0.153
100.00	-47.72	-8.33	0.00	-416.41	0.00	416.41	3603.88	884.79	3109.55	3137.88	9.60	-0.929	0.000	0.146
105.00	-46.07	-8.15	0.00	-374.78	0.00	374.78	3532.91	860.36	2940.20	2990.41	10.60	-0.978	0.000	0.138
110.00	-44.45	-7.97	0.00	-334.06	0.00	334.06	3460.32	835.93	2775.60	2845.05	11.65	-1.026	0.000	0.130
115.00	-42.87	-7.79	0.00	-294.23	0.00	294.23	3386.11	811.50	2615.74	2701.92	12.75	-1.072	0.000	0.122
120.00	-41.33	-7.60	0.00	-255.31	0.00	255.31	3310.28	787.07	2460.61	2561.13	13.90	-1.117	0.000	0.112
125.00	-39.83	-7.42	0.00	-217.29	0.00	217.29	3228.52	762.64	2310.23	2419.57	15.09	-1.159	0.000	0.102
130.00	-30.87	-5.72	0.00	-180.17	0.00	180.17	3125.09	738.21	2164.59	2266.28	16.33	-1.197	0.000	0.089
132.95	-30.03	-5.61	0.00	-163.31	0.00	163.31	3064.12	723.81	2080.95	2178.25	17.07	-1.219	0.000	0.085
135.00	-29.16	-5.52	0.00	-151.81	0.00	151.81	3021.67	713.78	2023.69	2118.00	17.60	-1.234	0.000	0.081
136.83	-28.40	-5.45	0.00	-141.68	0.00	141.68	2458.83	599.32	1712.04	1739.79	18.08	-1.246	0.000	0.093
140.00	-27.61	-5.34	0.00	-124.41	0.00	124.41	2420.71	586.43	1639.17	1675.64	18.91	-1.267	0.000	0.086
145.00	-26.39	-5.16	0.00	-97.70	0.00	97.70	2359.20	566.07	1527.33	1575.85	20.25	-1.300	0.000	0.073
150.00	-25.21	-4.98	0.00	-71.88	0.00	71.88	2296.08	545.71	1419.45	1478.00	21.63	-1.328	0.000	0.060
153.00	-21.42	-4.01	0.00	-56.93	0.00	56.93	2257.42	533.49	1356.61	1420.27	22.47	-1.342	0.000	0.050
155.00	-20.97	-3.94	0.00	-48.92	0.00	48.92	2223.99	525.35	1315.51	1377.66	23.04	-1.351	0.000	0.045
157.98	-20.31	-3.83	0.00	-37.20	0.00	37.20	2172.66	513.23	1255.49	1314.48	23.88	-1.361	0.000	0.038
157.98	-20.31	-3.83	0.00	-37.20	0.00	37.20	1653.01	411.45	1008.65	1004.33	23.88	-1.361	0.000	0.049
160.00	-19.91	-3.76	0.00	-29.45	0.00	29.45	1634.69	404.86	976.62	977.17	24.46	-1.367	0.000	0.042
162.00	-11.66	-2.20	0.00	-21.92	0.00	21.92	1616.31	398.35	945.44	950.51	25.03	-1.373	0.000	0.030
165.00	-11.15	-2.10	0.00	-15.31	0.00	15.31	1588.26	388.58	899.63	910.90	25.90	-1.380	0.000	0.024
170.00	-10.31	-1.94	0.00	-4.79	0.00	4.79	1540.22	372.29	825.79	845.99	27.35	-1.386	0.000	0.012
172.00	-0.90	-0.20	0.00	-0.91	0.00	0.91	1520.54	365.78	797.14	820.44	27.93	-1.387	0.000	0.002
175.00	-0.45	-0.11	0.00	-0.31	0.00	0.31	1490.55	356.00	755.12	782.56	28.80	-1.388	0.000	0.001
177.95	0.00	-0.09	0.00	0.00	0.00	0.00	1460.49	346.39	714.91	745.88	29.66	-1.388	0.000	0.000

Calculated Forces

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (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



Seismic Segment Forces (Factored)

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (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

Load Case: 1.2D + 1.0Ev + 1.0Eh

Iterations 21

Gust Response Factor 1.10

Sds 0.31

Ss 0.30

Dead Load Factor 1.20 **Seismic Load Factor** 1.00

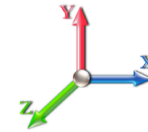
Sd1 0.09

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)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1682.1	2.50	104.38	0.01	
10.00		1654.5	7.50	102.66	0.12	
15.00		1626.9	12.50	100.95	0.32	
20.00		1599.2	17.50	99.23	0.60	
25.00		1571.6	22.50	97.52	0.96	
30.00		1544.0	27.50	95.80	1.38	
35.00		1516.4	32.50	94.09	1.86	
40.00		1488.7	37.50	92.37	2.38	
42.30	Bot - Section 2	676.16	41.15	41.95	0.59	
45.00		1482.6	43.65	91.99	3.20	
48.00	Top - Section 1	1629.7	46.50	101.12	4.39	
50.00		578.35	49.00	35.89	0.61	
55.00		1426.5	52.50	88.51	4.29	
60.00		1398.9	57.50	86.80	4.95	
65.00		1371.2	62.50	85.08	5.62	
70.00		1343.6	67.50	83.37	6.29	
75.00		1316.0	72.50	81.66	6.96	
80.00		1288.3	77.50	79.94	7.63	
85.00		1260.7	82.50	78.23	8.28	
86.83	Bot - Section 3	455.35	85.92	28.25	1.17	
90.00		1355.7	88.42	84.12	10.99	
92.30	Top - Section 2	972.69	91.15	60.35	6.01	
95.00		577.55	93.65	35.84	2.24	
100.00		1052.1	97.50	65.28	8.05	
105.00		1028.4	102.50	63.81	8.50	
110.00		1004.7	107.50	62.34	8.92	
115.00		981.07	112.50	60.87	9.32	
120.00		957.39	117.50	59.40	9.68	
125.00		933.71	122.50	57.93	10.01	
130.00	Appurtenance(s)	3507.4	127.50	217.63	152.97	
132.95	Bot - Section 4	517.65	131.47	32.12	3.54	
135.00		598.57	133.97	37.14	4.92	
136.83	Top - Section 3	528.58	135.92	32.80	3.95	
140.00		471.25	138.42	29.24	3.25	
145.00		727.96	142.50	45.17	8.23	
150.00		708.23	147.50	43.94	8.35	
153.00	Appurtenance(s)	2353.3	151.50	146.02	97.23	
155.00		271.44	154.00	16.84	1.34	
157.98	Top - Section 4	398.32	156.49	24.71	2.97	
160.00		226.90	158.99	14.08	1.00	
162.00	Appurtenance(s)	3159.1	161.00	196.01	197.87	
165.00		277.75	163.50	17.23	1.58	
170.00		450.29	167.50	27.94	4.35	
172.00	Appurtenance(s)	3585.8	171.00	222.49	287.59	
175.00		226.22	173.50	14.04	1.18	

Seismic Segment Forces (Factored)

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020	
Site Name: Coventry 2 CT	Exposure: C		
Height: 177.95 (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



177.95 Appurtenance(s)	207.38	176.47	12.87	1.02	
Totals:	53,991.3		3,350.0	916.7	Total Wind: 39,591.6

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02573-S-SBA **Code:** EIA/TIA-222-H 10/22/2020
Site Name: Coventry 2 CT **Exposure:** C
Height: 177.95 (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



Load Case: 1.2D + 1.0Ev + 1.0Eh

Iterations 21

Gust Response Factor 1.10

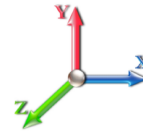
Sds 0.31

Ss 0.30

Dead Load Factor 1.20 **Seismic Load Factor** 1.00 **Sd1** 0.09

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	-66.94	-0.92	0.00	-141.02	0.00	141.02	5803.10	1561.17	8297.91	7657.05	0.00	0.00	0.00	0.030
5.00	-64.85	-0.92	0.00	-136.43	0.00	136.43	5740.73	1532.67	7997.69	7435.53	0.00	0.00	0.00	0.030
10.00	-62.80	-0.93	0.00	-131.81	0.00	131.81	5676.74	1504.17	7703.00	7214.97	0.01	-0.01	0.029	0.029
15.00	-60.78	-0.93	0.00	-127.18	0.00	127.18	5611.13	1475.67	7413.85	6995.50	0.02	-0.01	0.029	0.029
20.00	-58.80	-0.93	0.00	-122.52	0.00	122.52	5543.90	1447.16	7130.22	6777.22	0.04	-0.02	0.029	0.029
25.00	-56.86	-0.94	0.00	-117.85	0.00	117.85	5475.05	1418.66	6852.13	6560.27	0.06	-0.02	0.028	0.028
30.00	-54.94	-0.94	0.00	-113.16	0.00	113.16	5404.57	1390.16	6579.57	6344.75	0.08	-0.03	0.028	0.028
35.00	-53.07	-0.94	0.00	-108.46	0.00	108.46	5332.48	1361.66	6312.54	6130.79	0.11	-0.03	0.028	0.028
40.00	-51.22	-0.94	0.00	-103.75	0.00	103.75	5258.76	1333.16	6051.04	5918.51	0.15	-0.04	0.027	0.027
42.30	-50.39	-0.94	0.00	-101.59	0.00	101.59	5224.28	1320.03	5932.50	5821.36	0.17	-0.04	0.027	0.027
45.00	-48.54	-0.94	0.00	-99.04	0.00	99.04	5183.43	1304.65	5795.07	5708.01	0.19	-0.04	0.027	0.027
48.00	-46.50	-0.94	0.00	-96.22	0.00	96.22	5194.69	1308.88	5832.64	5739.07	0.22	-0.05	0.026	0.026
50.00	-45.78	-0.94	0.00	-94.35	0.00	94.35	5164.20	1297.48	5731.48	5655.29	0.24	-0.05	0.026	0.026
55.00	-44.02	-0.94	0.00	-89.66	0.00	89.66	5086.83	1268.97	5482.43	5447.20	0.29	-0.05	0.025	0.025
60.00	-42.29	-0.93	0.00	-84.97	0.00	84.97	5007.85	1240.47	5238.92	5241.17	0.35	-0.06	0.025	0.025
65.00	-40.60	-0.93	0.00	-80.31	0.00	80.31	4927.24	1211.97	5000.94	5037.31	0.41	-0.06	0.024	0.024
70.00	-38.94	-0.93	0.00	-75.66	0.00	75.66	4845.02	1183.47	4768.49	4835.75	0.48	-0.07	0.024	0.024
75.00	-37.31	-0.92	0.00	-71.03	0.00	71.03	4761.17	1154.97	4541.58	4636.60	0.55	-0.07	0.023	0.023
80.00	-35.72	-0.91	0.00	-66.43	0.00	66.43	4675.70	1126.46	4320.19	4439.97	0.63	-0.08	0.023	0.023
85.00	-34.17	-0.91	0.00	-61.87	0.00	61.87	4588.61	1097.96	4104.34	4245.99	0.71	-0.08	0.022	0.022
86.83	-33.61	-0.90	0.00	-60.21	0.00	60.21	4556.28	1087.51	4026.58	4175.55	0.75	-0.08	0.022	0.022
90.00	-31.92	-0.89	0.00	-57.34	0.00	57.34	4499.90	1069.46	3894.02	4054.78	0.80	-0.09	0.021	0.021
92.30	-30.71	-0.89	0.00	-55.29	0.00	55.29	3709.97	922.40	3379.54	3368.78	0.85	-0.09	0.025	0.025
95.00	-30.00	-0.89	0.00	-52.90	0.00	52.90	3673.22	909.22	3283.64	3287.35	0.90	-0.09	0.024	0.024
100.00	-28.71	-0.88	0.00	-48.47	0.00	48.47	3603.88	884.79	3109.55	3137.88	1.00	-0.10	0.023	0.023
105.00	-27.45	-0.87	0.00	-44.08	0.00	44.08	3532.91	860.36	2940.20	2990.41	1.11	-0.11	0.023	0.023
110.00	-26.22	-0.86	0.00	-39.73	0.00	39.73	3460.32	835.93	2775.60	2845.05	1.22	-0.11	0.022	0.022
115.00	-25.01	-0.85	0.00	-35.43	0.00	35.43	3386.11	811.50	2615.74	2701.92	1.34	-0.12	0.021	0.021
120.00	-23.84	-0.84	0.00	-31.17	0.00	31.17	3310.28	787.07	2460.61	2561.13	1.47	-0.12	0.019	0.019
125.00	-22.70	-0.83	0.00	-26.96	0.00	26.96	3228.52	762.64	2310.23	2419.57	1.60	-0.13	0.018	0.018
130.00	-18.31	-0.67	0.00	-22.80	0.00	22.80	3125.09	738.21	2164.59	2266.28	1.73	-0.13	0.016	0.016
132.95	-17.68	-0.67	0.00	-20.82	0.00	20.82	3064.12	723.81	2080.95	2178.25	1.82	-0.13	0.015	0.015
135.00	-16.94	-0.66	0.00	-19.46	0.00	19.46	3021.67	713.78	2023.69	2118.00	1.87	-0.14	0.015	0.015
136.83	-16.28	-0.65	0.00	-18.25	0.00	18.25	2458.83	599.32	1712.04	1739.79	1.93	-0.14	0.017	0.017
140.00	-15.71	-0.65	0.00	-16.18	0.00	16.18	2420.71	586.43	1639.17	1675.64	2.02	-0.14	0.016	0.016
145.00	-14.82	-0.64	0.00	-12.92	0.00	12.92	2359.20	566.07	1527.33	1575.85	2.17	-0.15	0.014	0.014
150.00	-13.96	-0.63	0.00	-9.71	0.00	9.71	2296.08	545.71	1419.45	1478.00	2.32	-0.15	0.013	0.013
153.00	-11.01	-0.53	0.00	-7.82	0.00	7.82	2257.42	533.49	1356.61	1420.27	2.42	-0.15	0.010	0.010
155.00	-10.68	-0.53	0.00	-6.76	0.00	6.76	2223.99	525.35	1315.51	1377.66	2.48	-0.15	0.010	0.010
157.98	-10.20	-0.52	0.00	-5.20	0.00	5.20	2172.66	513.23	1255.49	1314.48	2.58	-0.15	0.009	0.009
157.98	-10.20	-0.52	0.00	-5.20	0.00	5.20	1653.01	411.45	1008.65	1004.33	2.58	-0.15	0.011	0.011
160.00	-9.93	-0.52	0.00	-4.14	0.00	4.14	1634.69	404.86	976.62	977.17	2.64	-0.15	0.010	0.010
162.00	-5.95	-0.31	0.00	-3.10	0.00	3.10	1616.31	398.35	945.44	950.51	2.71	-0.16	0.007	0.007
165.00	-5.61	-0.31	0.00	-2.17	0.00	2.17	1588.26	388.58	899.63	910.90	2.80	-0.16	0.006	0.006
170.00	-5.06	-0.30	0.00	-0.62	0.00	0.62	1540.22	372.29	825.79	845.99	2.97	-0.16	0.004	0.004
172.00	-0.54	0.00	0.00	-0.02	0.00	0.02	1520.54	365.78	797.14	820.44	3.03	-0.16	0.000	0.000
175.00	-0.26	0.00	0.00	0.00	0.00	0.00	1490.55	356.00	755.12	782.56	3.13	-0.16	0.000	0.000

Calculated Forces

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (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



177.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1460.49	346.39	714.91	745.88	3.23	-0.16	0.000
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Seismic Segment Forces (Factored)

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0Ev + 1.0Eh

Iterations 21

Gust Response Factor 1.10

Sds 0.31

Ss 0.30

Dead Load Factor 0.90 **Seismic Load Factor** 1.00

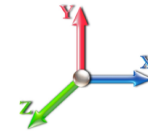
Sd1 0.09

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)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1636.5	2.50	101.54	0.01	
10.00		1608.9	7.50	99.83	0.11	
15.00		1581.2	12.50	98.12	0.31	
20.00		1553.6	17.50	96.40	0.58	
25.00		1526.0	22.50	94.69	0.93	
30.00		1498.4	27.50	92.97	1.33	
35.00		1470.7	32.50	91.26	1.79	
40.00		1443.1	37.50	89.54	2.30	
42.30	Bot - Section 2	655.15	41.15	40.65	0.57	
45.00		1457.9	43.65	90.46	3.18	
48.00	Top - Section 1	1602.3	46.50	99.42	4.36	
50.00		560.10	49.00	34.75	0.59	
55.00		1380.9	52.50	85.68	4.13	
60.00		1353.2	57.50	83.97	4.75	
65.00		1325.6	62.50	82.25	5.39	
70.00		1298.0	67.50	80.54	6.03	
75.00		1270.3	72.50	78.82	6.66	
80.00		1242.7	77.50	77.11	7.28	
85.00		1215.1	82.50	75.40	7.89	
86.83	Bot - Section 3	438.62	85.92	27.22	1.11	
90.00		1326.8	88.42	82.33	10.80	
92.30	Top - Section 2	951.68	91.15	59.05	5.91	
95.00		552.93	93.65	34.31	2.10	
100.00		1006.5	97.50	62.45	7.56	
105.00		982.81	102.50	60.98	7.97	
110.00		959.13	107.50	59.51	8.34	
115.00		935.44	112.50	58.04	8.69	
120.00		911.76	117.50	56.57	9.01	
125.00		888.08	122.50	55.10	9.29	
130.00	Appurtenance(s)	3461.7	127.50	214.80	152.92	
132.95	Bot - Section 4	492.70	131.47	30.57	3.29	
135.00		581.20	133.97	36.06	4.76	
136.83	Top - Section 3	513.06	135.92	31.83	3.82	
140.00		444.44	138.42	27.58	2.97	
145.00		685.63	142.50	42.54	7.49	
150.00		665.90	147.50	41.32	7.57	
153.00	Appurtenance(s)	2327.9	151.50	144.44	97.64	
155.00		254.91	154.00	15.82	1.21	
157.98	Top - Section 4	373.70	156.49	23.19	2.68	
160.00		210.18	158.99	13.04	0.88	
162.00	Appurtenance(s)	3142.5	161.00	194.99	200.93	
165.00		265.53	163.50	16.48	1.48	
170.00		429.92	167.50	26.68	4.07	
172.00	Appurtenance(s)	3577.6	171.00	221.98	293.78	
175.00		222.14	173.50	13.78	1.17	

Seismic Segment Forces (Factored)

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020	
Site Name: Coventry 2 CT	Exposure: C		
Height: 177.95 (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



177.95 Appurtenance(s)	207.38	176.47	12.87	1.05	
Totals:	52,491.0		3,256.9	916.7	Total Wind: 39,591.6

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02573-S-SBA **Code:** EIA/TIA-222-H 10/22/2020
Site Name: Coventry 2 CT **Exposure:** C
Height: 177.95 (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



Load Case: 0.9D + 1.0Ev + 1.0Eh

Iterations 21

Gust Response Factor 1.10

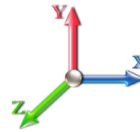
Sds 0.31

Ss 0.30

Dead Load Factor 0.90 **Seismic Load Factor** 1.00 **Sd1** 0.09

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	-50.95	-0.92	0.00	-140.02	0.00	140.02	5803.10	1561.17	8297.91	7657.05	0.00	0.00	0.00	0.027
5.00	-49.36	-0.92	0.00	-135.43	0.00	135.43	5740.73	1532.67	7997.69	7435.53	0.00	0.00	0.00	0.027
10.00	-47.80	-0.92	0.00	-130.83	0.00	130.83	5676.74	1504.17	7703.00	7214.97	0.01	-0.01	0.00	0.027
15.00	-46.26	-0.93	0.00	-126.21	0.00	126.21	5611.13	1475.67	7413.85	6995.50	0.02	-0.01	0.00	0.026
20.00	-44.76	-0.93	0.00	-121.57	0.00	121.57	5543.90	1447.16	7130.22	6777.22	0.04	-0.02	0.00	0.026
25.00	-43.27	-0.93	0.00	-116.92	0.00	116.92	5475.05	1418.66	6852.13	6560.27	0.06	-0.02	0.00	0.026
30.00	-41.82	-0.93	0.00	-112.27	0.00	112.27	5404.57	1390.16	6579.57	6344.75	0.08	-0.03	0.00	0.025
35.00	-40.39	-0.93	0.00	-107.60	0.00	107.60	5332.48	1361.66	6312.54	6130.79	0.11	-0.03	0.00	0.025
40.00	-38.99	-0.93	0.00	-102.93	0.00	102.93	5258.76	1333.16	6051.04	5918.51	0.15	-0.04	0.00	0.025
42.30	-38.35	-0.93	0.00	-100.78	0.00	100.78	5224.28	1320.03	5932.50	5821.36	0.17	-0.04	0.00	0.025
45.00	-36.94	-0.93	0.00	-98.26	0.00	98.26	5183.43	1304.65	5795.07	5708.01	0.19	-0.04	0.00	0.024
48.00	-35.39	-0.93	0.00	-95.46	0.00	95.46	5194.69	1308.88	5832.64	5739.07	0.22	-0.04	0.00	0.023
50.00	-34.85	-0.93	0.00	-93.61	0.00	93.61	5164.20	1297.48	5731.48	5655.29	0.24	-0.05	0.00	0.023
55.00	-33.50	-0.93	0.00	-88.96	0.00	88.96	5086.83	1268.97	5482.43	5447.20	0.29	-0.05	0.00	0.023
60.00	-32.19	-0.92	0.00	-84.33	0.00	84.33	5007.85	1240.47	5238.92	5241.17	0.35	-0.06	0.00	0.023
65.00	-30.90	-0.92	0.00	-79.71	0.00	79.71	4927.24	1211.97	5000.94	5037.31	0.41	-0.06	0.00	0.022
70.00	-29.64	-0.91	0.00	-75.11	0.00	75.11	4845.02	1183.47	4768.49	4835.75	0.47	-0.07	0.00	0.022
75.00	-28.40	-0.91	0.00	-70.54	0.00	70.54	4761.17	1154.97	4541.58	4636.60	0.55	-0.07	0.00	0.021
80.00	-27.19	-0.90	0.00	-65.99	0.00	65.99	4675.70	1126.46	4320.19	4439.97	0.63	-0.08	0.00	0.021
85.00	-26.01	-0.90	0.00	-61.48	0.00	61.48	4588.61	1097.96	4104.34	4245.99	0.71	-0.08	0.00	0.020
86.83	-25.58	-0.89	0.00	-59.83	0.00	59.83	4556.28	1087.51	4026.58	4175.55	0.74	-0.08	0.00	0.020
90.00	-24.30	-0.88	0.00	-57.00	0.00	57.00	4499.90	1069.46	3894.02	4054.78	0.80	-0.09	0.00	0.019
92.30	-23.37	-0.88	0.00	-54.97	0.00	54.97	3709.97	922.40	3379.54	3368.78	0.84	-0.09	0.00	0.023
95.00	-22.84	-0.88	0.00	-52.60	0.00	52.60	3673.22	909.22	3283.64	3287.35	0.89	-0.09	0.00	0.022
100.00	-21.85	-0.87	0.00	-48.23	0.00	48.23	3603.88	884.79	3109.55	3137.88	0.99	-0.10	0.00	0.021
105.00	-20.89	-0.86	0.00	-43.88	0.00	43.88	3532.91	860.36	2940.20	2990.41	1.10	-0.10	0.00	0.021
110.00	-19.96	-0.85	0.00	-39.58	0.00	39.58	3460.32	835.93	2775.60	2845.05	1.21	-0.11	0.00	0.020
115.00	-19.04	-0.84	0.00	-35.31	0.00	35.31	3386.11	811.50	2615.74	2701.92	1.33	-0.12	0.00	0.019
120.00	-18.15	-0.84	0.00	-31.09	0.00	31.09	3310.28	787.07	2460.61	2561.13	1.46	-0.12	0.00	0.018
125.00	-17.28	-0.83	0.00	-26.92	0.00	26.92	3228.52	762.64	2310.23	2419.57	1.59	-0.13	0.00	0.016
130.00	-13.94	-0.67	0.00	-22.79	0.00	22.79	3125.09	738.21	2164.59	2266.28	1.72	-0.13	0.00	0.015
132.95	-13.46	-0.66	0.00	-20.82	0.00	20.82	3064.12	723.81	2080.95	2178.25	1.80	-0.13	0.00	0.014
135.00	-12.90	-0.66	0.00	-19.47	0.00	19.47	3021.67	713.78	2023.69	2118.00	1.86	-0.14	0.00	0.013
136.83	-12.40	-0.65	0.00	-18.26	0.00	18.26	2458.83	599.32	1712.04	1739.79	1.91	-0.14	0.00	0.016
140.00	-11.96	-0.65	0.00	-16.20	0.00	16.20	2420.71	586.43	1639.17	1675.64	2.00	-0.14	0.00	0.015
145.00	-11.29	-0.64	0.00	-12.95	0.00	12.95	2359.20	566.07	1527.33	1575.85	2.15	-0.14	0.00	0.013
150.00	-10.64	-0.63	0.00	-9.75	0.00	9.75	2296.08	545.71	1419.45	1478.00	2.31	-0.15	0.00	0.011
153.00	-8.39	-0.53	0.00	-7.85	0.00	7.85	2257.42	533.49	1356.61	1420.27	2.40	-0.15	0.00	0.009
155.00	-8.14	-0.53	0.00	-6.80	0.00	6.80	2223.99	525.35	1315.51	1377.66	2.46	-0.15	0.00	0.009
157.98	-7.77	-0.52	0.00	-5.23	0.00	5.23	2172.66	513.23	1255.49	1314.48	2.56	-0.15	0.00	0.008
157.98	-7.77	-0.52	0.00	-5.23	0.00	5.23	1653.01	411.45	1008.65	1004.33	2.56	-0.15	0.00	0.010
160.00	-7.56	-0.52	0.00	-4.17	0.00	4.17	1634.69	404.86	976.62	977.17	2.62	-0.15	0.00	0.009
162.00	-4.54	-0.31	0.00	-3.12	0.00	3.12	1616.31	398.35	945.44	950.51	2.69	-0.15	0.00	0.006
165.00	-4.28	-0.31	0.00	-2.18	0.00	2.18	1588.26	388.58	899.63	910.90	2.79	-0.16	0.00	0.005
170.00	-3.86	-0.31	0.00	-0.63	0.00	0.63	1540.22	372.29	825.79	845.99	2.95	-0.16	0.00	0.003
172.00	-0.41	0.00	0.00	-0.01	0.00	0.01	1520.54	365.78	797.14	820.44	3.01	-0.16	0.00	0.000
175.00	-0.20	0.00	0.00	0.00	0.00	0.00	1490.55	356.00	755.12	782.56	3.11	-0.16	0.00	0.000

Calculated Forces

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020	
Site Name: Coventry 2 CT	Exposure: C		
Height: 177.95 (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



177.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1460.49	346.39	714.91	745.88	3.21	-0.16	0.000
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Wind Loading - Shaft

Structure: CT02573-S-SBA

Code: EIA/TIA-222-H

10/22/2020

Site Name: Coventry 2 CT

Exposure: C

Height: 177.95 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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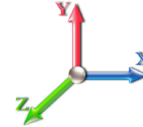


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 23

Dead Load Factor 1.00

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	6.463	7.11	297.46	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	6.463	7.11	292.06	0.730	0.000	5.00	27.042	19.74	140.3	0.0	1499.7
10.00		1.00	0.85	6.463	7.11	286.67	0.730	0.000	5.00	26.547	19.38	137.8	0.0	1472.0
15.00		1.00	0.85	6.463	7.11	281.27	0.730	0.000	5.00	26.052	19.02	135.2	0.0	1444.4
20.00		1.00	0.90	6.858	7.54	284.18	0.730	0.000	5.00	25.558	18.66	140.7	0.0	1416.8
25.00		1.00	0.95	7.188	7.91	285.24	0.730	0.000	5.00	25.063	18.30	144.7	0.0	1389.1
30.00		1.00	0.98	7.469	8.22	284.97	0.730	0.000	5.00	24.568	17.93	147.3	0.0	1361.5
35.00		1.00	1.01	7.715	8.49	283.74	0.730	0.000	5.00	24.073	17.57	149.1	0.0	1333.9
40.00		1.00	1.04	7.935	8.73	281.78	0.730	0.000	5.00	23.578	17.21	150.2	0.0	1306.2
42.30	Bot - Section 2	1.00	1.06	8.029	8.83	280.68	0.730	0.000	2.30	10.689	7.80	68.9	0.0	592.1
45.00		1.00	1.07	8.134	8.95	279.24	0.730	0.000	2.70	12.594	9.19	82.3	0.0	1384.1
48.00	Top - Section 1	1.00	1.08	8.246	9.07	277.49	0.730	0.000	3.00	13.835	10.10	91.6	0.0	1520.2
50.00		1.00	1.09	8.317	9.15	280.82	0.730	0.000	2.00	9.124	6.66	60.9	0.0	505.3
55.00		1.00	1.12	8.485	9.33	277.47	0.730	0.000	5.00	22.464	16.40	153.1	0.0	1244.0
60.00		1.00	1.14	8.642	9.51	273.78	0.730	0.000	5.00	21.969	16.04	152.5	0.0	1216.4
65.00		1.00	1.16	8.789	9.67	269.81	0.730	0.000	5.00	21.474	15.68	151.6	0.0	1188.8
70.00		1.00	1.17	8.927	9.82	265.59	0.730	0.000	5.00	20.979	15.32	150.4	0.0	1161.1
75.00		1.00	1.19	9.058	9.96	261.14	0.730	0.000	5.00	20.485	14.95	149.0	0.0	1133.5
80.00		1.00	1.21	9.182	10.10	256.49	0.730	0.000	5.00	19.990	14.59	147.4	0.0	1105.9
85.00		1.00	1.22	9.300	10.23	251.66	0.730	0.000	5.00	19.495	14.23	145.6	0.0	1078.2
86.83	Bot - Section 3	1.00	1.23	9.342	10.28	249.85	0.730	0.000	1.83	7.024	5.13	52.7	0.0	388.4
90.00		1.00	1.24	9.412	10.35	246.67	0.730	0.000	3.17	12.177	8.89	92.0	0.0	1240.2
92.30	Top - Section 2	1.00	1.24	9.463	10.41	244.32	0.730	0.000	2.30	8.728	6.37	66.3	0.0	888.7
95.00		1.00	1.25	9.520	10.47	245.73	0.730	0.000	2.70	10.095	7.37	77.2	0.0	479.1
100.00		1.00	1.27	9.623	10.59	240.48	0.730	0.000	5.00	18.328	13.38	141.6	0.0	869.6
105.00		1.00	1.28	9.723	10.70	235.10	0.730	0.000	5.00	17.833	13.02	139.2	0.0	845.9
110.00		1.00	1.29	9.819	10.80	229.61	0.730	0.000	5.00	17.338	12.66	136.7	0.0	822.2
115.00		1.00	1.30	9.911	10.90	224.00	0.730	0.000	5.00	16.843	12.30	134.0	0.0	798.6
120.00		1.00	1.32	10.000	11.00	218.30	0.730	0.000	5.00	16.348	11.93	131.3	0.0	774.9
125.00		1.00	1.33	10.086	11.10	212.50	0.730	0.000	5.00	15.854	11.57	128.4	0.0	751.2
130.00	Appurtenance(s)	1.00	1.34	10.170	11.19	206.62	0.730	0.000	5.00	15.359	11.21	125.4	0.0	727.5
132.95	Bot - Section 4	1.00	1.34	10.218	11.24	203.11	0.730	0.000	2.95	8.823	6.44	72.4	0.0	417.8
135.00		1.00	1.35	10.251	11.28	200.65	0.730	0.000	2.05	6.149	4.49	50.6	0.0	529.1
136.83	Top - Section 3	1.00	1.35	10.280	11.31	198.44	0.730	0.000	1.83	5.423	3.96	44.8	0.0	466.5
140.00		1.00	1.36	10.330	11.36	198.24	0.730	0.000	3.17	9.210	6.72	76.4	0.0	364.0
145.00		1.00	1.37	10.407	11.45	192.13	0.730	0.000	5.00	14.139	10.32	118.1	0.0	558.6
150.00		1.00	1.38	10.481	11.53	185.95	0.730	0.000	5.00	13.644	9.96	114.8	0.0	538.9
153.00	Appurtenance(s)	1.00	1.38	10.525	11.58	182.21	0.730	0.000	3.00	7.949	5.80	67.2	0.0	313.9
155.00		1.00	1.39	10.554	11.61	179.70	0.730	0.000	2.00	5.200	3.80	44.1	0.0	205.3
157.98	Top - Section 4	1.00	1.39	10.596	11.66	175.95	0.730	0.000	2.98	7.596	5.55	64.6	0.0	299.8
160.00		1.00	1.40	10.624	11.69	173.38	0.730	0.000	2.02	5.058	3.69	43.2	0.0	160.0
162.00	Appurtenance(s)	1.00	1.40	10.652	11.72	170.84	0.730	0.000	2.00	4.923	3.59	42.1	0.0	155.7
165.00		1.00	1.41	10.693	11.76	167.01	0.730	0.000	3.00	7.236	5.28	62.1	0.0	228.9
170.00		1.00	1.42	10.761	11.84	160.58	0.730	0.000	5.00	11.664	8.52	100.8	0.0	368.8
172.00	Appurtenance(s)	1.00	1.42	10.787	11.87	157.99	0.730	0.000	2.00	4.527	3.30	39.2	0.0	143.1
175.00		1.00	1.42	10.827	11.91	154.08	0.730	0.000	3.00	6.642	4.85	57.7	0.0	209.9
177.95	Appurtenance(s)	1.00	1.43	10.865	11.95	150.23	0.730	0.000	2.95	6.358	4.64	55.5	0.0	200.9

Wind Loading - Shaft

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	
		Struct Class:	II	Page: 39



Totals:	177.95	4,777.2	37,100.9
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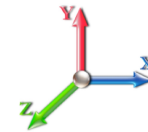
Discrete Appurtenance Forces

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 40



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
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	177.95	6' Lightning rod	1	10.865	11.951	1.00	1.00	0.38	6.50	0.000	0.000	4.54	0.00	0.00
2	172.00	KRY 112 144/1	3	10.787	11.866	0.38	0.75	0.46	33.00	0.000	0.000	5.47	0.00	0.00
3	172.00	MS-1436 (Light Collar)	1	10.787	11.866	1.00	1.00	1.50	65.60	0.000	0.000	17.80	0.00	0.00
4	172.00	MS-HRECP	1	10.787	11.866	1.00	1.00	12.25	514.00	0.000	0.000	145.36	0.00	0.00
5	172.00	MS-HR35	1	10.787	11.866	1.00	1.00	8.75	430.00	0.000	0.000	103.83	0.00	0.00
6	172.00	RR90-17-02DP	3	10.787	11.866	0.55	0.75	7.15	40.50	0.000	0.000	84.86	0.00	0.00
7	172.00	MS-C1B-2875P	1	10.787	11.866	1.00	1.00	10.00	329.00	0.000	0.000	118.66	0.00	0.00
8	172.00	4449	3	10.787	11.866	0.50	0.75	2.49	210.00	0.000	0.000	29.52	0.00	0.00
9	172.00	782 10660	3	10.787	11.866	0.38	0.75	0.32	7.80	0.000	0.000	3.74	0.00	0.00
10	172.00	APXVAARR24_43-U-NA2	3	10.761	11.837	0.53	0.75	31.97	384.00	0.000	-2.000	378.42	0.00	-756.84
11	172.00	T-Frames w/ Pipe Mount	3	10.787	11.866	0.56	0.75	27.00	1350.00	0.000	0.000	320.39	0.00	0.00
12	172.00	KRY 112 89/4	3	10.787	11.866	0.38	0.75	0.73	46.20	0.000	0.000	8.68	0.00	0.00
13	162.00	HRK12 (Handrail Kit)	1	10.652	11.717	1.00	1.00	6.75	261.72	0.000	0.000	79.09	0.00	0.00
14	162.00	Ericsson RRUS 8843 B2	3	10.652	11.717	0.50	0.75	2.47	216.00	0.000	0.000	28.97	0.00	0.00
15	162.00	Ericsson RRUS 4449	3	10.652	11.717	0.50	0.75	2.49	210.00	0.000	0.000	29.15	0.00	0.00
16	162.00	Raycap DC6-48-60-18-8F	1	10.652	11.717	1.00	1.00	0.92	31.80	0.000	0.000	10.78	0.00	0.00
17	162.00	HP Platform w/ Pipe	1	10.652	11.717	1.00	1.00	25.00	1600.00	0.000	0.000	292.94	0.00	0.00
18	162.00	Powerwave 7770	3	10.652	11.717	0.58	0.80	9.64	105.00	0.000	0.000	112.91	0.00	0.00
19	162.00	Powerwave 7020.00 RET	6	10.652	11.717	0.38	0.75	0.90	13.20	0.000	0.000	10.55	0.00	0.00
20	162.00	Powerwave 21401 TMA	6	10.652	11.717	0.38	0.75	1.84	105.00	0.000	0.000	21.62	0.00	0.00
21	162.00	Cci HPA-65R-BU6AA	2	10.652	11.717	0.89	0.90	14.11	86.00	0.000	0.000	165.37	0.00	0.00
22	162.00	Cci HPA-65R-BU8AA	1	10.652	11.717	0.86	1.00	9.66	54.00	0.000	0.000	113.17	0.00	0.00
23	162.00	Cci DMP65R-BU8DA	1	10.652	11.717	0.72	1.00	12.87	95.70	0.000	0.000	150.76	0.00	0.00
24	162.00	Cci DMP65R-BU6DA	2	10.652	11.717	0.65	0.90	16.47	158.80	0.000	0.000	193.01	0.00	0.00
25	153.00	ODI2-065R18K-GQ	3	10.525	11.577	0.56	0.80	8.15	75.30	0.000	0.000	94.33	0.00	0.00
26	153.00	SF-SU7-2-96	3	10.525	11.577	0.56	0.75	25.48	1185.00	0.000	0.000	295.00	0.00	0.00
27	153.00	4415	2	10.525	11.577	0.54	0.80	1.99	88.20	0.000	0.000	23.08	0.00	0.00
28	153.00	0208	3	10.525	11.577	0.54	0.80	2.20	59.40	0.000	0.000	25.50	0.00	0.00
29	153.00	Collar Mount (3-Sided)	2	10.525	11.577	1.00	1.00	5.00	440.00	0.000	0.000	57.89	0.00	0.00
30	153.00	3.0" Std Pipe	3	10.525	11.577	1.00	1.00	5.25	90.00	0.000	0.000	60.78	0.00	0.00
31	130.00	PV-LPP14L-HR-B	1	10.170	11.187	1.00	1.00	36.80	1641.00	0.000	0.000	411.68	0.00	0.00
32	130.00	DB-T1-6Z-8AB-OZ	2	10.170	11.187	0.70	0.90	6.74	37.80	0.000	0.000	75.39	0.00	0.00
33	130.00	QUAD656C0000x	3	10.170	11.187	0.57	0.80	22.56	162.00	0.000	0.000	252.39	0.00	0.00
34	130.00	SBNHH-1D65B	6	10.170	11.187	0.66	0.80	32.51	240.00	0.000	0.000	363.68	0.00	0.00
35	130.00	B66A RRH 4X45	3	10.170	11.187	0.60	0.80	4.68	192.00	0.000	0.000	52.36	0.00	0.00
36	130.00	B25 RRH4x30-4R	3	10.170	11.187	0.60	0.80	3.85	153.00	0.000	0.000	43.09	0.00	0.00
37	130.00	B13 RRH4X30-4R	3	10.170	11.187	0.60	0.80	3.89	171.60	0.000	0.000	43.50	0.00	0.00

Totals: 10,889.12

4,228.25

Total Applied Force Summary

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

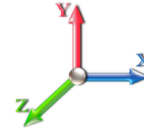


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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 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
5.00		140.35	1651.76	0.00	0.00
10.00		137.78	1624.13	0.00	0.00
15.00		135.21	1596.50	0.00	0.00
20.00		140.74	1568.87	0.00	0.00
25.00		144.65	1541.24	0.00	0.00
30.00		147.35	1513.61	0.00	0.00
35.00		149.14	1485.98	0.00	0.00
40.00		150.24	1458.35	0.00	0.00
42.30		68.92	662.16	0.00	0.00
45.00		82.26	1466.20	0.00	0.00
48.00		91.60	1611.48	0.00	0.00
50.00		60.93	566.19	0.00	0.00
55.00		153.06	1396.13	0.00	0.00
60.00		152.46	1368.49	0.00	0.00
65.00		151.56	1340.86	0.00	0.00
70.00		150.39	1313.23	0.00	0.00
75.00		149.00	1285.60	0.00	0.00
80.00		147.39	1257.97	0.00	0.00
85.00		145.58	1230.34	0.00	0.00
86.83		52.69	444.20	0.00	0.00
90.00		92.03	1336.51	0.00	0.00
92.30		66.32	958.68	0.00	0.00
95.00		77.17	561.13	0.00	0.00
100.00		141.63	1021.71	0.00	0.00
105.00		139.23	998.02	0.00	0.00
110.00		136.70	974.34	0.00	0.00
115.00		134.05	950.65	0.00	0.00
120.00		131.28	926.97	0.00	0.00
125.00		128.40	903.29	0.00	0.00
130.00	(21) attachments	1367.52	3477.00	0.00	0.00
132.95		72.40	501.02	0.00	0.00
135.00		50.62	586.99	0.00	0.00
136.83		44.77	518.23	0.00	0.00
140.00		76.40	453.38	0.00	0.00
145.00		118.15	699.74	0.00	0.00
150.00		114.83	680.01	0.00	0.00
153.00	(16) attachments	623.77	2336.43	0.00	0.00
155.00		44.07	260.42	0.00	0.00
157.98		64.63	381.90	0.00	0.00
160.00		43.15	215.75	0.00	0.00
162.00	(30) attachments	1250.42	3148.08	0.00	0.00
165.00		62.14	269.61	0.00	0.00
170.00		100.79	436.71	0.00	0.00
172.00	(25) attachments	1255.94	3580.36	0.00	-756.84
175.00		57.75	223.50	0.00	0.00
177.95	(1) attachments	60.01	207.38	0.00	0.00

Total Applied Force Summary

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	
		Struct Class:	II	Page: 42



Totals:	9,005.47	52,991.11	0.00	-756.84
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Calculated Forces

Structure: CT02573-S-SBA

Code: EIA/TIA-222-H

10/22/2020

Site Name: Coventry 2 CT

Exposure: C

Height: 177.95 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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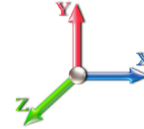


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 23

Dead Load Factor 1.00

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-52.99	-9.02	0.00	-1097.9	0.00	1097.96	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.153
5.00	-51.33	-8.91	0.00	-1052.8	0.00	1052.86	5740.73	1532.67	7997.69	7435.53	0.02	-0.033	0.000	0.151
10.00	-49.70	-8.80	0.00	-1008.3	0.00	1008.31	5676.74	1504.17	7703.00	7214.97	0.07	-0.067	0.000	0.149
15.00	-48.10	-8.69	0.00	-964.32	0.00	964.32	5611.13	1475.67	7413.85	6995.50	0.16	-0.101	0.000	0.146
20.00	-46.53	-8.57	0.00	-920.86	0.00	920.86	5543.90	1447.16	7130.22	6777.22	0.28	-0.135	0.000	0.144
25.00	-44.98	-8.45	0.00	-877.99	0.00	877.99	5475.05	1418.66	6852.13	6560.27	0.44	-0.170	0.000	0.142
30.00	-43.46	-8.33	0.00	-835.73	0.00	835.73	5404.57	1390.16	6579.57	6344.75	0.64	-0.205	0.000	0.140
35.00	-41.97	-8.20	0.00	-794.09	0.00	794.09	5332.48	1361.66	6312.54	6130.79	0.87	-0.241	0.000	0.137
40.00	-40.51	-8.06	0.00	-753.09	0.00	753.09	5258.76	1333.16	6051.04	5918.51	1.15	-0.277	0.000	0.135
42.30	-39.85	-8.00	0.00	-734.53	0.00	734.53	5224.28	1320.03	5932.50	5821.36	1.28	-0.294	0.000	0.134
45.00	-38.38	-7.93	0.00	-712.95	0.00	712.95	5183.43	1304.65	5795.07	5708.01	1.46	-0.314	0.000	0.132
48.00	-36.76	-7.84	0.00	-689.17	0.00	689.17	5194.69	1308.88	5832.64	5739.07	1.66	-0.336	0.000	0.127
50.00	-36.20	-7.79	0.00	-673.50	0.00	673.50	5164.20	1297.48	5731.48	5655.29	1.80	-0.351	0.000	0.126
55.00	-34.80	-7.65	0.00	-634.56	0.00	634.56	5086.83	1268.97	5482.43	5447.20	2.19	-0.386	0.000	0.123
60.00	-33.42	-7.51	0.00	-596.32	0.00	596.32	5007.85	1240.47	5238.92	5241.17	2.61	-0.421	0.000	0.120
65.00	-32.08	-7.36	0.00	-558.79	0.00	558.79	4927.24	1211.97	5000.94	5037.31	3.07	-0.457	0.000	0.117
70.00	-30.76	-7.22	0.00	-521.96	0.00	521.96	4845.02	1183.47	4768.49	4835.75	3.57	-0.492	0.000	0.114
75.00	-29.47	-7.08	0.00	-485.85	0.00	485.85	4761.17	1154.97	4541.58	4636.60	4.11	-0.528	0.000	0.111
80.00	-28.21	-6.94	0.00	-450.45	0.00	450.45	4675.70	1126.46	4320.19	4439.97	4.68	-0.564	0.000	0.108
85.00	-26.98	-6.79	0.00	-415.76	0.00	415.76	4588.61	1097.96	4104.34	4245.99	5.29	-0.599	0.000	0.104
86.83	-26.54	-6.74	0.00	-403.31	0.00	403.31	4556.28	1087.51	4026.58	4175.55	5.52	-0.613	0.000	0.102
90.00	-25.20	-6.64	0.00	-381.96	0.00	381.96	4499.90	1069.46	3894.02	4054.78	5.94	-0.635	0.000	0.100
92.30	-24.24	-6.58	0.00	-366.66	0.00	366.66	3709.97	922.40	3379.54	3368.78	6.25	-0.652	0.000	0.115
95.00	-23.67	-6.50	0.00	-348.92	0.00	348.92	3673.22	909.22	3283.64	3287.35	6.62	-0.671	0.000	0.113
100.00	-22.65	-6.36	0.00	-316.40	0.00	316.40	3603.88	884.79	3109.55	3137.88	7.34	-0.709	0.000	0.107
105.00	-21.65	-6.23	0.00	-284.58	0.00	284.58	3532.91	860.36	2940.20	2990.41	8.11	-0.747	0.000	0.101
110.00	-20.67	-6.09	0.00	-253.45	0.00	253.45	3460.32	835.93	2775.60	2845.05	8.91	-0.783	0.000	0.095
115.00	-19.72	-5.95	0.00	-223.00	0.00	223.00	3386.11	811.50	2615.74	2701.92	9.75	-0.818	0.000	0.088
120.00	-18.79	-5.82	0.00	-193.22	0.00	193.22	3310.28	787.07	2460.61	2561.13	10.62	-0.852	0.000	0.081
125.00	-17.89	-5.69	0.00	-164.12	0.00	164.12	3228.52	762.64	2310.23	2419.57	11.53	-0.883	0.000	0.073
130.00	-14.43	-4.27	0.00	-135.68	0.00	135.68	3125.09	738.21	2164.59	2266.28	12.48	-0.913	0.000	0.065
132.95	-13.93	-4.19	0.00	-123.09	0.00	123.09	3064.12	723.81	2080.95	2178.25	13.04	-0.929	0.000	0.061
135.00	-13.35	-4.14	0.00	-114.48	0.00	114.48	3021.67	713.78	2023.69	2118.00	13.45	-0.940	0.000	0.059
136.83	-12.83	-4.09	0.00	-106.90	0.00	106.90	2458.83	599.32	1712.04	1739.79	13.81	-0.950	0.000	0.067
140.00	-12.37	-4.01	0.00	-93.96	0.00	93.96	2420.71	586.43	1639.17	1675.64	14.44	-0.965	0.000	0.061
145.00	-11.67	-3.88	0.00	-73.92	0.00	73.92	2359.20	566.07	1527.33	1575.85	15.47	-0.990	0.000	0.052
150.00	-11.00	-3.76	0.00	-54.52	0.00	54.52	2296.08	545.71	1419.45	1478.00	16.52	-1.011	0.000	0.042
153.00	-8.67	-3.09	0.00	-43.24	0.00	43.24	2257.42	533.49	1356.61	1420.27	17.16	-1.022	0.000	0.034
155.00	-8.41	-3.05	0.00	-37.05	0.00	37.05	2223.99	525.35	1315.51	1377.66	17.59	-1.029	0.000	0.031
157.98	-8.03	-2.98	0.00	-27.98	0.00	27.98	2172.66	513.23	1255.49	1314.48	18.23	-1.037	0.000	0.025
157.98	-8.03	-2.98	0.00	-27.98	0.00	27.98	1653.01	411.45	1008.65	1004.33	18.23	-1.037	0.000	0.033
160.00	-7.81	-2.93	0.00	-21.96	0.00	21.96	1634.69	404.86	976.62	977.17	18.67	-1.041	0.000	0.027
162.00	-4.69	-1.62	0.00	-16.11	0.00	16.11	1616.31	398.35	945.44	950.51	19.11	-1.045	0.000	0.020
165.00	-4.42	-1.56	0.00	-11.24	0.00	11.24	1588.26	388.58	899.63	910.90	19.77	-1.050	0.000	0.015
170.00	-3.99	-1.45	0.00	-3.46	0.00	3.46	1540.22	372.29	825.79	845.99	20.87	-1.055	0.000	0.007
172.00	-0.43	-0.13	0.00	-0.56	0.00	0.56	1520.54	365.78	797.14	820.44	21.31	-1.056	0.000	0.001
175.00	-0.21	-0.06	0.00	-0.19	0.00	0.19	1490.55	356.00	755.12	782.56	21.98	-1.056	0.000	0.000
177.95	0.00	-0.06	0.00	0.00	0.00	0.00	1460.49	346.39	714.91	745.88	22.63	-1.056	0.000	0.000

Calculated Forces

Structure:	CT02573-S-SBA	Code:	EIA/TIA-222-H	10/22/2020
Site Name:	Coventry 2 CT	Exposure:	C	
Height:	177.95 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	Struct Class: II
				Page: 44



Final Analysis Summary

Structure: CT02573-S-SBA	Code: EIA/TIA-222-H	10/22/2020
Site Name: Coventry 2 CT	Exposure: C	
Height: 177.95 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 119 mph Wind	39.7	0.00	63.54	0.00	0.00	4855.80
0.9D + 1.0W 119 mph Wind	39.7	0.00	47.64	0.00	0.00	4806.66
1.2D + 1.0Di + 1.0Wi 50 mph Wind	11.5	0.00	94.57	0.00	0.00	1428.93
1.2D + 1.0Ev + 1.0Eh	0.9	0.00	66.94	0.00	0.00	141.02
0.9D + 1.0Ev + 1.0Eh	0.9	0.00	50.95	0.00	0.00	140.02
1.0D + 1.0W 60 mph Wind	9.0	0.00	52.99	0.00	0.00	1097.96

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 + 1.0W 119 mph Wind	-63.54	-39.67	0.00	-4855.8	0.00	-4855.8	5803.10	1561.1	8297.91	7657.05	0.00	0.646
0.9D + 1.0W 119 mph Wind	-47.64	-39.65	0.00	-4806.6	0.00	-4806.6	5803.10	1561.1	8297.91	7657.05	0.00	0.637
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-94.57	-11.52	0.00	-1428.9	0.00	-1428.9	5803.10	1561.1	8297.91	7657.05	0.00	0.203
1.2D + 1.0Ev + 1.0Eh	-66.94	-0.92	0.00	-141.02	0.00	-141.02	5803.10	1561.1	8297.91	7657.05	0.00	0.030
0.9D + 1.0Ev + 1.0Eh	-50.95	-0.92	0.00	-140.02	0.00	-140.02	5803.10	1561.1	8297.91	7657.05	0.00	0.027
1.0D + 1.0W 60 mph Wind	-52.99	-9.02	0.00	-1097.9	0.00	-1097.9	5803.10	1561.1	8297.91	7657.05	0.00	0.153

	Monopole Mat Foundation Design		Date
			10/22/2020
	Customer Name:	AT&T	EIA/TIA Standard:
	Site Name:		Structure Height (Ft.):
	Site Number:	CT02573-S-SBA	Engineer Name:
Engr. Number:	98942	Engineer Login ID:	

Foundation Info Obtained from:

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	63.5	Shear Force (Kips):	39.7
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4855.8

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	14.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	32	Width of Pad (ft.):	32

Final Length of pad (ft)	32.0	Final width of pad (ft):	32.0
--------------------------	------	--------------------------	------

Material Properties and Rebar Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	46	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
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):	31	Qty. of Rebar in Pad (W):	31
---------------------------	----	---------------------------	----

Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	31	Qty. of Rebar in Pad (W):	31
---------------------------	----	---------------------------	----

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

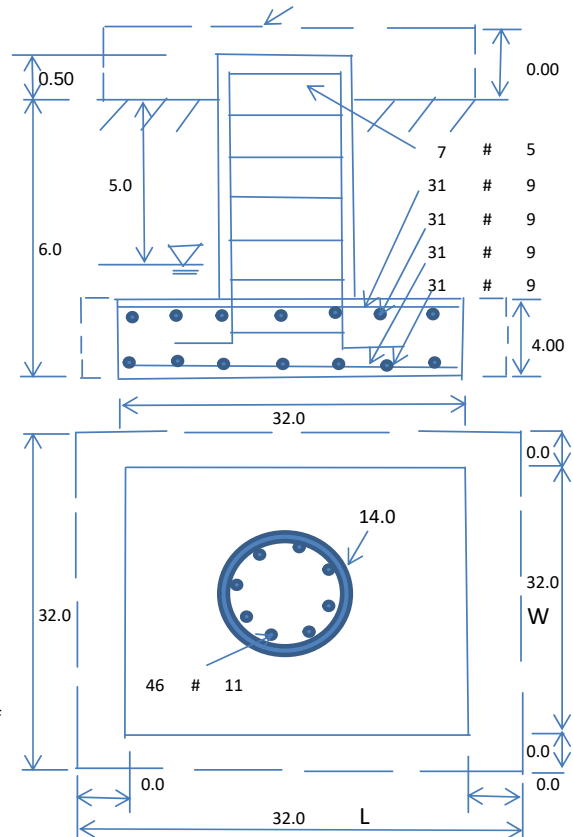
Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	5.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	16000	Ultimate Skin Friction:	175	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hor. resist. for OTM.:	Yes	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1740.12	Total Dry Soil Weight (Kips):	217.52
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	217.52	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	3456.85	Total Dry Concrete Weight (Kips):	518.53
Total Buoyant Concrete Volume (cu. Ft.):	1024.00	Total Buoyant Concrete Weight (Kips):	89.70
Total Effective Concrete Weight (Kips):	608.23	Total Vertical Load on Base (Kips):	889.24

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	2071	< Allowable Factored Soil Bearing (psf):	12000	0.17	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	12906.7	> Design Factored Momont (kips-ft):	4902	0.38	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.63				OK!



Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):

0.90

Strength reduction factor (Shear):

0.75

Strength reduction factor (Axial compression):

0.65

Wind Load Factor on Concrete Design:

1.00

Load/
Capacity
Ratio**(1) Concrete Pier:**

Vertical Steel Rebar Area (sq. in./each):

1.56

Tie / Stirrup Area (sq. in./each):

0.31

Calculated Moment Capacity (Mn,Kips-Ft):

24776.3

>

Design Factored Moment (Mu, Kips-F

4955.1

0.20

OK!

Calculated Shear Capacity (Kips):

2237.9

>

Design Factored Shear (Kips):

39.7

0.02

OK!

Calculated Tension Capacity (Tn, Kips):

3875.0

>

Design Factored Tension (Tu Kips):

0.0

0.00

OK!

Calculated Compression Capacity (Pn, Kips):

29298.4

>

Design Factored Axial Load (Pu Kips):

63.5

0.00

OK!

Moment & Axial Strength Combination:

0.20

OK!

Check Tie Spacing (Design/Required):

1

OK!

Pier Reinforcement Ratio:

0.003

Reinforcement Ratio is too small

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):

1402.0

>

One-Way Factored Shear (L-D. Kips):

250.2

0.18

OK!

One-Way Design Shear Capacity (W-Direction, Kips):

1402.0

>

One-Way Factored Shear (W-D., Kips)

250.2

0.18

OK!

One-Way Design Shear Capacity (Corner-Corner. Kips):

1044.8

>

One-Way Factored Shear (C-C, Kips):

231.2

0.22

OK!

Lower Steel Pad Reinforcement Ratio (L-Direct.):

0.0018

OK!

Lower Steel Pad Reinf. Ratio (W-Direc

0.0018

Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):

6066.5

>

Moment at Bottom (L-Dir. K-Ft):

1731.2

0.29

OK!

Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):

6066.5

>

Moment at Bottom (W-Dir. K-Ft):

1731.2

0.29

OK!

Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):

8495.5

>

Moment at Bottom (C-C Dir. K-Ft):

2448.3

0.29

OK!

Upper Steel Pad Reinforcement Ratio (L-Direct.):

0.0018

OK!

Upper Steel Reinf. Ratio (W-Dir.):

0.0018

Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):

6066.5

>

Moment at the top (L-Dir K-Ft):

443.0

0.07

OK!

Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):

6066.5

>

Moment at the top (W-Dir K-Ft):

443.0

0.07

OK!

Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):

8495.5

>

Moment at the top (C-C Dir. K-Ft):

434.8

0.05

OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:

1942.3

k-ft.

Max. factored shear stress v_{u_CD} :

0.2

Psi

Max. factored shear stress v_{u_AB} :

3.3

Psi

Factored shear Strength ϕv_n :

164.3

Psi

Max. factored shear stress v_u :

3.3

Psi

Check Usage of Punching Shear Capacity:

0.02

OK!

October 9, 2020



SAI Communications
12 Industrial Way
Salem NH, 03079

RE: Site Number: CT5818 (LTE 2C/3C/4C/5G)
 FA Number: 10070981
 PACE Number: MRCTB048621
 PT Number: 2101A0WFPE
 Site Name: COVENTRY NW
 Site Address: 712 Bread and Milk Street
 Coventry, CT 06238

To Whom It May Concern:

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

- (3) 7770 Antennas (55.0"x11.0"x5.0" - Wt. = 35 lbs. /each)
- (6) LGP21401 TMA's (14.4"x9.0"x2.7" - Wt. = 19 lbs. /each)
- **(1) HPA-65R-BU8AA Antennas (96.0"x11.7"x7.6" - Wt. = 54 lbs. /each)**
- **(2) HPA-65R-BU6AA Antennas (71.2"x11.7"x8.4" - Wt. = 43 lbs. /each)**
- **(1) DMP65R-BU8DA Antennas (96.0"x20.7"x7.7" - Wt. = 96 lbs. /each)**
- **(2) DMP65R-BU6DA Antennas (71.2"x20.7"x7.7" - Wt. = 80 lbs. /each)**
- **(3) B2/B66A 8843 RRH's (14.9"x13.2"x10.9" - Wt. = 72 lbs. /each)**
- **(3) B5/B12 4449 RRH's (17.9"x13.2"x9.4" - Wt. = 73 lbs. /each)**
- **(1) Squid Surge Arrestor (24.0"x9.7" Φ - Wt. = 33 lbs. /each) (Tower Mount)**

**Proposed equipment shown in bold*

No original structural design documents or fabrication drawings were available for the existing mounts. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mount on September 9, 2020.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R13.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 130 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 1.76 in was used for this analysis.
- HDG considers this site to be exposure category B; tower is located in an urban/suburban or wooded area with numerous closely spaced obstructions.
- 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 0.176 and a spectral response acceleration parameter at a period of 1 second, S_1 , of 0.063.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 3.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the existing monopole with a ring mount. The connection is considered OK by visual inspection.

Based on our evaluation, we have determined that the existing mount **IS CAPABLE** of supporting the proposed installation.

- **Install new handrail kit, SitePro1 P/N HRK12 (or approved equal). Handrail kit is required per AT&T Technical Directive to stabilize existing cantilevered antennas.**

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing (LTE 2C/3C/4C/5G) Mount Rating	159	LC3	48%	PASS
Modified (LTE 2C/3C/4C/5G) Mount Rating	180	LC1	71%	PASS

Reference Documents:

- Mount mapping report prepared by ProVertic LLC.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mount must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

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

Respectfully Submitted,
Hudson Design Group LLC

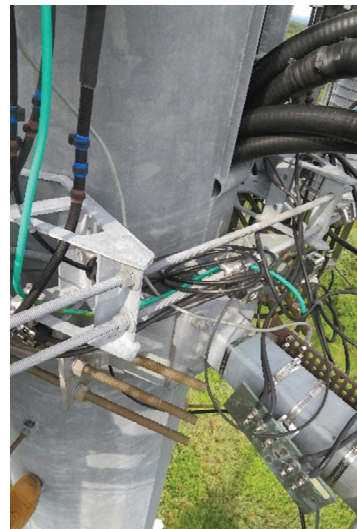
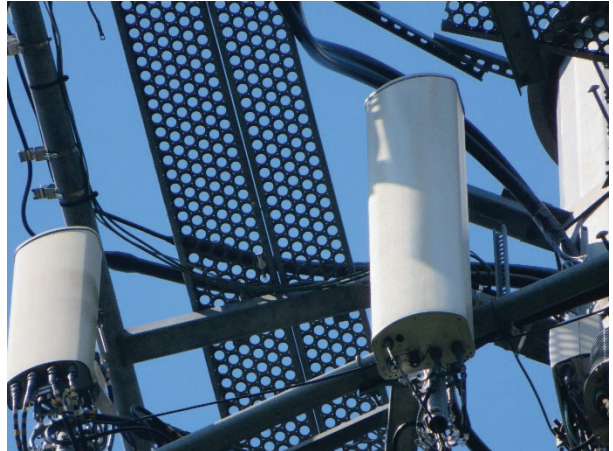
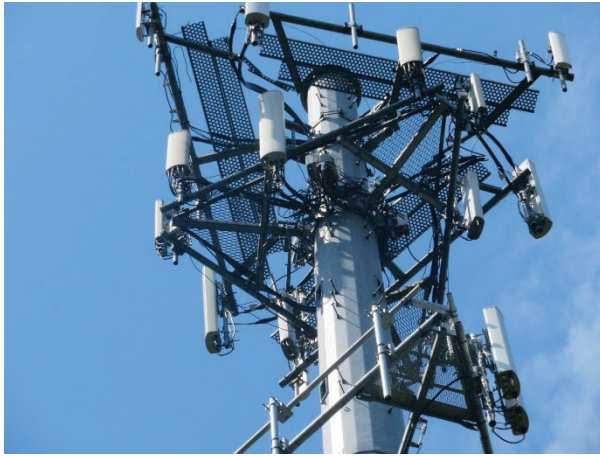


Michael Cabral
Vice President



Daniel P. Hamm, PE
Principal

FIELD PHOTOS:







HUDSON
Design Group LLC

Wind & Ice Calculations

Date: 10/9/2020
 Project Name: COVENTRY NW
 Project No.: CT5818
 Designed By: LBW Checked By: MSC



HUDSON
 Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

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

$$\begin{aligned} z &= 164 \text{ (ft)} \\ z_g &= 1200 \text{ (ft)} \\ \alpha &= 7.0 \end{aligned}$$

$$K_z = 1.138$$

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

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

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

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

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

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

$$K_h = \text{\#DIV/0!}$$

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

$$K_c = 0.9 \text{ (from Table 2-4)}$$

$$K_t = 0 \text{ (from Table 2-5)}$$

$$f = 0 \text{ (from Table 2-5)}$$

$$z = 164$$

$$z_s = 830 \text{ (Mean elevation of base of structure above sea level)}$$

$$H = 0 \text{ (Ht. of the crest above surrounding terrain)}$$

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

$$K_e = 0.97 \text{ (from 2.6.8)}$$

2.6.10 Design Ice Thickness

Max Ice Thickness =

$$t_i = 1.50 \text{ in}$$

Importance Factor =

$$I = 1.0 \text{ (from Table 2-3)}$$

$$K_{iz} = 1.17 \text{ (from Sec. 2.6.10)}$$

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

$$t_{iz} = 1.76 \text{ in}$$

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 Designed By: LBW Checked By: MSC



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2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

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

$h =$ ht. of structure

$h =$ 175

$G_h =$ 0.85

2.6.9.2 Guyed Masts

$G_h =$ 0.85

2.6.9.3 Pole Structures

$G_h =$ 1.1

2.6.9 Appurtenances

$G_h =$ 1.0

2.6.9.4 Structures Supported on Other Structures

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

$G_h =$ 1.35

$G_h =$ 1.00

2.6.11.2 Design Wind Force on Appurtenances

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

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

$q_z =$ 45.40

$q_{z(ice)} =$ 6.72

$q_{z(30)} =$ 2.42

$K_z =$ 1.138 (from 2.6.5.2)

$K_{zt} =$ 1.0 (from 2.6.6.2.1)

$K_s =$ 1.0 (from 2.6.7)

$K_e =$ 0.97 (from 2.6.8)

$K_d =$ 0.95 (from Table 2-2)

$V_{max} =$ 130 mph (Ultimate Wind Speed)

$V_{max(ice)} =$ 50 mph

$V_{30} =$ 30 mph

Table 2-2

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

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 Designed By: LBW Checked By: MSC



Determine Ca:

Table 2-9

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

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

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

Ice Thickness = 1.76 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)
7770 Antenna	55.0	11.0	5.0	4.20	5.00	1.31	250	52	13
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	8.21	1.44	510	102	27
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	4.64	1.30	811	146	43
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	6.09	1.36	357	72	19
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.44	1.24	577	105	31
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.20	74	17	4
B2/B66A 8843 RRH (Shielded)	14.9	2.2	10.9	0.23	6.77	1.39	14	7	1
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.36	1.20	89	20	5
B5/B12 4449 RRH (Shielded)	17.9	0.0	9.4	0.00	0.00	1.20	0	4	0
LGP21401 TMA	14.4	2.7	9.0	0.27	5.33	1.33	16	7	1
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.00	1.20	0	4	0
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	51	12	3
2" Pipe	2.4	12.0		0.20	0.20	1.20	11	5	1
2-1/2" Pipe	2.9	12.0		0.24	0.24	1.20	13	6	1
3" Pipe	3.5	12.0		0.29	0.29	1.20	16	6	1
2x2 Angle	2.0	12.0		0.17	0.17	2.00	15	8	1
HSS 4x4	4.0	12.0		0.33	0.33	1.25	19	7	1
6x1/2 Plate	6.0	12.0		0.50	0.50	2.00	45	14	2

Date: 10/9/2020
 Project Name: COVENTRY NW
 Project No.: CT5818
 Designed By: LBW Checked By: MSC



WIND LOADS

Angle = 30 (deg)

Ice Thickness = 1.76 in.

Equivalent Angle = 210 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	250	133	221
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	510	365	474
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	811	369	701
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	357	273	336
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	577	255	496
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	74	61	71
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	37	61	43
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	89	64	83
B5/B12 4449 RRH (Shielded)	17.9	6.6	9.4	0.82	1.17	2.71	1.90	1.21	1.20	45	64	50
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	16	49	24
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	49	12

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.90	3.46	4.03	6.87	1.27	1.39	50	32	46
HPA-65R-BU8AA Antenna	99.5	15.2	11.1	10.52	7.69	6.54	8.95	1.38	1.46	97	76	92
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.74	7.76	4.11	8.87	1.27	1.46	143	76	126
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.90	6.19	4.91	6.27	1.31	1.37	69	57	66
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.57	5.82	3.08	6.66	1.23	1.38	103	54	91
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.84	1.10	1.28	1.20	1.20	17	15	17
B2/B66A 8843 RRH (Shielded)	18.4	8.4	14.4	1.07	1.84	2.20	1.28	1.20	1.20	9	15	10
B5/B12 4449 RRH	21.4	16.7	12.9	2.49	1.92	1.28	1.66	1.20	1.20	20	15	19
B5/B12 4449 RRH (Shielded)	21.4	8.4	12.9	1.24	1.92	2.56	1.66	1.20	1.20	10	15	11
LGP21401 TMA	17.9	6.2	12.5	0.77	1.56	2.88	1.43	1.22	1.20	6	13	8
LGP21401 TMA (Shielded)	17.9	3.5	12.5	0.44	1.56	5.09	1.43	1.32	1.20	4	13	6

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	12
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	19	25
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	43	20	37
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	19	15	18
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	31	14	26
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	4
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	2	3	2
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B5/B12 4449 RRH (Shielded)	17.9	6.6	9.4	0.82	1.17	2.71	1.90	1.21	1.20	2	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	1
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	3	1

Date: 10/9/2020
 Project Name: COVENTRY NW
 Project No.: CT5818
 Designed By: LBW Checked By: MSC



WIND LOADS

Angle = 60 (deg)

Ice Thickness = 1.76 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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	250	133	162
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	510	365	401
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	811	369	479
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	357	273	294
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	577	255	335
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	74	61	65
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	56	61	60
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	89	64	70
B5/B12 4449 RRH (Shielded)	17.9	9.9	9.4	1.23	1.17	1.81	1.90	1.20	1.20	67	64	65
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	16	49	41
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	49	37

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.90	3.46	4.03	6.87	1.27	1.39	50	32	37
HPA-65R-BU8AA Antenna	99.5	15.2	11.1	10.52	7.69	6.54	8.95	1.38	1.46	97	76	81
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.74	7.76	4.11	8.87	1.27	1.46	143	76	93
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.90	6.19	4.91	6.27	1.31	1.37	69	57	60
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.57	5.82	3.08	6.66	1.23	1.38	103	54	66
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.84	1.10	1.28	1.20	1.20	17	15	15
B2/B66A 8843 RRH (Shielded)	18.4	12.5	14.4	1.60	1.84	1.47	1.28	1.20	1.20	13	15	14
B5/B12 4449 RRH	21.4	16.7	12.9	2.49	1.92	1.28	1.66	1.20	1.20	20	15	17
B5/B12 4449 RRH (Shielded)	21.4	12.5	12.9	1.87	1.92	1.71	1.66	1.20	1.20	15	15	15
LGP21401 TMA	17.9	6.2	12.5	0.77	1.56	2.88	1.43	1.22	1.20	6	13	11
LGP21401 TMA (Shielded)	17.9	3.5	12.5	0.44	1.56	5.09	1.43	1.32	1.20	4	13	10

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	9
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	19	21
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	43	20	26
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	19	15	16
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	31	14	18
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	3	3	3
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B5/B12 4449 RRH (Shielded)	17.9	9.9	9.4	1.23	1.17	1.81	1.90	1.20	1.20	4	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	3	2

Date: 10/9/2020
 Project Name: COVENTRY NW
 Project No.: CT5818
 Designed By: LBW Checked By: MSC



WIND LOADS

Angle = 90 (deg)

Ice Thickness = 1.76 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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	250	133	133
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	510	365	365
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	811	369	369
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	357	273	273
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	577	255	255
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	74	61	61
B2/B66A 8843 RRH (Shielded)	14.9	2.2	10.9	0.23	1.13	6.77	1.37	1.39	1.20	14	61	61
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	89	64	64
B5/B12 4449 RRH (Shielded)	17.9	0.0	9.4	0.00	1.17	0.00	1.90	1.20	1.20	0	64	64
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	16	49	49
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	49	49

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.90	3.46	4.03	6.87	1.27	1.39	50	32	32
HPA-65R-BU8AA Antenna	99.5	15.2	11.1	10.52	7.69	6.54	8.95	1.38	1.46	97	76	76
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.74	7.76	4.11	8.87	1.27	1.46	143	76	76
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.90	6.19	4.91	6.27	1.31	1.37	69	57	57
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.57	5.82	3.08	6.66	1.23	1.38	103	54	54
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.84	1.10	1.28	1.20	1.20	17	15	15
B2/B66A 8843 RRH (Shielded)	18.4	5.7	14.4	0.73	1.84	3.22	1.28	1.23	1.20	6	15	15
B5/B12 4449 RRH	21.4	16.7	12.9	2.49	1.92	1.28	1.66	1.20	1.20	20	15	15
B5/B12 4449 RRH (Shielded)	21.4	3.5	12.9	0.52	1.92	6.08	1.66	1.36	1.20	5	15	15
LGP21401 TMA	17.9	6.2	12.5	0.77	1.56	2.88	1.43	1.22	1.20	6	13	13
LGP21401 TMA (Shielded)	17.9	3.5	12.5	0.44	1.56	5.09	1.43	1.32	1.20	4	13	13

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	7
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	19	19
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	43	20	20
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	19	15	15
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	31	14	14
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
B2/B66A 8843 RRH (Shielded)	14.9	2.2	10.9	0.23	1.13	6.77	1.37	1.39	1.20	1	3	3
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	3
B5/B12 4449 RRH (Shielded)	17.9	0.0	9.4	0.00	1.17	0.00	1.90	1.20	1.20	0	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	3	3

Date: 10/9/2020
 Project Name: COVENTRY NW
 Project No.: CT5818
 Designed By: LBW Checked By: MSC



WIND LOADS

Angle = 120 (deg)

Ice Thickness = 1.76 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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	250	133	162
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	510	365	401
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	811	369	479
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	357	273	294
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	577	255	335
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	74	61	65
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	56	61	60
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	89	64	70
B5/B12 4449 RRH (Shielded)	17.9	9.9	9.4	1.23	1.17	1.81	1.90	1.20	1.20	67	64	65
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	16	49	41
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	49	37

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.90	3.46	4.03	6.87	1.27	1.39	50	32	37
HPA-65R-BU8AA Antenna	99.5	15.2	11.1	10.52	7.69	6.54	8.95	1.38	1.46	97	76	81
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.74	7.76	4.11	8.87	1.27	1.46	143	76	93
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.90	6.19	4.91	6.27	1.31	1.37	69	57	60
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.57	5.82	3.08	6.66	1.23	1.38	103	54	66
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.84	1.10	1.28	1.20	1.20	17	15	15
B2/B66A 8843 RRH (Shielded)	18.4	12.5	14.4	1.60	1.84	1.47	1.28	1.20	1.20	13	15	14
B5/B12 4449 RRH	21.4	16.7	12.9	2.49	1.92	1.28	1.66	1.20	1.20	20	15	17
B5/B12 4449 RRH (Shielded)	21.4	12.5	12.9	1.87	1.92	1.71	1.66	1.20	1.20	15	15	15
LGP21401 TMA	17.9	6.2	12.5	0.77	1.56	2.88	1.43	1.22	1.20	6	13	11
LGP21401 TMA (Shielded)	17.9	3.5	12.5	0.44	1.56	5.09	1.43	1.32	1.20	4	13	10

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	9
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	19	21
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	43	20	26
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	19	15	16
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	31	14	18
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	3	3	3
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B5/B12 4449 RRH (Shielded)	17.9	9.9	9.4	1.23	1.17	1.81	1.90	1.20	1.20	4	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	3	2

Date: 10/9/2020
 Project Name: COVENTRY NW
 Project No.: CT5818
 Designed By: LBW Checked By: MSC



WIND LOADS

Angle = 150 (deg) Ice Thickness = 1.76 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)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	250	133	221
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	510	365	474
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	811	369	701
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	357	273	336
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	577	255	496
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	74	61	71
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	37	61	43
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	89	64	83
B5/B12 4449 RRH (Shielded)	17.9	6.6	9.4	0.82	1.17	2.71	1.90	1.21	1.20	45	64	50
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	16	49	24
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	49	12

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.90	3.46	4.03	6.87	1.27	1.39	50	32	46
HPA-65R-BU8AA Antenna	99.5	15.2	11.1	10.52	7.69	6.54	8.95	1.38	1.46	97	76	92
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.74	7.76	4.11	8.87	1.27	1.46	143	76	126
HPA-65R-BU6AA Antenna	74.7	15.2	11.9	7.90	6.19	4.91	6.27	1.31	1.37	69	57	66
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.57	5.82	3.08	6.66	1.23	1.38	103	54	91
B2/B66A 8843 RRH	18.4	16.7	14.4	2.14	1.84	1.10	1.28	1.20	1.20	17	15	17
B2/B66A 8843 RRH (Shielded)	18.4	8.4	14.4	1.07	1.84	2.20	1.28	1.20	1.20	9	15	10
B5/B12 4449 RRH	21.4	16.7	12.9	2.49	1.92	1.28	1.66	1.20	1.20	20	15	19
B5/B12 4449 RRH (Shielded)	21.4	8.4	12.9	1.24	1.92	2.56	1.66	1.20	1.20	10	15	11
LGP21401 TMA	17.9	6.2	12.5	0.77	1.56	2.88	1.43	1.22	1.20	6	13	8
LGP21401 TMA (Shielded)	17.9	3.5	12.5	0.44	1.56	5.09	1.43	1.32	1.20	4	13	6

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	12
HPA-65R-BU8AA Antenna	96.0	11.7	7.6	7.80	5.07	8.21	12.63	1.44	1.59	27	19	25
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	43	20	37
HPA-65R-BU6AA Antenna	71.2	11.7	8.4	5.79	4.15	6.09	8.48	1.36	1.45	19	15	18
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	31	14	26
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	4
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	2	3	2
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B5/B12 4449 RRH (Shielded)	17.9	6.6	9.4	0.82	1.17	2.71	1.90	1.21	1.20	2	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	1
LGP21401 TMA (Shielded)	14.4	0.0	9.0	0.00	0.90	0.00	1.60	1.20	1.20	0	3	1

Date: 10/9/2020

Project Name: COVENTRY NW

Project No.: CT5818

Designed By: LBW Checked By: MSC



HUDSON
Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 1.76 in.
Density of ice: 56 pcf

7770 Antenna

Weight of ice based on total radial SF area:

Height (in):	55.0
Width (in):	11.0
Depth (in):	5.0
Total weight of ice on object:	136 lbs
Weight of object:	35.0 lbs
Combined weight of ice and object:	171 lbs

HPA-65R-BU8AA Antenna

Weight of ice based on total radial SF area:

Height (in):	96.0
Width (in):	11.7
Depth (in):	7.6
Total weight of ice on object:	270 lbs
Weight of object:	54.0 lbs
Combined weight of ice and object:	324 lbs

DMP65R-BU8DA 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:	410 lbs
Weight of object:	96.0 lbs
Combined weight of ice and object:	506 lbs

HPA-65R-BU6AA Antenna

Weight of ice based on total radial SF area:

Height (in):	71.2
Width (in):	11.7
Depth (in):	8.4
Total weight of ice on object:	206 lbs
Weight of object:	43.0 lbs
Combined weight of ice and object:	249 lbs

DMP65R-BU6DA Antenna

Weight of ice based on total radial SF area:

Height (in):	71.2
Width (in):	20.7
Depth (in):	7.7
Total weight of ice on object:	304 lbs
Weight of object:	80.0 lbs
Combined weight of ice and object:	384 lbs

B2/B66A 8843 RRH

Weight of ice based on total radial SF area:

Height (in):	14.9
Width (in):	13.2
Depth (in):	10.9
Total weight of ice on object:	50 lbs
Weight of object:	72.0 lbs
Combined weight of ice and object:	122 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:	58 lbs
Weight of object:	73.0 lbs
Combined weight of ice and object:	131 lbs

LGP21401 TMA

Weight of ice based on total radial SF area:

Height (in):	14.4
Width (in):	2.7
Depth (in):	9.0
Total weight of ice on object:	29 lbs
Weight of object:	19.0 lbs
Combined weight of ice and object:	48 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

2" pipe

Per foot weight of ice:

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

2-1/2" pipe

Per foot weight of ice:

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

HSS 4x4

Weight of ice based on total radial SF area:

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

PL 6x1/2

Weight of ice based on total radial SF area:

Height (in):	6
Width (in):	0.5
Per foot weight of ice on object:	17 plf

L 2x2 Angles

Weight of ice based on total radial SF area:

Height (in):	2
Width (in):	2
Per foot weight of ice on object:	10 plf

3" Pipe

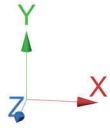
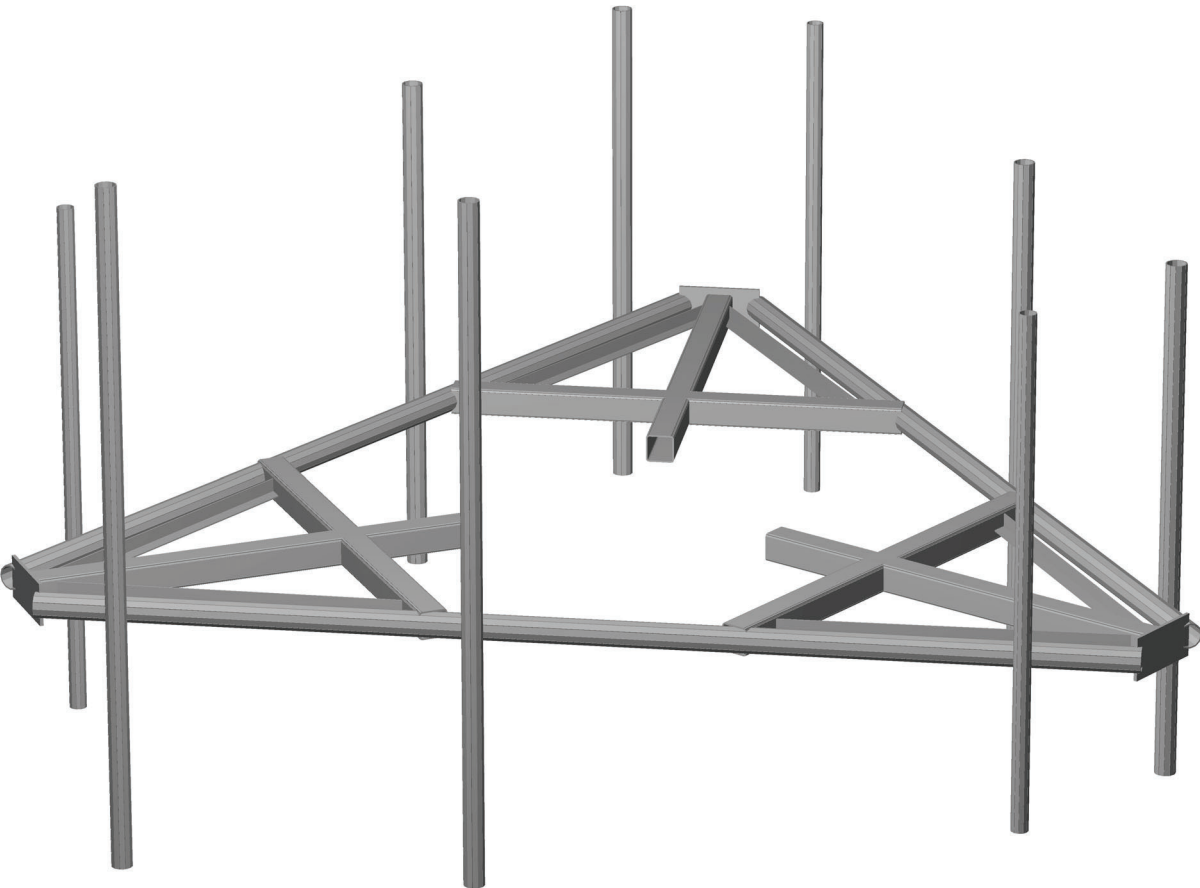
Per foot weight of ice:

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

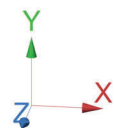
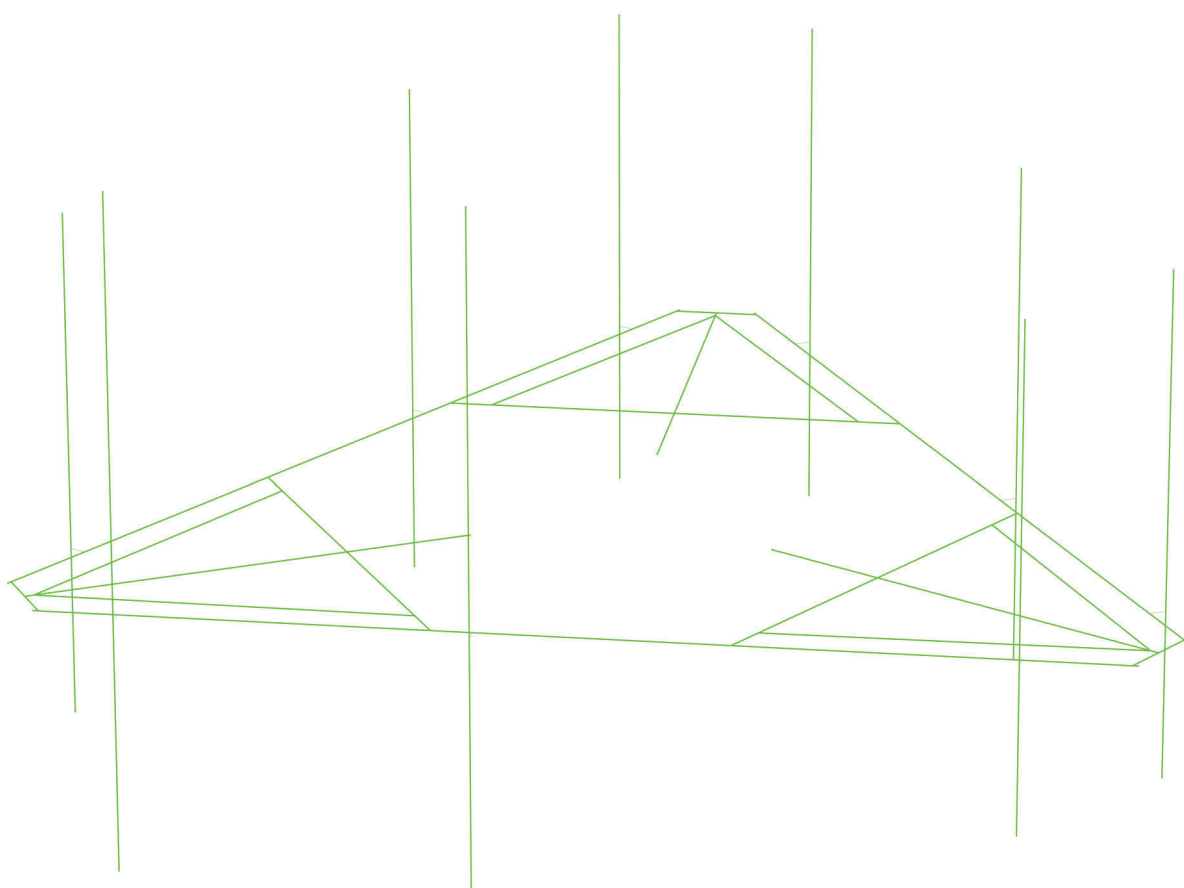


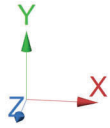
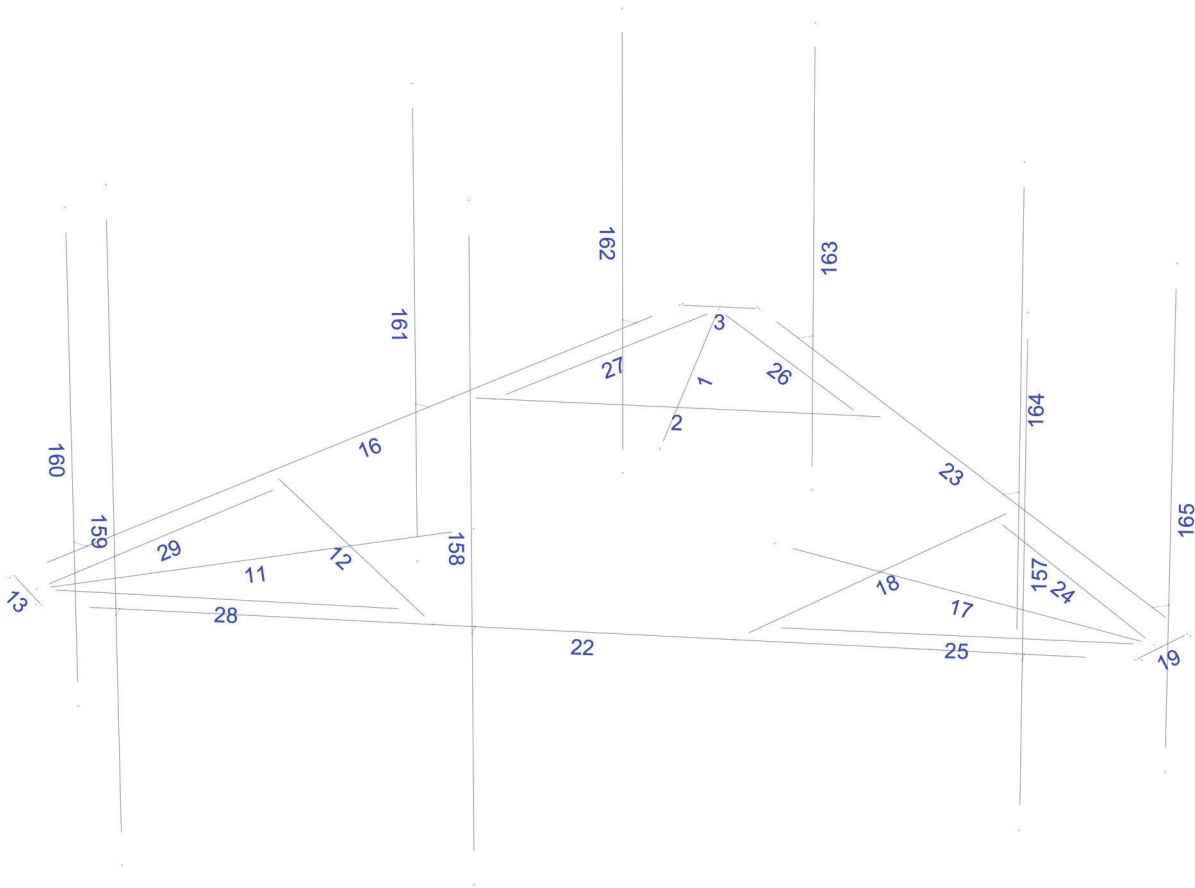
HUDSON
Design Group LLC

**Mount Calculations
(Existing Conditions)**



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Current Date: 10/12/2020 1:39 PM

Units system: English

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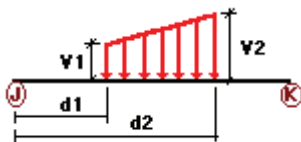
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

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

Distributed force on members

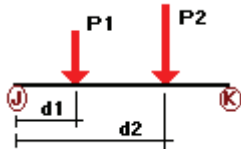


Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
DL	1	y	-0.01	0.00	0.00	No	0.00	No
	2	y	-0.01	0.00	0.00	No	0.00	No
	11	y	-0.01	0.00	0.00	No	0.00	No
	12	y	-0.01	0.00	0.00	No	0.00	No
	17	y	-0.01	0.00	0.00	No	0.00	No
	18	y	-0.01	0.00	0.00	No	0.00	No
	24	y	-0.01	0.00	0.00	No	0.00	No
	25	y	-0.01	0.00	0.00	No	0.00	No
	26	y	-0.01	0.00	0.00	No	0.00	No
	27	y	-0.01	0.00	0.00	No	0.00	No
	28	y	-0.01	0.00	0.00	No	0.00	No
	29	y	-0.01	0.00	0.00	No	0.00	No
W0	1	z	-0.019	0.00	0.00	No	0.00	No
	2	z	-0.019	0.00	0.00	No	0.00	No
	3	z	-0.045	0.00	0.00	No	0.00	No

W30	11	z	-0.019	0.00	0.00	No	0.00	No
	12	z	-0.019	0.00	0.00	No	0.00	No
	13	z	-0.045	0.00	0.00	No	0.00	No
	16	z	-0.016	0.00	0.00	No	0.00	No
	17	z	-0.019	0.00	0.00	No	0.00	No
	18	z	-0.019	0.00	0.00	No	0.00	No
	19	z	-0.045	0.00	0.00	No	0.00	No
	22	z	-0.016	0.00	0.00	No	0.00	No
	23	z	-0.016	0.00	0.00	No	0.00	No
	24	z	-0.015	0.00	0.00	No	0.00	No
	25	z	-0.015	0.00	0.00	No	0.00	No
	26	z	-0.015	0.00	0.00	No	0.00	No
	27	z	-0.015	0.00	0.00	No	0.00	No
	28	z	-0.015	0.00	0.00	No	0.00	No
	29	z	-0.015	0.00	0.00	No	0.00	No
	160	z	-0.011	0.00	0.00	No	0.00	No
	161	z	-0.013	0.00	0.00	No	0.00	No
	162	z	-0.013	0.00	0.00	No	0.00	No
	163	z	-0.011	0.00	0.00	No	0.00	No
	164	z	-0.013	0.00	0.00	No	0.00	No
	165	z	-0.013	0.00	0.00	No	0.00	No
	1	x	-0.019	0.00	0.00	No	0.00	No
	2	x	-0.019	0.00	0.00	No	0.00	No
	3	x	-0.045	0.00	0.00	No	0.00	No
	11	x	-0.019	0.00	0.00	No	0.00	No
	12	x	-0.019	0.00	0.00	No	0.00	No
	13	x	-0.045	0.00	0.00	No	0.00	No
	16	x	-0.016	0.00	0.00	No	0.00	No
	17	x	-0.019	0.00	0.00	No	0.00	No
	18	x	-0.019	0.00	0.00	No	0.00	No
	19	x	-0.045	0.00	0.00	No	0.00	No
	23	x	-0.016	0.00	0.00	No	0.00	No
	24	x	-0.015	0.00	0.00	No	0.00	No
	25	x	-0.015	0.00	0.00	No	0.00	No
	26	x	-0.015	0.00	0.00	No	0.00	No
	27	x	-0.015	0.00	0.00	No	0.00	No
	28	x	-0.015	0.00	0.00	No	0.00	No
	29	x	-0.015	0.00	0.00	No	0.00	No
	157	x	-0.011	0.00	0.00	No	0.00	No
	158	x	-0.013	0.00	0.00	No	0.00	No
	159	x	-0.013	0.00	0.00	No	0.00	No
	160	x	-0.011	0.00	0.00	No	0.00	No
	161	x	-0.013	0.00	0.00	No	0.00	No
	162	x	-0.013	0.00	0.00	No	0.00	No
	163	x	-0.011	0.00	0.00	No	0.00	No
	164	x	-0.013	0.00	0.00	No	0.00	No
	165	x	-0.013	0.00	0.00	No	0.00	No
Di	1	y	-0.016	0.00	0.00	No	0.00	No
	2	y	-0.016	0.00	0.00	No	0.00	No
	3	y	-0.017	0.00	0.00	No	0.00	No
	11	y	-0.016	0.00	0.00	No	0.00	No
	12	y	-0.016	0.00	0.00	No	0.00	No
	13	y	-0.017	0.00	0.00	No	0.00	No
	16	y	-0.011	0.00	0.00	No	0.00	No
	17	y	-0.016	0.00	0.00	No	0.00	No
	18	y	-0.016	0.00	0.00	No	0.00	No
	19	y	-0.017	0.00	0.00	No	0.00	No
	22	y	-0.011	0.00	0.00	No	0.00	No
	23	y	-0.011	0.00	0.00	No	0.00	No
	24	y	-0.01	0.00	0.00	No	0.00	No

25	y	-0.01	0.00	0.00	No	0.00	No
26	y	-0.01	0.00	0.00	No	0.00	No
27	y	-0.01	0.00	0.00	No	0.00	No
28	y	-0.01	0.00	0.00	No	0.00	No
29	y	-0.01	0.00	0.00	No	0.00	No
157	y	-0.009	0.00	0.00	No	0.00	No
158	y	-0.01	0.00	0.00	No	0.00	No
159	y	-0.01	0.00	0.00	No	0.00	No
160	y	-0.009	0.00	0.00	No	0.00	No
161	y	-0.01	0.00	0.00	No	0.00	No
162	y	-0.01	0.00	0.00	No	0.00	No
163	y	-0.009	0.00	0.00	No	0.00	No
164	y	-0.01	0.00	0.00	No	0.00	No
165	y	-0.01	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	157	y	-0.018	1.50	No
		y	-0.018	5.00	No
		y	-0.038	3.00	No
	158	y	-0.027	0.50	No
		y	-0.027	7.50	No
		y	-0.072	3.00	No
	159	y	-0.048	0.50	No
		y	-0.048	7.50	No
		y	-0.073	3.00	No
	160	y	-0.018	1.50	No
		y	-0.018	5.00	No
		y	-0.038	3.00	No
	161	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.072	3.00	No
	162	y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.073	3.00	No
	163	y	-0.018	1.50	No
		y	-0.018	5.00	No
		y	-0.038	3.00	No
	164	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.072	3.00	No
	165	y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.073	3.00	No
W0	157	z	-0.126	1.50	No
		z	-0.126	5.00	No
	158	z	-0.255	0.50	No
		z	-0.255	7.50	No

		z	-0.014	3.00	No
	159	z	-0.406	0.50	No
		z	-0.406	7.50	No
	160	z	-0.082	1.50	No
		z	-0.082	5.00	No
		z	-0.037	3.00	No
	161	z	-0.148	0.50	No
		z	-0.148	5.50	No
		z	-0.06	3.00	No
	162	z	-0.168	0.50	No
		z	-0.168	5.50	No
		z	-0.065	3.00	No
	163	z	-0.082	1.50	No
		z	-0.082	5.00	No
		z	-0.037	3.00	No
	164	z	-0.148	0.50	No
		z	-0.148	5.50	No
		z	-0.06	3.00	No
	165	z	-0.168	0.50	No
		z	-0.168	5.50	No
		z	-0.065	3.00	No
W30	157	x	-0.067	1.50	No
		x	-0.067	5.00	No
		x	-0.049	3.00	No
	158	x	-0.183	0.50	No
		x	-0.183	7.50	No
		x	-0.061	3.00	No
	159	x	-0.185	0.50	No
		x	-0.185	7.50	No
		x	-0.064	3.00	No
	160	x	-0.111	1.50	No
		x	-0.111	5.00	No
		x	-0.012	3.00	No
	161	x	-0.169	0.50	No
		x	-0.169	5.50	No
		x	-0.043	3.00	No
	162	x	-0.249	0.50	No
		x	-0.249	5.50	No
		x	-0.05	3.00	No
	163	x	-0.111	1.50	No
		x	-0.111	5.00	No
		x	-0.012	3.00	No
	164	x	-0.169	0.50	No
		x	-0.169	5.50	No
		x	-0.043	3.00	No
	165	x	-0.249	0.50	No
		x	-0.249	5.50	No
		x	-0.05	3.00	No
Di	157	y	-0.068	1.50	No
		y	-0.068	5.00	No
		y	-0.058	3.00	No
	158	y	-0.135	0.50	No
		y	-0.135	7.50	No
		y	-0.05	3.00	No
	159	y	-0.205	0.50	No
		y	-0.205	7.50	No
		y	-0.058	3.00	No
	160	y	-0.068	1.50	No
		y	-0.068	5.00	No
		y	-0.058	3.00	No

Wi0	161	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.05	3.00	No
	162	y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.058	3.00	No
	163	y	-0.068	1.50	No
		y	-0.068	5.00	No
		y	-0.058	3.00	No
	164	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.05	3.00	No
	165	y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.058	3.00	No
	157	z	-0.026	1.50	No
		z	-0.026	5.00	No
		z	-0.004	3.00	No
	158	z	-0.051	0.50	No
		z	-0.051	7.50	No
		z	-0.007	3.00	No
	159	z	-0.073	0.50	No
		z	-0.073	7.50	No
		z	-0.004	3.00	No
	160	z	-0.019	1.50	No
		z	-0.019	5.00	No
		z	-0.01	3.00	No
	161	z	-0.03	0.50	No
		z	-0.03	5.50	No
		z	-0.014	3.00	No
	162	z	-0.034	0.50	No
		z	-0.034	5.50	No
		z	-0.015	3.00	No
	163	z	-0.019	1.50	No
		z	-0.019	5.00	No
		z	-0.01	3.00	No
	164	z	-0.03	0.50	No
		z	-0.03	5.50	No
		z	-0.014	3.00	No
	165	z	-0.034	0.50	No
		z	-0.034	5.50	No
		z	-0.015	3.00	No
Wi30	157	x	-0.017	1.50	No
		x	-0.017	5.00	No
		x	-0.013	3.00	No
	158	x	-0.038	0.50	No
		x	-0.038	7.50	No
		x	-0.015	3.00	No
	159	x	-0.039	0.50	No
		x	-0.039	7.50	No
		x	-0.015	3.00	No
	160	x	-0.023	1.50	No
		x	-0.023	5.00	No
		x	-0.006	3.00	No
	161	x	-0.034	0.50	No
		x	-0.034	5.50	No
		x	-0.01	3.00	No
	162	x	-0.046	0.50	No
		x	-0.046	5.50	No
		x	-0.011	3.00	No

WL0	163	x	-0.023	1.50	No
		x	-0.023	5.00	No
		x	-0.006	3.00	No
	164	x	-0.034	0.50	No
		x	-0.034	5.50	No
		x	-0.01	3.00	No
	165	x	-0.046	0.50	No
		x	-0.046	5.50	No
		x	-0.011	3.00	No
	157	z	-0.007	1.50	No
		z	-0.007	5.00	No
	158	z	-0.014	0.50	No
		z	-0.014	7.50	No
		z	-0.001	3.00	No
	159	z	-0.022	0.50	No
		z	-0.022	7.50	No
	160	z	-0.005	1.50	No
		z	-0.005	5.00	No
		z	-0.002	3.00	No
	161	z	-0.008	0.50	No
		z	-0.008	5.50	No
		z	-0.003	3.00	No
	162	z	-0.009	0.50	No
		z	-0.009	5.50	No
		z	-0.003	3.00	No
	163	z	-0.005	1.50	No
		z	-0.005	5.00	No
		z	-0.002	3.00	No
	164	z	-0.008	0.50	No
		z	-0.008	5.50	No
		z	-0.003	3.00	No
WL30	165	z	-0.009	0.50	No
		z	-0.009	5.50	No
		z	-0.003	3.00	No
	157	x	-0.004	1.50	No
		x	-0.004	5.00	No
		x	-0.003	3.00	No
	158	x	-0.01	0.50	No
		x	-0.01	7.50	No
		x	-0.003	3.00	No
	159	x	-0.01	0.50	No
		x	-0.01	7.50	No
		x	-0.003	3.00	No
	160	x	-0.006	1.50	No
		x	-0.006	5.00	No
		x	-0.001	3.00	No
	161	x	-0.009	0.50	No
		x	-0.009	5.50	No
		x	-0.002	3.00	No
	162	x	-0.014	0.50	No
		x	-0.014	5.50	No
		x	-0.003	3.00	No
	163	x	-0.006	1.50	No
		x	-0.006	5.00	No
		x	-0.001	3.00	No
	164	x	-0.009	0.50	No
		x	-0.009	5.50	No
		x	-0.002	3.00	No
	165	x	-0.014	0.50	No
		x	-0.014	5.50	No

		x	-0.003	3.00	No
LL1	22	y	-0.25	50.00	Yes
LL2	22	y	-0.25	0.00	Yes
LLa1	157	y	-0.25	50.00	Yes
LLa2	158	y	-0.25	50.00	Yes
LLa3	159	y	-0.25	50.00	Yes

Self weight multipliers for load conditions

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

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

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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=1.2DL
 LC15=1.2DL+1.5LL1
 LC16=1.2DL+1.5LL2
 LC17=1.2DL+WL0+1.5LLa1
 LC18=1.2DL+WL30+1.5LLa1
 LC19=1.2DL-WL0+1.5LLa1
 LC20=1.2DL-WL30+1.5LLa1
 LC21=1.2DL+WL0+1.5LLa2
 LC22=1.2DL+WL30+1.5LLa2
 LC23=1.2DL-WL0+1.5LLa2
 LC24=1.2DL-WL30+1.5LLa2
 LC25=1.2DL+WL0+1.5LLa3
 LC26=1.2DL+WL30+1.5LLa3
 LC27=1.2DL-WL0+1.5LLa3
 LC28=1.2DL-WL30+1.5LLa3
 LC29=1.2DL+WL0+1.5LLa4
 LC30=1.2DL+WL30+1.5LLa4
 LC31=1.2DL-WL0+1.5LLa4
 LC32=1.2DL-WL30+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
<i>HSS_SQR 4X4X1_4</i>		1	LC9 at 0.00%	0.29	OK	Eq. H1-1b
		2	LC1 at 50.00%	0.10	OK	Eq. H1-1b
		11	LC11 at 0.00%	0.41	OK	Eq. H1-1b
		12	LC11 at 50.00%	0.14	OK	Eq. H1-1b
		17	LC12 at 0.00%	0.31	OK	Eq. H1-1b
		18	LC11 at 48.44%	0.11	OK	Eq. H1-1b
<i>L 2X2X3_16</i>		24	LC4 at 0.00%	0.23	OK	Eq. H2-1
		25	LC3 at 0.00%	0.18	OK	Eq. H2-1
		26	LC1 at 0.00%	0.19	OK	Eq. H2-1
		27	LC1 at 0.00%	0.19	OK	Eq. H2-1
		28	LC3 at 0.00%	0.22	OK	Eq. H2-1
		29	LC2 at 100.00%	0.21	OK	Eq. H2-1
<i>PIPE 2-1_2x0.203</i>		158	LC3 at 59.38%	0.31	OK	Eq. H1-1b
		159	LC3 at 59.38%	0.48	OK	Eq. H1-1b
		161	LC4 at 65.63%	0.20	OK	Eq. H1-1b

	162	LC2 at 65.63%	0.28	OK	Eq. H1-1b
	164	LC2 at 65.63%	0.20	OK	Eq. H1-1b
	165	LC4 at 65.63%	0.28	OK	Eq. H1-1b
PIPE 2x0.154	157	LC3 at 65.63%	0.17	OK	Eq. H1-1b
	160	LC2 at 65.63%	0.20	OK	Eq. H1-1b
	163	LC2 at 65.63%	0.20	OK	Eq. H1-1b
PIPE 3x0.216	16	LC11 at 36.72%	0.23	OK	Eq. H1-1b
	22	LC12 at 63.28%	0.19	OK	Eq. H1-1b
	23	LC2 at 7.81%	0.15	OK	Eq. H1-1b
PL 6x1/2	3	LC1 at 46.88%	0.10	OK	Eq. H1-1b
	13	LC3 at 46.88%	0.14	OK	Eq. H1-1b
	19	LC4 at 46.88%	0.13	OK	Eq. H1-1b

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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
3	0.00	0.00	-0.75	0
4	0.00	0.00	-2.25	0
5	0.00	0.00	-6.08	0
6	-2.709	0.00	-2.25	0
7	2.709	0.00	-2.25	0
8	-0.50	0.00	-6.08	0
9	0.50	0.00	-6.08	0
10	2.212	0.00	-2.25	0
11	-2.212	0.00	-2.25	0
28	-1.7321	0.00	2.25	0
29	-3.0311	0.00	3.00	0
30	-6.348	0.00	4.915	0
31	-1.6766	0.00	5.3461	0
32	-4.3856	0.00	0.6539	0
33	-6.098	0.00	5.348	0
34	-6.598	0.00	4.482	0
35	-4.1371	0.00	1.0844	0
36	-1.9251	0.00	4.9156	0
39	1.7321	0.00	2.25	0
40	3.0311	0.00	3.00	0
41	6.348	0.00	4.915	0

42	4.3856	0.00	0.6539	0
43	1.6766	0.00	5.3461	0
44	6.598	0.00	4.482	0
45	6.098	0.00	5.348	0
46	1.9251	0.00	4.9156	0
47	4.1371	0.00	1.0844	0
375	6.2566	0.00	4.8622	0
377	0.00	0.00	-5.9745	0
379	-6.2566	0.00	4.8622	0
581	-1.1178	-2.00	-5.4099	0
582	-6.1595	-2.00	3.3226	0
585	-1.1178	4.00	-5.4099	0
586	-6.1595	4.00	3.3226	0
610	6.3265	-2.00	3.6118	0
611	6.3265	4.00	3.6118	0
618	1.2849	-2.00	-5.1206	0
619	1.2849	4.00	-5.1206	0
626	-5.2087	-3.00	5.548	0
627	-5.2087	5.00	5.548	0
634	4.8746	-2.00	5.548	0
635	4.8746	4.00	5.548	0
638	4.3248	-2.00	0.1487	0
639	4.3248	4.00	0.1487	0
644	-2.9429	0.00	-1.8448	0
646	-3.1161	-2.00	-1.9448	0
647	-3.1161	4.00	-1.9448	0
650	-1.2087	-3.00	5.5461	0
651	-1.2087	5.00	5.5461	0
652	6.1665	0.00	5.348	0
653	-6.1665	0.00	5.348	0
654	-0.4657	0.00	-6.1393	0
655	-6.6322	0.00	4.5413	0
656	6.6322	0.00	4.5413	0
657	0.4658	0.00	-6.1393	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
3	1	1	1	1	1	1
28	1	1	1	1	1	1
39	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	3	5		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
2	7	6		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
3	8	9		PL 6x1/2	A36	0.00	0.00	0.00
11	28	30		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
12	32	31		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00

13	33	34	PL 6x1/2	A36	0.00	0.00	0.00
16	655	654	PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
17	39	41	HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
18	43	42	HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
19	44	45	PL 6x1/2	A36	0.00	0.00	0.00
22	653	652	PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
23	656	657	PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
24	47	375	L 2X2X3_16	A36	0.00	0.00	0.00
25	46	375	L 2X2X3_16	A36	0.00	0.00	0.00
26	10	377	L 2X2X3_16	A36	0.00	0.00	0.00
27	11	377	L 2X2X3_16	A36	0.00	0.00	0.00
28	36	379	L 2X2X3_16	A36	0.00	0.00	0.00
29	379	35	L 2X2X3_16	A36	0.00	0.00	0.00
157	635	634	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
158	651	650	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
159	627	626	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
160	586	582	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
161	647	646	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
162	585	581	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
163	619	618	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
164	639	638	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
165	611	610	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00

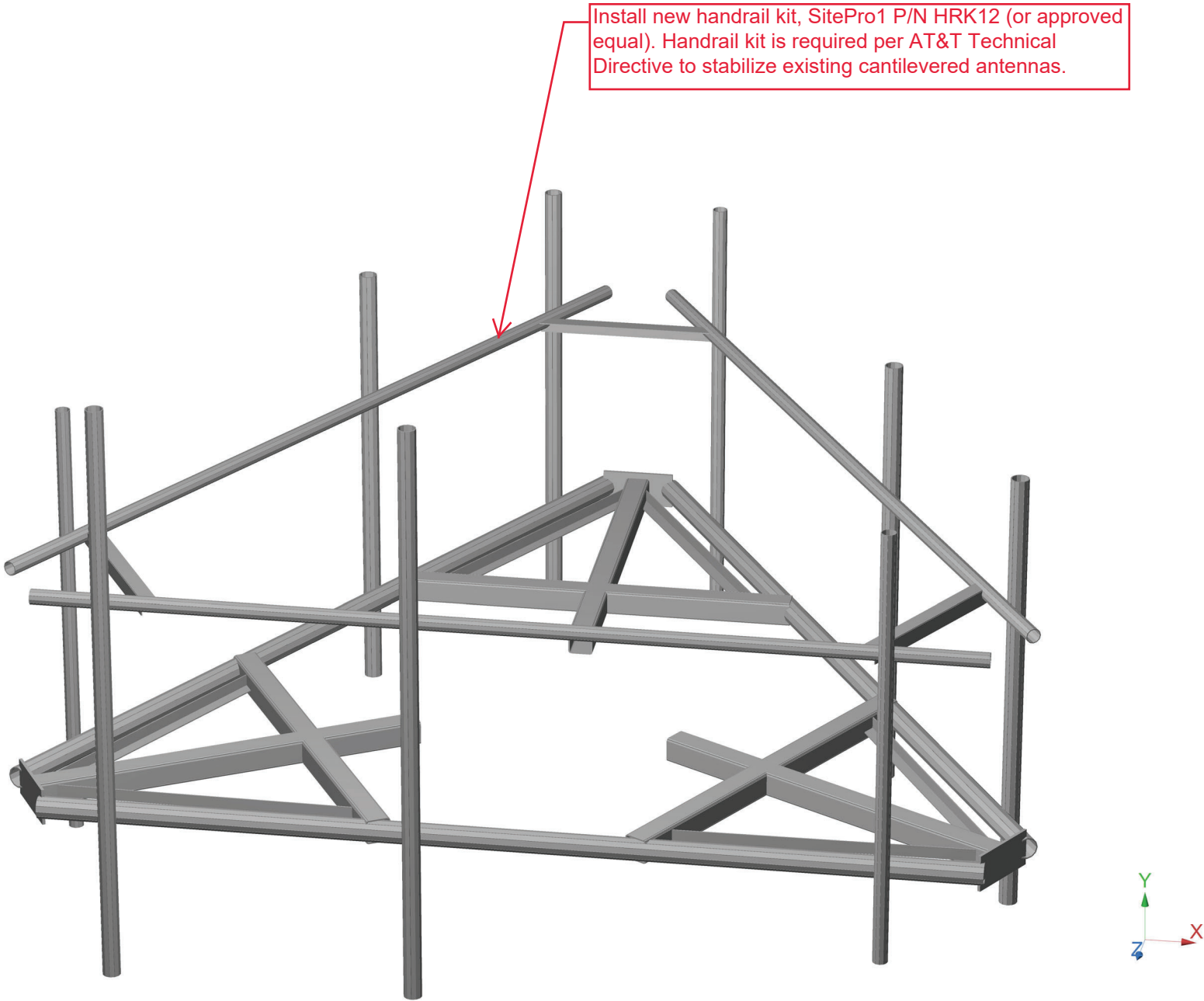
Orientation of local axes

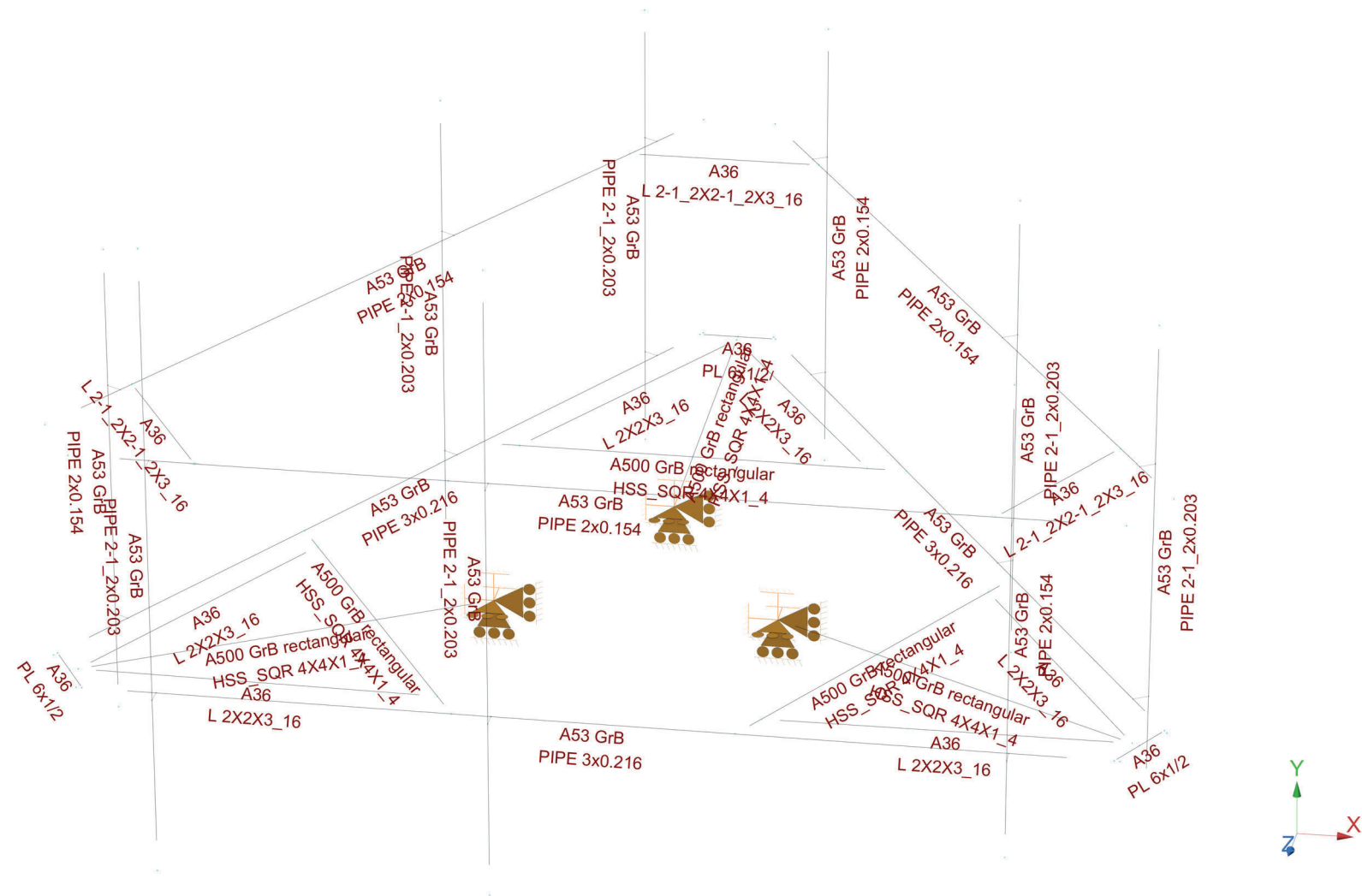
Member	Rotation [Deg]	Axes23	NX	NY	NZ
25	270.00	0	0.00	0.00	0.00
26	270.00	0	0.00	0.00	0.00

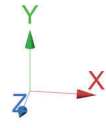
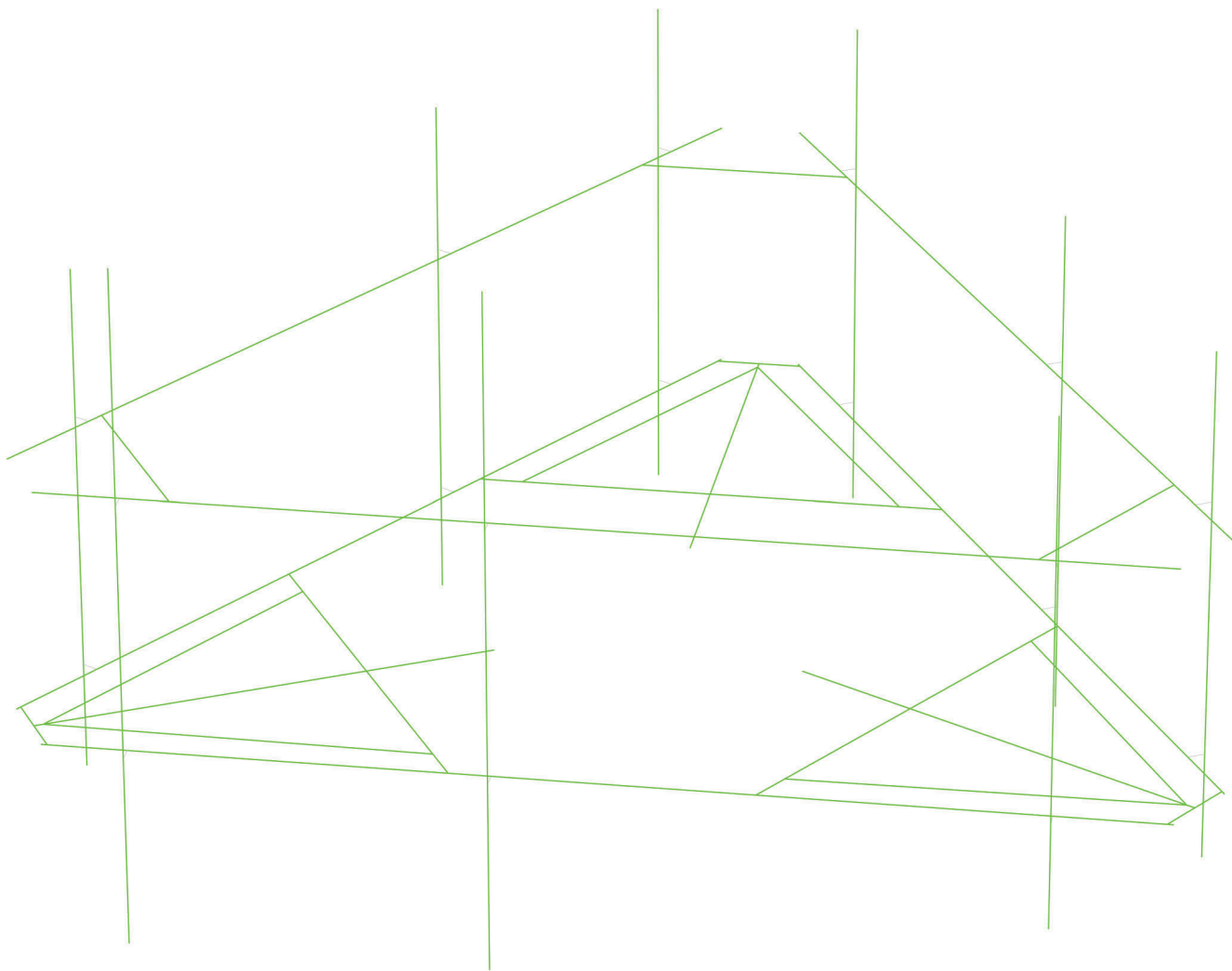


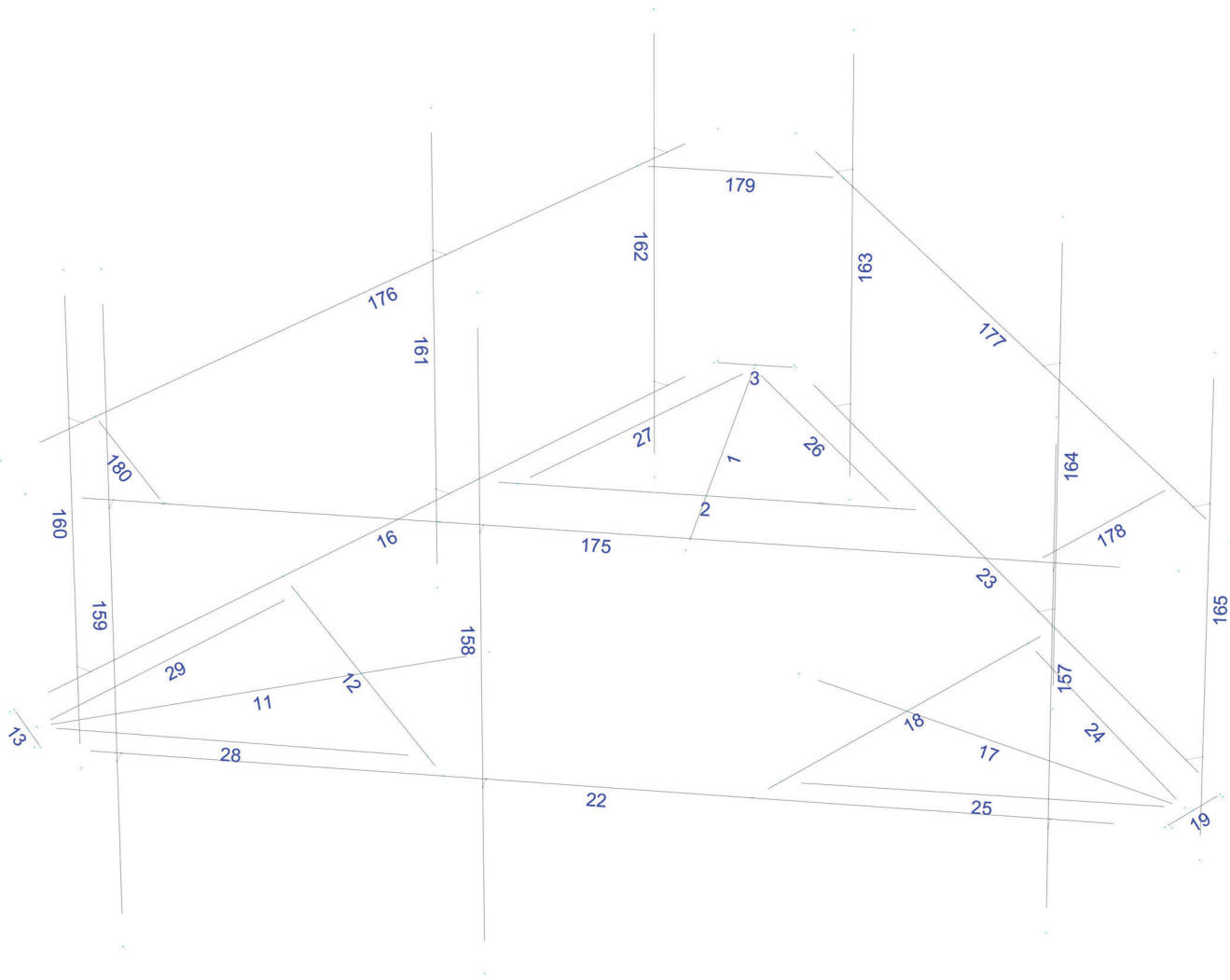
HUDSON
Design Group LLC

**Mount Calculations
(Modified Conditions)**









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Load data

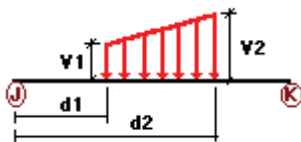
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

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

Distributed force on members

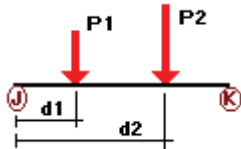


Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
DL	1	y	-0.01	0.00	0.00	No	0.00	No
	2	y	-0.01	0.00	0.00	No	0.00	No
	11	y	-0.01	0.00	0.00	No	0.00	No
	12	y	-0.01	0.00	0.00	No	0.00	No
	17	y	-0.01	0.00	0.00	No	0.00	No
	18	y	-0.01	0.00	0.00	No	0.00	No
	24	y	-0.01	0.00	0.00	No	0.00	No
	25	y	-0.01	0.00	0.00	No	0.00	No
	26	y	-0.01	0.00	0.00	No	0.00	No
	27	y	-0.01	0.00	0.00	No	0.00	No
	28	y	-0.01	0.00	0.00	No	0.00	No
	29	y	-0.01	0.00	0.00	No	0.00	No
W0	1	z	-0.019	0.00	0.00	No	0.00	No
	2	z	-0.019	0.00	0.00	No	0.00	No
	3	z	-0.045	0.00	0.00	No	0.00	No

W30	11	z	-0.019	0.00	0.00	No	0.00	No
	12	z	-0.019	0.00	0.00	No	0.00	No
	13	z	-0.045	0.00	0.00	No	0.00	No
	16	z	-0.016	0.00	0.00	No	0.00	No
	17	z	-0.019	0.00	0.00	No	0.00	No
	18	z	-0.019	0.00	0.00	No	0.00	No
	19	z	-0.045	0.00	0.00	No	0.00	No
	22	z	-0.016	0.00	0.00	No	0.00	No
	23	z	-0.016	0.00	0.00	No	0.00	No
	24	z	-0.015	0.00	0.00	No	0.00	No
	25	z	-0.015	0.00	0.00	No	0.00	No
	26	z	-0.015	0.00	0.00	No	0.00	No
	27	z	-0.015	0.00	0.00	No	0.00	No
	28	z	-0.015	0.00	0.00	No	0.00	No
	29	z	-0.015	0.00	0.00	No	0.00	No
	160	z	-0.011	0.00	0.00	No	0.00	No
	161	z	-0.013	0.00	0.00	No	0.00	No
	162	z	-0.013	0.00	0.00	No	0.00	No
	163	z	-0.011	0.00	0.00	No	0.00	No
	164	z	-0.013	0.00	0.00	No	0.00	No
	165	z	-0.013	0.00	0.00	No	0.00	No
	175	z	-0.016	0.00	0.00	No	0.00	No
	176	z	-0.016	0.00	0.00	No	0.00	No
	177	z	-0.016	0.00	0.00	No	0.00	No
	1	x	-0.019	0.00	0.00	No	0.00	No
	2	x	-0.019	0.00	0.00	No	0.00	No
	3	x	-0.045	0.00	0.00	No	0.00	No
	11	x	-0.019	0.00	0.00	No	0.00	No
	12	x	-0.019	0.00	0.00	No	0.00	No
	13	x	-0.045	0.00	0.00	No	0.00	No
	16	x	-0.016	0.00	0.00	No	0.00	No
	17	x	-0.019	0.00	0.00	No	0.00	No
	18	x	-0.019	0.00	0.00	No	0.00	No
	19	x	-0.045	0.00	0.00	No	0.00	No
	23	x	-0.016	0.00	0.00	No	0.00	No
	24	x	-0.015	0.00	0.00	No	0.00	No
	25	x	-0.015	0.00	0.00	No	0.00	No
	26	x	-0.015	0.00	0.00	No	0.00	No
	27	x	-0.015	0.00	0.00	No	0.00	No
	28	x	-0.015	0.00	0.00	No	0.00	No
	29	x	-0.015	0.00	0.00	No	0.00	No
	157	x	-0.011	0.00	0.00	No	0.00	No
	158	x	-0.013	0.00	0.00	No	0.00	No
	159	x	-0.013	0.00	0.00	No	0.00	No
	160	x	-0.011	0.00	0.00	No	0.00	No
	161	x	-0.013	0.00	0.00	No	0.00	No
	162	x	-0.013	0.00	0.00	No	0.00	No
	163	x	-0.011	0.00	0.00	No	0.00	No
	164	x	-0.013	0.00	0.00	No	0.00	No
	165	x	-0.013	0.00	0.00	No	0.00	No
	176	x	-0.016	0.00	0.00	No	0.00	No
	177	x	-0.016	0.00	0.00	No	0.00	No
Di	1	y	-0.016	0.00	0.00	No	0.00	No
	2	y	-0.016	0.00	0.00	No	0.00	No
	3	y	-0.017	0.00	0.00	No	0.00	No
	11	y	-0.016	0.00	0.00	No	0.00	No
	12	y	-0.016	0.00	0.00	No	0.00	No
	13	y	-0.017	0.00	0.00	No	0.00	No
	16	y	-0.011	0.00	0.00	No	0.00	No
	17	y	-0.016	0.00	0.00	No	0.00	No

18	y	-0.016	0.00	0.00	No	0.00	No
19	y	-0.017	0.00	0.00	No	0.00	No
22	y	-0.011	0.00	0.00	No	0.00	No
23	y	-0.011	0.00	0.00	No	0.00	No
24	y	-0.01	0.00	0.00	No	0.00	No
25	y	-0.01	0.00	0.00	No	0.00	No
26	y	-0.01	0.00	0.00	No	0.00	No
27	y	-0.01	0.00	0.00	No	0.00	No
28	y	-0.01	0.00	0.00	No	0.00	No
29	y	-0.01	0.00	0.00	No	0.00	No
157	y	-0.009	0.00	0.00	No	0.00	No
158	y	-0.01	0.00	0.00	No	0.00	No
159	y	-0.01	0.00	0.00	No	0.00	No
160	y	-0.009	0.00	0.00	No	0.00	No
161	y	-0.01	0.00	0.00	No	0.00	No
162	y	-0.01	0.00	0.00	No	0.00	No
163	y	-0.009	0.00	0.00	No	0.00	No
164	y	-0.01	0.00	0.00	No	0.00	No
165	y	-0.01	0.00	0.00	No	0.00	No
175	y	-0.011	0.00	0.00	No	0.00	No
176	y	-0.011	0.00	0.00	No	0.00	No
177	y	-0.011	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	157	y	-0.018	1.50	No
		y	-0.018	5.00	No
		y	-0.038	3.00	No
	158	y	-0.027	0.50	No
		y	-0.027	7.50	No
		y	-0.072	3.00	No
	159	y	-0.048	0.50	No
		y	-0.048	7.50	No
		y	-0.073	3.00	No
	160	y	-0.018	1.50	No
		y	-0.018	5.00	No
		y	-0.038	3.00	No
	161	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.072	3.00	No
	162	y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.073	3.00	No
	163	y	-0.018	1.50	No
		y	-0.018	5.00	No
		y	-0.038	3.00	No
	164	y	-0.022	0.50	No
		y	-0.022	5.50	No

W0	165	y	-0.072	3.00	No
		y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.073	3.00	No
	157	z	-0.126	1.50	No
		z	-0.126	5.00	No
	158	z	-0.255	0.50	No
		z	-0.255	7.50	No
		z	-0.014	3.00	No
	159	z	-0.406	0.50	No
		z	-0.406	7.50	No
	160	z	-0.082	1.50	No
		z	-0.082	5.00	No
		z	-0.037	3.00	No
	161	z	-0.148	0.50	No
		z	-0.148	5.50	No
		z	-0.06	3.00	No
	162	z	-0.168	0.50	No
		z	-0.168	5.50	No
	163	z	-0.065	3.00	No
		z	-0.082	1.50	No
		z	-0.082	5.00	No
W30	164	z	-0.037	3.00	No
		z	-0.148	0.50	No
		z	-0.148	5.50	No
	165	z	-0.06	3.00	No
		z	-0.168	0.50	No
		z	-0.168	5.50	No
	157	z	-0.065	3.00	No
		x	-0.067	1.50	No
		x	-0.067	5.00	No
	158	x	-0.049	3.00	No
		x	-0.183	0.50	No
		x	-0.183	7.50	No
	159	x	-0.061	3.00	No
		x	-0.185	0.50	No
		x	-0.185	7.50	No
	160	x	-0.064	3.00	No
		x	-0.111	1.50	No
		x	-0.111	5.00	No
	161	x	-0.012	3.00	No
		x	-0.169	0.50	No
		x	-0.169	5.50	No
	162	x	-0.043	3.00	No
		x	-0.249	0.50	No
		x	-0.249	5.50	No
Di	163	x	-0.05	3.00	No
		x	-0.111	1.50	No
		x	-0.111	5.00	No
	164	x	-0.012	3.00	No
		x	-0.169	0.50	No
		x	-0.169	5.50	No
	165	x	-0.043	3.00	No
		x	-0.249	0.50	No
		x	-0.249	5.50	No
	157	x	-0.05	3.00	No
		y	-0.068	1.50	No
		y	-0.068	5.00	No
	158	y	-0.058	3.00	No
		y	-0.135	0.50	No

Wi0		y	-0.135	7.50	No
		y	-0.05	3.00	No
	159	y	-0.205	0.50	No
		y	-0.205	7.50	No
		y	-0.058	3.00	No
	160	y	-0.068	1.50	No
		y	-0.068	5.00	No
		y	-0.058	3.00	No
	161	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.05	3.00	No
	162	y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.058	3.00	No
	163	y	-0.068	1.50	No
		y	-0.068	5.00	No
		y	-0.058	3.00	No
	164	y	-0.022	0.50	No
		y	-0.022	5.50	No
		y	-0.05	3.00	No
	165	y	-0.04	0.50	No
		y	-0.04	5.50	No
		y	-0.058	3.00	No
	157	z	-0.026	1.50	No
		z	-0.026	5.00	No
		z	-0.004	3.00	No
	158	z	-0.051	0.50	No
		z	-0.051	7.50	No
		z	-0.007	3.00	No
	159	z	-0.073	0.50	No
		z	-0.073	7.50	No
		z	-0.004	3.00	No
	160	z	-0.019	1.50	No
		z	-0.019	5.00	No
		z	-0.01	3.00	No
	161	z	-0.03	0.50	No
		z	-0.03	5.50	No
		z	-0.014	3.00	No
	162	z	-0.034	0.50	No
		z	-0.034	5.50	No
		z	-0.015	3.00	No
	163	z	-0.019	1.50	No
		z	-0.019	5.00	No
		z	-0.01	3.00	No
	164	z	-0.03	0.50	No
		z	-0.03	5.50	No
		z	-0.014	3.00	No
	165	z	-0.034	0.50	No
		z	-0.034	5.50	No
		z	-0.015	3.00	No
Wi30	157	x	-0.017	1.50	No
		x	-0.017	5.00	No
		x	-0.013	3.00	No
	158	x	-0.038	0.50	No
		x	-0.038	7.50	No
		x	-0.015	3.00	No
	159	x	-0.039	0.50	No
		x	-0.039	7.50	No
		x	-0.015	3.00	No
	160	x	-0.023	1.50	No

		x	-0.023	5.00	No
		x	-0.006	3.00	No
	161	x	-0.034	0.50	No
		x	-0.034	5.50	No
		x	-0.01	3.00	No
	162	x	-0.046	0.50	No
		x	-0.046	5.50	No
		x	-0.011	3.00	No
	163	x	-0.023	1.50	No
		x	-0.023	5.00	No
		x	-0.006	3.00	No
	164	x	-0.034	0.50	No
		x	-0.034	5.50	No
		x	-0.01	3.00	No
	165	x	-0.046	0.50	No
		x	-0.046	5.50	No
		x	-0.011	3.00	No
WL0	157	z	-0.007	1.50	No
		z	-0.007	5.00	No
	158	z	-0.014	0.50	No
		z	-0.014	7.50	No
		z	-0.001	3.00	No
	159	z	-0.022	0.50	No
		z	-0.022	7.50	No
	160	z	-0.005	1.50	No
		z	-0.005	5.00	No
		z	-0.002	3.00	No
	161	z	-0.008	0.50	No
		z	-0.008	5.50	No
		z	-0.003	3.00	No
	162	z	-0.009	0.50	No
		z	-0.009	5.50	No
		z	-0.003	3.00	No
	163	z	-0.005	1.50	No
		z	-0.005	5.00	No
		z	-0.002	3.00	No
	164	z	-0.008	0.50	No
		z	-0.008	5.50	No
		z	-0.003	3.00	No
	165	z	-0.009	0.50	No
		z	-0.009	5.50	No
		z	-0.003	3.00	No
WL30	157	x	-0.004	1.50	No
		x	-0.004	5.00	No
		x	-0.003	3.00	No
	158	x	-0.01	0.50	No
		x	-0.01	7.50	No
		x	-0.003	3.00	No
	159	x	-0.01	0.50	No
		x	-0.01	7.50	No
		x	-0.003	3.00	No
	160	x	-0.006	1.50	No
		x	-0.006	5.00	No
		x	-0.001	3.00	No
	161	x	-0.009	0.50	No
		x	-0.009	5.50	No
		x	-0.002	3.00	No
	162	x	-0.014	0.50	No
		x	-0.014	5.50	No
		x	-0.003	3.00	No

	163	x	-0.006	1.50	No
		x	-0.006	5.00	No
		x	-0.001	3.00	No
	164	x	-0.009	0.50	No
		x	-0.009	5.50	No
		x	-0.002	3.00	No
	165	x	-0.014	0.50	No
		x	-0.014	5.50	No
		x	-0.003	3.00	No
LL1	22	y	-0.25	50.00	Yes
	175	y	-0.25	50.00	Yes
LL2	22	y	-0.25	0.00	Yes
	175	y	-0.25	0.00	Yes
LLa1	157	y	-0.25	50.00	Yes
LLa2	158	y	-0.25	50.00	Yes
LLa3	159	y	-0.25	50.00	Yes

Self weight multipliers for load conditions

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

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
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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=1.2DL
LC15=1.2DL+1.5LL1
LC16=1.2DL+1.5LL2
LC17=1.2DL+WL0+1.5LLa1
LC18=1.2DL+WL30+1.5LLa1
LC19=1.2DL-WL0+1.5LLa1
LC20=1.2DL-WL30+1.5LLa1
LC21=1.2DL+WL0+1.5LLa2
LC22=1.2DL+WL30+1.5LLa2
LC23=1.2DL-WL0+1.5LLa2
LC24=1.2DL-WL30+1.5LLa2
LC25=1.2DL+WL0+1.5LLa3
LC26=1.2DL+WL30+1.5LLa3
LC27=1.2DL-WL0+1.5LLa3
LC28=1.2DL-WL30+1.5LLa3

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
<i>HSS_SQR 4X4X1_4</i>		1	LC1 at 0.00%	0.29	OK	Eq. H1-1b
		2	LC1 at 50.00%	0.14	OK	Eq. H1-1b
		11	LC11 at 0.00%	0.37	OK	Eq. H1-1b
		12	LC11 at 50.00%	0.17	OK	Eq. H1-1b
		17	LC4 at 0.00%	0.30	OK	Eq. H1-1b
		18	LC4 at 50.00%	0.15	OK	Eq. H1-1b
<i>L 2-1_2X2-1_2X3_16</i>		178	LC2 at 0.00%	0.36	OK	Eq. H2-1
		179	LC4 at 0.00%	0.46	OK	Eq. H2-1
		180	LC1 at 0.00%	0.71	OK	Eq. H2-1
<i>L 2X2X3_16</i>		24	LC4 at 0.00%	0.21	OK	Eq. H2-1
		25	LC3 at 0.00%	0.18	OK	Eq. H2-1
		26	LC1 at 0.00%	0.21	OK	Eq. H2-1
		27	LC1 at 0.00%	0.18	OK	Eq. H2-1
		28	LC3 at 0.00%	0.19	OK	Eq. H2-1
		29	LC2 at 100.00%	0.22	OK	Eq. H2-1
<i>PIPE 2-1_2x0.203</i>		158	LC1 at 70.83%	0.38	OK	Eq. H1-1b
		159	LC1 at 70.83%	0.34	OK	Eq. H1-1b
		161	LC3 at 77.08%	0.31	OK	Eq. H1-1b

	162	LC4 at 77.08%	0.25	OK	Eq. H1-1b
	164	LC2 at 77.08%	0.30	OK	Eq. H1-1b
	165	LC2 at 77.08%	0.23	OK	Eq. H1-1b
PIPE 2x0.154	157	LC2 at 77.08%	0.31	OK	Eq. H1-1b
	160	LC3 at 77.08%	0.37	OK	Eq. H1-1b
	163	LC4 at 77.08%	0.37	OK	Eq. H1-1b
	175	LC4 at 40.18%	0.34	OK	Eq. H1-1b
	176	LC2 at 88.54%	0.28	OK	Eq. H1-1b
	177	LC1 at 11.46%	0.26	OK	Eq. H1-1b
PIPE 3x0.216	16	LC11 at 36.72%	0.21	OK	Eq. H1-1b
	22	LC4 at 63.28%	0.18	OK	Eq. H1-1b
	23	LC1 at 63.28%	0.18	OK	Eq. H1-1b
PL 6x1/2	3	LC1 at 50.00%	0.10	OK	Eq. H1-1b
	13	LC2 at 50.00%	0.11	OK	Eq. H1-1b
	19	LC2 at 46.88%	0.12	OK	Eq. H1-1b

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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
3	0.00	0.00	-0.75	0
4	0.00	0.00	-2.25	0
5	0.00	0.00	-6.08	0
6	-2.709	0.00	-2.25	0
7	2.709	0.00	-2.25	0
8	-0.50	0.00	-6.08	0
9	0.50	0.00	-6.08	0
10	2.212	0.00	-2.25	0
11	-2.212	0.00	-2.25	0
28	-1.7321	0.00	2.25	0
29	-3.0311	0.00	3.00	0
30	-6.348	0.00	4.915	0
31	-1.6766	0.00	5.3461	0
32	-4.3856	0.00	0.6539	0
33	-6.098	0.00	5.348	0
34	-6.598	0.00	4.482	0
35	-4.1371	0.00	1.0844	0
36	-1.9251	0.00	4.9156	0
39	1.7321	0.00	2.25	0
40	3.0311	0.00	3.00	0
41	6.348	0.00	4.915	0

42	4.3856	0.00	0.6539	0
43	1.6766	0.00	5.3461	0
44	6.598	0.00	4.482	0
45	6.098	0.00	5.348	0
46	1.9251	0.00	4.9156	0
47	4.1371	0.00	1.0844	0
375	6.2566	0.00	4.8622	0
377	0.00	0.00	-5.9745	0
379	-6.2566	0.00	4.8622	0
581	-1.1178	-1.25	-5.4099	0
582	-6.1595	-1.25	3.3226	0
585	-1.1178	4.75	-5.4099	0
586	-6.1595	4.75	3.3226	0
610	6.3265	-1.25	3.6118	0
611	6.3265	4.75	3.6118	0
618	1.2849	-1.25	-5.1206	0
619	1.2849	4.75	-5.1206	0
626	-5.2087	-2.25	5.548	0
627	-5.2087	5.75	5.548	0
634	4.8746	-1.25	5.548	0
635	4.8746	4.75	5.548	0
638	4.3248	-1.25	0.1487	0
639	4.3248	4.75	0.1487	0
646	-3.1161	-1.25	-1.9448	0
647	-3.1161	4.75	-1.9448	0
650	-1.2087	-2.25	5.5461	0
651	-1.2087	5.75	5.5461	0
652	6.1665	0.00	5.348	0
653	-6.1665	0.00	5.348	0
654	-0.4657	0.00	-6.1393	0
655	-6.6322	0.00	4.5413	0
656	6.6322	0.00	4.5413	0
657	0.4658	0.00	-6.1393	0
660	-1.6766	3.00	5.3461	0
677	-6.1665	3.00	5.348	0
678	-6.6322	3.00	4.5413	0
679	-0.4657	3.00	-6.1393	0
680	0.4658	3.00	-6.1393	0
681	6.6322	3.00	4.5413	0
682	6.1665	3.00	5.348	0
683	-4.6665	3.00	5.348	0
684	4.6665	3.00	5.348	0
685	-1.2157	3.00	-4.8403	0
686	-5.8822	3.00	3.2423	0
687	5.8822	3.00	3.2423	0
688	1.2157	3.00	-4.8403	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
3	1	1	1	1	1	1
28	1	1	1	1	1	1
39	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	3	5		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
2	7	6		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
3	8	9		PL 6x1/2	A36	0.00	0.00	0.00
11	28	30		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
12	32	31		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
13	33	34		PL 6x1/2	A36	0.00	0.00	0.00
16	655	654		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
17	39	41		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
18	43	42		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
19	44	45		PL 6x1/2	A36	0.00	0.00	0.00
22	653	652		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
23	656	657		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
24	47	375		L 2X2X3_16	A36	0.00	0.00	0.00
25	46	375		L 2X2X3_16	A36	0.00	0.00	0.00
26	10	377		L 2X2X3_16	A36	0.00	0.00	0.00
27	11	377		L 2X2X3_16	A36	0.00	0.00	0.00
28	36	379		L 2X2X3_16	A36	0.00	0.00	0.00
29	379	35		L 2X2X3_16	A36	0.00	0.00	0.00
157	635	634		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
158	651	650		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
159	627	626		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
160	586	582		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
161	647	646		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
162	585	581		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
163	619	618		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
164	639	638		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
165	611	610		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
175	677	682		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
176	678	679		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
177	681	680		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
178	687	684		L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
179	685	688		L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
180	683	686		L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
25	270.00	0	0.00	0.00	0.00
26	270.00	0	0.00	0.00	0.00
157	0.00	2	1.00	0.00	0.00
158	0.00	2	1.00	0.00	0.00
159	0.00	2	1.00	0.00	0.00
160	0.00	2	1.00	0.00	0.00
161	0.00	2	1.00	0.00	0.00
162	0.00	2	1.00	0.00	0.00
163	0.00	2	1.00	0.00	0.00
164	0.00	2	1.00	0.00	0.00
165	0.00	2	1.00	0.00	0.00
178	90.00	0	0.00	0.00	0.00
179	90.00	0	0.00	0.00	0.00
180	90.00	0	0.00	0.00	0.00

712 BREAD & MILK ST

Location 712 BREAD & MILK ST

Mblu 10/ / 15/ /

Acct# R04086

Owner NADEAU RONALD R +

PBN

Assessment \$1,268,300

Appraisal \$1,836,300

PID 3904

Building Count 6

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$1,114,600	\$721,700	\$1,836,300
Assessment			
Valuation Year	Improvements	Land	Total
2019	\$780,400	\$487,900	\$1,268,300

Owner of Record

Owner NADEAU RONALD R +

Sale Price \$0

Co-Owner NADEAU JEANNINE G
Address 2050 BOSTON TPK
COVENTRY, CT 06238

Certificate
Book & Page 0968/0121
Sale Date 11/02/2005
Instrument 29

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
NADEAU RONALD R +	\$0		0968/0121	29	11/02/2005
NADEAU RONALD&RENETTE G TRUSTEE	\$0		0876/0158		03/15/2004
NADEAU RONALD&RENETTE G TRUSTEE	\$0		0876/0158		03/15/2004
NADEAU RONALD&RENETTE G TRUSTEE	\$0		0876/0158		03/15/2004
NADEAU RONALD&RENETTE G TRUSTEE	\$0		0876/0158		03/15/2004

Building Information

Building 1 : Section 1

Year Built: 1950
Living Area: 24,816
Replacement Cost: \$1,022,221
Building Percent Good: 60
Replacement Cost
Less Depreciation: \$613,300

Building Attributes	
Field	Description
STYLE	Office/Warehs

MODEL	Comm/Ind
Grade	C-
Stories:	2
Occupancy	8.00
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Metal/Tin
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Cement
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air
AC Type	None/partial
Struct Class	
Bldg Use	Commercial Improv
Total Rooms	0
Usrflid 216	
Total Baths	2
Usrflid 218	
Usrflid 219	
1st Floor Use:	201
Heat/AC	HEAT ONLY
Frame Type	WOOD FRAME

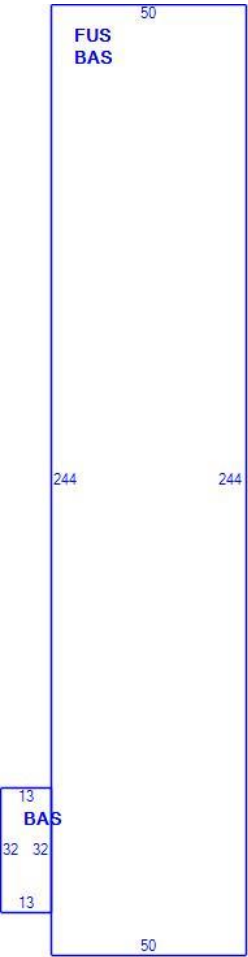
Building Photo



(<http://images.vgsi.com/photos/CoventryCTPhotos/\00\00\65\83.jpg>)

Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	8.00
% Comn Wall	0.00

Building Layout



(ParcelSketch.ashx?pid=3904&bid=3904)

Code	Description	Gross Area	Living Area
BAS	First Floor	12,616	12,616
FUS	Upper Story, Finished	12,200	12,200
		24,816	24,816

Building 2 : Section 1

Year Built: 1950
Living Area: 14,520
Replacement Cost: \$515,800
Building Percent Good: 54
Replacement Cost Less Depreciation: \$278,500

Building Attributes : Bldg 2 of 6	
Field	Description
STYLE	Light Indust
MODEL	Comm/Ind
Grade	C
Stories:	1
Occupancy	2.00
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Shed
Roof Cover	Metal/Tin
Interior Wall 1	Drywall
Interior Wall 2	

Building Photo

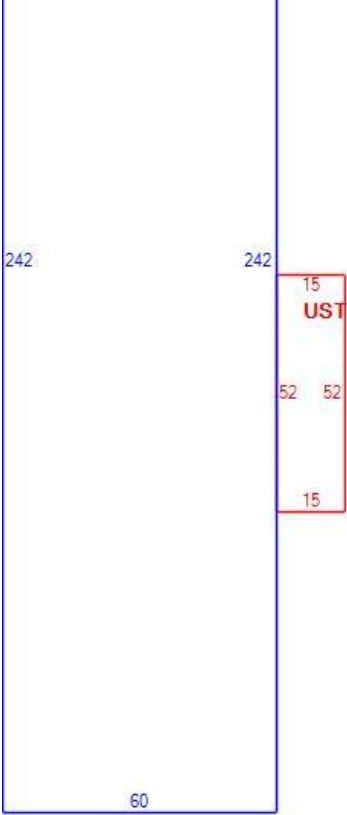


(<http://images.vgsi.com/photos/CoventryCTPhotos//default.jpg>)

Building Layout



Interior Floor 1	Cement
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air
AC Type	None/partial
Struct Class	
Bldg Use	Commercial Improv
Total Rooms	0
Usrflid 216	
Total Baths	
Usrflid 218	
Usrflid 219	
1st Floor Use:	201
Heat/AC	HEAT ONLY
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & MIN WL
Rooms/Prtns	AVERAGE
Wall Height	10.00
% Comn Wall	0.00



(ParcelSketch.ashx?pid=3904&bid=20055)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area

BAS	First Floor	14,520	14,520
UST	Utility, Storage, Unfinished	780	0
		15,300	14,520

Building 3 : Section 1

Year Built: 1950
Living Area: 4,800
Replacement Cost: \$171,410
Building Percent Good: 54
Replacement Cost Less Depreciation: \$92,600

Building Attributes : Bldg 3 of 6	
Field	Description
STYLE	Warehouse
MODEL	Comm/Ind
Grade	C-
Stories:	1
Occupancy	2.00
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Shed
Roof Cover	Metal/Tin
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Cement
Interior Floor 2	

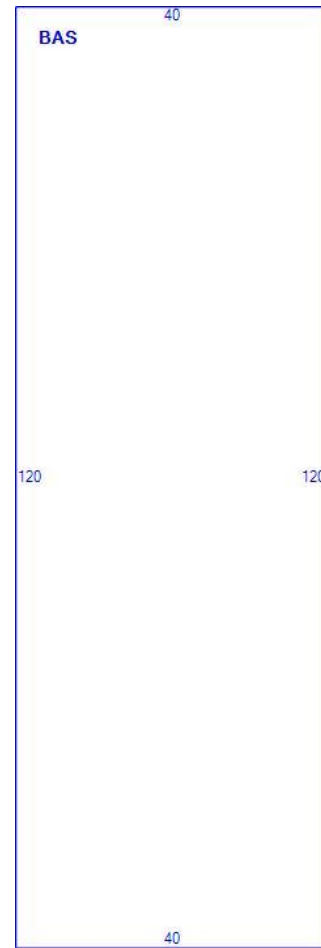
Building Photo



(<http://images.vgsi.com/photos/CoventryCTPhotos//default.jpg>)

Heating Fuel	Gas
Heating Type	Forced Air
AC Type	None/partial
Struct Class	
Bldg Use	Commercial Improv
Total Rooms	0
Usrflid 216	
Total Baths	
Usrflid 218	
Usrflid 219	
1st Floor Use:	201
Heat/AC	HEAT ONLY
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	14.00
% Comn Wall	0.00

Building Layout



(ParcelSketch.ashx?pid=3904&bid=20056)

Building Sub-Areas (sq ft)

Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	4,800	4,800
		4,800	4,800

Building 4 : Section 1

Year Built: 1957
Living Area: 1,296
Replacement Cost: \$84,468
Building Percent Good: 30
Replacement Cost Less Depreciation: \$25,300

Building Attributes : Bldg 4 of 6	
Field	Description
Style	Conventional
Model	Residential
Grade:	Below Average
Story Height	1.75
Occupancy	1
Exterior Wall 1	Vinyl
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Metal/Tin
Interior Wall 1	Panel
Interior Wall 2	Drywall
Interior Flr 1	Vnl Linoleum

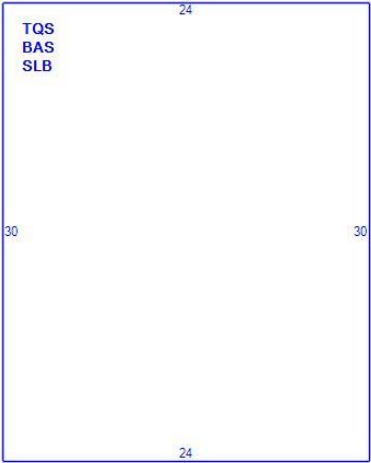
Building Photo



(<http://images.vgsi.com/photos/CoventryCTPhotos//default.jpg>)

Interior Flr 2	Carpet
Heat Fuel	Electric
Heat Type:	Electr Basebrd
AC Type:	None/partial
Total Bedrooms:	2 Bedrooms
Total Bthrms:	1
Total Half Baths:	
Extra Fixtures	
Total Rooms:	4
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	
Bsmt Gar	
Usrflid 103	06
Usrflid 104	0
Fire_Places	
Usrflid 106	
Usrflid 107	
Num Park	
Fireplaces	
Usrflid 108	
Usrflid 101	
Usrflid 102	
Usrflid 100	
Usrflid 300	

Building Layout



(ParcelSketch.ashx?pid=3904&bid=20057)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	720	720
TQS	Three Quarter Story	720	576

Usrflid 301	
-------------	--

SLB	Slab	720	0
		2,160	1,296

Building 5 : Section 1

Year Built: 1950
Living Area: 360
Replacement Cost: \$7,326
Building Percent Good: 60
Replacement Cost Less Depreciation: \$4,400

Building Attributes : Bldg 5 of 6	
Field	Description
STYLE	Support Shed
MODEL	Comm/Ind
Grade	D
Stories:	1
Occupancy	
Exterior Wall 1	Vinyl
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Roll Roofing
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Sub Floor
Interior Floor 2	
Heating Fuel	None

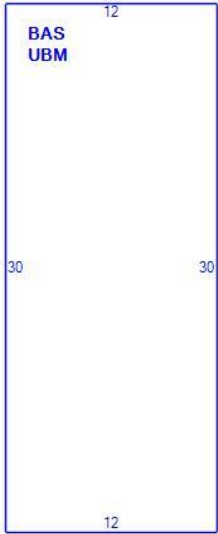
Building Photo



(<http://images.vgsi.com/photos/CoventryCTPhotos//default.jpg>)

Heating Type	None
AC Type	None/partial
Struct Class	
Bldg Use	Commercial Improv
Total Rooms	
Usrflid 216	
Total Baths	
Usrflid 218	
Usrflid 219	
1st Floor Use:	
Heat/AC	HEAT ONLY
Frame Type	WOOD FRAME
Baths/Plumbing	NONE
Ceiling/Wall	CEIL & MIN WL
Rooms/Prtns	AVERAGE
Wall Height	8.00
% Comn Wall	

Building Layout



(ParcelSketch.ashx?pid=3904&bid=20058)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area

BAS	First Floor	360	360
UBM	Basement	360	0
		720	360

Building 6 : Section 1

Year Built: 1930
Living Area: 920
Replacement Cost: \$99,585
Building Percent Good: 68
Replacement Cost Less Depreciation: \$67,700

Building Attributes : Bldg 6 of 6	
Field	Description
Style	Ranch
Model	Residential
Grade:	Average
Story Height	1
Occupancy	1
Exterior Wall 1	Vinyl
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt Shingl
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	Carpet

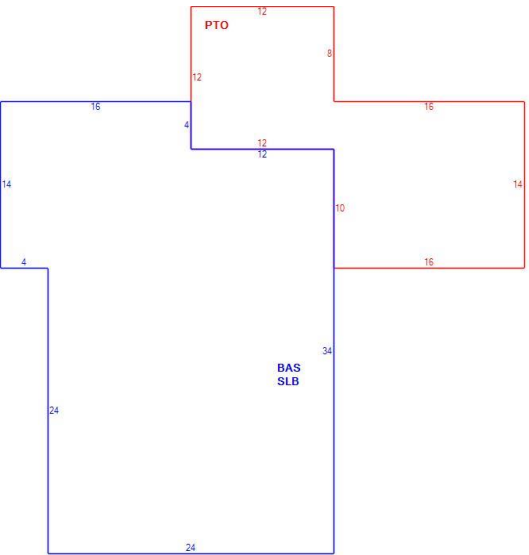
Building Photo



(<http://images.vgsi.com/photos/CoventryCTPhotos//default.jpg>)

Heat Fuel	Gas
Heat Type:	Forced Air
AC Type:	None/partial
Total Bedrooms:	2 Bedrooms
Total Bthrms:	1
Total Half Baths:	
Extra Fixtures	
Total Rooms:	5
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	
Bsmt Gar	
Usrflid 103	
Usrflid 104	
Fire_Places	0
Usrflid 106	
Usrflid 107	
Num Park	
Fireplaces	
Usrflid 108	
Usrflid 101	
Usrflid 102	
Usrflid 100	
Usrflid 300	
Usrflid 301	

Building Layout



(ParcelSketch.ashx?pid=3904&bid=20331)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	920	920
PTO	Patio	368	0
SLB	Slab	920	0
		2,208	920

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
MEZ1	Mezzanine-Unf	2184.00 S.F.	\$9,400	3

Land

Land Use		Land Line Valuation	
Use Code	201	Size (Acres)	24.94
Description	Commercial Improv	Frontage	
Zone	RD	Depth	
Neighborhood	E	Assessed Value	\$487,900
Alt Land Appr Category	No	Appraised Value	\$721,700

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	Paving			15250.00 S.F.	\$13,700	1
SHD1	Shed			288.00 S.F.	\$1,400	1
SHD1	Shed			560.00 S.F.	\$2,800	1
LNT	Lean-to			384.00 S.F.	\$1,800	1
FNC	Fence	M	Metal	280.00 L.F.	\$3,700	1

Valuation History

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Appraisal

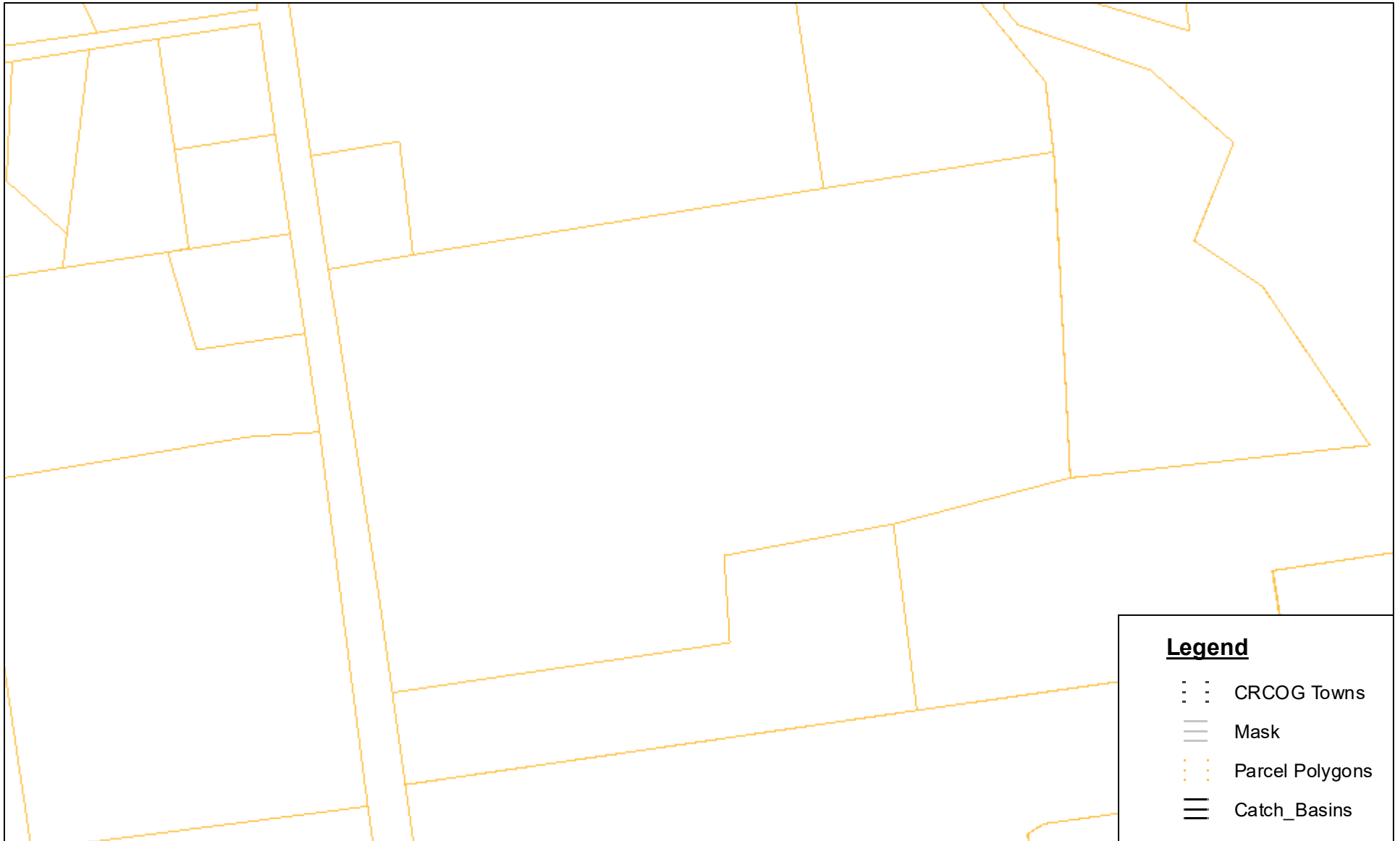
Valuation Year	Improvements	Land	Total
2018	\$1,253,600	\$728,800	\$1,982,400
2018	\$1,253,600	\$728,800	\$1,982,400
2017	\$1,253,600	\$728,800	\$1,982,400

Assessment

Valuation Year	Improvements	Land	Total
2018	\$877,700	\$487,900	\$1,365,600
2018	\$877,700	\$487,900	\$1,365,600
2017	\$877,700	\$487,900	\$1,365,600

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712 Bread and Milk St



CRCOG CAPITOL REGION
COUNCIL OF GOVERNMENTS
Working together for a better region.

CRCOG makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Scale
1:4,514
Created: 10/27/2020

TO: OFFICE OF THE TOWN CLERK

FROM: COVENTRY PLANNING AND ZONING COMMISSION

SUBJECT: FILING REQUIREMENTS - SECTION 8-3D, CT. GENERAL STATUTES.

In accordance with the provisions of Public Act Number 75-317, State of Connecticut, the following application #00-20S approved on October 23, 2000, by the Coventry Planning and Zoning Commission, is being submitted to your office for recording within the Coventry Land Records.

1. Description of Premises: 712 BREAD AND MILK STREET.
2. Assessor's Map: 4 ; Block: 12 ; Lot (s): 8 .
Volume 226 ; Page(s): 35-39 .
3. Nature of **SPECIAL PERMIT**: Granted to SBA, Inc. to install a 175' monopole communications tower with the capability of expanding to 195', antenna, and associated equipment. The following conditions apply: 1) A copy of federal licenses necessary to operate the facility must be submitted by the applicant as necessary. 2) The landscape plans provided on the site plan, currently propose vegetation on the westerly fence as white pine to be used. The vegetation is to be reviewed by the Planning and Zoning staff. 3) The tower be constructed to provide service for seven carriers, and that it be built and constructed with the ability to be expanded to 195'. Reason for approval: application meets the regulations and is appropriate for the location.
4. Zoning Regulation(s) which apply: Section 4.0 and 6.19.
5. Owner(s) of Record: NORMAN NADEAU AND RONALD NADEAU.

This information is certified by:

Julius Polfussky Chairman
Name Title

11/16/00
Date Signed

Return to:
Attorney Wendell g. Davis
Cranmore, Fitzgerald, and Meany
For SBA, Inc.
49 Wethersfield Avenue
Hartford CT 06114

Received for record Nov 29 2000
At 3:30 P M. Recorded in Coventry
Land Records, Vol 687 Page 290
By Paula Benoit Town Clerk



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

T + 561.995.7670
F + 561.995.7626

sbasite.com

LETTER OF AUTHORIZATION

SBA Site ID: CT02573-S, Coventry 2 CT

Property Located at: 712 Bread & Milk Street, Coventry, CT, 06238-1093

THE CITY/COUNTY OF: Coventry / Tolland

APPLICATION FOR ZONING/USE/BUILDING PERMIT

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

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

SBA Towers, LLC

Jason Silberstein

Executive VP, Site Leasing

Date: 10/22/2020

 UNITED STATES POSTAL SERVICE®		Click-N-Ship®	
P	usps.com \$7.75 US POSTAGE Flat Rate Env	9405 5036 9930 0117 9284 87 0077 5000 0010 6238	
		11/06/2020	Mailed from 06450 062S0000001310
PRIORITY MAIL 2-DAY™			
HOLLIS REDDING SAI GROUP 39 WESTVIEW DR MERIDEN CT 06450-4723		Expected Delivery Date: 11/09/20 0005	
Carrier -- Leave if No Response			
R013			
SHIP TO: HONORABLE JOHN A ELSSESSER TOWN MANAGER TOWN OF COVENTRY TOWN HALL 1712 MAIN ST COVENTRY CT 06238-3615			
USPS TRACKING #			
			
9405 5036 9930 0117 9284 87			
Electronic Rate Approved #038555749			

 UNITED STATES POSTAL SERVICE®		Click-N-Ship®	
P	usps.com \$7.75 US POSTAGE Flat Rate Env	9405 5036 9930 0117 9284 94 0077 5000 0010 6238	
		11/06/2020	Mailed from 06450 062S0000001307
PRIORITY MAIL 2-DAY™			
HOLLIS REDDING SAI GROUP 39 WESTVIEW DR MERIDEN CT 06450-4723		Expected Delivery Date: 11/09/20 0005	
Carrier -- Leave if No Response			
R017			
SHIP TO: RONALD & JEANNINE NADEAU 2050 BOSTON TPKE COVENTRY CT 06238-1110			
USPS TRACKING #			
			
9405 5036 9930 0117 9284 94			
Electronic Rate Approved #038555749			



UNITED STATES
POSTAL SERVICE®

Click-N-Ship®

P

USPS.COM 9405 5036 9930 0117 9284 70 0077 5000 0010 6051
\$7.75
US POSTAGE
Flat Rate Env



11/06/2020 Mailed from 06450 062S0000000312

PRIORITY MAIL 1-DAY™

HOLLIS REDDING
SAI GROUP
39 WESTVIEW DR
MERIDEN CT 06450-4723
0005

Expected Delivery Date: 11/07/20

Carrier -- Leave if No Response

C006

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

USPS TRACKING #



9405 5036 9930 0117 9284 70

Electronic Rate Approved #038555749

Hollis Redding

To: Michael McNamara
Subject: AT&T Wireless Exempt Mod Filing SBA CT02753-S Coventry S 712 Bread & Milk Street, Coventry

Mike-

Attached please find an Exempt Modification which will be filed with the CT Siting Council on November 6, 2020.

Thank you. Hollis

Hollis M. Redding



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