May 21, 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 CT1114
96 Powder Mill Rd, Canton, CT 06019 (the "Property")
Latitude: 41.834233 N Longitude: 72.932666 W

Dear Ms. Bachman:

AT&T currently maintains (9) antennas at the 137-foot level on the existing 180-foot monopole tower ("Tower") at 96 Powder Mill Rd in the Collinsville section of Canton, CT. The tower is owned by SBA Towers, Inc ("SBA") and the property is owned by Properties One LLC. AT&T intends to modify its facility by replacing (6) antennas with (1) OPA65R-BU6DA, (1) DMP65R-BU6DA, (2) OPA65R-BU8DA & (2) DMP65R-BU8DA antennas and replacing (6) RRUs with (3) B5/B12 4449 & (3) 8843 B2 B66A RRUs. The height of AT&Ts existing and proposed antennas & RRUs is 137'.

The SBA facility was approved by the Town of Canton Zoning Commission by a Certificate of Action approving Special Exception and Sit Plan Application 843 on July 19, 2000. AT&T received CT Siting Council Approval under EM-AT&T-023-020503.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies ("R.C.S.A") §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2). In accordance with to R.C.S.A §16-50j-73, a copy of this letter is being sent to the Honorable Robert Bessel, First Selectman, Town of Canton, Mr. Neil Pade AICP, Director of Planning and Community Development, Town of Canton, Properties One, LLC as property owner and SBA as tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require an extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

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

6. The existing structure and foundation can support the proposed loading.

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

Sincerely,

Hollis M. Redding

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

Enclosures

Cc: The Honorable Robert Bessel, First Selectman, Town of Canton
Mr. Neil Pade AICP, Director of Planning & Community Development, Town of Canton
SBA Towers, Inc. as tower owner
Properties One, LLC as property 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*							3.50%
AT&T UMTS	2	565	137	0.0237	880	0.5867	0.40%
AT&T LTE	2	875	137	0.0367	1900	1.0000	0.37%
AT&T GSM	1	283	137	0.0059	880	0.5867	0.10%
AT&T UMTS	4	525	137	0.0440	1900	1.0000	0.44%
AT&T UMTS	1	1615	137	0.0338	734	0.4893	0.69%
Site Total							5.51%

*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*							3.50%
AT&T UMTS	1	565	137	0.0118	850	0.5667	0.21%
AT&T LTE	1	1000	137	0.0210	850	0.5667	0.37%
AT&T 5G	1	1000	137	0.0210	850	0.5667	0.37%
AT&T LTE	1	1476	137	0.0309	700	0.4667	0.66%
AT&T LTE	2	3664	137	0.1536	1900	1.0000	1.54%
AT&T LTE	1	3837	137	0.0804	2100	1.0000	0.80%
Site Total							7.46%

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

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

PROJECT INFORMATION

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:
- NEW AT&T ANTENNAS (OPA65R-BU6DA) @ POS. 3 (TOTAL OF 1 FOR ALPHA SECTOR)
- NEW AT&T ANTENNAS (DMP65R-BU6DA) @ POS. 4 (TOTAL OF 1 FOR ALPHA SECTOR)
- NEW AT&T ANTENNAS (OPA65R-BU8DA) @ POS. 3 (TYP. OF 1 PER BETA & GAMMA SECTORS, TOTAL OF 2)
- NEW AT&T ANTENNAS (DMP65R-BU8DA) @ POS. 4 (TYP. 1 PER BETA & GAMMA SECTORS, TOTAL OF 2)
- NEW AT&T RRUS: B5/B12 4449 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 8843 B2/B66A (PCS/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T SURGE ARRESTOR DC6-48-60-0-8C-EV (TOTAL OF 1) WITH (2) DC POWER AND (1) FIBER RUN IN (1) 3"ø FLEX CONDUIT (TO FOLLOW EXISTING ROUTING).
- ADD HOME RUN RET WITH 3/8" LINE.
- PROPOSED MOUNT MOD (SEE SHEET S-1).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:
- ADD RBS 6630.
- ADD XMU.
- ADD IDLe.
- ADD DC12
- ADD FIBER MANAGEMENT BOX.

ITEMS TO BE REMOVED:
- EXISTING AT&T ANTENNAS (AM-X-CD-17-65-00T-RET) @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T ANTENNAS (7770) @ POS. 4 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS 11 B12 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T DIPLEXER (TYP. OF 4 PER SECTOR, TOTAL OF 12).
- EXISTING AT&T COAX CABLE (TOTAL OF 6).

ITEMS TO REMAIN:
- (3) ANTENNAS, (6) TMA'S, (6) DIPLEXER, (1) SURGE ARRESTOR, (6) 1-5/8 COAX CABLES, (2) DC POWER & (1) FIBER.

SITE ADDRESS:	96 POWDER MILL ROAD CANTON, CT 06019
LATITUDE:	41.834233° N, 41° 50' 03.24" N
LONGITUDE:	72.932666° W, 72° 55' 57.60" W
TYPE OF SITE:	MONOPOLE / INDOOR EQUIPMENT
STRUCTURE HEIGHT:	180'-0"±
RAD CENTER:	137'-0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

DRAWING INDEX

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

SBA SITE #: CT01722

at&t

SITE NUMBER: CT1114

SITE NAME: COLLINSVILLE- POWDER MILL ROAD

FA CODE: 10042311

PACE ID: MRCTB046731, MRCTB046882, MRCTB046679, MRCTB046951

PROJECT: LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

START OUT GOING NORTHEAST ON ENTERPRISE DR TOWARD CAPITOL BLVD. 0.4 MI. TURN LEFT ONTO CAPITOL BLVD. 0.3 MI. TURN LEFT ONTO WEST ST. 0.3 MI. MERGE ONTO I-91 S VIA THE RAMP ON THE LEFT TOWARD NEW HAVEN. 1.7 MI. MERGE ONTO CT-9 N VIA EXIT 22N TOWARD NEW BRITAIN. 11.1 MI. MERGE ONTO I-84 W/US-6 W VIA EXIT 32 ON THE LEFT TOWARD WATERBURY. 1.2 MI. MERGE ONTO CT-4 W/FARMINGTON AVE VIA EXIT 39 TOWARD FARMINGTON. 5.8 MI. TURN SLIGHT RIGHT ONTO MAIN ST/CT-4. CONTINUE TO FOLLOW CT-4. 2.6 MI. STAY STRAIGHT TO GO ONTO CANTON RD/CT-179. CONTINUE TO FOLLOW CT-179. 2.0 MI. TURN RIGHT ONTO BRIDGE ST/CT-179. CONTINUE TO FOLLOW CT-179. 0.5 MI. TURN SLIGHT LEFT ONTO RIVER RD/CT-179. 1.4 MI. TURN LEFT ONTO US-202. 0.2 MI. TURN RIGHT ONTO POWDER MILL RD. 0.1 MI. END AT 96 POWDER MILL RD CANTON, CT 06022.

GENERAL NOTES

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

72 HOURS

CALL BEFORE YOU DIG

CALL TOLL FREE 1-800-922-4455

OR CALL 811

UNDERGROUND SERVICE ALERT

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

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: CT1114
SITE NAME: COLLINSVILLE- POWDER MILL ROAD
SBA SITE # ID: CT01722

96 POWDER MILL ROAD
CANTON, CT 06019
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	05/14/20	ISSUED FOR CONSTRUCTION	AM	HC	DPH
A	04/27/20	ISSUED FOR REVIEW	AM	HC	DPH

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

AT&T

TITLE SHEET
LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1114	T-1	1

GROUNDING NOTES

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

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – SAI
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. **APPLICABLE BUILDING CODES:**
    SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

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

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

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

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

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

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

ABBREVIATIONS

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

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: CT1114
SITE NAME: COLLINSVILLE- POWDER MILL ROAD
SBA SITE # ID: CT01722

96 POWDER MILL ROAD
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SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: AM

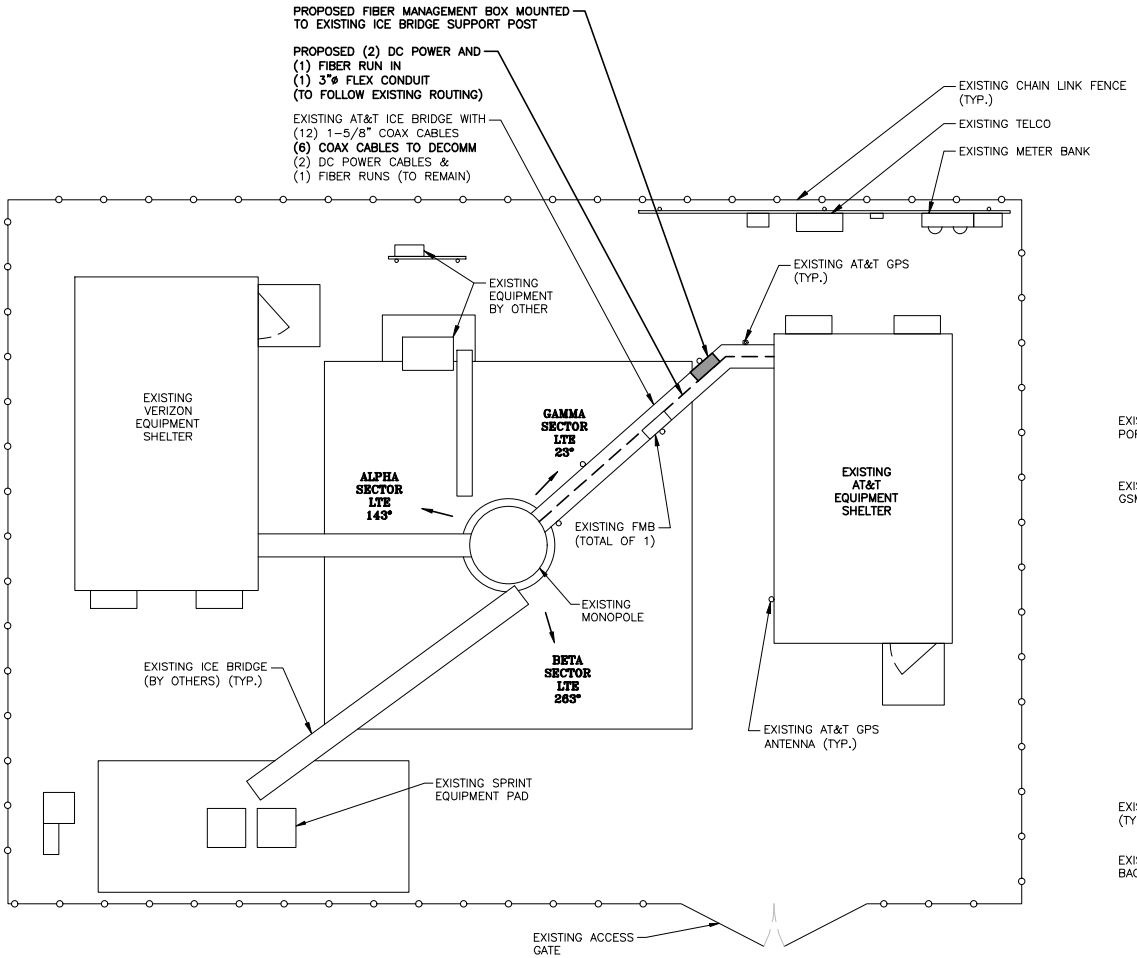
STATE OF CONNECTICUT — DANIEL P. HAMM — No. 24178 — LICENSED PROFESSIONAL ENGINEER

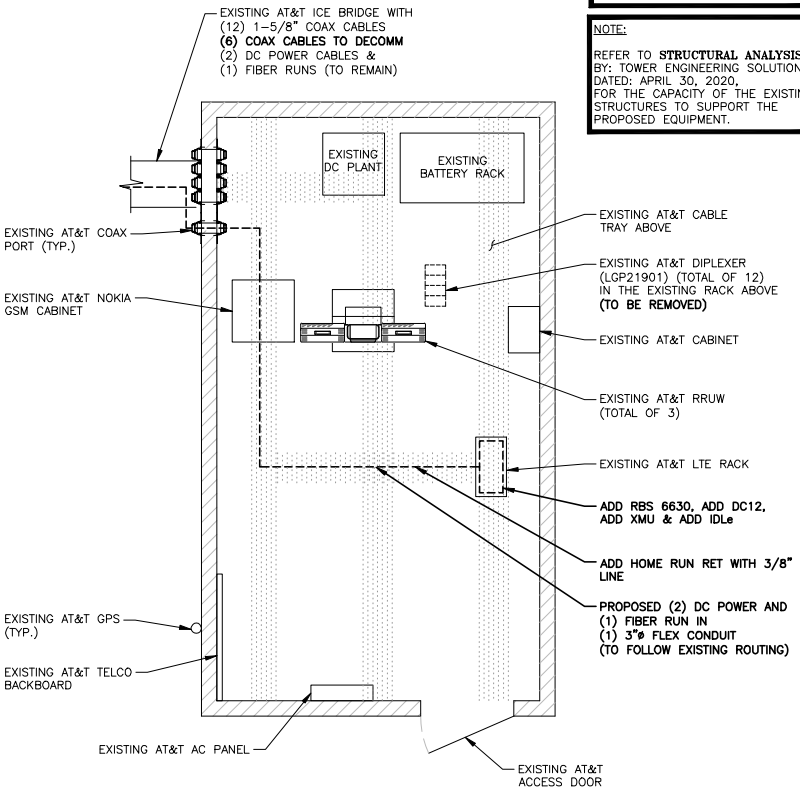
AT&T

GENERAL NOTES

LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1114	GN-1	1





NOTE:

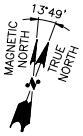
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: APRIL 17, 2020

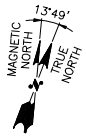
NOTE:

REFER TO **STRUCTURAL ANALYSIS** BY: TOWER ENGINEERING SOLUTIONS DATED: APRIL 30, 2020, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



COMPOUND PLAN (1 / A-1)
22x34 SCALE: 1/4"=1'-0"
11x17 SCALE: 1/8"=1'-0"

0 2'-0" 4'-0" 8'-0" 12'-0"



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

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

HUDSON Design Group LLC
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STATE OF CONNECTICUT
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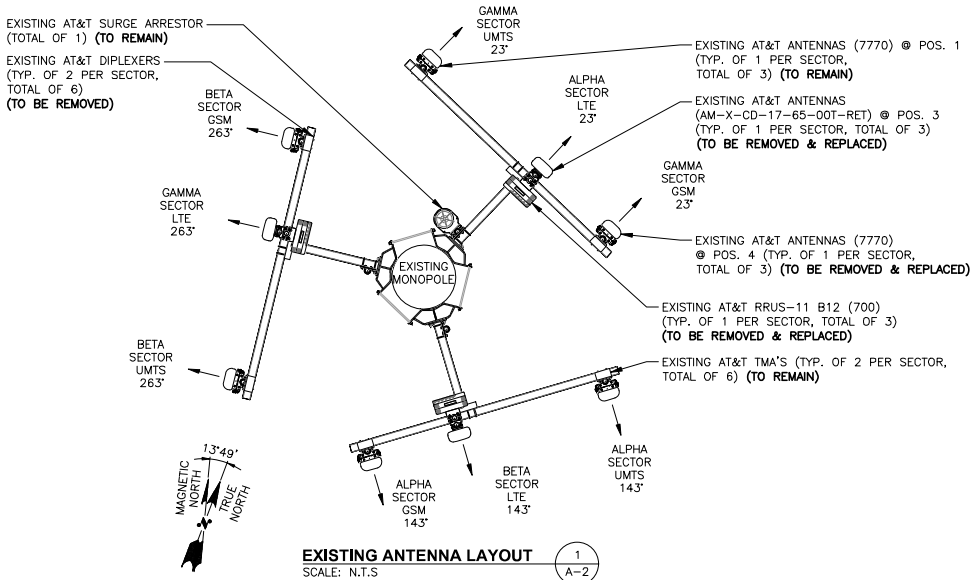
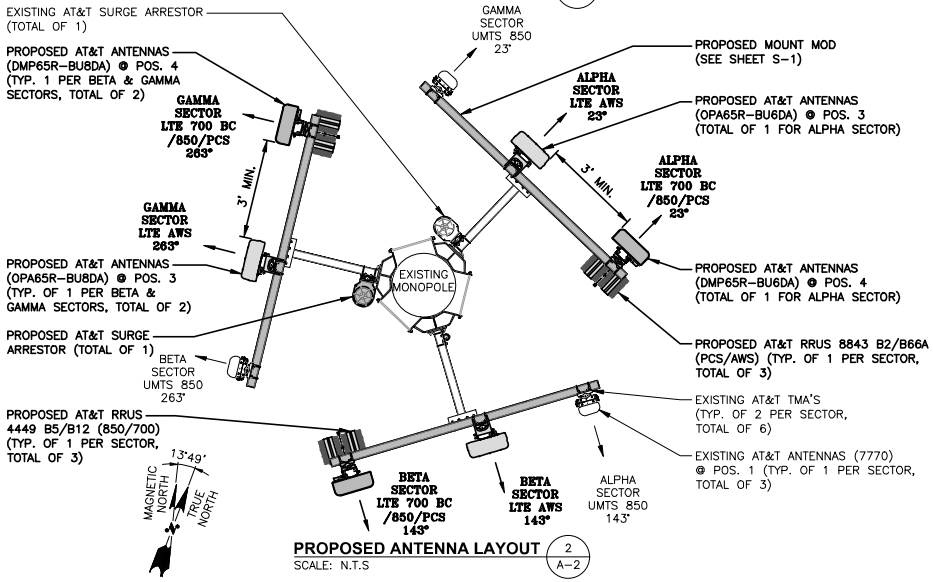
AT&T

COMPOUND & EQUIPMENT PLANS
LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

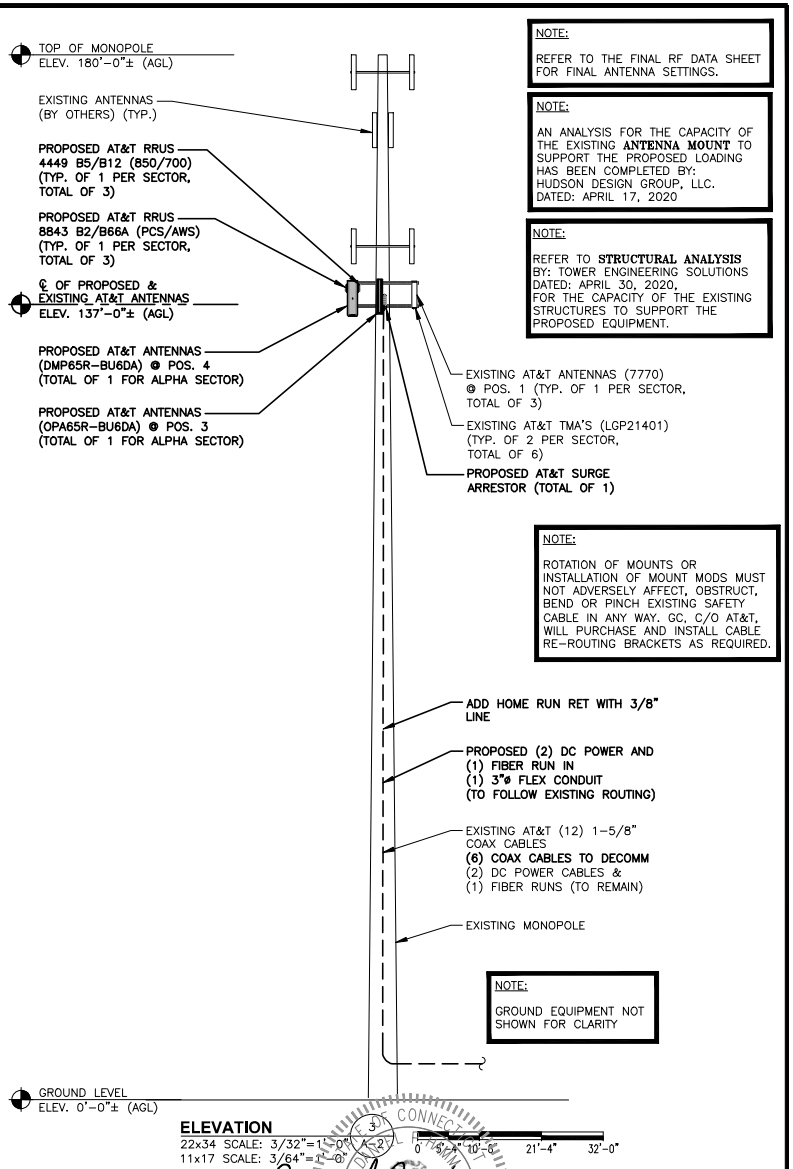
SITE NUMBER	DRAWING NUMBER	REV
CT1114	A-1	1



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



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



ELEVATION (3 / A-2)
22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"
0' 5'-4" 10'-8" 21'-4" 32'-0"

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

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: APRIL 17, 2020

NOTE:
REFER TO **STRUCTURAL ANALYSIS** BY: TOWER ENGINEERING SOLUTIONS DATED: APRIL 30, 2020, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
ROTATION OF MOUNTS OR INSTALLATION OF MOUNT MODS MUST NOT ADVERSELY AFFECT, OBSTRUCT, BEND OR PINCH EXISTING SAFETY CABLE IN ANY WAY. GC, C/O AT&T, WILL PURCHASE AND INSTALL CABLE RE-ROUTING BRACKETS AS REQUIRED.

NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
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SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1114
SITE NAME: COLLINSVILLE- POWDER MILL ROAD
SBA SITE # ID: CT01722

96 POWDER MILL ROAD
CANTON, CT 06019
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP
1	05/14/20	ISSUED FOR CONSTRUCTION	AM	HC	DPH
A	04/27/20	ISSUED FOR REVIEW	AM	HC	DPH

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

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

AT&T

ANTENNA LAYOUTS & ELEVATION
LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1114	A-2	1

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ℄ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	FREQUENCY	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	7770	55X11X5	137'-0"±	143°	(2)(E) LGP21401	–	–	–	(2)1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8F
A2	–	–	–	–	–	–	–	–	–	–	–	
A3	PROPOSED	LTE AWS	OPA65R-BU6DA	71.2X21X7.8	137'-0"±	23°	–	–	–	–	–	
A4	PROPOSED	LTE 700BC /850/PCS	DMP65R-BU6DA	71.2X20.7X7.7	137'-0"±	23°	–	(P)(1) 4449 B5/B12 (P)(1) 8843 B2/B66A	(850/700) (PCS/AWS)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(2) DC & (1) FIBER	
B1	EXISTING	UMTS 850	7770	55X11X5	137'-0"±	263°	(2)(E) LGP21401	–	–	–	(2)1-5/8 COAX	(P) (1) RAYCAP DC6-48-60-0-8C-EV
B2	–	–	–	–	–	–	–	–	–	–	–	
B3	PROPOSED	LTE AWS	OPA65R-BU8DA	96X21X7.8	137'-0"±	143°	–	–	–	–	–	
B4	PROPOSED	LTE 700BC /850/PCS	DMP65R-BU8DA	96.0X20.7X7.7	137'-0"±	143°	–	(P)(1) 4449 B5/B12 (P)(1) 8843 B2/B66A	(850/700) (PCS/AWS)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(2) DC & (1) FIBER	
C1	EXISTING	UMTS 850	7770	55X11X5	137'-0"±	23°	(2)(E) LGP21401	–	–	–	(2)1-5/8 COAX	SHARED
C2	–	–	–	–	–	–	–	–	–	–	–	
C3	PROPOSED	LTE AWS	OPA65R-BU8DA	96X21X7.8	137'-0"±	263°	–	–	–	–	–	
C4	PROPOSED	LTE 700BC /850/PCS	DMP65R-BU8DA	96.0X20.7X7.7	137'-0"±	263°	–	(P)(1) 4449 B5/B12 (P)(1) 8843 B2/B66A	(850/700) (PCS/AWS)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	–	

FINAL ANTENNA SCHEDULE (1 / A-3)
SCALE: N.T.S

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

NOTE:
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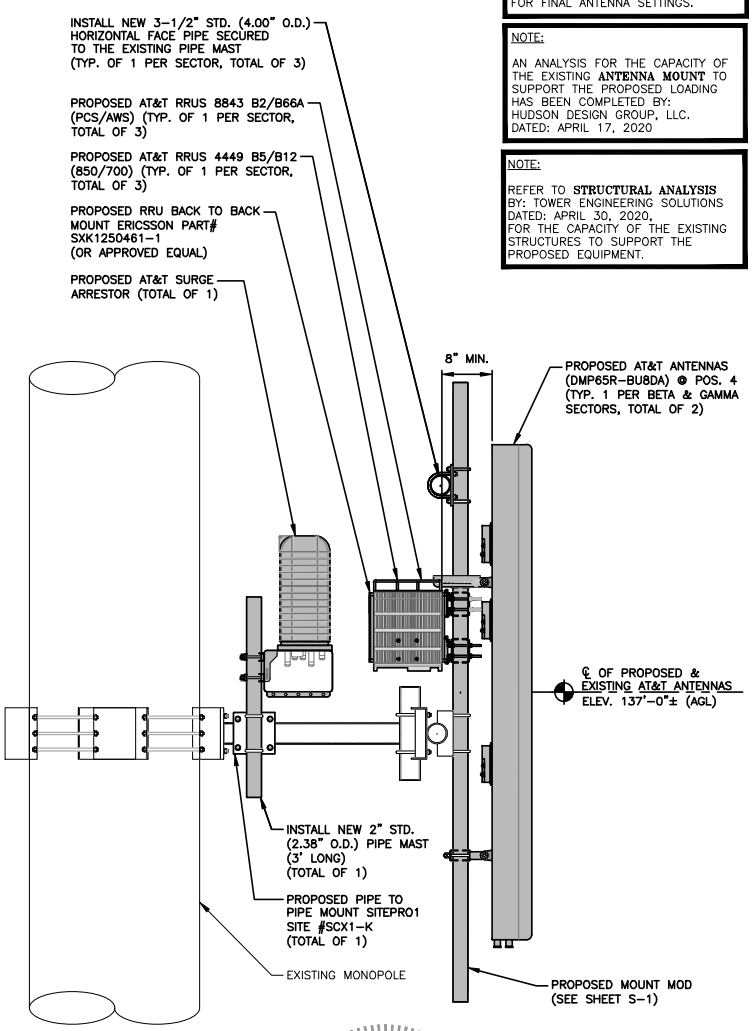
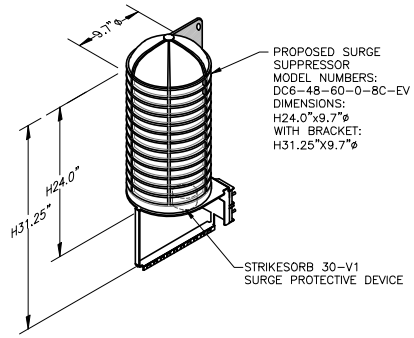


PROPOSED LTE ANTENNA, RRUS & SURGE ARRESTOR MOUNTING DETAIL (4 / A-3)
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

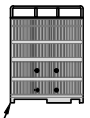
DC SURGE SUPPRESSOR DETAIL (2 / A-3)
SCALE: N.T.S

RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
3(P)	4449 B5/B12 (850/700)	17.9"x13.2"x10.4"
3(P)	8843 B2/B66A (PCS/AWS)	14.9"x13.2"x10.9"
3(E)(G)	RRUW	23.6"x13.8"x4.4"

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 (3 / A-3)
SCALE: N.T.S

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

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

AT&T

DETAILS

LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1114	A-3	1

STRUCTURAL NOTES:

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 DI.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-HIT 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.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

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

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

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

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

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

SPECIAL INSPECTION CHECKLIST

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

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STATE OF CONNECTICUT
DANIEL P. HAMM
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STRUCTURAL NOTES

LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1114	SN-1	1

NOTE:

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

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: APRIL 17, 2020

NOTE:

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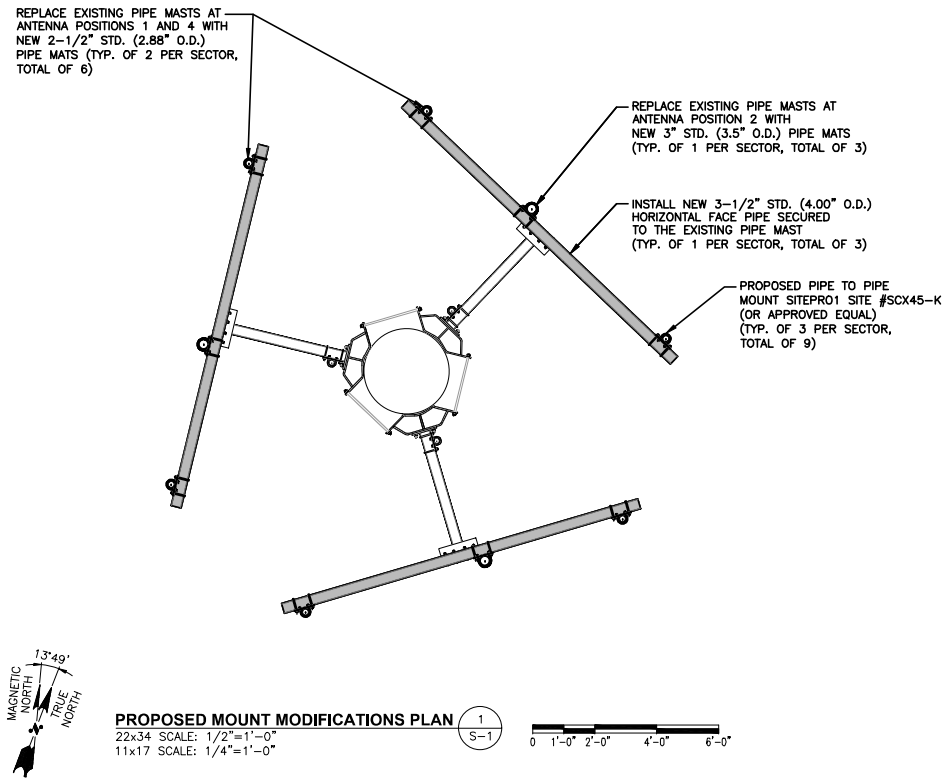
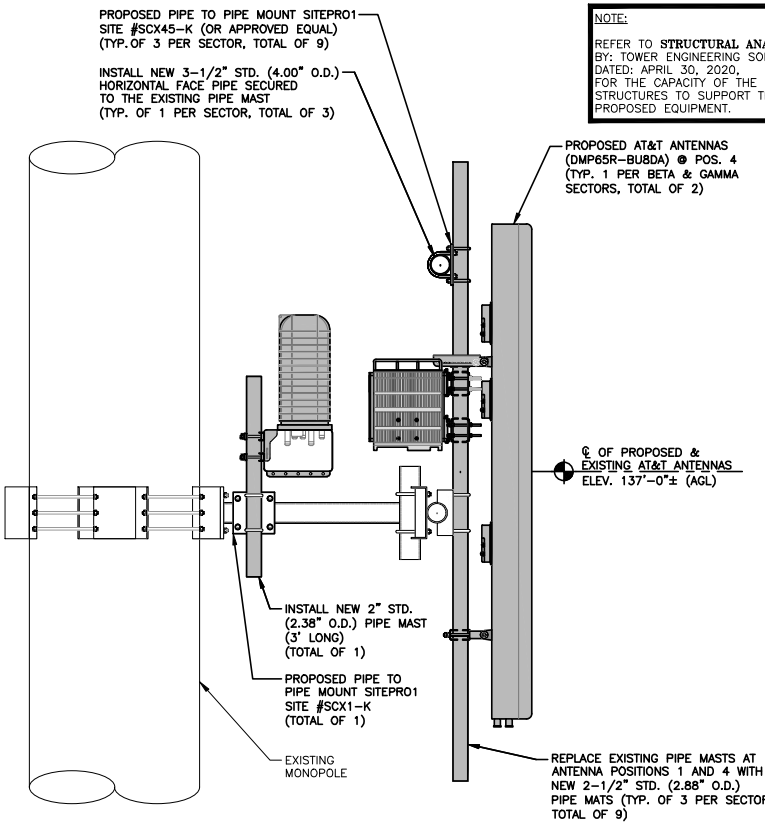


PROPOSED MOUNT MODIFICATIONS PLAN (1 / S-1)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

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



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

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

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

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MOUNT MODIFICATION DESIGN
LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
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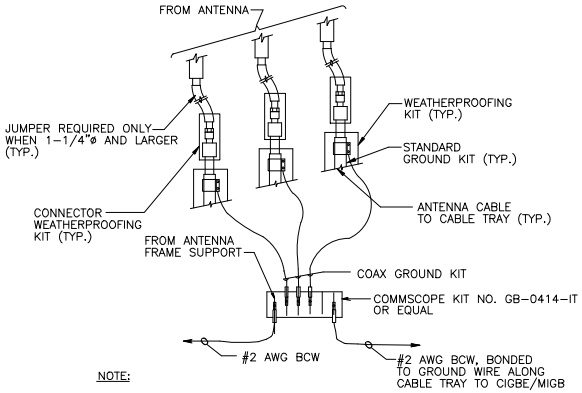
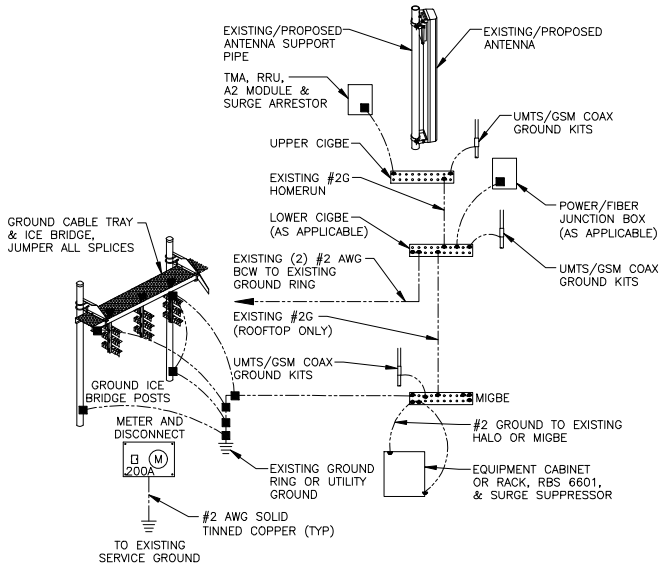


NOTE:

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

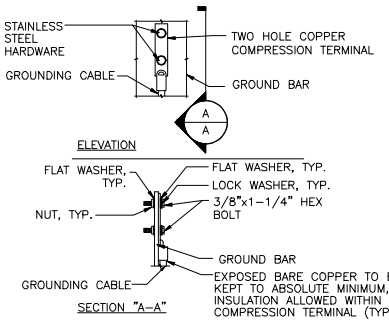
GROUND WIRE TO GROUND BAR CONNECTION DETAIL (1 / G-1)

SCALE: N.T.S



GROUNDING RISER DIAGRAM (2 / G-1)

SCALE: N.T.S



NOTES:

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

TYPICAL GROUND BAR CONNECTION DETAIL (3 / G-1)

SCALE: N.T.S

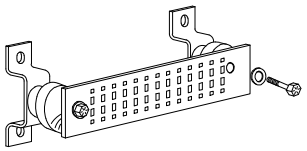
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

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

SECTION "A" – SURGE ABSORBERS

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



GROUND BAR - DETAIL (AS REQUIRED) (4 / G-1)

SCALE: N.T.S

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: CT1114
SITE NAME: COLLINSVILLE- POWDER MILL ROAD
SBA SITE # ID: CT01722

96 POWDER MILL ROAD
CANTON, CT 06019
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	05/14/20	ISSUED FOR CONSTRUCTION	AM	HC	DPH
A	04/27/20	ISSUED FOR REVIEW	AM	HC	DPH

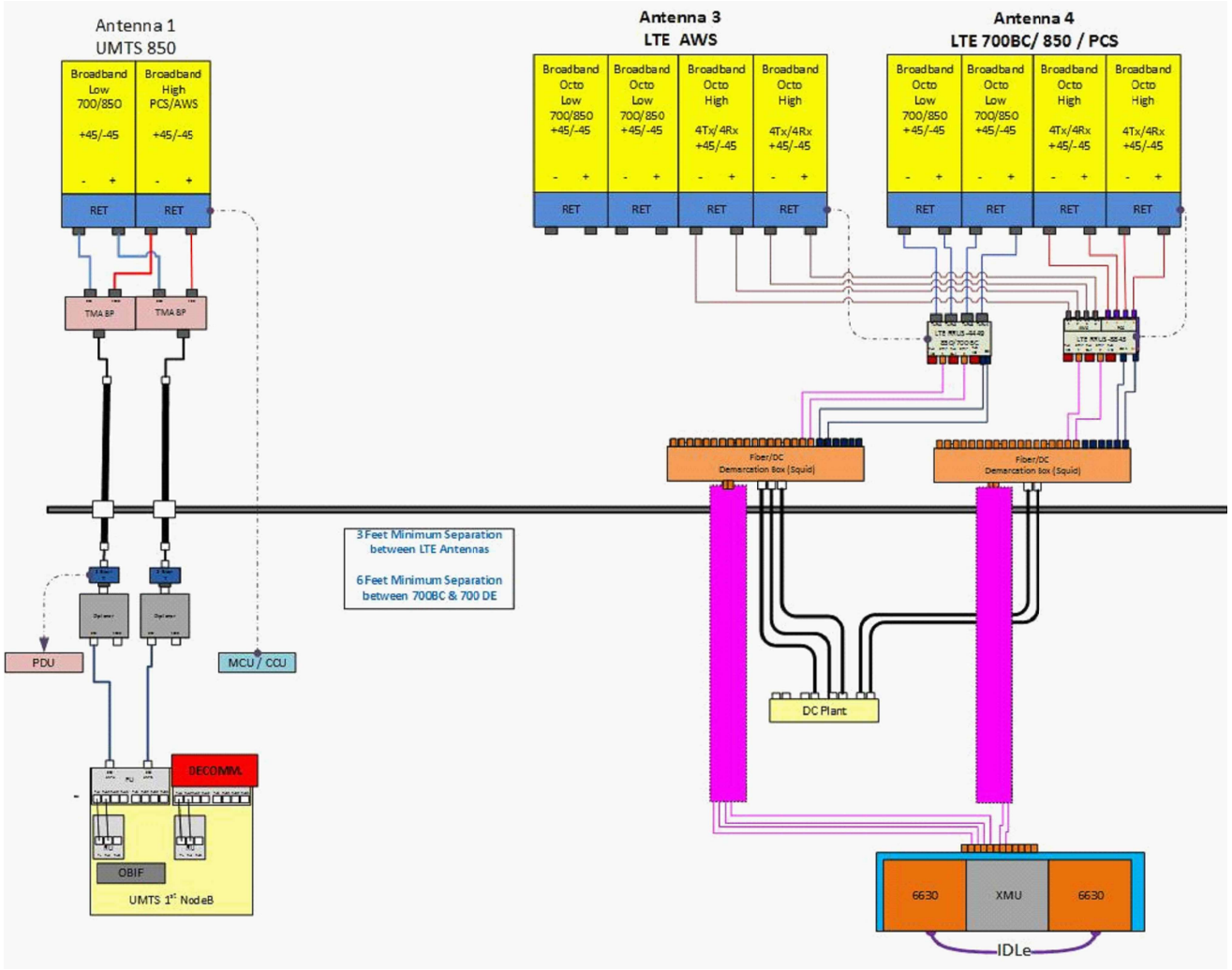
SCALE: AS SHOWN | DESIGNED BY: HC | DRAWN BY: AM

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

AT&T

GROUNDING DETAILS
LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1114	G-1	1



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

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

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

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

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1114
SITE NAME: COLLINSVILLE- POWDER MILL ROAD
SBA SITE # ID: CT01722

96 POWDER MILL ROAD
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500 ENTERPRISE DRIVE, SUITE 3A
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NO.	DATE	REVISIONS	BY	CHK	APP'D
1	05/14/20	ISSUED FOR CONSTRUCTION	AM	HC	DPH
A	04/27/20	ISSUED FOR REVIEW	AM	HC	DPH

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

AT&T

RF PLUMBING DIAGRAM
LTE 2C_3C_4TX4RX_5G NR 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1114	RF–1	1

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

Structural Analysis Report

Existing 180 ft Valmont Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01722-S

Customer Site Name: South Canton

Carrier Name: AT&T (App#: 132675-2)

Carrier Site ID / Name: CT1114 / COLLINSVILLE- POWDER MILL ROAD

Site Location: 96 Powder Mill Road

Canton, Connecticut

Hartford County

Latitude: 41.834244

Longitude: -72.932669

Analysis Result:

Max Structural Usage: 65.6% [Pass]

Max Foundation Usage: 66.0% [Pass]

Additional Usage Caused by Mount Modification: +2%

Report Prepared By: Tawfeeq Alajaj

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
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Additional Usage Caused by Mount Modification: +2%

Report Prepared By: Tawfeeq Alajaj

Introduction

The purpose of this report is to summarize the analysis results on the 180 ft Valmont 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	Valmont Design Calculations, Order #12156-00, 8/03/2000 Valmont Record Drawings, Order #12156-00, 8/03/2000
Foundation Drawing	FDH Nondestructive Testing Report, Project #1206272EN1, 8/01/2012
Geotechnical Report	FDH Geotechnical Evaluation, Project #1206272EG1, 8/06/2012
Modification Drawings	FDH Modification Inspection Report, Project #1301891700, 8/08/2013

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 120.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 93.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.18, S_1 = 0.065

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	177.0	3	ALU 1900 MHz	(1) Platform w/ Hand Rails & Sitepro PRK-1245L	(4) 1-1/4" Fiber	Sprint Nextel
2		6	ALU 800 MHz			
3		3	ALU TD-RRH8x20-25			
4		3	RFS APXVTM14-C-I20			
5		3	Commscope NNVV-65B-R4			
6	167.5	3	Kathrein 742 351	(3) Pipe Mounts	(6) 1 5/8"	T-Mobile
7	147.0	3	Antel BXA-70063/6CF	(1) Low Profile Platform	(12) 1 5/8"	Verizon
8	146.5	4	Antel LPA-80080/4CF-EDIN			
9		2	Antel BXA-171085-8CF-2			
10		1	Antel BXA-171063/8CF-2			
11		2	Antel LPA-80063/4CF			
12	146.0	6	RFS FD9R6004/2C-3			
13	139.5	6	Powerwave LGP 21903	(3) T-Arms	(12) 1 5/8" (2) 3/4" DC* (1) 7/16 Fiber*	AT&T
-	139.0	6	Powerwave 7770			
-		3	CSS DUO1417-8686-40			
-		2	Powerwave P65-17-XLH-RR			
-		1	KMW AM-X-CD-16-65-001-RET			
-		6	Powerwave LGP 21401			
-		6	Ericsson RRUS-11			
-		3	Andrew ABT-DF-DMADBH			
-		1	Raycap DC6-48-60-18-8F			
26	50.0	1	GPS	(1) Stand Off	(1) 1/2"	Sprint Nextel

*Coax installed inside 3" Flex conduit inside the monopole's shaft.

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
14	137.0	6	Powerwave Allgon - 7770 - Panel	(3) Modified T-Arms with (3) Pipe Masts, (3) Horizontal Face Pipe and (6) Pipe Masts	(6) 1 5/8" (4) 3/4" DC* (2) 7/16" Fiber* (3) 3/8" RET	AT&T
15		1	CCI - OPA65R-BU6DA- Panel			
16		2	CCI - OPA65R-BU8DA- Panel			
17		1	CCI - DMP65R-BU6DA- Panel			
18		2	CCI - DMP65R-BU8DA- Panel			
19		6	Powerwave LGP21401 TMA			
20		6	Powerwave 21903 Diplexer			
21		3	Ericsson 4449 B5/B12			
22		3	Ericsson RRUS 8843 B2 B66A			
23		1	Raycap DC6-48-60-18-8F			
24		1	Raycap DC6-48-60-0-8C-EV			
25		3	Andrew ABT-DF-DMADBH BIAS-T			

3" (Housing (4) 3/4" DC power & (2) 7//16" Fiber cables)

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:	**65.6%**	**46.1%**	**42.3%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4544.7	37.8	99.9

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.1353 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 ANSI/TIA/EIA 222-G 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 EIA/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.

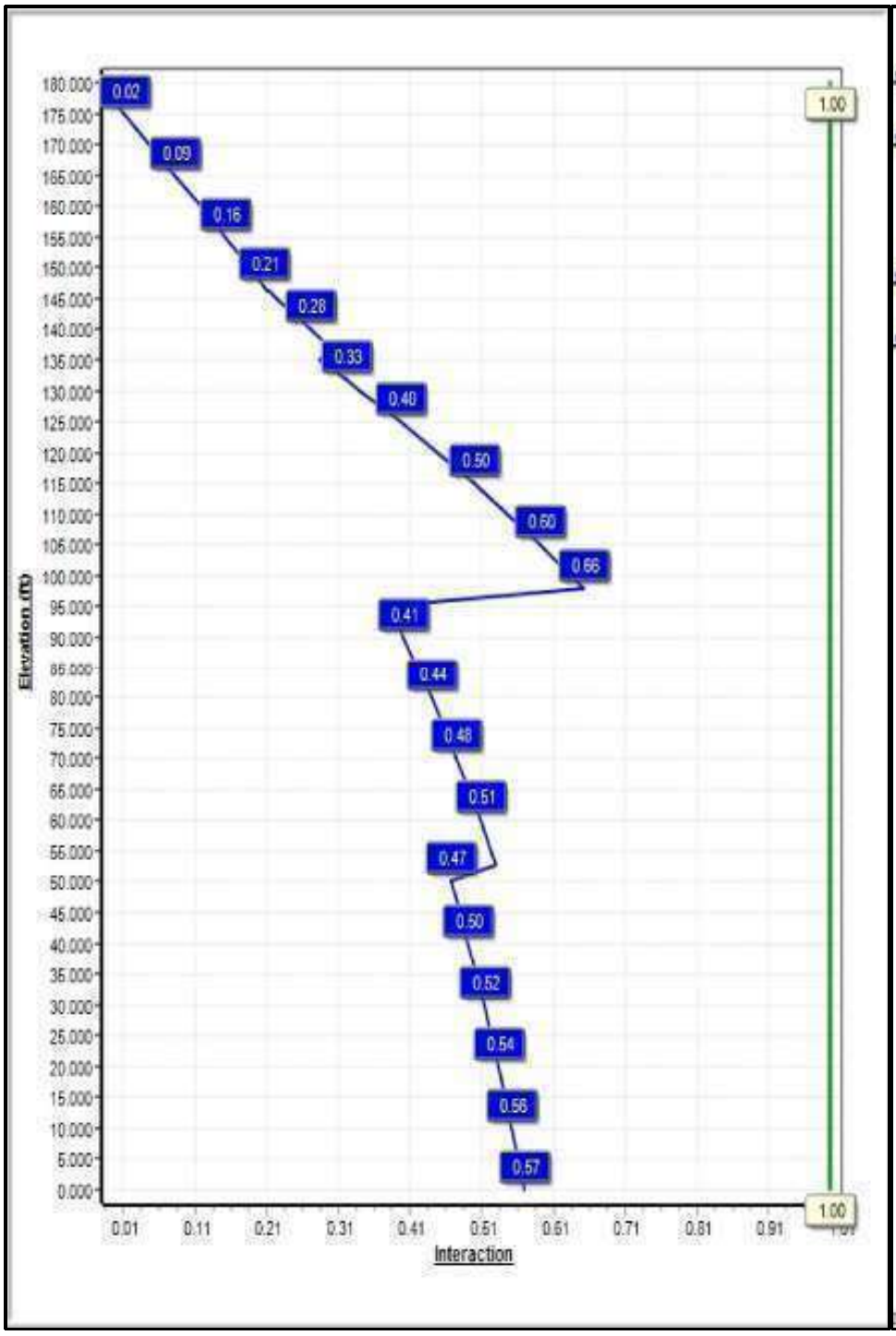
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

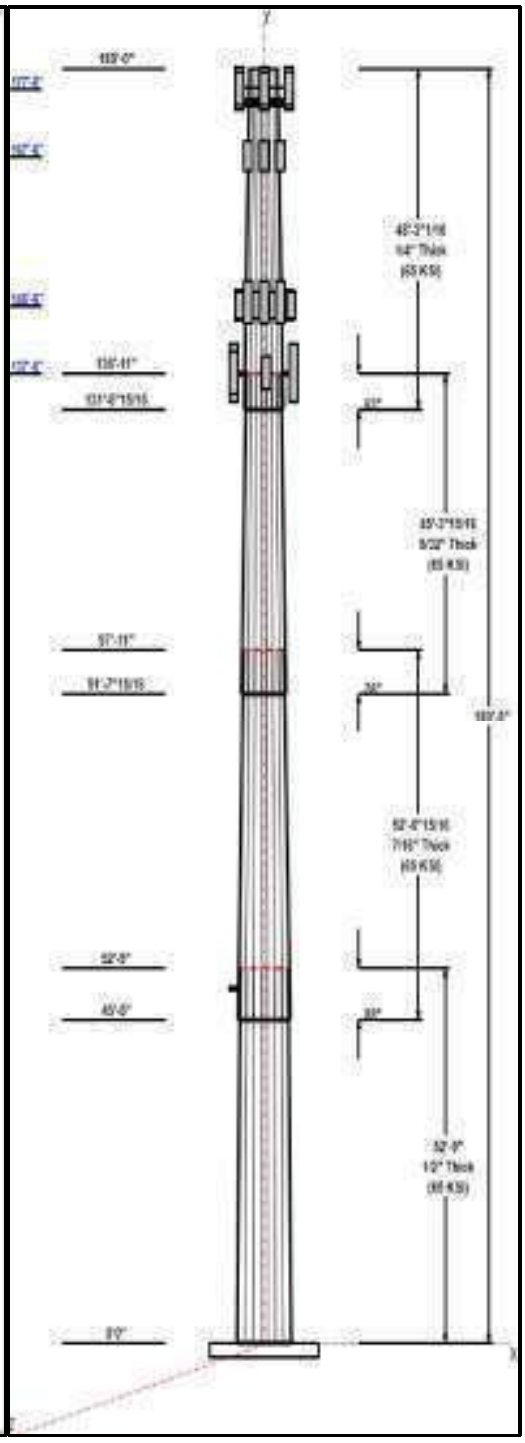
Usage Diagram - Max Ratio 65.56% at 98.0ft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton	**Exposure:**	C	
Height:	180.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

Dead Load Factor:	1.20	**Iterations:**	25
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 93 mph Wind





Structure: CT01722-S-SBA

Type: Tapered
Site Name: South Canton
Height: 180.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 16 Sided
Taper: 0.19501

4/30/2020

Shaft Properties

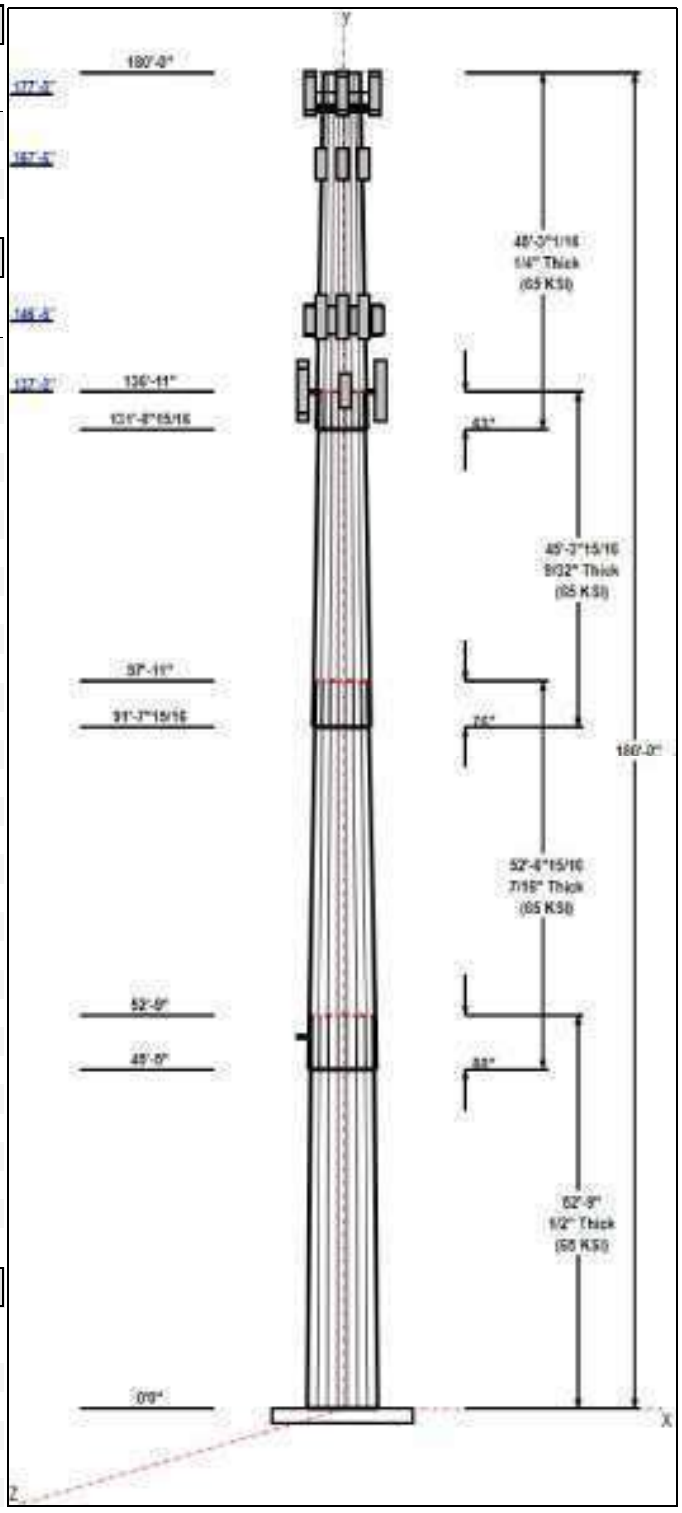
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.75	49.71	60.00	0.500		0.19501	65
2	52.58	41.77	52.02	0.438	Slip	0.19501	65
3	45.33	34.72	43.56	0.281	Slip	0.19501	65
4	48.26	26.84	36.25	0.250	Slip	0.19501	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
177.00	177.00	3	ALU 1900 MHz	Sprint Nextel
177.00	177.00	6	ALU 800 MHz	Sprint Nextel
177.00	177.00	3	ALU TD-RRH8x20-25	Sprint Nextel
177.00	177.00	1	Platform w/ Hand Rails	Sprint Nextel
177.00	177.00	3	RFS APXVTM14-C-I20	Sprint Nextel
177.00	177.00	3	Commscope	Sprint Nextel
177.00	177.00	1	Sitepro PRK-1245L	Sprint Nextel
167.50	167.50	3	Kathrein 742 351	T-Mobile
167.50	167.50	3	Pipe Mount	T-Mobile
147.00	147.00	3	Antel BXA-70063/6CF	Verizon
146.50	146.50	4	Antel	Verizon
146.50	146.50	2	Antel BXA-171085-8CF-2	Verizon
146.50	146.50	1	Antel BXA-171063/8CF-2	Verizon
146.50	146.50	2	Antel LPA-80063/4CF	Verizon
146.50	146.50	1	Low Profile Platform	Verizon
146.00	146.00	6	RFS FD9R6004/2C-3	Verizon
137.00	137.00	3	T-Arms	AT&T
137.00	137.00	6	7770	AT&T
137.00	137.00	1	OPA65R-KE6D	AT&T
137.00	137.00	2	OPA65R-BU8DA	AT&T
137.00	137.00	1	DMP65R-BU6DA	AT&T
137.00	137.00	2	DMP65R-BU8DA	AT&T
137.00	137.00	6	Powerwave LGP21401	AT&T
137.00	137.00	6	2Powerwave 1903	AT&T
137.00	137.00	3	4449 B5/B12	AT&T
137.00	137.00	3	RRUS 8843 B2 B66A	AT&T
137.00	137.00	1	Raycap DC6-48-60-18-8F	AT&T
137.00	137.00	1	Raycap	AT&T
137.00	137.00	3	Andrew ABT-DF-DMADBH	AT&T
137.00	137.00	1	(3) T-Arm Kit	AT&T
50.00	50.00	1	GPS	Sprint Nextel
50.00	50.00	1	Stand Off	Sprint Nextel

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	177.00	Inside	1-1/4" Fiber	Sprint Nextel
0.00	167.00	Inside	1 5/8" Coax	T-Mobile
0.00	146.50	Inside	1 5/8" Coax	Verizon
0.00	139.00	Inside	1 5/8" Coax	AT&T
0.00	139.00	Inside	3" Conduit	AT&T
0.00	139.00	Inside	3/4" DC	AT&T
0.00	139.00	Inside	3/8" RET	AT&T
0.00	139.00	Inside	7/16 Fiber	AT&T
0.00	50.00	Outside	1/2" Coax	Sprint Nextel



Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
28	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	74.6	60.0	Polygon

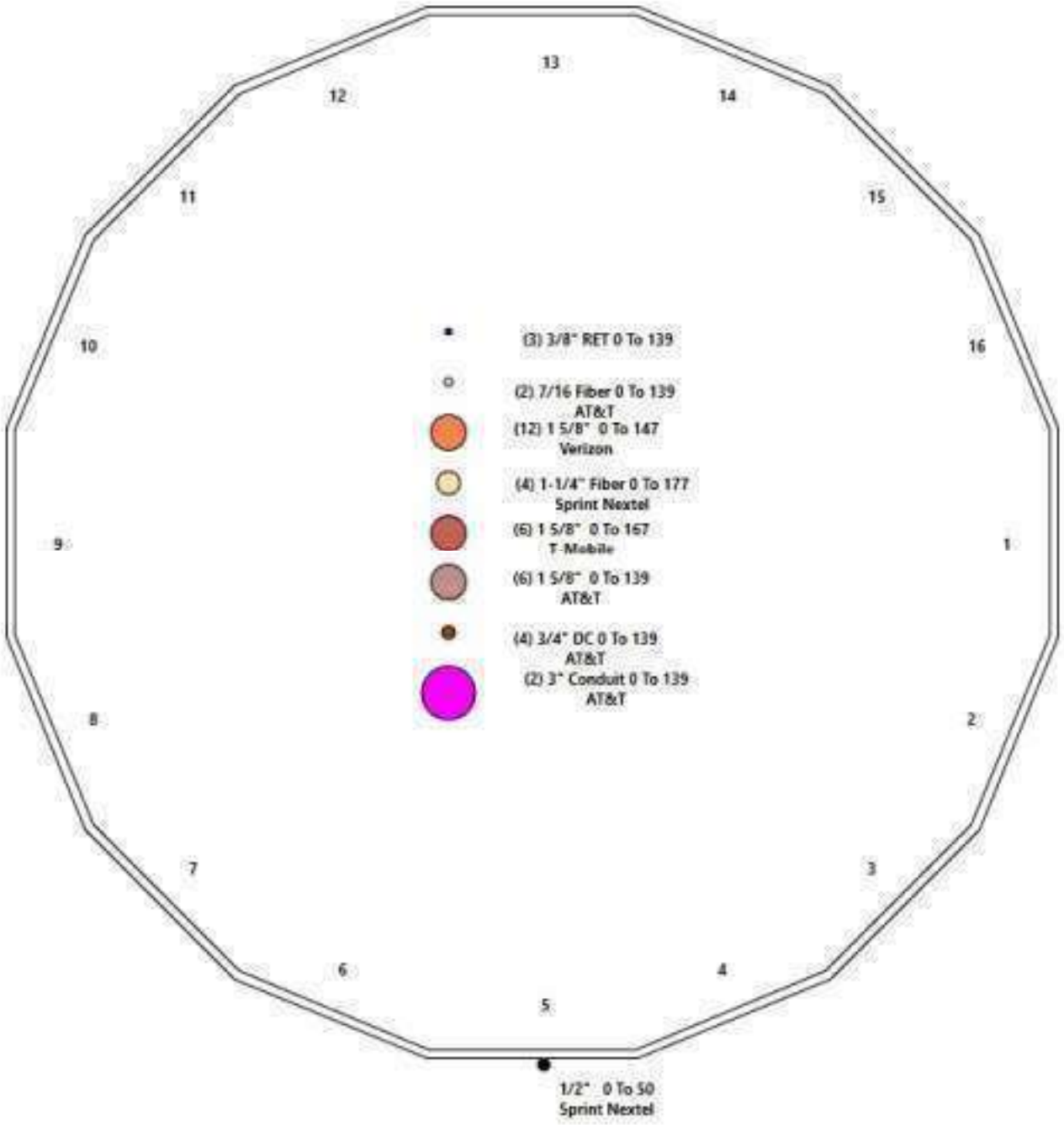
Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	4544.7	37.8	61.3
0.9D + 1.6W 93 mph Wind	4500.0	37.8	46.0
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1424.2	11.5	99.9
1.2D + 1.0E	273.6	2.1	61.4
0.9D + 1.0E	270.6	2.1	46.0
1.0D + 1.0W 60 mph Wind	1175.5	9.8	51.1

Structure: CT01722-S-SBA - Coax Line Placement

Type: Monopole
Site Name: South Canton
Height: 180.00 (ft)

4/30/2020



Shaft Properties

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	16	52.750	0.5000	65		0.00	15,562
2	16	52.580	0.4380	65	Slip	88.00	11,613
3	16	45.330	0.2813	65	Slip	76.00	5,378
4	16	48.257	0.2500	65	Slip	63.00	4,098
					Total Shaft Weight:		**36,651**

	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	60.00	0.00	94.90	42444.94	22.28	120.00	49.71	52.75	78.50	24017.2	18.19	99.43	0.195008
2	52.02	45.42	72.07	24224.67	22.03	118.77	41.77	98.00	57.74	12459.6	17.38	95.36	0.195008
3	43.56	91.66	38.83	9190.17	29.22	154.89	34.72	136.99	30.90	4631.04	22.97	123.4	0.195008
4	36.25	131.7	28.71	4699.59	27.25	144.99	26.84	180.00	21.20	1893.45	19.76	107.3	0.195008

Load Summary

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	177.00	ALU 1900 MHz	3	60.00	3.80	0.67	261.79	5.684	0.67	0.00	0.00
2	177.00	ALU 800 MHz	6	53.00	2.49	0.67	153.26	4.040	0.67	0.00	0.00
3	177.00	ALU TD-RRH8x20-25	3	70.00	4.05	0.67	231.09	5.183	0.67	0.00	0.00
4	177.00	Platform w/ Hand Rails	1	2000.00	35.00	1.00	4838.95	59.841	1.00	0.00	0.00
5	177.00	RFS APXVTM14-C-I20	3	56.00	6.34	0.79	289.33	7.884	0.79	0.00	0.00
6	177.00	Commscope NNVV-65B-R4	3	77.40	12.27	0.74	464.50	14.244	0.74	0.00	0.00
7	177.00	Sitepro PRK-1245L	1	464.91	9.50	1.00	904.86	22.985	1.00	0.00	0.00
8	167.50	Kathrein 742 351	3	29.80	5.38	0.61	158.27	8.058	0.61	0.00	0.00
9	167.50	Pipe Mount	3	350.00	5.00	0.75	745.27	9.706	0.75	0.00	0.00
10	147.00	Antel BXA-70063/6CF	3	17.00	7.57	0.70	205.56	11.248	0.70	0.00	0.00
11	146.50	Antel LPA-80080/4CF-EDIN	4	12.00	2.61	1.70	165.80	3.805	1.70	0.00	0.00
12	146.50	Antel BXA-171085-8CF-2	2	10.50	2.94	0.84	97.69	5.146	0.84	0.00	0.00
13	146.50	Antel BXA-171063/8CF-2	1	10.50	2.94	0.84	97.69	5.146	0.84	0.00	0.00
14	146.50	Antel LPA-80063/4CF	2	20.00	6.15	0.93	263.35	8.668	0.93	0.00	0.00
15	146.50	Low Profile Platform	1	1500.00	22.00	1.00	3241.10	45.493	1.00	0.00	0.00
16	146.00	RFS FD9R6004/2C-3	6	3.10	0.36	0.67	13.77	0.950	0.67	0.00	0.00
17	137.00	T-Arms	3	350.00	8.00	0.75	672.83	17.224	0.75	0.00	0.00
18	137.00	7770	6	35.00	5.51	0.73	226.86	6.937	0.73	0.00	0.00
19	137.00	OPA65R-KE6D	1	60.20	12.87	1.00	463.27	14.874	1.00	0.00	0.00
20	137.00	OPA65R-BU8DA	2	76.50	18.09	0.86	603.41	20.539	0.87	0.00	0.00
21	137.00	DMP65R-BU6DA	1	79.40	12.71	1.00	477.28	14.705	1.00	0.00	0.00
22	137.00	DMP65R-BU8DA	2	95.70	17.87	0.86	615.94	20.312	0.87	0.00	0.00
23	137.00	Powerwave LGP21401 TMA	6	14.10	1.29	1.00	47.13	2.394	1.00	0.00	0.00
24	137.00	2Powerwave 1903 Diplexer	6	5.50	0.27	0.84	16.64	0.795	0.84	0.00	0.00
25	137.00	4449 B5/B12	3	71.00	1.97	0.67	141.53	2.693	0.67	0.00	0.00
26	137.00	RRUS 8843 B2 B66A	3	72.00	1.64	0.67	133.90	2.296	0.67	0.00	0.00
27	137.00	Raycap DC6-48-60-18-8F	1	31.80	0.92	1.00	113.49	1.499	1.00	0.00	0.00
28	137.00	Raycap DC6-48-60-0-8C-EV	1	16.00	4.78	1.00	179.49	5.948	1.00	0.00	0.00
29	137.00	Andrew ABT-DF-DMADBH	3	1.10	0.05	0.98	4.05	0.304	0.98	0.00	0.00
30	137.00	(3) T-Arm Kit	1	500.00	16.50	1.00	1284.02	37.807	1.00	0.00	0.00
31	50.00	GPS	1	10.00	1.00	1.00	45.03	1.851	1.00	0.00	0.00
32	50.00	Stand Off	1	40.00	2.63	1.00	135.90	9.760	1.00	0.00	0.00
		Totals:	**86**	**9,293.31**			**28,275.37**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	177.00	(4) 1-1/4" Fiber	0.00	Inside
0.00	167.00	(6) 1 5/8" Coax	0.00	Inside
0.00	146.50	(12) 1 5/8" Coax	0.00	Inside
0.00	139.00	(6) 1 5/8" Coax	0.00	Inside
0.00	139.00	(2) 3" Conduit	0.00	Inside
0.00	139.00	(4) 3/4" DC	0.00	Inside
0.00	139.00	(3) 3/8" RET	0.00	Inside
0.00	139.00	(2) 7/16 Fiber	0.00	Inside
0.00	50.00	(1) 1/2" Coax	0.65	Outside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)

Shaft Section Properties

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.5000	60.000	94.903	42444.9	22.28	120.00	77.4	1387.	0.0
5.00		0.5000	59.025	93.347	40392.3	21.89	118.05	77.8	1342.	1601.4
10.00		0.5000	58.050	91.792	38406.9	21.50	116.10	78.2	1297.	1575.0
15.00		0.5000	57.075	90.237	36487.6	21.11	114.15	78.7	1254.	1548.5
20.00		0.5000	56.100	88.682	34633.4	20.73	112.20	79.1	1211.	1522.1
25.00		0.5000	55.125	87.127	32843.1	20.34	110.25	79.6	1168.	1495.6
30.00		0.5000	54.150	85.571	31115.6	19.95	108.30	80.0	1127.	1469.1
35.00		0.5000	53.175	84.016	29449.7	19.56	106.35	80.4	1086.	1442.7
40.00		0.5000	52.200	82.461	27844.4	19.18	104.40	80.9	1046.	1416.2
45.00		0.5000	51.225	80.906	26298.5	18.79	102.45	81.3	1007.	1389.8
45.42	Bot - Section 2	0.5000	51.143	80.776	26172.4	18.75	102.29	81.3	1003.	114.6
50.00		0.5000	50.250	79.351	24811.0	18.40	100.50	81.8	968.5	2363.0
52.75	Top - Section 1	0.4380	50.589	70.072	22265.2	21.38	115.50	0.0	0.0	1397.8
55.00		0.4380	50.151	69.459	21685.9	21.18	114.50	78.6	848.2	534.1
60.00		0.4380	49.176	68.097	20434.7	20.74	112.27	79.1	815.1	1170.2
65.00		0.4380	48.200	66.735	19232.7	20.30	110.05	79.6	782.7	1147.0
70.00		0.4380	47.225	65.372	18078.7	19.86	107.82	80.1	750.9	1123.8
75.00		0.4380	46.250	64.010	16971.8	19.41	105.59	80.6	719.8	1100.6
80.00		0.4380	45.275	62.648	15911.0	18.97	103.37	81.1	689.4	1077.5
85.00		0.4380	44.300	61.285	14895.4	18.53	101.14	81.6	659.6	1054.3
90.00		0.4380	43.325	59.923	13924.0	18.08	98.92	82.1	630.4	1031.1
91.66	Bot - Section 3	0.4380	43.001	59.470	13610.4	17.94	98.18	82.3	620.9	337.9
95.00		0.4380	42.350	58.561	12995.7	17.64	96.69	82.5	601.9	1107.6
98.00	Top - Section 2	0.2813	42.328	37.724	8425.7	28.35	150.50	0.0	0.0	980.3
100.00		0.2813	41.938	37.374	8193.0	28.07	149.11	70.8	383.2	256.0
105.00		0.2813	40.963	36.499	7631.1	27.38	145.64	71.6	365.4	628.4
110.00		0.2813	39.988	35.624	7095.4	26.69	142.18	72.4	348.1	613.5
115.00		0.2813	39.013	34.749	6585.4	26.00	138.71	73.2	331.1	598.7
120.00		0.2813	38.038	33.874	6100.5	25.31	135.24	73.9	314.6	583.8
125.00		0.2813	37.062	33.000	5640.0	24.62	131.78	74.7	298.5	568.9
130.00		0.2813	36.087	32.125	5203.2	23.93	128.31	75.5	282.8	554.0
131.74	Bot - Section 4	0.2813	35.747	31.820	5056.4	23.69	127.10	75.8	277.5	189.7
135.00		0.2813	35.112	31.250	4789.6	23.24	124.84	76.3	267.6	664.8
136.99	Top - Section 3	0.2500	35.224	27.891	4309.9	26.43	140.89	0.0	0.0	401.0
137.00		0.2500	35.222	27.890	4309.4	26.43	140.89	72.7	240.0	0.6
140.00		0.2500	34.637	27.424	4096.8	25.97	138.55	73.2	232.0	282.3
145.00		0.2500	33.662	26.646	3758.1	25.19	134.65	74.1	219.0	460.0
146.00		0.2500	33.467	26.491	3692.6	25.04	133.87	74.2	216.4	90.4
146.50		0.2500	33.370	26.413	3660.2	24.96	133.48	74.3	215.2	45.0
147.00		0.2500	33.272	26.335	3628.0	24.88	133.09	74.4	213.9	44.9
150.00		0.2500	32.687	25.869	3438.6	24.42	130.75	74.9	206.3	266.5
155.00		0.2500	31.712	25.091	3137.7	23.64	126.85	75.8	194.1	433.5
160.00		0.2500	30.737	24.314	2854.9	22.86	122.95	76.7	182.2	420.3
165.00		0.2500	29.762	23.536	2589.7	22.09	119.05	77.6	170.7	407.1
167.50		0.2500	29.275	23.147	2463.5	21.70	117.10	78.0	165.1	198.6
170.00		0.2500	28.787	22.758	2341.4	21.31	115.15	78.5	159.5	195.3
175.00		0.2500	27.812	21.981	2109.5	20.54	111.25	79.3	148.8	380.6
177.00		0.2500	27.422	21.670	2021.2	20.23	109.69	79.7	144.6	148.5
180.00		0.2500	26.837	21.203	1893.4	19.76	107.35	80.2	138.4	218.8

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
										36651.2

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	17.879	19.67	437.11	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	17.879	19.67	430.00	0.750	0.000	5.00	25.283	18.96	596.7	0.0	1921.7
10.00		1.00	0.85	17.879	19.67	422.90	0.750	0.000	5.00	24.868	18.65	586.9	0.0	1890.0
15.00		1.00	0.85	17.879	19.67	415.80	0.750	0.000	5.00	24.454	18.34	577.1	0.0	1858.2
20.00		1.00	0.90	18.971	20.87	420.98	0.750	0.000	5.00	24.040	18.03	602.0	0.0	1826.5
25.00		1.00	0.95	19.883	21.87	423.50	0.750	0.000	5.00	23.626	17.72	620.1	0.0	1794.7
30.00		1.00	0.98	20.661	22.73	424.07	0.750	0.000	5.00	23.212	17.41	633.0	0.0	1763.0
35.00		1.00	1.01	21.343	23.48	423.24	0.750	0.000	5.00	22.797	17.10	642.3	0.0	1731.2
40.00		1.00	1.04	21.951	24.15	421.37	0.750	0.000	5.00	22.383	16.79	648.6	0.0	1699.5
45.00		1.00	1.07	22.502	24.75	418.65	0.750	0.000	5.00	21.969	16.48	652.5	0.0	1667.7
45.42	Bot - Section 2	1.00	1.07	22.546	24.80	418.39	0.750	0.000	0.42	1.812	1.36	53.9	0.0	137.5
50.00	Appurtenance(s)	1.00	1.09	23.007	25.31	415.26	0.750	0.000	4.58	20.084	15.06	609.9	0.0	2835.5
52.75	Top - Section 1	1.00	1.11	23.268	25.59	413.15	0.750	0.000	2.75	11.883	8.91	365.0	0.0	1677.3
55.00		1.00	1.12	23.473	25.82	418.62	0.750	0.000	2.25	9.629	7.22	298.4	0.0	641.0
60.00		1.00	1.14	23.907	26.30	414.26	0.750	0.000	5.00	21.098	15.82	665.8	0.0	1404.2
65.00		1.00	1.16	24.313	26.74	409.48	0.750	0.000	5.00	20.684	15.51	663.8	0.0	1376.4
70.00		1.00	1.17	24.696	27.17	404.34	0.750	0.000	5.00	20.270	15.20	660.8	0.0	1348.6
75.00		1.00	1.19	25.057	27.56	398.88	0.750	0.000	5.00	19.856	14.89	656.7	0.0	1320.8
80.00		1.00	1.21	25.400	27.94	393.13	0.750	0.000	5.00	19.441	14.58	651.8	0.0	1293.0
85.00		1.00	1.22	25.726	28.30	387.13	0.750	0.000	5.00	19.027	14.27	646.1	0.0	1265.1
90.00		1.00	1.24	26.037	28.64	380.89	0.750	0.000	5.00	18.613	13.96	639.7	0.0	1237.3
91.66	Bot - Section 3	1.00	1.24	26.138	28.75	378.77	0.750	0.000	1.66	6.100	4.58	210.5	0.0	405.5
95.00		1.00	1.25	26.336	28.97	374.45	0.750	0.000	3.34	12.258	9.19	426.1	0.0	1329.2
98.00	Top - Section 2	1.00	1.26	26.508	29.16	370.49	0.750	0.000	3.00	10.852	8.14	379.7	0.0	1176.4
100.00		1.00	1.27	26.621	29.28	372.81	0.750	0.000	2.00	7.172	5.38	252.0	0.0	307.2
105.00		1.00	1.28	26.896	29.59	366.01	0.750	0.000	5.00	17.609	13.21	625.2	0.0	754.1
110.00		1.00	1.29	27.161	29.88	359.06	0.750	0.000	5.00	17.195	12.90	616.5	0.0	736.3
115.00		1.00	1.30	27.416	30.16	351.94	0.750	0.000	5.00	16.781	12.59	607.3	0.0	718.4
120.00		1.00	1.32	27.663	30.43	344.69	0.750	0.000	5.00	16.367	12.27	597.6	0.0	700.5
125.00		1.00	1.33	27.902	30.69	337.30	0.750	0.000	5.00	15.952	11.96	587.5	0.0	682.7
130.00		1.00	1.34	28.133	30.95	329.78	0.750	0.000	5.00	15.538	11.65	577.0	0.0	664.8
131.74	Bot - Section 4	1.00	1.34	28.212	31.03	327.14	0.750	0.000	1.74	5.320	3.99	198.1	0.0	227.6
135.00		1.00	1.35	28.358	31.19	322.15	0.750	0.000	3.26	9.942	7.46	372.2	0.0	797.7
136.99	Top - Section 3	1.00	1.35	28.445	31.29	319.08	0.750	0.000	1.99	5.999	4.50	225.2	0.0	481.2
137.00	Appurtenance(s)	1.00	1.35	28.446	31.29	323.66	0.750	0.000	0.01	0.020	0.01	0.7	0.0	0.8
140.00		1.00	1.36	28.576	31.43	319.01	0.750	0.000	3.00	8.904	6.68	335.8	0.0	338.8
145.00		1.00	1.37	28.788	31.67	311.18	0.750	0.000	5.00	14.508	10.88	551.3	0.0	552.0
146.00	Appurtenance(s)	1.00	1.37	28.829	31.71	309.60	0.750	0.000	1.00	2.852	2.14	108.5	0.0	108.5
146.50	Appurtenance(s)	1.00	1.37	28.850	31.73	308.81	0.750	0.000	0.50	1.420	1.06	54.1	0.0	54.0
147.00	Appurtenance(s)	1.00	1.37	28.871	31.76	308.02	0.750	0.000	0.50	1.416	1.06	53.9	0.0	53.8
150.00		1.00	1.38	28.994	31.89	303.24	0.750	0.000	3.00	8.406	6.30	321.7	0.0	319.7
155.00		1.00	1.39	29.195	32.11	295.22	0.750	0.000	5.00	13.679	10.26	527.2	0.0	520.2
160.00		1.00	1.40	29.390	32.33	287.10	0.750	0.000	5.00	13.265	9.95	514.6	0.0	504.3
165.00		1.00	1.41	29.581	32.54	278.89	0.750	0.000	5.00	12.851	9.64	501.8	0.0	488.5
167.50	Appurtenance(s)	1.00	1.41	29.675	32.64	274.76	0.750	0.000	2.50	6.270	4.70	245.6	0.0	238.3
170.00		1.00	1.42	29.768	32.74	270.60	0.750	0.000	2.50	6.167	4.62	242.3	0.0	234.3
175.00		1.00	1.42	29.950	32.95	262.24	0.750	0.000	5.00	12.022	9.02	475.3	0.0	456.7

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

177.00 Appurtenance(s)	1.00	1.43	30.022	33.02	258.87	0.750	0.000	2.00	4.693	3.52	186.0	0.0	178.2
180.00	1.00	1.43	30.128	33.14	253.80	0.750	0.000	3.00	6.915	5.19	275.0	0.0	262.6
							Totals:	**180.00**			**21,540.1**		**43,981.5**

Discrete Appurtenance Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 25

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	177.00	Commscope	3	30.022	33.024	0.55	0.75	20.43	278.64	0.000	0.000	1079.47	0.00	0.00
2	177.00	RFS APXVTM14-C-I20	3	30.022	33.024	0.59	0.75	11.27	201.60	0.000	0.000	595.45	0.00	0.00
3	177.00	Platform w/ Hand Rails	1	30.022	33.024	1.00	1.00	35.00	2400.00	0.000	0.000	1849.35	0.00	0.00
4	177.00	ALU TD-RRH8x20-25	3	30.022	33.024	0.50	0.75	6.11	252.00	0.000	0.000	322.60	0.00	0.00
5	177.00	ALU 800 MHz	6	30.022	33.024	0.50	0.75	7.51	381.60	0.000	0.000	396.68	0.00	0.00
6	177.00	ALU 1900 MHz	3	30.022	33.024	0.50	0.75	5.73	216.00	0.000	0.000	302.68	0.00	0.00
7	177.00	Sitepro PRK-1245L	1	30.022	33.024	1.00	1.00	9.50	557.89	0.000	0.000	501.97	0.00	0.00
8	167.50	Kathrein 742 351	3	29.675	32.643	0.49	0.80	7.88	107.28	0.000	0.000	411.37	0.00	0.00
9	167.50	Pipe Mount	3	29.675	32.643	0.56	0.75	8.44	1260.00	0.000	0.000	440.68	0.00	0.00
10	147.00	Antel BXA-70063/6CF	3	28.871	31.758	0.56	0.80	12.72	61.20	0.000	0.000	646.21	0.00	0.00
11	146.50	Low Profile Platform	1	28.850	31.735	1.00	1.00	22.00	1800.00	0.000	0.000	1117.07	0.00	0.00
12	146.50	Antel LPA-80063/4CF	2	28.850	31.735	0.74	0.80	9.15	48.00	0.000	0.000	464.66	0.00	0.00
13	146.50	Antel BXA-171063/8CF-2	1	28.850	31.735	0.67	0.80	1.98	12.60	0.000	0.000	100.32	0.00	0.00
14	146.50	Antel BXA-171085-8CF-2	2	28.850	31.735	0.67	0.80	3.95	25.20	0.000	0.000	200.63	0.00	0.00
15	146.50	Antel	4	28.850	31.735	1.36	0.80	14.20	57.60	0.000	0.000	720.94	0.00	0.00
16	146.00	RFS FD9R6004/2C-3	6	28.829	31.712	0.54	0.80	1.16	22.32	0.000	0.000	58.74	0.00	0.00
17	137.00	(3) T-Arm Kit	1	28.446	31.290	1.00	1.00	16.50	600.00	0.000	0.000	826.06	0.00	0.00
18	137.00	DMP65R-BU8DA	2	28.446	31.290	0.69	0.80	24.59	229.68	0.000	0.000	1231.04	0.00	0.00
19	137.00	T-Arms	3	28.446	31.290	0.56	0.75	13.50	1260.00	0.000	0.000	675.87	0.00	0.00
20	137.00	7770	6	28.446	31.290	0.58	0.80	19.31	252.00	0.000	0.000	966.59	0.00	0.00
21	137.00	OPA65R-KE6D	1	28.446	31.290	0.80	0.80	10.30	72.24	0.000	0.000	515.46	0.00	0.00
22	137.00	OPA65R-BU8DA	2	28.446	31.290	0.69	0.80	24.89	183.60	0.000	0.000	1246.19	0.00	0.00
23	137.00	DMP65R-BU6DA	1	28.446	31.290	0.80	0.80	10.17	95.28	0.000	0.000	509.05	0.00	0.00
24	137.00	Andrew ABT-DF-DMADBH	3	28.446	31.290	0.78	0.80	0.12	3.96	0.000	0.000	5.89	0.00	0.00
25	137.00	Powerwave LGP21401	6	28.446	31.290	0.80	0.80	6.19	101.52	0.000	0.000	310.00	0.00	0.00
26	137.00	2Powerwave 1903	6	28.446	31.290	0.67	0.80	1.09	39.60	0.000	0.000	54.50	0.00	0.00
27	137.00	4449 B5/B12	3	28.446	31.290	0.54	0.80	3.17	255.60	0.000	0.000	158.59	0.00	0.00
28	137.00	RRUS 8843 B2 B66A	3	28.446	31.290	0.54	0.80	2.64	259.20	0.000	0.000	132.03	0.00	0.00
29	137.00	Raycap DC6-48-60-18-8F	1	28.446	31.290	0.80	0.80	0.74	38.16	0.000	0.000	36.85	0.00	0.00
30	137.00	Raycap	1	28.446	31.290	0.80	0.80	3.82	19.20	0.000	0.000	191.45	0.00	0.00
31	50.00	Stand Off	1	23.007	25.308	1.00	1.00	2.63	48.00	0.000	0.000	106.49	0.00	0.00
32	50.00	GPS	1	23.007	25.308	1.00	1.00	1.00	12.00	0.000	0.000	40.49	0.00	0.00
							Totals:		**11,151.97**			**16,215.37**		

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 13

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		596.69	2129.17	0.00	0.00
10.00		586.91	2097.42	0.00	0.00
15.00		577.13	2065.67	0.00	0.00
20.00		601.99	2033.92	0.00	0.00
25.00		620.07	2002.17	0.00	0.00
30.00		633.04	1970.41	0.00	0.00
35.00		642.25	1938.66	0.00	0.00
40.00		648.56	1906.91	0.00	0.00
45.00		652.54	1875.16	0.00	0.00
45.42		53.93	154.83	0.00	0.00
50.00	(2) attachments	756.91	3085.71	0.00	0.00
52.75		364.97	1790.87	0.00	0.00
55.00		298.36	733.90	0.00	0.00
60.00		665.81	1610.72	0.00	0.00
65.00		663.83	1582.90	0.00	0.00
70.00		660.76	1555.09	0.00	0.00
75.00		656.73	1527.27	0.00	0.00
80.00		651.83	1499.46	0.00	0.00
85.00		646.13	1471.64	0.00	0.00
90.00		639.72	1443.83	0.00	0.00
91.66		210.47	474.15	0.00	0.00
95.00		426.13	1466.97	0.00	0.00
98.00		379.72	1300.15	0.00	0.00
100.00		252.02	389.90	0.00	0.00
105.00		625.18	960.61	0.00	0.00
110.00		616.49	942.75	0.00	0.00
115.00		607.29	924.89	0.00	0.00
120.00		597.63	907.03	0.00	0.00
125.00		587.53	889.17	0.00	0.00
130.00		577.02	871.31	0.00	0.00
131.74		198.13	299.60	0.00	0.00
135.00		372.15	932.24	0.00	0.00
136.99		225.23	563.54	0.00	0.00
137.00	(39) attachments	6860.32	3411.07	0.00	0.00
140.00		335.84	448.44	0.00	0.00
145.00		551.29	687.18	0.00	0.00
146.00	(6) attachments	167.27	157.85	0.00	0.00
146.50	(10) attachments	2657.69	2010.93	0.00	0.00
147.00	(3) attachments	700.16	121.08	0.00	0.00
150.00		321.73	355.95	0.00	0.00
155.00		527.16	580.55	0.00	0.00
160.00		514.63	564.67	0.00	0.00
165.00		501.80	548.80	0.00	0.00
167.50	(6) attachments	1097.65	1631.98	0.00	0.00
170.00		242.31	245.76	0.00	0.00
175.00		475.30	479.61	0.00	0.00

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

177.00	(20) attachments	5234.17	4475.13	0.00	0.00
180.00		275.01	262.60	0.00	0.00
	Totals:	**37,755.47**	**61,379.62**	**0.00**	**0.00**

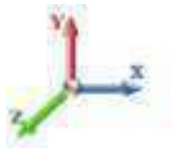
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	17.879	0.00	0.96
10.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	17.879	0.00	0.96
15.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	17.879	0.00	0.96
20.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	18.971	0.00	0.96
25.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	19.883	0.00	0.96
30.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	20.661	0.00	0.96
35.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	21.343	0.00	0.96
40.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	21.951	0.00	0.96
45.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	22.502	0.00	0.96
45.42	1/2" Coax	Yes	0.42	0.000	0.65	0.02	0.00	0.012	0.000	22.546	0.00	0.08
50.00	1/2" Coax	Yes	4.58	0.000	0.65	0.25	0.00	0.013	0.000	23.007	0.00	0.88
										Totals:	**0.0**	**9.6**

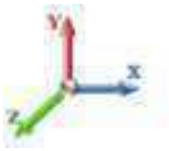
Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 25

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	-61.33	-37.84	0.00	-4544.6	0.00	4544.69	6607.78	3303.89	16218.3	8051.48	0.00	0.000	0.000	0.574
5.00	-59.10	-37.39	0.00	-4355.5	0.00	4355.52	6536.37	3268.19	15777.9	7832.86	0.08	-0.149	0.000	0.565
10.00	-56.91	-36.95	0.00	-4168.5	0.00	4168.56	6463.73	3231.87	15340.5	7615.67	0.32	-0.299	0.000	0.556
15.00	-54.75	-36.50	0.00	-3983.8	0.00	3983.84	6389.86	3194.93	14906.0	7399.99	0.71	-0.450	0.000	0.547
20.00	-52.63	-36.02	0.00	-3801.3	0.00	3801.34	6314.77	3157.38	14474.7	7185.88	1.27	-0.602	0.000	0.537
25.00	-50.54	-35.51	0.00	-3621.2	0.00	3621.25	6238.44	3119.22	14046.7	6973.42	1.98	-0.754	0.000	0.528
30.00	-48.49	-34.98	0.00	-3443.7	0.00	3443.71	6160.89	3080.44	13622.3	6762.68	2.85	-0.907	0.000	0.517
35.00	-46.47	-34.43	0.00	-3268.8	0.00	3268.82	6082.10	3041.05	13201.4	6553.75	3.88	-1.061	0.000	0.507
40.00	-44.48	-33.86	0.00	-3096.6	0.00	3096.68	6002.09	3001.05	12784.3	6346.69	5.08	-1.215	0.000	0.495
45.00	-42.57	-33.23	0.00	-2927.3	0.00	2927.38	5920.85	2960.42	12371.1	6141.58	6.43	-1.368	0.000	0.484
45.42	-42.38	-33.23	0.00	-2913.5	0.00	2913.54	5914.02	2957.01	12336.9	6124.58	6.55	-1.382	0.000	0.483
50.00	-39.25	-32.47	0.00	-2761.2	0.00	2761.25	5838.38	2919.19	11962.1	5938.49	7.95	-1.523	0.000	0.472
52.75	-37.42	-32.11	0.00	-2671.9	0.00	2671.96	4942.80	2471.40	10222.2	5074.76	8.85	-1.609	0.000	0.534
55.00	-36.63	-31.86	0.00	-2599.7	0.00	2599.72	4913.65	2456.82	10072.3	5000.32	9.63	-1.679	0.000	0.528
60.00	-34.95	-31.25	0.00	-2440.4	0.00	2440.40	4847.98	2423.99	9741.07	4835.88	11.47	-1.844	0.000	0.512
65.00	-33.30	-30.63	0.00	-2284.1	0.00	2284.16	4781.08	2390.54	9412.76	4672.89	13.49	-2.009	0.000	0.496
70.00	-31.69	-30.00	0.00	-2131.0	0.00	2131.02	4712.96	2356.48	9087.49	4511.41	15.68	-2.172	0.000	0.479
75.00	-30.11	-29.37	0.00	-1981.0	0.00	1981.02	4643.60	2321.80	8765.44	4351.53	18.05	-2.334	0.000	0.462
80.00	-28.56	-28.73	0.00	-1834.1	0.00	1834.17	4573.02	2286.51	8446.74	4193.32	20.58	-2.494	0.000	0.444
85.00	-27.04	-28.10	0.00	-1690.5	0.00	1690.50	4501.21	2250.60	8131.55	4036.84	23.27	-2.651	0.000	0.425
90.00	-25.58	-27.43	0.00	-1550.0	0.00	1550.02	4428.17	2214.08	7820.02	3882.19	26.13	-2.806	0.000	0.405
91.66	-25.08	-27.23	0.00	-1504.3	0.00	1504.39	4403.60	2201.80	7717.21	3831.15	27.12	-2.858	0.000	0.399
95.00	-23.59	-26.77	0.00	-1413.5	0.00	1413.52	4350.76	2175.38	7506.87	3726.73	29.15	-2.960	0.000	0.385
98.00	-22.28	-26.36	0.00	-1333.2	0.00	1333.29	2393.56	1196.78	4158.66	2064.53	31.04	-3.050	0.000	0.656
100.00	-21.84	-26.14	0.00	-1280.4	0.00	1280.49	2381.84	1190.92	4099.59	2035.21	32.33	-3.109	0.000	0.639
105.00	-20.82	-25.53	0.00	-1149.8	0.00	1149.82	2351.72	1175.86	3952.36	1962.12	35.70	-3.320	0.000	0.595
110.00	-19.83	-24.93	0.00	-1022.1	0.00	1022.15	2320.37	1160.18	3805.57	1889.24	39.28	-3.523	0.000	0.550
115.00	-18.87	-24.33	0.00	-897.51	0.00	897.51	2287.79	1143.89	3659.35	1816.65	43.08	-3.715	0.000	0.503
120.00	-17.93	-23.72	0.00	-775.88	0.00	775.88	2253.98	1126.99	3513.86	1744.43	47.06	-3.896	0.000	0.453
125.00	-17.02	-23.12	0.00	-657.25	0.00	657.25	2218.95	1109.47	3369.25	1672.64	51.23	-4.063	0.000	0.401
130.00	-16.16	-22.51	0.00	-541.63	0.00	541.63	2182.68	1091.34	3225.66	1601.35	55.57	-4.214	0.000	0.346
131.74	-15.85	-22.31	0.00	-502.38	0.00	502.38	2169.75	1084.87	3175.87	1576.63	57.12	-4.264	0.000	0.326
135.00	-14.92	-21.89	0.00	-429.72	0.00	429.72	2145.19	1072.59	3083.25	1530.65	60.05	-4.349	0.000	0.288
136.99	-14.36	-21.63	0.00	-386.09	0.00	386.09	1823.96	911.98	2634.70	1307.98	61.88	-4.398	0.000	0.304
137.00	-11.48	-14.53	0.00	-385.94	0.00	385.94	1823.92	911.96	2634.55	1307.90	61.89	-4.398	0.000	0.302
140.00	-11.04	-14.18	0.00	-342.35	0.00	342.35	1806.41	903.20	2565.29	1273.52	64.67	-4.470	0.000	0.275
145.00	-10.38	-13.59	0.00	-271.44	0.00	271.44	1776.24	888.12	2450.41	1216.49	69.41	-4.577	0.000	0.229
146.00	-10.23	-13.41	0.00	-257.85	0.00	257.85	1770.06	885.03	2427.52	1205.13	70.37	-4.597	0.000	0.220
146.50	-8.44	-10.60	0.00	-251.15	0.00	251.15	1766.95	883.47	2416.09	1199.45	70.85	-4.606	0.000	0.214
147.00	-8.37	-9.90	0.00	-245.85	0.00	245.85	1763.83	881.91	2404.67	1193.78	71.33	-4.616	0.000	0.211
150.00	-8.03	-9.56	0.00	-216.15	0.00	216.15	1744.84	872.42	2336.33	1159.85	74.25	-4.670	0.000	0.191
155.00	-7.48	-9.00	0.00	-168.35	0.00	168.35	1712.21	856.11	2223.20	1103.69	79.18	-4.750	0.000	0.157
160.00	-6.96	-8.44	0.00	-123.37	0.00	123.37	1678.36	839.18	2111.17	1048.07	84.18	-4.816	0.000	0.122
165.00	-6.45	-7.90	0.00	-81.15	0.00	81.15	1643.27	821.64	2000.39	993.08	89.25	-4.867	0.000	0.086
167.50	-4.91	-6.67	0.00	-61.40	0.00	61.40	1625.27	812.64	1945.52	965.84	91.80	-4.887	0.000	0.067
170.00	-4.69	-6.41	0.00	-44.73	0.00	44.73	1606.96	803.48	1891.02	938.78	94.36	-4.902	0.000	0.051
175.00	-4.25	-5.90	0.00	-12.68	0.00	12.68	1569.42	784.71	1783.19	885.25	99.50	-4.919	0.000	0.017
177.00	-0.24	-0.30	0.00	-0.89	0.00	0.89	1554.06	777.03	1740.53	864.07	101.56	-4.921	0.000	0.001

Calculated Forces

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 17

180.00	0.00	-0.27	0.00	0.00	0.00	0.00	1530.65	765.32	1677.06	832.56	104.65	-4.921	0.000	0.000

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	17.879	19.67	437.11	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	17.879	19.67	430.00	0.750	0.000	5.00	25.283	18.96	596.7	0.0	1441.3
10.00		1.00	0.85	17.879	19.67	422.90	0.750	0.000	5.00	24.868	18.65	586.9	0.0	1417.5
15.00		1.00	0.85	17.879	19.67	415.80	0.750	0.000	5.00	24.454	18.34	577.1	0.0	1393.7
20.00		1.00	0.90	18.971	20.87	420.98	0.750	0.000	5.00	24.040	18.03	602.0	0.0	1369.8
25.00		1.00	0.95	19.883	21.87	423.50	0.750	0.000	5.00	23.626	17.72	620.1	0.0	1346.0
30.00		1.00	0.98	20.661	22.73	424.07	0.750	0.000	5.00	23.212	17.41	633.0	0.0	1322.2
35.00		1.00	1.01	21.343	23.48	423.24	0.750	0.000	5.00	22.797	17.10	642.3	0.0	1298.4
40.00		1.00	1.04	21.951	24.15	421.37	0.750	0.000	5.00	22.383	16.79	648.6	0.0	1274.6
45.00		1.00	1.07	22.502	24.75	418.65	0.750	0.000	5.00	21.969	16.48	652.5	0.0	1250.8
45.42	Bot - Section 2	1.00	1.07	22.546	24.80	418.39	0.750	0.000	0.42	1.812	1.36	53.9	0.0	103.2
50.00	Appurtenance(s)	1.00	1.09	23.007	25.31	415.26	0.750	0.000	4.58	20.084	15.06	609.9	0.0	2126.7
52.75	Top - Section 1	1.00	1.11	23.268	25.59	413.15	0.750	0.000	2.75	11.883	8.91	365.0	0.0	1258.0
55.00		1.00	1.12	23.473	25.82	418.62	0.750	0.000	2.25	9.629	7.22	298.4	0.0	480.7
60.00		1.00	1.14	23.907	26.30	414.26	0.750	0.000	5.00	21.098	15.82	665.8	0.0	1053.2
65.00		1.00	1.16	24.313	26.74	409.48	0.750	0.000	5.00	20.684	15.51	663.8	0.0	1032.3
70.00		1.00	1.17	24.696	27.17	404.34	0.750	0.000	5.00	20.270	15.20	660.8	0.0	1011.4
75.00		1.00	1.19	25.057	27.56	398.88	0.750	0.000	5.00	19.856	14.89	656.7	0.0	990.6
80.00		1.00	1.21	25.400	27.94	393.13	0.750	0.000	5.00	19.441	14.58	651.8	0.0	969.7
85.00		1.00	1.22	25.726	28.30	387.13	0.750	0.000	5.00	19.027	14.27	646.1	0.0	948.9
90.00		1.00	1.24	26.037	28.64	380.89	0.750	0.000	5.00	18.613	13.96	639.7	0.0	928.0
91.66	Bot - Section 3	1.00	1.24	26.138	28.75	378.77	0.750	0.000	1.66	6.100	4.58	210.5	0.0	304.1
95.00		1.00	1.25	26.336	28.97	374.45	0.750	0.000	3.34	12.258	9.19	426.1	0.0	996.9
98.00	Top - Section 2	1.00	1.26	26.508	29.16	370.49	0.750	0.000	3.00	10.852	8.14	379.7	0.0	882.3
100.00		1.00	1.27	26.621	29.28	372.81	0.750	0.000	2.00	7.172	5.38	252.0	0.0	230.4
105.00		1.00	1.28	26.896	29.59	366.01	0.750	0.000	5.00	17.609	13.21	625.2	0.0	565.6
110.00		1.00	1.29	27.161	29.88	359.06	0.750	0.000	5.00	17.195	12.90	616.5	0.0	552.2
115.00		1.00	1.30	27.416	30.16	351.94	0.750	0.000	5.00	16.781	12.59	607.3	0.0	538.8
120.00		1.00	1.32	27.663	30.43	344.69	0.750	0.000	5.00	16.367	12.27	597.6	0.0	525.4
125.00		1.00	1.33	27.902	30.69	337.30	0.750	0.000	5.00	15.952	11.96	587.5	0.0	512.0
130.00		1.00	1.34	28.133	30.95	329.78	0.750	0.000	5.00	15.538	11.65	577.0	0.0	498.6
131.74	Bot - Section 4	1.00	1.34	28.212	31.03	327.14	0.750	0.000	1.74	5.320	3.99	198.1	0.0	170.7
135.00		1.00	1.35	28.358	31.19	322.15	0.750	0.000	3.26	9.942	7.46	372.2	0.0	598.3
136.99	Top - Section 3	1.00	1.35	28.445	31.29	319.08	0.750	0.000	1.99	5.999	4.50	225.2	0.0	360.9
137.00	Appurtenance(s)	1.00	1.35	28.446	31.29	323.66	0.750	0.000	0.01	0.020	0.01	0.7	0.0	0.6
140.00		1.00	1.36	28.576	31.43	319.01	0.750	0.000	3.00	8.904	6.68	335.8	0.0	254.1
145.00		1.00	1.37	28.788	31.67	311.18	0.750	0.000	5.00	14.508	10.88	551.3	0.0	414.0
146.00	Appurtenance(s)	1.00	1.37	28.829	31.71	309.60	0.750	0.000	1.00	2.852	2.14	108.5	0.0	81.4
146.50	Appurtenance(s)	1.00	1.37	28.850	31.73	308.81	0.750	0.000	0.50	1.420	1.06	54.1	0.0	40.5
147.00	Appurtenance(s)	1.00	1.37	28.871	31.76	308.02	0.750	0.000	0.50	1.416	1.06	53.9	0.0	40.4
150.00		1.00	1.38	28.994	31.89	303.24	0.750	0.000	3.00	8.406	6.30	321.7	0.0	239.8
155.00		1.00	1.39	29.195	32.11	295.22	0.750	0.000	5.00	13.679	10.26	527.2	0.0	390.2
160.00		1.00	1.40	29.390	32.33	287.10	0.750	0.000	5.00	13.265	9.95	514.6	0.0	378.3
165.00		1.00	1.41	29.581	32.54	278.89	0.750	0.000	5.00	12.851	9.64	501.8	0.0	366.3
167.50	Appurtenance(s)	1.00	1.41	29.675	32.64	274.76	0.750	0.000	2.50	6.270	4.70	245.6	0.0	178.7
170.00		1.00	1.42	29.768	32.74	270.60	0.750	0.000	2.50	6.167	4.62	242.3	0.0	175.7
175.00		1.00	1.42	29.950	32.95	262.24	0.750	0.000	5.00	12.022	9.02	475.3	0.0	342.5

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

177.00 Appurtenance(s)	1.00	1.43	30.022	33.02	258.87	0.750	0.000	2.00	4.693	3.52	186.0	0.0	133.7
180.00	1.00	1.43	30.128	33.14	253.80	0.750	0.000	3.00	6.915	5.19	275.0	0.0	196.9
							Totals:	**180.00**			**21,540.1**		**32,986.1**

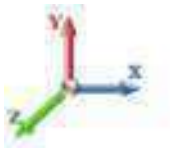
Discrete Appurtenance Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 25

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	177.00	Commscope	3	30.022	33.024	0.55	0.75	20.43	208.98	0.000	0.000	1079.47	0.00	0.00
2	177.00	RFS APXVTM14-C-I20	3	30.022	33.024	0.59	0.75	11.27	151.20	0.000	0.000	595.45	0.00	0.00
3	177.00	Platform w/ Hand Rails	1	30.022	33.024	1.00	1.00	35.00	1800.00	0.000	0.000	1849.35	0.00	0.00
4	177.00	ALU TD-RRH8x20-25	3	30.022	33.024	0.50	0.75	6.11	189.00	0.000	0.000	322.60	0.00	0.00
5	177.00	ALU 800 MHz	6	30.022	33.024	0.50	0.75	7.51	286.20	0.000	0.000	396.68	0.00	0.00
6	177.00	ALU 1900 MHz	3	30.022	33.024	0.50	0.75	5.73	162.00	0.000	0.000	302.68	0.00	0.00
7	177.00	Sitepro PRK-1245L	1	30.022	33.024	1.00	1.00	9.50	418.42	0.000	0.000	501.97	0.00	0.00
8	167.50	Kathrein 742 351	3	29.675	32.643	0.49	0.80	7.88	80.46	0.000	0.000	411.37	0.00	0.00
9	167.50	Pipe Mount	3	29.675	32.643	0.56	0.75	8.44	945.00	0.000	0.000	440.68	0.00	0.00
10	147.00	Antel BXA-70063/6CF	3	28.871	31.758	0.56	0.80	12.72	45.90	0.000	0.000	646.21	0.00	0.00
11	146.50	Low Profile Platform	1	28.850	31.735	1.00	1.00	22.00	1350.00	0.000	0.000	1117.07	0.00	0.00
12	146.50	Antel LPA-80063/4CF	2	28.850	31.735	0.74	0.80	9.15	36.00	0.000	0.000	464.66	0.00	0.00
13	146.50	Antel BXA-171063/8CF-2	1	28.850	31.735	0.67	0.80	1.98	9.45	0.000	0.000	100.32	0.00	0.00
14	146.50	Antel BXA-171085-8CF-2	2	28.850	31.735	0.67	0.80	3.95	18.90	0.000	0.000	200.63	0.00	0.00
15	146.50	Antel	4	28.850	31.735	1.36	0.80	14.20	43.20	0.000	0.000	720.94	0.00	0.00
16	146.00	RFS FD9R6004/2C-3	6	28.829	31.712	0.54	0.80	1.16	16.74	0.000	0.000	58.74	0.00	0.00
17	137.00	(3) T-Arm Kit	1	28.446	31.290	1.00	1.00	16.50	450.00	0.000	0.000	826.06	0.00	0.00
18	137.00	DMP65R-BU8DA	2	28.446	31.290	0.69	0.80	24.59	172.26	0.000	0.000	1231.04	0.00	0.00
19	137.00	T-Arms	3	28.446	31.290	0.56	0.75	13.50	945.00	0.000	0.000	675.87	0.00	0.00
20	137.00	7770	6	28.446	31.290	0.58	0.80	19.31	189.00	0.000	0.000	966.59	0.00	0.00
21	137.00	OPA65R-KE6D	1	28.446	31.290	0.80	0.80	10.30	54.18	0.000	0.000	515.46	0.00	0.00
22	137.00	OPA65R-BU8DA	2	28.446	31.290	0.69	0.80	24.89	137.70	0.000	0.000	1246.19	0.00	0.00
23	137.00	DMP65R-BU6DA	1	28.446	31.290	0.80	0.80	10.17	71.46	0.000	0.000	509.05	0.00	0.00
24	137.00	Andrew ABT-DF-DMADBH	3	28.446	31.290	0.78	0.80	0.12	2.97	0.000	0.000	5.89	0.00	0.00
25	137.00	Powerwave LGP21401	6	28.446	31.290	0.80	0.80	6.19	76.14	0.000	0.000	310.00	0.00	0.00
26	137.00	2Powerwave 1903	6	28.446	31.290	0.67	0.80	1.09	29.70	0.000	0.000	54.50	0.00	0.00
27	137.00	4449 B5/B12	3	28.446	31.290	0.54	0.80	3.17	191.70	0.000	0.000	158.59	0.00	0.00
28	137.00	RRUS 8843 B2 B66A	3	28.446	31.290	0.54	0.80	2.64	194.40	0.000	0.000	132.03	0.00	0.00
29	137.00	Raycap DC6-48-60-18-8F	1	28.446	31.290	0.80	0.80	0.74	28.62	0.000	0.000	36.85	0.00	0.00
30	137.00	Raycap	1	28.446	31.290	0.80	0.80	3.82	14.40	0.000	0.000	191.45	0.00	0.00
31	50.00	Stand Off	1	23.007	25.308	1.00	1.00	2.63	36.00	0.000	0.000	106.49	0.00	0.00
32	50.00	GPS	1	23.007	25.308	1.00	1.00	1.00	9.00	0.000	0.000	40.49	0.00	0.00
							Totals:		**8,363.98**			**16,215.37**		

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 21

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		596.69	1596.88	0.00	0.00
10.00		586.91	1573.07	0.00	0.00
15.00		577.13	1549.25	0.00	0.00
20.00		601.99	1525.44	0.00	0.00
25.00		620.07	1501.62	0.00	0.00
30.00		633.04	1477.81	0.00	0.00
35.00		642.25	1454.00	0.00	0.00
40.00		648.56	1430.18	0.00	0.00
45.00		652.54	1406.37	0.00	0.00
45.42		53.93	116.12	0.00	0.00
50.00	(2) attachments	756.91	2314.28	0.00	0.00
52.75		364.97	1343.15	0.00	0.00
55.00		298.36	550.42	0.00	0.00
60.00		665.81	1208.04	0.00	0.00
65.00		663.83	1187.18	0.00	0.00
70.00		660.76	1166.32	0.00	0.00
75.00		656.73	1145.46	0.00	0.00
80.00		651.83	1124.59	0.00	0.00
85.00		646.13	1103.73	0.00	0.00
90.00		639.72	1082.87	0.00	0.00
91.66		210.47	355.61	0.00	0.00
95.00		426.13	1100.23	0.00	0.00
98.00		379.72	975.11	0.00	0.00
100.00		252.02	292.42	0.00	0.00
105.00		625.18	720.46	0.00	0.00
110.00		616.49	707.06	0.00	0.00
115.00		607.29	693.67	0.00	0.00
120.00		597.63	680.27	0.00	0.00
125.00		587.53	666.88	0.00	0.00
130.00		577.02	653.48	0.00	0.00
131.74		198.13	224.70	0.00	0.00
135.00		372.15	699.18	0.00	0.00
136.99		225.23	422.66	0.00	0.00
137.00	(39) attachments	6860.32	2558.31	0.00	0.00
140.00		335.84	336.33	0.00	0.00
145.00		551.29	515.39	0.00	0.00
146.00	(6) attachments	167.27	118.39	0.00	0.00
146.50	(10) attachments	2657.69	1508.20	0.00	0.00
147.00	(3) attachments	700.16	90.81	0.00	0.00
150.00		321.73	266.96	0.00	0.00
155.00		527.16	435.41	0.00	0.00
160.00		514.63	423.51	0.00	0.00
165.00		501.80	411.60	0.00	0.00
167.50	(6) attachments	1097.65	1223.99	0.00	0.00
170.00		242.31	184.32	0.00	0.00
175.00		475.30	359.71	0.00	0.00

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 22

177.00	(20) attachments	5234.17	3356.35	0.00	0.00
180.00		275.01	196.95	0.00	0.00
	Totals:	**37,755.47**	**46,034.72**	**0.00**	**0.00**

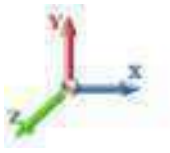
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	17.879	0.00	0.72
10.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	17.879	0.00	0.72
15.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	17.879	0.00	0.72
20.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	18.971	0.00	0.72
25.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	19.883	0.00	0.72
30.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	20.661	0.00	0.72
35.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	21.343	0.00	0.72
40.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	21.951	0.00	0.72
45.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	22.502	0.00	0.72
45.42	1/2" Coax	Yes	0.42	0.000	0.65	0.02	0.00	0.012	0.000	22.546	0.00	0.06
50.00	1/2" Coax	Yes	4.58	0.000	0.65	0.25	0.00	0.013	0.000	23.007	0.00	0.66
										Totals:	**0.0**	**7.2**

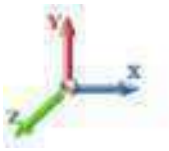
Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 25

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	-45.98	-37.82	0.00	-4500.0	0.00	4500.01	6607.78	3303.89	16218.3	8051.48	0.00	0.000	0.000	0.566
5.00	-44.29	-37.33	0.00	-4310.9	0.00	4310.94	6536.37	3268.19	15777.9	7832.86	0.08	-0.148	0.000	0.557
10.00	-42.63	-36.85	0.00	-4124.2	0.00	4124.28	6463.73	3231.87	15340.5	7615.67	0.31	-0.296	0.000	0.548
15.00	-40.99	-36.37	0.00	-3940.0	0.00	3940.04	6389.86	3194.93	14906.0	7399.99	0.70	-0.446	0.000	0.539
20.00	-39.37	-35.86	0.00	-3758.2	0.00	3758.20	6314.77	3157.38	14474.7	7185.88	1.25	-0.596	0.000	0.529
25.00	-37.78	-35.32	0.00	-3578.9	0.00	3578.92	6238.44	3119.22	14046.7	6973.42	1.96	-0.746	0.000	0.519
30.00	-36.22	-34.76	0.00	-3402.3	0.00	3402.33	6160.89	3080.44	13622.3	6762.68	2.82	-0.897	0.000	0.509
35.00	-34.69	-34.19	0.00	-3228.5	0.00	3228.53	6082.10	3041.05	13201.4	6553.75	3.84	-1.049	0.000	0.498
40.00	-33.18	-33.60	0.00	-3057.6	0.00	3057.60	6002.09	3001.05	12784.3	6346.69	5.02	-1.201	0.000	0.487
45.00	-31.75	-32.96	0.00	-2889.6	0.00	2889.62	5920.85	2960.42	12371.1	6141.58	6.36	-1.353	0.000	0.476
45.42	-31.59	-32.94	0.00	-2875.8	0.00	2875.89	5914.02	2957.01	12336.9	6124.58	6.48	-1.366	0.000	0.475
50.00	-29.23	-32.19	0.00	-2724.9	0.00	2724.90	5838.38	2919.19	11962.1	5938.49	7.86	-1.505	0.000	0.464
52.75	-27.85	-31.82	0.00	-2636.3	0.00	2636.39	4942.80	2471.40	10222.2	5074.76	8.75	-1.590	0.000	0.525
55.00	-27.25	-31.56	0.00	-2564.7	0.00	2564.79	4913.65	2456.82	10072.3	5000.32	9.52	-1.659	0.000	0.519
60.00	-25.97	-30.94	0.00	-2406.9	0.00	2406.97	4847.98	2423.99	9741.07	4835.88	11.34	-1.822	0.000	0.503
65.00	-24.72	-30.30	0.00	-2252.2	0.00	2252.29	4781.08	2390.54	9412.76	4672.89	13.34	-1.984	0.000	0.487
70.00	-23.50	-29.67	0.00	-2100.7	0.00	2100.77	4712.96	2356.48	9087.49	4511.41	15.50	-2.145	0.000	0.471
75.00	-22.30	-29.03	0.00	-1952.4	0.00	1952.44	4643.60	2321.80	8765.44	4351.53	17.84	-2.305	0.000	0.454
80.00	-21.13	-28.39	0.00	-1807.3	0.00	1807.31	4573.02	2286.51	8446.74	4193.32	20.33	-2.462	0.000	0.436
85.00	-19.98	-27.75	0.00	-1665.3	0.00	1665.37	4501.21	2250.60	8131.55	4036.84	23.00	-2.618	0.000	0.417
90.00	-18.88	-27.09	0.00	-1526.6	0.00	1526.64	4428.17	2214.08	7820.02	3882.19	25.82	-2.770	0.000	0.398
91.66	-18.50	-26.89	0.00	-1481.5	0.00	1481.58	4403.60	2201.80	7717.21	3831.15	26.79	-2.821	0.000	0.391
95.00	-17.38	-26.43	0.00	-1391.8	0.00	1391.87	4350.76	2175.38	7506.87	3726.73	28.80	-2.921	0.000	0.378
98.00	-16.39	-26.03	0.00	-1312.6	0.00	1312.65	2393.56	1196.78	4158.66	2064.53	30.66	-3.010	0.000	0.643
100.00	-16.05	-25.80	0.00	-1260.5	0.00	1260.51	2381.84	1190.92	4099.59	2035.21	31.94	-3.069	0.000	0.627
105.00	-15.28	-25.19	0.00	-1131.5	0.00	1131.53	2351.72	1175.86	3952.36	1962.12	35.26	-3.277	0.000	0.584
110.00	-14.52	-24.58	0.00	-1005.5	0.00	1005.59	2320.37	1160.18	3805.57	1889.24	38.80	-3.476	0.000	0.539
115.00	-13.79	-23.97	0.00	-882.70	0.00	882.70	2287.79	1143.89	3659.35	1816.65	42.54	-3.665	0.000	0.492
120.00	-13.08	-23.37	0.00	-762.82	0.00	762.82	2253.98	1126.99	3513.86	1744.43	46.48	-3.843	0.000	0.444
125.00	-12.39	-22.78	0.00	-645.96	0.00	645.96	2218.95	1109.47	3369.25	1672.64	50.59	-4.007	0.000	0.392
130.00	-11.75	-22.17	0.00	-532.09	0.00	532.09	2182.68	1091.34	3225.66	1601.35	54.86	-4.156	0.000	0.338
131.74	-11.51	-21.97	0.00	-493.43	0.00	493.43	2169.75	1084.87	3175.87	1576.63	56.39	-4.204	0.000	0.319
135.00	-10.82	-21.56	0.00	-421.88	0.00	421.88	2145.19	1072.59	3083.25	1530.65	59.29	-4.288	0.000	0.281
136.99	-10.40	-21.31	0.00	-378.90	0.00	378.90	1823.96	911.98	2634.70	1307.98	61.09	-4.336	0.000	0.296
137.00	-8.36	-14.28	0.00	-378.75	0.00	378.75	1823.92	911.96	2634.55	1307.90	61.09	-4.336	0.000	0.294
140.00	-8.03	-13.93	0.00	-335.91	0.00	335.91	1806.41	903.20	2565.29	1273.52	63.84	-4.407	0.000	0.268
145.00	-7.55	-13.35	0.00	-266.25	0.00	266.25	1776.24	888.12	2450.41	1216.49	68.51	-4.511	0.000	0.223
146.00	-7.44	-13.18	0.00	-252.90	0.00	252.90	1770.06	885.03	2427.52	1205.13	69.45	-4.531	0.000	0.214
146.50	-6.14	-10.41	0.00	-246.31	0.00	246.31	1766.95	883.47	2416.09	1199.45	69.93	-4.540	0.000	0.209
147.00	-6.10	-9.71	0.00	-241.11	0.00	241.11	1763.83	881.91	2404.67	1193.78	70.40	-4.550	0.000	0.206
150.00	-5.85	-9.37	0.00	-211.98	0.00	211.98	1744.84	872.42	2336.33	1159.85	73.28	-4.603	0.000	0.186
155.00	-5.45	-8.82	0.00	-165.12	0.00	165.12	1712.21	856.11	2223.20	1103.69	78.14	-4.681	0.000	0.153
160.00	-5.06	-8.28	0.00	-121.03	0.00	121.03	1678.36	839.18	2111.17	1048.07	83.07	-4.746	0.000	0.119
165.00	-4.69	-7.74	0.00	-79.65	0.00	79.65	1643.27	821.64	2000.39	993.08	88.06	-4.796	0.000	0.083
167.50	-3.56	-6.55	0.00	-60.29	0.00	60.29	1625.27	812.64	1945.52	965.84	90.58	-4.815	0.000	0.065
170.00	-3.39	-6.29	0.00	-43.92	0.00	43.92	1606.96	803.48	1891.02	938.78	93.10	-4.830	0.000	0.049
175.00	-3.07	-5.79	0.00	-12.45	0.00	12.45	1569.42	784.71	1783.19	885.25	98.17	-4.847	0.000	0.016
177.00	-0.17	-0.29	0.00	-0.87	0.00	0.87	1554.06	777.03	1740.53	864.07	100.19	-4.849	0.000	0.001

Calculated Forces

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 25

180.00	0.00	-0.27	0.00	0.00	0.00	0.00	1530.65	765.32	1677.06	832.56	103.24	-4.849	0.000	0.000

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	26.663	32.00	181.9	635.2	2556.9
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	26.348	31.62	179.7	671.2	2561.1
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	25.995	31.19	177.3	688.4	2546.6
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	25.625	30.75	185.5	697.4	2523.8
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	25.247	30.30	191.5	701.6	2496.3
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	24.862	29.83	196.0	702.8	2465.7
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	24.474	29.37	199.3	701.7	2432.9
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	24.082	28.90	201.7	698.9	2398.3
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	23.688	28.43	203.4	694.7	2362.4
45.42	Bot - Section 2	1.00	1.07	6.517	7.17	0.00	1.200	2.065	0.42	1.955	2.35	16.8	57.9	195.4
50.00	Appurtenance(s)	1.00	1.09	6.650	7.32	0.00	1.200	2.085	4.58	21.676	26.01	190.3	642.6	3478.2
52.75	Top - Section 1	1.00	1.11	6.726	7.40	0.00	1.200	2.096	2.75	12.844	15.41	114.0	383.8	2061.1
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	2.25	10.419	12.50	93.3	312.8	953.8
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	22.868	27.44	208.6	688.3	2092.5
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	22.468	26.96	208.4	680.8	2057.2
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	22.067	26.48	207.9	672.8	2021.4
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	21.665	26.00	207.1	664.3	1985.1
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	21.262	25.51	206.1	655.3	1948.3
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	20.859	25.03	204.7	645.9	1911.1
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	5.00	20.456	24.55	203.2	636.2	1873.5
91.66	Bot - Section 3	1.00	1.24	7.555	8.31	0.00	1.200	2.215	1.66	6.714	8.06	67.0	210.5	616.0
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	3.34	13.494	16.19	135.6	423.1	1752.2
98.00	Top - Section 2	1.00	1.26	7.662	8.43	0.00	1.200	2.230	3.00	11.966	14.36	121.0	376.3	1552.7
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	2.00	7.918	9.50	80.4	249.9	557.0
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	19.480	23.38	199.9	613.0	1367.1
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	19.075	22.89	197.7	602.1	1338.3
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	18.669	22.40	195.3	590.9	1309.3
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	18.263	21.92	192.8	579.5	1280.1
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	5.00	17.856	21.43	190.1	568.0	1250.6
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	5.00	17.450	20.94	187.3	556.2	1221.0
131.74	Bot - Section 4	1.00	1.34	8.155	8.97	0.00	1.200	2.297	1.74	5.988	7.19	64.5	192.5	420.1
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	3.26	11.192	13.43	121.1	359.2	1156.9
136.99	Top - Section 3	1.00	1.35	8.222	9.04	0.00	1.200	2.306	1.99	6.765	8.12	73.4	217.9	699.2
137.00	Appurtenance(s)	1.00	1.35	8.222	9.04	0.00	1.200	2.306	0.01	0.023	0.03	0.2	0.7	1.5
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	3.00	10.059	12.07	109.7	323.6	662.4
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	16.440	19.73	180.6	527.1	1079.0
146.00	Appurtenance(s)	1.00	1.37	8.333	9.17	0.00	1.200	2.321	1.00	3.239	3.89	35.6	104.9	213.4
146.50	Appurtenance(s)	1.00	1.37	8.339	9.17	0.00	1.200	2.321	0.50	1.613	1.94	17.8	52.3	106.3
147.00	Appurtenance(s)	1.00	1.37	8.345	9.18	0.00	1.200	2.322	0.50	1.609	1.93	17.7	52.2	106.1
150.00		1.00	1.38	8.381	9.22	0.00	1.200	2.327	3.00	9.570	11.48	105.9	308.8	628.5
155.00		1.00	1.39	8.439	9.28	0.00	1.200	2.335	5.00	15.625	18.75	174.0	502.0	1022.2
160.00		1.00	1.40	8.495	9.34	0.00	1.200	2.342	5.00	15.217	18.26	170.6	489.3	993.6
165.00		1.00	1.41	8.551	9.41	0.00	1.200	2.349	5.00	14.809	17.77	167.1	476.4	964.9
167.50	Appurtenance(s)	1.00	1.41	8.578	9.44	0.00	1.200	2.353	2.50	7.250	8.70	82.1	235.0	473.2
170.00		1.00	1.42	8.604	9.46	0.00	1.200	2.356	2.50	7.148	8.58	81.2	231.7	466.0
175.00		1.00	1.42	8.657	9.52	0.00	1.200	2.363	5.00	13.992	16.79	159.9	450.3	907.0

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

177.00 Appurtenance(s)	1.00	1.43	8.678	9.55	0.00	1.200	2.366	2.00	5.482	6.58	62.8	178.0	356.2
180.00	1.00	1.43	8.709	9.58	0.00	1.200	2.370	3.00	8.100	9.72	93.1	262.2	524.8
							Totals:	**180.00**			**6,861.2**		**65,947.5**

Discrete Appurtenance Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 25

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	177.00	Commscope	3	8.678	9.546	0.55	0.75	23.72	1242.54	0.000	0.000	226.39	0.00	0.00
2	177.00	RFS APXVTM14-C-I20	3	8.678	9.546	0.59	0.75	14.01	901.58	0.000	0.000	133.76	0.00	0.00
3	177.00	Platform w/ Hand Rails	1	8.678	9.546	1.00	1.00	59.84	4638.95	0.000	0.000	571.22	0.00	0.00
4	177.00	ALU TD-RRH8x20-25	3	8.678	9.546	0.50	0.75	7.81	735.26	0.000	0.000	74.58	0.00	0.00
5	177.00	ALU 800 MHz	6	8.678	9.546	0.50	0.75	12.18	856.56	0.000	0.000	116.28	0.00	0.00
6	177.00	ALU 1900 MHz	3	8.678	9.546	0.50	0.75	8.57	775.78	0.000	0.000	81.80	0.00	0.00
7	177.00	Sitepro PRK-1245L	1	8.678	9.546	1.00	1.00	22.98	902.75	0.000	0.000	219.41	0.00	0.00
8	167.50	Kathrein 742 351	3	8.578	9.435	0.49	0.80	11.80	410.80	0.000	0.000	111.31	0.00	0.00
9	167.50	Pipe Mount	3	8.578	9.435	0.56	0.75	16.38	2145.80	0.000	0.000	154.53	0.00	0.00
10	147.00	Antel BXA-70063/6CF	3	8.345	9.180	0.56	0.80	18.90	505.09	0.000	0.000	173.46	0.00	0.00
11	146.50	Low Profile Platform	1	8.339	9.173	1.00	1.00	45.49	3241.10	0.000	0.000	417.31	0.00	0.00
12	146.50	Antel LPA-80063/4CF	2	8.339	9.173	0.74	0.80	12.90	429.89	0.000	0.000	118.32	0.00	0.00
13	146.50	Antel BXA-171063/8CF-2	1	8.339	9.173	0.67	0.80	3.46	80.99	0.000	0.000	31.72	0.00	0.00
14	146.50	Antel BXA-171085-8CF-2	2	8.339	9.173	0.67	0.80	6.92	162.17	0.000	0.000	63.44	0.00	0.00
15	146.50	Antel	4	8.339	9.173	1.36	0.80	20.70	540.38	0.000	0.000	189.87	0.00	0.00
16	146.00	RFS FD9R6004/2C-3	6	8.333	9.166	0.54	0.80	3.05	72.56	0.000	0.000	27.99	0.00	0.00
17	137.00	(3) T-Arm Kit	1	8.222	9.044	1.00	1.00	37.81	1234.02	0.000	0.000	341.94	0.00	0.00
18	137.00	DMP65R-BU8DA	2	8.222	9.044	0.70	0.80	28.27	1270.15	0.000	0.000	255.72	0.00	0.00
19	137.00	T-Arms	3	8.222	9.044	0.56	0.75	29.07	2018.50	0.000	0.000	262.88	0.00	0.00
20	137.00	7770	6	8.222	9.044	0.58	0.80	24.31	1403.18	0.000	0.000	219.85	0.00	0.00
21	137.00	OPA65R-KE6D	1	8.222	9.044	0.80	0.80	11.90	475.31	0.000	0.000	107.62	0.00	0.00
22	137.00	OPA65R-BU8DA	2	8.222	9.044	0.70	0.80	28.59	1237.42	0.000	0.000	258.58	0.00	0.00
23	137.00	DMP65R-BU6DA	1	8.222	9.044	0.80	0.80	11.76	493.16	0.000	0.000	106.40	0.00	0.00
24	137.00	Andrew ABT-DF-DMADBH	3	8.222	9.044	0.78	0.80	0.72	10.70	0.000	0.000	6.48	0.00	0.00
25	137.00	Powerwave LGP21401	6	8.222	9.044	0.80	0.80	11.49	257.13	0.000	0.000	103.94	0.00	0.00
26	137.00	2Powerwave 1903	6	8.222	9.044	0.67	0.80	3.21	92.01	0.000	0.000	29.01	0.00	0.00
27	137.00	4449 B5/B12	3	8.222	9.044	0.54	0.80	4.33	426.40	0.000	0.000	39.17	0.00	0.00
28	137.00	RRUS 8843 B2 B66A	3	8.222	9.044	0.54	0.80	3.69	408.89	0.000	0.000	33.40	0.00	0.00
29	137.00	Raycap DC6-48-60-18-8F	1	8.222	9.044	0.80	0.80	1.20	102.15	0.000	0.000	10.84	0.00	0.00
30	137.00	Raycap	1	8.222	9.044	0.80	0.80	4.76	152.89	0.000	0.000	43.04	0.00	0.00
31	50.00	Stand Off	1	6.650	7.315	1.00	1.00	9.76	120.90	0.000	0.000	71.40	0.00	0.00
32	50.00	GPS	1	6.650	7.315	1.00	1.00	1.85	39.03	0.000	0.000	13.54	0.00	0.00
							Totals:		**27,384.04**			**4,615.19**		

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		181.89	2785.49	0.00	0.00
10.00		179.74	2792.49	0.00	0.00
15.00		177.33	2779.76	0.00	0.00
20.00		185.48	2758.38	0.00	0.00
25.00		191.53	2732.00	0.00	0.00
30.00		195.99	2702.33	0.00	0.00
35.00		199.29	2670.31	0.00	0.00
40.00		201.70	2636.49	0.00	0.00
45.00		203.38	2601.28	0.00	0.00
45.42		16.82	215.31	0.00	0.00
50.00	(2) attachments	275.21	3857.61	0.00	0.00
52.75		114.02	2174.70	0.00	0.00
55.00		93.31	1046.67	0.00	0.00
60.00		208.59	2299.00	0.00	0.00
65.00		208.43	2263.75	0.00	0.00
70.00		207.93	2227.91	0.00	0.00
75.00		207.13	2191.57	0.00	0.00
80.00		206.06	2154.77	0.00	0.00
85.00		204.75	2117.57	0.00	0.00
90.00		203.22	2079.99	0.00	0.00
91.66		66.96	684.67	0.00	0.00
95.00		135.60	1890.04	0.00	0.00
98.00		121.02	1676.41	0.00	0.00
100.00		80.42	639.76	0.00	0.00
105.00		199.91	1573.58	0.00	0.00
110.00		197.68	1544.82	0.00	0.00
115.00		195.29	1515.81	0.00	0.00
120.00		192.76	1486.57	0.00	0.00
125.00		190.10	1457.12	0.00	0.00
130.00		187.31	1427.48	0.00	0.00
131.74		64.45	492.07	0.00	0.00
135.00		121.09	1291.44	0.00	0.00
136.99		73.42	781.48	0.00	0.00
137.00	(39) attachments	1819.12	9583.67	0.00	0.00
140.00		109.67	772.06	0.00	0.00
145.00		180.58	1214.25	0.00	0.00
146.00	(6) attachments	63.61	313.01	0.00	0.00
146.50	(10) attachments	838.42	4574.40	0.00	0.00
147.00	(3) attachments	191.18	617.19	0.00	0.00
150.00		105.87	664.72	0.00	0.00
155.00		174.05	1082.58	0.00	0.00
160.00		170.64	1053.97	0.00	0.00
165.00		167.14	1025.22	0.00	0.00
167.50	(6) attachments	347.94	3056.27	0.00	0.00
170.00		81.19	477.46	0.00	0.00
175.00		159.89	929.89	0.00	0.00

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 30

177.00	(20) attachments	1486.22	10418.81	0.00	0.00
180.00		93.11	524.82	0.00	0.00
	Totals:	**11,476.43**	**99,856.95**	**0.00**	**0.00**

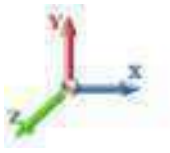
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1/2" Coax	Yes	5.00	0.000	0.65	1.65	0.00	0.011	0.000	5.168	0.00	22.08
10.00	1/2" Coax	Yes	5.00	0.000	0.65	1.75	0.00	0.011	0.000	5.168	0.00	24.87
15.00	1/2" Coax	Yes	5.00	0.000	0.65	1.81	0.00	0.011	0.000	5.168	0.00	26.68
20.00	1/2" Coax	Yes	5.00	0.000	0.65	1.86	0.00	0.011	0.000	5.483	0.00	28.05
25.00	1/2" Coax	Yes	5.00	0.000	0.65	1.89	0.00	0.011	0.000	5.747	0.00	29.17
30.00	1/2" Coax	Yes	5.00	0.000	0.65	1.92	0.00	0.012	0.000	5.972	0.00	30.12
35.00	1/2" Coax	Yes	5.00	0.000	0.65	1.95	0.00	0.012	0.000	6.169	0.00	30.95
40.00	1/2" Coax	Yes	5.00	0.000	0.65	1.97	0.00	0.012	0.000	6.345	0.00	31.68
45.00	1/2" Coax	Yes	5.00	0.000	0.65	1.99	0.00	0.012	0.000	6.504	0.00	32.35
45.42	1/2" Coax	Yes	0.42	0.000	0.65	0.17	0.00	0.012	0.000	6.517	0.00	2.70
50.00	1/2" Coax	Yes	4.58	0.000	0.65	1.84	0.00	0.013	0.000	6.650	0.00	30.21
									Totals:		**0.0**	**288.8**

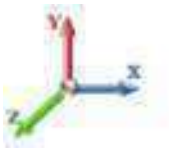
Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

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	-99.85	-11.52	0.00	-1424.1	0.00	1424.19	6607.78	3303.89	16218.3	8051.48	0.00	0.000	0.000	0.192
5.00	-97.06	-11.41	0.00	-1366.6	0.00	1366.60	6536.37	3268.19	15777.9	7832.86	0.03	-0.047	0.000	0.189
10.00	-94.26	-11.31	0.00	-1309.5	0.00	1309.53	6463.73	3231.87	15340.5	7615.67	0.10	-0.094	0.000	0.187
15.00	-91.47	-11.20	0.00	-1252.9	0.00	1252.99	6389.86	3194.93	14906.0	7399.99	0.22	-0.141	0.000	0.184
20.00	-88.70	-11.08	0.00	-1196.9	0.00	1196.98	6314.77	3157.38	14474.7	7185.88	0.40	-0.189	0.000	0.181
25.00	-85.96	-10.95	0.00	-1141.5	0.00	1141.57	6238.44	3119.22	14046.7	6973.42	0.62	-0.237	0.000	0.177
30.00	-83.25	-10.82	0.00	-1086.8	0.00	1086.81	6160.89	3080.44	13622.3	6762.68	0.90	-0.285	0.000	0.174
35.00	-80.57	-10.67	0.00	-1032.7	0.00	1032.73	6082.10	3041.05	13201.4	6553.75	1.22	-0.334	0.000	0.171
40.00	-77.93	-10.52	0.00	-979.39	0.00	979.39	6002.09	3001.05	12784.3	6346.69	1.60	-0.382	0.000	0.167
45.00	-75.32	-10.33	0.00	-926.80	0.00	926.80	5920.85	2960.42	12371.1	6141.58	2.02	-0.431	0.000	0.164
45.42	-75.10	-10.34	0.00	-922.50	0.00	922.50	5914.02	2957.01	12336.9	6124.58	2.06	-0.435	0.000	0.163
50.00	-71.24	-10.08	0.00	-875.09	0.00	875.09	5838.38	2919.19	11962.1	5938.49	2.50	-0.480	0.000	0.160
52.75	-69.06	-9.98	0.00	-847.36	0.00	847.36	4942.80	2471.40	10222.2	5074.76	2.79	-0.507	0.000	0.181
55.00	-68.01	-9.92	0.00	-824.91	0.00	824.91	4913.65	2456.82	10072.3	5000.32	3.03	-0.530	0.000	0.179
60.00	-65.71	-9.75	0.00	-775.31	0.00	775.31	4847.98	2423.99	9741.07	4835.88	3.61	-0.582	0.000	0.174
65.00	-63.44	-9.58	0.00	-726.55	0.00	726.55	4781.08	2390.54	9412.76	4672.89	4.25	-0.634	0.000	0.169
70.00	-61.20	-9.40	0.00	-678.68	0.00	678.68	4712.96	2356.48	9087.49	4511.41	4.94	-0.686	0.000	0.163
75.00	-59.00	-9.22	0.00	-631.69	0.00	631.69	4643.60	2321.80	8765.44	4351.53	5.69	-0.738	0.000	0.158
80.00	-56.84	-9.03	0.00	-585.61	0.00	585.61	4573.02	2286.51	8446.74	4193.32	6.49	-0.789	0.000	0.152
85.00	-54.72	-8.84	0.00	-540.46	0.00	540.46	4501.21	2250.60	8131.55	4036.84	7.34	-0.839	0.000	0.146
90.00	-52.64	-8.64	0.00	-496.24	0.00	496.24	4428.17	2214.08	7820.02	3882.19	8.25	-0.889	0.000	0.140
91.66	-51.95	-8.58	0.00	-481.87	0.00	481.87	4403.60	2201.80	7717.21	3831.15	8.56	-0.905	0.000	0.138
95.00	-50.06	-8.45	0.00	-453.22	0.00	453.22	4350.76	2175.38	7506.87	3726.73	9.21	-0.938	0.000	0.133
98.00	-48.38	-8.32	0.00	-427.92	0.00	427.92	2393.56	1196.78	4158.66	2064.53	9.80	-0.967	0.000	0.228
100.00	-47.74	-8.26	0.00	-411.26	0.00	411.26	2381.84	1190.92	4099.59	2035.21	10.21	-0.986	0.000	0.222
105.00	-46.16	-8.09	0.00	-369.94	0.00	369.94	2351.72	1175.86	3952.36	1962.12	11.28	-1.054	0.000	0.208
110.00	-44.61	-7.91	0.00	-329.51	0.00	329.51	2320.37	1160.18	3805.57	1889.24	12.42	-1.119	0.000	0.194
115.00	-43.09	-7.73	0.00	-289.95	0.00	289.95	2287.79	1143.89	3659.35	1816.65	13.63	-1.181	0.000	0.178
120.00	-41.60	-7.55	0.00	-251.30	0.00	251.30	2253.98	1126.99	3513.86	1744.43	14.90	-1.240	0.000	0.163
125.00	-40.14	-7.36	0.00	-213.57	0.00	213.57	2218.95	1109.47	3369.25	1672.64	16.22	-1.294	0.000	0.146
130.00	-38.72	-7.16	0.00	-176.76	0.00	176.76	2182.68	1091.34	3225.66	1601.35	17.61	-1.343	0.000	0.128
131.74	-38.22	-7.10	0.00	-164.28	0.00	164.28	2169.75	1084.87	3175.87	1576.63	18.10	-1.359	0.000	0.122
135.00	-36.93	-6.96	0.00	-141.15	0.00	141.15	2145.19	1072.59	3083.25	1530.65	19.04	-1.387	0.000	0.109
136.99	-36.15	-6.88	0.00	-127.27	0.00	127.27	1823.96	911.98	2634.70	1307.98	19.62	-1.403	0.000	0.117
137.00	-26.61	-4.83	0.00	-127.23	0.00	127.23	1823.92	911.96	2634.55	1307.90	19.62	-1.403	0.000	0.112
140.00	-25.84	-4.71	0.00	-112.74	0.00	112.74	1806.41	903.20	2565.29	1273.52	20.51	-1.427	0.000	0.103
145.00	-24.63	-4.51	0.00	-89.18	0.00	89.18	1776.24	888.12	2450.41	1216.49	22.03	-1.462	0.000	0.087
146.00	-24.32	-4.44	0.00	-84.67	0.00	84.67	1770.06	885.03	2427.52	1205.13	22.33	-1.469	0.000	0.084
146.50	-19.77	-3.49	0.00	-82.45	0.00	82.45	1766.95	883.47	2416.09	1199.45	22.49	-1.472	0.000	0.080
147.00	-19.16	-3.28	0.00	-80.70	0.00	80.70	1763.83	881.91	2404.67	1193.78	22.64	-1.475	0.000	0.078
150.00	-18.49	-3.17	0.00	-70.85	0.00	70.85	1744.84	872.42	2336.33	1159.85	23.57	-1.493	0.000	0.072
155.00	-17.41	-2.97	0.00	-55.02	0.00	55.02	1712.21	856.11	2223.20	1103.69	25.15	-1.519	0.000	0.060
160.00	-16.36	-2.78	0.00	-40.16	0.00	40.16	1678.36	839.18	2111.17	1048.07	26.75	-1.540	0.000	0.048
165.00	-15.34	-2.59	0.00	-26.26	0.00	26.26	1643.27	821.64	2000.39	993.08	28.38	-1.557	0.000	0.036
167.50	-12.30	-2.16	0.00	-19.79	0.00	19.79	1625.27	812.64	1945.52	965.84	29.19	-1.563	0.000	0.028
170.00	-11.82	-2.06	0.00	-14.40	0.00	14.40	1606.96	803.48	1891.02	938.78	30.01	-1.568	0.000	0.023
175.00	-10.90	-1.88	0.00	-4.08	0.00	4.08	1569.42	784.71	1783.19	885.25	31.66	-1.574	0.000	0.012
177.00	-0.52	-0.11	0.00	-0.32	0.00	0.32	1554.06	777.03	1740.53	864.07	32.32	-1.574	0.000	0.001

Calculated Forces

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

180.00	0.00	-0.09	0.00	0.00	0.00	0.00	1530.65	765.32	1677.06	832.56	33.31	-1.574	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

Load Case:	1.2D + 1.0E							**Iterations**	23
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1601.4	0.00	0.03	0.02	26.98	
10.00		1574.9	0.01	0.05	0.03	39.69	
15.00		1548.5	0.01	0.06	0.03	46.04	
20.00		1522.0	0.02	0.07	0.04	49.12	
25.00		1495.5	0.04	0.07	0.04	50.49	
30.00		1469.1	0.05	0.07	0.04	51.01	
35.00		1442.6	0.07	0.07	0.04	51.20	
40.00		1416.2	0.09	0.07	0.04	51.29	
45.00		1389.7	0.12	0.07	0.03	51.33	
45.42	Bot - Section 2	114.62	0.12	0.07	0.03	4.24	
50.00	Appurtenance(s)	2412.9	0.15	0.07	0.03	90.72	
52.75	Top - Section 1	1397.7	0.16	0.07	0.03	52.94	
55.00		534.15	0.18	0.07	0.03	20.31	
60.00		1170.1	0.21	0.06	0.02	44.42	
65.00		1147.0	0.25	0.06	0.02	42.50	
70.00		1123.8	0.29	0.05	0.01	39.16	
75.00		1100.6	0.33	0.04	0.01	33.97	
80.00		1077.4	0.37	0.03	0.01	26.59	
85.00		1054.2	0.42	0.01	0.01	16.98	
90.00		1031.1	0.47	-0.01	0.01	5.62	
91.66	Bot - Section 3	337.88	0.49	-0.01	0.01	0.54	
95.00		1107.6	0.53	-0.03	0.01	-7.03	
98.00	Top - Section 2	980.32	0.56	-0.04	0.01	-13.13	
100.00		255.97	0.58	-0.05	0.01	-4.58	
105.00		628.43	0.64	-0.07	0.02	-17.39	
110.00		613.55	0.71	-0.09	0.03	-21.25	
115.00		598.66	0.77	-0.11	0.05	-22.85	
120.00		583.78	0.84	-0.12	0.07	-22.22	
125.00		568.89	0.91	-0.12	0.09	-19.53	
130.00		554.01	0.99	-0.11	0.12	-14.97	
131.74	Bot - Section 4	189.67	1.01	-0.11	0.14	-4.48	
135.00		664.79	1.06	-0.09	0.17	-10.76	
136.99	Top - Section 3	401.02	1.09	-0.07	0.18	-4.37	
137.00	Appurtenance(s)	2842.3	1.09	-0.07	0.18	-30.95	
140.00		282.33	1.14	-0.04	0.21	-0.54	
145.00		459.97	1.23	0.03	0.27	7.30	
146.00	Appurtenance(s)	109.01	1.24	0.05	0.29	2.16	
146.50	Appurtenance(s)	1664.5	1.25	0.06	0.30	36.41	
147.00	Appurtenance(s)	95.87	1.26	0.07	0.30	2.30	
150.00		266.46	1.31	0.14	0.35	9.89	
155.00		433.51	1.40	0.29	0.43	26.84	
160.00		420.28	1.49	0.48	0.53	37.94	
165.00		407.05	1.59	0.74	0.65	49.79	
167.50	Appurtenance(s)	1337.9	1.64	0.90	0.72	186.95	
170.00		195.26	1.69	1.07	0.79	30.87	

Seismic Segment Forces (Factored)

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 35

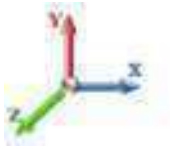
175.00		380.59	1.79	1.48	0.95	75.22			
177.00	Appurtenance(s)	3721.6	1.83	1.67	1.03	798.46			
180.00		218.83	1.89	1.98	1.14	52.75			
	Totals:	**45,944.5**				**1,917.9**	**Total Wind:**	**37,755.5**	

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

Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Load Case: 1.2D + 1.0E



Gust Response Factor	1.10			**Sds**	0.19			**Iterations**	23
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32	**SA**	0.03			**S1**	0.07
								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	-61.38	-2.12	0.00	-273.61	0.00	273.61	6607.78	3303.89	16218.3	8051.48		0.00	0.00	0.043
5.00	-59.25	-2.10	0.00	-263.03	0.00	263.03	6536.37	3268.19	15777.9	7832.86		0.00	-0.01	0.043
10.00	-57.15	-2.07	0.00	-252.54	0.00	252.54	6463.73	3231.87	15340.5	7615.67		0.02	-0.02	0.042
15.00	-55.09	-2.03	0.00	-242.21	0.00	242.21	6389.86	3194.93	14906.0	7399.99		0.04	-0.03	0.041
20.00	-53.05	-1.99	0.00	-232.06	0.00	232.06	6314.77	3157.38	14474.7	7185.88		0.08	-0.04	0.041
25.00	-51.05	-1.94	0.00	-222.12	0.00	222.12	6238.44	3119.22	14046.7	6973.42		0.12	-0.05	0.040
30.00	-49.08	-1.90	0.00	-212.40	0.00	212.40	6160.89	3080.44	13622.3	6762.68		0.17	-0.06	0.039
35.00	-47.14	-1.85	0.00	-202.91	0.00	202.91	6082.10	3041.05	13201.4	6553.75		0.24	-0.06	0.039
40.00	-45.23	-1.81	0.00	-193.64	0.00	193.64	6002.09	3001.05	12784.3	6346.69		0.31	-0.07	0.038
45.00	-43.36	-1.76	0.00	-184.60	0.00	184.60	5920.85	2960.42	12371.1	6141.58		0.39	-0.08	0.037
45.42	-43.20	-1.76	0.00	-183.87	0.00	183.87	5914.02	2957.01	12336.9	6124.58		0.40	-0.08	0.037
50.00	-40.12	-1.67	0.00	-175.81	0.00	175.81	5838.38	2919.19	11962.1	5938.49		0.48	-0.09	0.036
52.75	-38.33	-1.61	0.00	-171.23	0.00	171.23	4942.80	2471.40	10222.2	5074.76		0.54	-0.10	0.041
55.00	-37.59	-1.60	0.00	-167.60	0.00	167.60	4913.65	2456.82	10072.3	5000.32		0.59	-0.10	0.041
60.00	-35.98	-1.56	0.00	-159.61	0.00	159.61	4847.98	2423.99	9741.07	4835.88		0.70	-0.11	0.040
65.00	-34.40	-1.52	0.00	-151.83	0.00	151.83	4781.08	2390.54	9412.76	4672.89		0.83	-0.13	0.040
70.00	-32.84	-1.48	0.00	-144.24	0.00	144.24	4712.96	2356.48	9087.49	4511.41		0.97	-0.14	0.039
75.00	-31.32	-1.45	0.00	-136.83	0.00	136.83	4643.60	2321.80	8765.44	4351.53		1.11	-0.15	0.038
80.00	-29.82	-1.42	0.00	-129.59	0.00	129.59	4573.02	2286.51	8446.74	4193.32		1.27	-0.16	0.037
85.00	-28.34	-1.41	0.00	-122.46	0.00	122.46	4501.21	2250.60	8131.55	4036.84		1.45	-0.17	0.037
90.00	-26.90	-1.40	0.00	-115.42	0.00	115.42	4428.17	2214.08	7820.02	3882.19		1.63	-0.18	0.036
91.66	-26.43	-1.40	0.00	-113.09	0.00	113.09	4403.60	2201.80	7717.21	3831.15		1.69	-0.18	0.036
95.00	-24.96	-1.40	0.00	-108.40	0.00	108.40	4350.76	2175.38	7506.87	3726.73		1.83	-0.19	0.035
98.00	-23.66	-1.40	0.00	-104.20	0.00	104.20	2393.56	1196.78	4158.66	2064.53		1.95	-0.20	0.060
100.00	-23.27	-1.40	0.00	-101.40	0.00	101.40	2381.84	1190.92	4099.59	2035.21		2.03	-0.20	0.060
105.00	-22.31	-1.41	0.00	-94.39	0.00	94.39	2351.72	1175.86	3952.36	1962.12		2.26	-0.22	0.058
110.00	-21.36	-1.41	0.00	-87.36	0.00	87.36	2320.37	1160.18	3805.57	1889.24		2.50	-0.24	0.055
115.00	-20.44	-1.41	0.00	-80.32	0.00	80.32	2287.79	1143.89	3659.35	1816.65		2.76	-0.26	0.053
120.00	-19.53	-1.41	0.00	-73.26	0.00	73.26	2253.98	1126.99	3513.86	1744.43		3.03	-0.27	0.051
125.00	-18.64	-1.41	0.00	-66.21	0.00	66.21	2218.95	1109.47	3369.25	1672.64		3.33	-0.29	0.048
130.00	-17.77	-1.41	0.00	-59.14	0.00	59.14	2182.68	1091.34	3225.66	1601.35		3.64	-0.30	0.045
131.74	-17.47	-1.41	0.00	-56.68	0.00	56.68	2169.75	1084.87	3175.87	1576.63		3.75	-0.31	0.044
135.00	-16.54	-1.41	0.00	-52.08	0.00	52.08	2145.19	1072.59	3083.25	1530.65		3.96	-0.32	0.042
136.99	-15.97	-1.41	0.00	-49.27	0.00	49.27	1823.96	911.98	2634.70	1307.98		4.10	-0.33	0.046
137.00	-12.56	-1.39	0.00	-49.26	0.00	49.26	1823.92	911.96	2634.55	1307.90		4.10	-0.33	0.045
140.00	-12.11	-1.39	0.00	-45.10	0.00	45.10	1806.41	903.20	2565.29	1273.52		4.31	-0.33	0.042
145.00	-11.43	-1.38	0.00	-38.15	0.00	38.15	1776.24	888.12	2450.41	1216.49		4.66	-0.35	0.038
146.00	-11.27	-1.38	0.00	-36.78	0.00	36.78	1770.06	885.03	2427.52	1205.13		4.74	-0.35	0.037
146.50	-9.26	-1.33	0.00	-36.09	0.00	36.09	1766.95	883.47	2416.09	1199.45		4.77	-0.35	0.035
147.00	-9.14	-1.33	0.00	-35.42	0.00	35.42	1763.83	881.91	2404.67	1193.78		4.81	-0.35	0.035
150.00	-8.78	-1.32	0.00	-31.45	0.00	31.45	1744.84	872.42	2336.33	1159.85		5.04	-0.36	0.032
155.00	-8.20	-1.29	0.00	-24.87	0.00	24.87	1712.21	856.11	2223.20	1103.69		5.42	-0.37	0.027
160.00	-7.64	-1.25	0.00	-18.44	0.00	18.44	1678.36	839.18	2111.17	1048.07		5.82	-0.38	0.022
165.00	-7.09	-1.19	0.00	-12.21	0.00	12.21	1643.27	821.64	2000.39	993.08		6.23	-0.39	0.017
167.50	-5.46	-0.99	0.00	-9.23	0.00	9.23	1625.27	812.64	1945.52	965.84		6.43	-0.39	0.013
170.00	-5.21	-0.96	0.00	-6.74	0.00	6.74	1606.96	803.48	1891.02	938.78		6.64	-0.40	0.010
175.00	-4.73	-0.88	0.00	-1.93	0.00	1.93	1569.42	784.71	1783.19	885.25		7.06	-0.40	0.005

Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 37	

177.00	-0.26	-0.05	0.00	-0.16	0.00	0.16	1554.06	777.03	1740.53	864.07	7.23	-0.40	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1530.65	765.32	1677.06	832.56	7.48	-0.40	0.000

Seismic Segment Forces (Factored)

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 38	

Load Case:	0.9D + 1.0E							**Iterations**	23
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1601.4	0.00	0.03	0.02	26.98	
10.00		1574.9	0.01	0.05	0.03	39.69	
15.00		1548.5	0.01	0.06	0.03	46.04	
20.00		1522.0	0.02	0.07	0.04	49.12	
25.00		1495.5	0.04	0.07	0.04	50.49	
30.00		1469.1	0.05	0.07	0.04	51.01	
35.00		1442.6	0.07	0.07	0.04	51.20	
40.00		1416.2	0.09	0.07	0.04	51.29	
45.00		1389.7	0.12	0.07	0.03	51.33	
45.42	Bot - Section 2	114.62	0.12	0.07	0.03	4.24	
50.00	Appurtenance(s)	2412.9	0.15	0.07	0.03	90.72	
52.75	Top - Section 1	1397.7	0.16	0.07	0.03	52.94	
55.00		534.15	0.18	0.07	0.03	20.31	
60.00		1170.1	0.21	0.06	0.02	44.42	
65.00		1147.0	0.25	0.06	0.02	42.50	
70.00		1123.8	0.29	0.05	0.01	39.16	
75.00		1100.6	0.33	0.04	0.01	33.97	
80.00		1077.4	0.37	0.03	0.01	26.59	
85.00		1054.2	0.42	0.01	0.01	16.98	
90.00		1031.1	0.47	-0.01	0.01	5.62	
91.66	Bot - Section 3	337.88	0.49	-0.01	0.01	0.54	
95.00		1107.6	0.53	-0.03	0.01	-7.03	
98.00	Top - Section 2	980.32	0.56	-0.04	0.01	-13.13	
100.00		255.97	0.58	-0.05	0.01	-4.58	
105.00		628.43	0.64	-0.07	0.02	-17.39	
110.00		613.55	0.71	-0.09	0.03	-21.25	
115.00		598.66	0.77	-0.11	0.05	-22.85	
120.00		583.78	0.84	-0.12	0.07	-22.22	
125.00		568.89	0.91	-0.12	0.09	-19.53	
130.00		554.01	0.99	-0.11	0.12	-14.97	
131.74	Bot - Section 4	189.67	1.01	-0.11	0.14	-4.48	
135.00		664.79	1.06	-0.09	0.17	-10.76	
136.99	Top - Section 3	401.02	1.09	-0.07	0.18	-4.37	
137.00	Appurtenance(s)	2842.3	1.09	-0.07	0.18	-30.95	
140.00		282.33	1.14	-0.04	0.21	-0.54	
145.00		459.97	1.23	0.03	0.27	7.30	
146.00	Appurtenance(s)	109.01	1.24	0.05	0.29	2.16	
146.50	Appurtenance(s)	1664.5	1.25	0.06	0.30	36.41	
147.00	Appurtenance(s)	95.87	1.26	0.07	0.30	2.30	
150.00		266.46	1.31	0.14	0.35	9.89	
155.00		433.51	1.40	0.29	0.43	26.84	
160.00		420.28	1.49	0.48	0.53	37.94	
165.00		407.05	1.59	0.74	0.65	49.79	
167.50	Appurtenance(s)	1337.9	1.64	0.90	0.72	186.95	
170.00		195.26	1.69	1.07	0.79	30.87	

Seismic Segment Forces (Factored)

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 39	

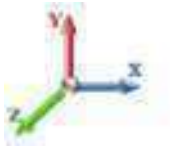
175.00		380.59	1.79	1.48	0.95	75.22			
177.00	Appurtenance(s)	3721.6	1.83	1.67	1.03	798.46			
180.00		218.83	1.89	1.98	1.14	52.75			
	Totals:	**45,944.5**				**1,917.9**	**Total Wind:**	**37,755.5**	

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

Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 40	

Load Case: 0.9D + 1.0E



Gust Response Factor	1.10			**Sds**	0.19			**Iterations**	23
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.32	**SA**	0.03			**S1**	0.07
								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	-46.03	-2.11	0.00	-270.61	0.00	270.61	6607.78	3303.89	16218.3	8051.48		0.00	0.00	0.041
5.00	-44.44	-2.09	0.00	-260.04	0.00	260.04	6536.37	3268.19	15777.9	7832.86		0.00	-0.01	0.040
10.00	-42.86	-2.06	0.00	-249.56	0.00	249.56	6463.73	3231.87	15340.5	7615.67		0.02	-0.02	0.039
15.00	-41.31	-2.02	0.00	-239.26	0.00	239.26	6389.86	3194.93	14906.0	7399.99		0.04	-0.03	0.039
20.00	-39.79	-1.98	0.00	-229.15	0.00	229.15	6314.77	3157.38	14474.7	7185.88		0.08	-0.04	0.038
25.00	-38.29	-1.93	0.00	-219.26	0.00	219.26	6238.44	3119.22	14046.7	6973.42		0.12	-0.05	0.038
30.00	-36.81	-1.89	0.00	-209.60	0.00	209.60	6160.89	3080.44	13622.3	6762.68		0.17	-0.05	0.037
35.00	-35.35	-1.84	0.00	-200.17	0.00	200.17	6082.10	3041.05	13201.4	6553.75		0.23	-0.06	0.036
40.00	-33.92	-1.79	0.00	-190.98	0.00	190.98	6002.09	3001.05	12784.3	6346.69		0.30	-0.07	0.036
45.00	-32.52	-1.74	0.00	-182.02	0.00	182.02	5920.85	2960.42	12371.1	6141.58		0.39	-0.08	0.035
45.42	-32.40	-1.74	0.00	-181.29	0.00	181.29	5914.02	2957.01	12336.9	6124.58		0.39	-0.08	0.035
50.00	-30.09	-1.65	0.00	-173.32	0.00	173.32	5838.38	2919.19	11962.1	5938.49		0.48	-0.09	0.034
52.75	-28.74	-1.60	0.00	-168.78	0.00	168.78	4942.80	2471.40	10222.2	5074.76		0.53	-0.10	0.039
55.00	-28.19	-1.58	0.00	-165.19	0.00	165.19	4913.65	2456.82	10072.3	5000.32		0.58	-0.10	0.039
60.00	-26.98	-1.54	0.00	-157.30	0.00	157.30	4847.98	2423.99	9741.07	4835.88		0.69	-0.11	0.038
65.00	-25.80	-1.50	0.00	-149.61	0.00	149.61	4781.08	2390.54	9412.76	4672.89		0.82	-0.12	0.037
70.00	-24.63	-1.46	0.00	-142.12	0.00	142.12	4712.96	2356.48	9087.49	4511.41		0.95	-0.13	0.037
75.00	-23.49	-1.43	0.00	-134.82	0.00	134.82	4643.60	2321.80	8765.44	4351.53		1.10	-0.15	0.036
80.00	-22.36	-1.40	0.00	-127.69	0.00	127.69	4573.02	2286.51	8446.74	4193.32		1.26	-0.16	0.035
85.00	-21.26	-1.39	0.00	-120.67	0.00	120.67	4501.21	2250.60	8131.55	4036.84		1.43	-0.17	0.035
90.00	-20.17	-1.38	0.00	-113.74	0.00	113.74	4428.17	2214.08	7820.02	3882.19		1.61	-0.18	0.034
91.66	-19.82	-1.38	0.00	-111.45	0.00	111.45	4403.60	2201.80	7717.21	3831.15		1.67	-0.18	0.034
95.00	-18.72	-1.38	0.00	-106.84	0.00	106.84	4350.76	2175.38	7506.87	3726.73		1.80	-0.19	0.033
98.00	-17.74	-1.38	0.00	-102.70	0.00	102.70	2393.56	1196.78	4158.66	2064.53		1.92	-0.20	0.057
100.00	-17.45	-1.38	0.00	-99.94	0.00	99.94	2381.84	1190.92	4099.59	2035.21		2.01	-0.20	0.056
105.00	-16.73	-1.38	0.00	-93.04	0.00	93.04	2351.72	1175.86	3952.36	1962.12		2.23	-0.22	0.055
110.00	-16.02	-1.38	0.00	-86.13	0.00	86.13	2320.37	1160.18	3805.57	1889.24		2.46	-0.24	0.052
115.00	-15.33	-1.39	0.00	-79.21	0.00	79.21	2287.79	1143.89	3659.35	1816.65		2.72	-0.25	0.050
120.00	-14.65	-1.39	0.00	-72.28	0.00	72.28	2253.98	1126.99	3513.86	1744.43		2.99	-0.27	0.048
125.00	-13.98	-1.39	0.00	-65.35	0.00	65.35	2218.95	1109.47	3369.25	1672.64		3.28	-0.28	0.045
130.00	-13.33	-1.39	0.00	-58.41	0.00	58.41	2182.68	1091.34	3225.66	1601.35		3.59	-0.30	0.043
131.74	-13.10	-1.39	0.00	-55.99	0.00	55.99	2169.75	1084.87	3175.87	1576.63		3.70	-0.31	0.042
135.00	-12.40	-1.39	0.00	-51.47	0.00	51.47	2145.19	1072.59	3083.25	1530.65		3.91	-0.31	0.039
136.99	-11.98	-1.38	0.00	-48.71	0.00	48.71	1823.96	911.98	2634.70	1307.98		4.04	-0.32	0.044
137.00	-9.42	-1.37	0.00	-48.70	0.00	48.70	1823.92	911.96	2634.55	1307.90		4.04	-0.32	0.042
140.00	-9.08	-1.37	0.00	-44.59	0.00	44.59	1806.41	903.20	2565.29	1273.52		4.25	-0.33	0.040
145.00	-8.57	-1.36	0.00	-37.74	0.00	37.74	1776.24	888.12	2450.41	1216.49		4.60	-0.34	0.036
146.00	-8.45	-1.36	0.00	-36.38	0.00	36.38	1770.06	885.03	2427.52	1205.13		4.67	-0.35	0.035
146.50	-6.94	-1.31	0.00	-35.70	0.00	35.70	1766.95	883.47	2416.09	1199.45		4.71	-0.35	0.034
147.00	-6.85	-1.31	0.00	-35.05	0.00	35.05	1763.83	881.91	2404.67	1193.78		4.75	-0.35	0.033
150.00	-6.58	-1.30	0.00	-31.11	0.00	31.11	1744.84	872.42	2336.33	1159.85		4.97	-0.36	0.031
155.00	-6.15	-1.27	0.00	-24.61	0.00	24.61	1712.21	856.11	2223.20	1103.69		5.35	-0.37	0.026
160.00	-5.72	-1.23	0.00	-18.25	0.00	18.25	1678.36	839.18	2111.17	1048.07		5.74	-0.38	0.021
165.00	-5.31	-1.18	0.00	-12.09	0.00	12.09	1643.27	821.64	2000.39	993.08		6.14	-0.39	0.015
167.50	-4.09	-0.99	0.00	-9.14	0.00	9.14	1625.27	812.64	1945.52	965.84		6.35	-0.39	0.012
170.00	-3.91	-0.95	0.00	-6.68	0.00	6.68	1606.96	803.48	1891.02	938.78		6.55	-0.39	0.010
175.00	-3.55	-0.88	0.00	-1.91	0.00	1.91	1569.42	784.71	1783.19	885.25		6.96	-0.39	0.004

Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 41	

177.00	-0.20	-0.05	0.00	-0.16	0.00	0.16	1554.06	777.03	1740.53	864.07	7.13	-0.39	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1530.65	765.32	1677.06	832.56	7.38	-0.39	0.000

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 42	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	282.00	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	277.42	0.750	0.000	5.00	25.283	18.96	155.2	0.0	1601.4
10.00		1.00	0.85	7.442	8.19	272.84	0.750	0.000	5.00	24.868	18.65	152.7	0.0	1575.0
15.00		1.00	0.85	7.442	8.19	268.26	0.750	0.000	5.00	24.454	18.34	150.1	0.0	1548.5
20.00		1.00	0.90	7.896	8.69	271.60	0.750	0.000	5.00	24.040	18.03	156.6	0.0	1522.1
25.00		1.00	0.95	8.276	9.10	273.22	0.750	0.000	5.00	23.626	17.72	161.3	0.0	1495.6
30.00		1.00	0.98	8.600	9.46	273.59	0.750	0.000	5.00	23.212	17.41	164.7	0.0	1469.1
35.00		1.00	1.01	8.883	9.77	273.06	0.750	0.000	5.00	22.797	17.10	167.1	0.0	1442.7
40.00		1.00	1.04	9.137	10.05	271.85	0.750	0.000	5.00	22.383	16.79	168.7	0.0	1416.2
45.00		1.00	1.07	9.366	10.30	270.10	0.750	0.000	5.00	21.969	16.48	169.8	0.0	1389.8
45.42	Bot - Section 2	1.00	1.07	9.384	10.32	269.93	0.750	0.000	0.42	1.812	1.36	14.0	0.0	114.6
50.00	Appurtenance(s)	1.00	1.09	9.576	10.53	267.91	0.750	0.000	4.58	20.084	15.06	158.7	0.0	2363.0
52.75	Top - Section 1	1.00	1.11	9.685	10.65	266.55	0.750	0.000	2.75	11.883	8.91	94.9	0.0	1397.8
55.00		1.00	1.12	9.770	10.75	270.08	0.750	0.000	2.25	9.629	7.22	77.6	0.0	534.1
60.00		1.00	1.14	9.951	10.95	267.27	0.750	0.000	5.00	21.098	15.82	173.2	0.0	1170.2
65.00		1.00	1.16	10.120	11.13	264.18	0.750	0.000	5.00	20.684	15.51	172.7	0.0	1147.0
70.00		1.00	1.17	10.279	11.31	260.87	0.750	0.000	5.00	20.270	15.20	171.9	0.0	1123.8
75.00		1.00	1.19	10.430	11.47	257.34	0.750	0.000	5.00	19.856	14.89	170.8	0.0	1100.6
80.00		1.00	1.21	10.572	11.63	253.63	0.750	0.000	5.00	19.441	14.58	169.6	0.0	1077.5
85.00		1.00	1.22	10.708	11.78	249.76	0.750	0.000	5.00	19.027	14.27	168.1	0.0	1054.3
90.00		1.00	1.24	10.838	11.92	245.74	0.750	0.000	5.00	18.613	13.96	166.4	0.0	1031.1
91.66	Bot - Section 3	1.00	1.24	10.880	11.97	244.37	0.750	0.000	1.66	6.100	4.58	54.8	0.0	337.9
95.00		1.00	1.25	10.962	12.06	241.58	0.750	0.000	3.34	12.258	9.19	110.9	0.0	1107.6
98.00	Top - Section 2	1.00	1.26	11.034	12.14	239.03	0.750	0.000	3.00	10.852	8.14	98.8	0.0	980.3
100.00		1.00	1.27	11.081	12.19	240.52	0.750	0.000	2.00	7.172	5.38	65.6	0.0	256.0
105.00		1.00	1.28	11.195	12.31	236.14	0.750	0.000	5.00	17.609	13.21	162.6	0.0	628.4
110.00		1.00	1.29	11.305	12.44	231.65	0.750	0.000	5.00	17.195	12.90	160.4	0.0	613.5
115.00		1.00	1.30	11.412	12.55	227.06	0.750	0.000	5.00	16.781	12.59	158.0	0.0	598.7
120.00		1.00	1.32	11.514	12.67	222.38	0.750	0.000	5.00	16.367	12.27	155.5	0.0	583.8
125.00		1.00	1.33	11.614	12.78	217.61	0.750	0.000	5.00	15.952	11.96	152.8	0.0	568.9
130.00		1.00	1.34	11.710	12.88	212.76	0.750	0.000	5.00	15.538	11.65	150.1	0.0	554.0
131.74	Bot - Section 4	1.00	1.34	11.743	12.92	211.05	0.750	0.000	1.74	5.320	3.99	51.5	0.0	189.7
135.00		1.00	1.35	11.803	12.98	207.84	0.750	0.000	3.26	9.942	7.46	96.8	0.0	664.8
136.99	Top - Section 3	1.00	1.35	11.840	13.02	205.86	0.750	0.000	1.99	5.999	4.50	58.6	0.0	401.0
137.00	Appurtenance(s)	1.00	1.35	11.840	13.02	208.81	0.750	0.000	0.01	0.020	0.01	0.2	0.0	0.6
140.00		1.00	1.36	11.894	13.08	205.81	0.750	0.000	3.00	8.904	6.68	87.4	0.0	282.3
145.00		1.00	1.37	11.982	13.18	200.76	0.750	0.000	5.00	14.508	10.88	143.4	0.0	460.0
146.00	Appurtenance(s)	1.00	1.37	12.000	13.20	199.74	0.750	0.000	1.00	2.852	2.14	28.2	0.0	90.4
146.50	Appurtenance(s)	1.00	1.37	12.008	13.21	199.23	0.750	0.000	0.50	1.420	1.06	14.1	0.0	45.0
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	198.72	0.750	0.000	0.50	1.416	1.06	14.0	0.0	44.9
150.00		1.00	1.38	12.068	13.27	195.64	0.750	0.000	3.00	8.406	6.30	83.7	0.0	266.5
155.00		1.00	1.39	12.152	13.37	190.46	0.750	0.000	5.00	13.679	10.26	137.1	0.0	433.5
160.00		1.00	1.40	12.233	13.46	185.22	0.750	0.000	5.00	13.265	9.95	133.9	0.0	420.3
165.00		1.00	1.41	12.313	13.54	179.93	0.750	0.000	5.00	12.851	9.64	130.5	0.0	407.1
167.50	Appurtenance(s)	1.00	1.41	12.352	13.59	177.26	0.750	0.000	2.50	6.270	4.70	63.9	0.0	198.6
170.00		1.00	1.42	12.390	13.63	174.58	0.750	0.000	2.50	6.167	4.62	63.0	0.0	195.3
175.00		1.00	1.42	12.466	13.71	169.19	0.750	0.000	5.00	12.022	9.02	123.6	0.0	380.6

Wind Loading - Shaft

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 43	

177.00 Appurtenance(s)	1.00	1.43	12.496	13.75	167.01	0.750	0.000	2.00	4.693	3.52	48.4	0.0	148.5
180.00	1.00	1.43	12.540	13.79	163.74	0.750	0.000	3.00	6.915	5.19	71.5	0.0	218.8
							Totals:	**180.00**			**5,603.6**		**36,651.2**

Discrete Appurtenance Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 44	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 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	177.00	Commscope	3	12.496	13.746	0.55	0.75	20.43	232.20	0.000	0.000	280.82	0.00	0.00
2	177.00	RFS APXVTM14-C-I20	3	12.496	13.746	0.59	0.75	11.27	168.00	0.000	0.000	154.90	0.00	0.00
3	177.00	Platform w/ Hand Rails	1	12.496	13.746	1.00	1.00	35.00	2000.00	0.000	0.000	481.10	0.00	0.00
4	177.00	ALU TD-RRH8x20-25	3	12.496	13.746	0.50	0.75	6.11	210.00	0.000	0.000	83.92	0.00	0.00
5	177.00	ALU 800 MHz	6	12.496	13.746	0.50	0.75	7.51	318.00	0.000	0.000	103.19	0.00	0.00
6	177.00	ALU 1900 MHz	3	12.496	13.746	0.50	0.75	5.73	180.00	0.000	0.000	78.74	0.00	0.00
7	177.00	Sitepro PRK-1245L	1	12.496	13.746	1.00	1.00	9.50	464.91	0.000	0.000	130.58	0.00	0.00
8	167.50	Kathrein 742 351	3	12.352	13.587	0.49	0.80	7.88	89.40	0.000	0.000	107.02	0.00	0.00
9	167.50	Pipe Mount	3	12.352	13.587	0.56	0.75	8.44	1050.00	0.000	0.000	114.64	0.00	0.00
10	147.00	Antel BXA-70063/6CF	3	12.017	13.219	0.56	0.80	12.72	51.00	0.000	0.000	168.11	0.00	0.00
11	146.50	Low Profile Platform	1	12.008	13.209	1.00	1.00	22.00	1500.00	0.000	0.000	290.60	0.00	0.00
12	146.50	Antel LPA-80063/4CF	2	12.008	13.209	0.74	0.80	9.15	40.00	0.000	0.000	120.88	0.00	0.00
13	146.50	Antel BXA-171063/8CF-2	1	12.008	13.209	0.67	0.80	1.98	10.50	0.000	0.000	26.10	0.00	0.00
14	146.50	Antel BXA-171085-8CF-2	2	12.008	13.209	0.67	0.80	3.95	21.00	0.000	0.000	52.19	0.00	0.00
15	146.50	Antel	4	12.008	13.209	1.36	0.80	14.20	48.00	0.000	0.000	187.55	0.00	0.00
16	146.00	RFS FD9R6004/2C-3	6	12.000	13.200	0.54	0.80	1.16	18.60	0.000	0.000	15.28	0.00	0.00
17	137.00	(3) T-Arm Kit	1	11.840	13.024	1.00	1.00	16.50	500.00	0.000	0.000	214.90	0.00	0.00
18	137.00	DMP65R-BU8DA	2	11.840	13.024	0.69	0.80	24.59	191.40	0.000	0.000	320.25	0.00	0.00
19	137.00	T-Arms	3	11.840	13.024	0.56	0.75	13.50	1050.00	0.000	0.000	175.82	0.00	0.00
20	137.00	7770	6	11.840	13.024	0.58	0.80	19.31	210.00	0.000	0.000	251.46	0.00	0.00
21	137.00	OPA65R-KE6D	1	11.840	13.024	0.80	0.80	10.30	60.20	0.000	0.000	134.10	0.00	0.00
22	137.00	OPA65R-BU8DA	2	11.840	13.024	0.69	0.80	24.89	153.00	0.000	0.000	324.19	0.00	0.00
23	137.00	DMP65R-BU6DA	1	11.840	13.024	0.80	0.80	10.17	79.40	0.000	0.000	132.43	0.00	0.00
24	137.00	Andrew ABT-DF-DMADBH	3	11.840	13.024	0.78	0.80	0.12	3.30	0.000	0.000	1.53	0.00	0.00
25	137.00	Powerwave LGP21401	6	11.840	13.024	0.80	0.80	6.19	84.60	0.000	0.000	80.64	0.00	0.00
26	137.00	2Powerwave 1903	6	11.840	13.024	0.67	0.80	1.09	33.00	0.000	0.000	14.18	0.00	0.00
27	137.00	4449 B5/B12	3	11.840	13.024	0.54	0.80	3.17	213.00	0.000	0.000	41.26	0.00	0.00
28	137.00	RRUS 8843 B2 B66A	3	11.840	13.024	0.54	0.80	2.64	216.00	0.000	0.000	34.35	0.00	0.00
29	137.00	Raycap DC6-48-60-18-8F	1	11.840	13.024	0.80	0.80	0.74	31.80	0.000	0.000	9.59	0.00	0.00
30	137.00	Raycap	1	11.840	13.024	0.80	0.80	3.82	16.00	0.000	0.000	49.80	0.00	0.00
31	50.00	Stand Off	1	9.576	10.534	1.00	1.00	2.63	40.00	0.000	0.000	27.70	0.00	0.00
32	50.00	GPS	1	9.576	10.534	1.00	1.00	1.00	10.00	0.000	0.000	10.53	0.00	0.00
							Totals:		**9,293.31**			**4,218.36**		

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 45

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

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		155.23	1774.31	0.00	0.00
10.00		152.68	1747.85	0.00	0.00
15.00		150.14	1721.39	0.00	0.00
20.00		156.60	1694.93	0.00	0.00
25.00		161.31	1668.47	0.00	0.00
30.00		164.68	1642.01	0.00	0.00
35.00		167.08	1615.55	0.00	0.00
40.00		168.72	1589.09	0.00	0.00
45.00		169.75	1562.63	0.00	0.00
45.42		14.03	129.02	0.00	0.00
50.00	(2) attachments	196.91	2571.43	0.00	0.00
52.75		94.95	1492.39	0.00	0.00
55.00		77.62	611.58	0.00	0.00
60.00		173.21	1342.26	0.00	0.00
65.00		172.69	1319.09	0.00	0.00
70.00		171.89	1295.91	0.00	0.00
75.00		170.85	1272.73	0.00	0.00
80.00		169.57	1249.55	0.00	0.00
85.00		168.09	1226.37	0.00	0.00
90.00		166.42	1203.19	0.00	0.00
91.66		54.75	395.12	0.00	0.00
95.00		110.86	1222.47	0.00	0.00
98.00		98.78	1083.46	0.00	0.00
100.00		65.56	324.91	0.00	0.00
105.00		162.64	800.51	0.00	0.00
110.00		160.38	785.63	0.00	0.00
115.00		157.98	770.74	0.00	0.00
120.00		155.47	755.86	0.00	0.00
125.00		152.84	740.97	0.00	0.00
130.00		150.11	726.09	0.00	0.00
131.74		51.54	249.66	0.00	0.00
135.00		96.81	776.87	0.00	0.00
136.99		58.59	469.62	0.00	0.00
137.00	(39) attachments	1784.68	2842.56	0.00	0.00
140.00		87.37	373.70	0.00	0.00
145.00		143.42	572.65	0.00	0.00
146.00	(6) attachments	43.51	131.54	0.00	0.00
146.50	(10) attachments	691.39	1675.77	0.00	0.00
147.00	(3) attachments	182.14	100.90	0.00	0.00
150.00		83.70	296.63	0.00	0.00
155.00		137.14	483.79	0.00	0.00
160.00		133.88	470.56	0.00	0.00
165.00		130.54	457.33	0.00	0.00
167.50	(6) attachments	285.55	1359.99	0.00	0.00
170.00		63.04	204.80	0.00	0.00
175.00		123.65	399.67	0.00	0.00

Total Applied Force Summary

Structure:	CT01722-S-SBA		**Code:**	EIA/TIA-222-G	4/30/2020
Site Name:	South Canton		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 46

177.00	(20) attachments	1361.65	3729.27	0.00	0.00
180.00		71.54	218.83	0.00	0.00
	Totals:	**9,821.92**	**51,149.69**	**0.00**	**0.00**

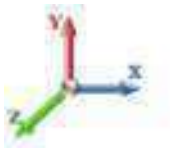
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 47	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	7.442	0.00	0.80
10.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	7.442	0.00	0.80
15.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	7.442	0.00	0.80
20.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	7.896	0.00	0.80
25.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.011	0.000	8.276	0.00	0.80
30.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	8.600	0.00	0.80
35.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	8.883	0.00	0.80
40.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	9.137	0.00	0.80
45.00	1/2" Coax	Yes	5.00	0.000	0.65	0.27	0.00	0.012	0.000	9.366	0.00	0.80
45.42	1/2" Coax	Yes	0.42	0.000	0.65	0.02	0.00	0.012	0.000	9.384	0.00	0.07
50.00	1/2" Coax	Yes	4.58	0.000	0.65	0.25	0.00	0.013	0.000	9.576	0.00	0.73
										Totals:	**0.0**	**8.0**

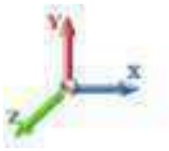
Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 48	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

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	-51.15	-9.84	0.00	-1175.5	0.00	1175.54	6607.78	3303.89	16218.3	8051.48	0.00	0.000	0.000	0.154
5.00	-49.37	-9.72	0.00	-1126.3	0.00	1126.35	6536.37	3268.19	15777.9	7832.86	0.02	-0.039	0.000	0.151
10.00	-47.61	-9.59	0.00	-1077.7	0.00	1077.77	6463.73	3231.87	15340.5	7615.67	0.08	-0.077	0.000	0.149
15.00	-45.88	-9.47	0.00	-1029.8	0.00	1029.80	6389.86	3194.93	14906.0	7399.99	0.18	-0.116	0.000	0.146
20.00	-44.18	-9.34	0.00	-982.44	0.00	982.44	6314.77	3157.38	14474.7	7185.88	0.33	-0.156	0.000	0.144
25.00	-42.51	-9.20	0.00	-935.73	0.00	935.73	6238.44	3119.22	14046.7	6973.42	0.51	-0.195	0.000	0.141
30.00	-40.86	-9.06	0.00	-889.70	0.00	889.70	6160.89	3080.44	13622.3	6762.68	0.74	-0.235	0.000	0.138
35.00	-39.24	-8.92	0.00	-844.39	0.00	844.39	6082.10	3041.05	13201.4	6553.75	1.00	-0.274	0.000	0.135
40.00	-37.65	-8.76	0.00	-799.82	0.00	799.82	6002.09	3001.05	12784.3	6346.69	1.31	-0.314	0.000	0.132
45.00	-36.08	-8.60	0.00	-756.00	0.00	756.00	5920.85	2960.42	12371.1	6141.58	1.66	-0.354	0.000	0.129
45.42	-35.95	-8.60	0.00	-752.41	0.00	752.41	5914.02	2957.01	12336.9	6124.58	1.69	-0.357	0.000	0.129
50.00	-33.37	-8.40	0.00	-713.01	0.00	713.01	5838.38	2919.19	11962.1	5938.49	2.05	-0.394	0.000	0.126
52.75	-31.88	-8.31	0.00	-689.91	0.00	689.91	4942.80	2471.40	10222.2	5074.76	2.29	-0.416	0.000	0.142
55.00	-31.26	-8.24	0.00	-671.23	0.00	671.23	4913.65	2456.82	10072.3	5000.32	2.49	-0.434	0.000	0.141
60.00	-29.92	-8.08	0.00	-630.03	0.00	630.03	4847.98	2423.99	9741.07	4835.88	2.97	-0.476	0.000	0.136
65.00	-28.59	-7.92	0.00	-589.63	0.00	589.63	4781.08	2390.54	9412.76	4672.89	3.49	-0.519	0.000	0.132
70.00	-27.29	-7.75	0.00	-550.06	0.00	550.06	4712.96	2356.48	9087.49	4511.41	4.05	-0.561	0.000	0.128
75.00	-26.02	-7.59	0.00	-511.30	0.00	511.30	4643.60	2321.80	8765.44	4351.53	4.66	-0.603	0.000	0.123
80.00	-24.76	-7.42	0.00	-473.37	0.00	473.37	4573.02	2286.51	8446.74	4193.32	5.32	-0.644	0.000	0.118
85.00	-23.54	-7.26	0.00	-436.26	0.00	436.26	4501.21	2250.60	8131.55	4036.84	6.01	-0.685	0.000	0.113
90.00	-22.33	-7.08	0.00	-399.99	0.00	399.99	4428.17	2214.08	7820.02	3882.19	6.75	-0.725	0.000	0.108
91.66	-21.93	-7.03	0.00	-388.20	0.00	388.20	4403.60	2201.80	7717.21	3831.15	7.01	-0.738	0.000	0.106
95.00	-20.71	-6.91	0.00	-364.74	0.00	364.74	4350.76	2175.38	7506.87	3726.73	7.53	-0.764	0.000	0.103
98.00	-19.63	-6.81	0.00	-344.02	0.00	344.02	2393.56	1196.78	4158.66	2064.53	8.02	-0.788	0.000	0.175
100.00	-19.30	-6.75	0.00	-330.38	0.00	330.38	2381.84	1190.92	4099.59	2035.21	8.35	-0.803	0.000	0.170
105.00	-18.49	-6.59	0.00	-296.63	0.00	296.63	2351.72	1175.86	3952.36	1962.12	9.23	-0.857	0.000	0.159
110.00	-17.71	-6.44	0.00	-263.67	0.00	263.67	2320.37	1160.18	3805.57	1889.24	10.15	-0.910	0.000	0.147
115.00	-16.93	-6.28	0.00	-231.49	0.00	231.49	2287.79	1143.89	3659.35	1816.65	11.13	-0.959	0.000	0.135
120.00	-16.17	-6.12	0.00	-200.10	0.00	200.10	2253.98	1126.99	3513.86	1744.43	12.16	-1.006	0.000	0.122
125.00	-15.43	-5.97	0.00	-169.48	0.00	169.48	2218.95	1109.47	3369.25	1672.64	13.24	-1.049	0.000	0.108
130.00	-14.71	-5.81	0.00	-139.64	0.00	139.64	2182.68	1091.34	3225.66	1601.35	14.36	-1.088	0.000	0.094
131.74	-14.46	-5.76	0.00	-129.50	0.00	129.50	2169.75	1084.87	3175.87	1576.63	14.76	-1.101	0.000	0.089
135.00	-13.68	-5.65	0.00	-110.75	0.00	110.75	2145.19	1072.59	3083.25	1530.65	15.52	-1.123	0.000	0.079
136.99	-13.21	-5.59	0.00	-99.48	0.00	99.48	1823.96	911.98	2634.70	1307.98	15.99	-1.135	0.000	0.083
137.00	-10.40	-3.75	0.00	-99.44	0.00	99.44	1823.92	911.96	2634.55	1307.90	15.99	-1.135	0.000	0.082
140.00	-10.03	-3.66	0.00	-88.20	0.00	88.20	1806.41	903.20	2565.29	1273.52	16.71	-1.154	0.000	0.075
145.00	-9.46	-3.50	0.00	-69.92	0.00	69.92	1776.24	888.12	2450.41	1216.49	17.93	-1.181	0.000	0.063
146.00	-9.33	-3.46	0.00	-66.42	0.00	66.42	1770.06	885.03	2427.52	1205.13	18.18	-1.187	0.000	0.060
146.50	-7.67	-2.73	0.00	-64.69	0.00	64.69	1766.95	883.47	2416.09	1199.45	18.31	-1.189	0.000	0.058
147.00	-7.57	-2.55	0.00	-63.33	0.00	63.33	1763.83	881.91	2404.67	1193.78	18.43	-1.192	0.000	0.057
150.00	-7.27	-2.46	0.00	-55.68	0.00	55.68	1744.84	872.42	2336.33	1159.85	19.19	-1.206	0.000	0.052
155.00	-6.79	-2.32	0.00	-43.37	0.00	43.37	1712.21	856.11	2223.20	1103.69	20.46	-1.226	0.000	0.043
160.00	-6.32	-2.17	0.00	-31.79	0.00	31.79	1678.36	839.18	2111.17	1048.07	21.75	-1.243	0.000	0.034
165.00	-5.87	-2.03	0.00	-20.92	0.00	20.92	1643.27	821.64	2000.39	993.08	23.06	-1.256	0.000	0.025
167.50	-4.52	-1.72	0.00	-15.83	0.00	15.83	1625.27	812.64	1945.52	965.84	23.72	-1.261	0.000	0.019
170.00	-4.31	-1.65	0.00	-11.53	0.00	11.53	1606.96	803.48	1891.02	938.78	24.38	-1.265	0.000	0.015
175.00	-3.92	-1.52	0.00	-3.27	0.00	3.27	1569.42	784.71	1783.19	885.25	25.71	-1.270	0.000	0.006
177.00	-0.22	-0.08	0.00	-0.23	0.00	0.23	1554.06	777.03	1740.53	864.07	26.24	-1.270	0.000	0.000

Calculated Forces

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 49	

180.00	0.00	-0.07	0.00	0.00	0.00	0.00	1530.65	765.32	1677.06	832.56	27.04	-1.270	0.000	0.000

Final Analysis Summary

Structure:	CT01722-S-SBA	**Code:**	EIA/TIA-222-G	4/30/2020	
Site Name:	South Canton	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 50	

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 93 mph Wind	37.8	0.00	61.33	0.00	0.00	4544.69
0.9D + 1.6W 93 mph Wind	37.8	0.00	45.98	0.00	0.00	4500.01
1.2D + 1.0Di + 1.0Wi 50 mph Wind	11.5	0.00	99.85	0.00	0.00	1424.19
1.2D + 1.0E	2.1	0.00	61.38	0.00	0.00	273.61
0.9D + 1.0E	2.1	0.00	46.03	0.00	0.00	270.61
1.0D + 1.0W 60 mph Wind	9.8	0.00	51.15	0.00	0.00	1175.54

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 93 mph Wind	-22.28	-26.36	0.00	-1333.2	0.00	-1333.2	2393.56	1196.7	4158.66	2064.53	98.00	0.656
0.9D + 1.6W 93 mph Wind	-16.39	-26.03	0.00	-1312.6	0.00	-1312.6	2393.56	1196.7	4158.66	2064.53	98.00	0.643
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-48.38	-8.32	0.00	-427.92	0.00	-427.92	2393.56	1196.7	4158.66	2064.53	98.00	0.228
1.2D + 1.0E	-23.66	-1.40	0.00	-104.20	0.00	-104.20	2393.56	1196.7	4158.66	2064.53	98.00	0.060
0.9D + 1.0E	-17.74	-1.38	0.00	-102.70	0.00	-102.70	2393.56	1196.7	4158.66	2064.53	98.00	0.057
1.0D + 1.0W 60 mph Wind	-19.63	-6.81	0.00	-344.02	0.00	-344.02	2393.56	1196.7	4158.66	2064.53	98.00	0.175

Monopole Mat Foundation Design

				Date
				4/30/2020
Customer Name:	T-Mobile	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	180
Site Number:	CT01722-S-SBA	**Engineer Name:**	H. You
Engr. Number:	79534	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

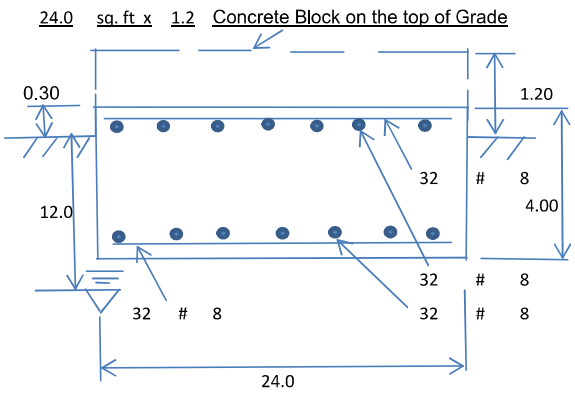
Analysis or Design? Analysis

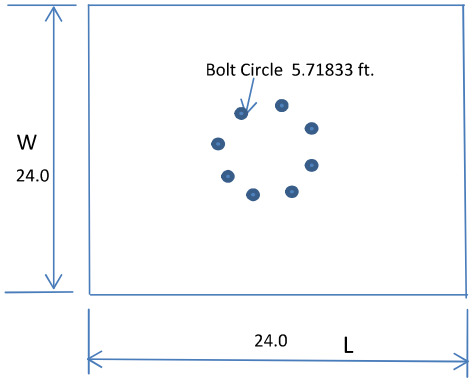
Base Reactions (Factored):

Axial Load (Kips):	99.9	Shear Force (Kips):	37.8
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4544.7
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	Yes
Anchor Bolt Circle (ft.):	5.72	Depth of Base BG (ft.):	3.70
Thickness of Pad (ft):	4.00		
Length of Pad (ft.):	24	Width of Pad (ft.):	24
Add Concrete Width & Length (ft.)	24	Add Concrete Thick. (ft)	1.2
Final Length of pad (ft)	24.0	Final width of pad (ft):	24.0





Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0	
Pad Steel Rebar Size (#):	8			
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Water Table B.G.S. (ft):	12.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	13000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

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

Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	99.06
Total Dry Concrete Volume (cu. Ft.):	2964.38	Total Dry Concrete Weight (Kips):	444.66
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	444.66	Total Vertical Load on Base (Kips):	544.51

Check Soil Capacities:

				Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	4560	<	Allowable Factored Soil Bearing (psf): 9750	0.47	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	7070.3	>	Design Factored Momont (kips-ft): 4698	0.66	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.50	OK!			

Check the capacities of Reinforceing Concrete:

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

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1052.9	>	One-Way Factored Shear (L-D. Kips):	333.0	0.32	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1052.9	>	One-Way Factored Shear (W-D., Kips)	333.0	0.32	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1216.3	>	One-Way Factored Shear (C-C, Kips):	670.8	0.55	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0020		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	4944.8	>	Moment at Bottom (L-Direct. K-Ft):	862.8	0.17	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	4944.8	>	Moment at Bottom (W-Direct. K-Ft):	862.8	0.17	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	6955.8	>	Moment at Bottom (C-C Dir. K-Ft):	1220.2	0.18	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0020		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	4944.8	>	Moment at the top (L-Dir Kips-Ft):	346.1	0.07	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	4944.8	>	Moment at the top (W-Dir Kips-Ft):	346.1	0.07	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	6955.8	>	Moment at the top (C-C Direc. K-Ft):	542.3	0.08	OK!

April 17, 2020

SAI Communications
12 Industrial Way
Salem NH, 03079

RE:		
	SBA Site I.D.:	CT01722-S
	Site Number:	CT1114 (LTE 2C/3C/4TX4RX/5G)
	FA Number:	10042311
	PACE Number:	MRCTB046731
	PT Number:	2051A0V4QY
	Site Name:	COLLINSVILLE-POWDER MILL ROAD
	Site Address:	96 Powder Mill Road Canton, CT 06019

To Whom It May Concern:

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

- (3) 7770 Antennas (55.0"x11.0"x5.0" - Wt. = 35 lbs. /each)
- (6) LGP21401 TMA's (14.4"x9.0"x2.7" – Wt. = 19 lbs. /each)
- (6) LGP 21901 Diplexers (6.3"x4.4"x3.0" – Wt. = 6 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7"Ø – Wt. = 33 lbs.)
- **(1) OPA65R-BU6D Antennas (71.2"x21.0"x7.8" – Wt. = 63 lbs. /each)**
- **(1) DMP65R-BU6DA Antennas (71.2"x20.7"x7.7" – Wt. = 80 lbs. /each)**
- **(2) OPA65R-BU8D Antennas (96.0"x21.0"x7.8" – Wt. = 77 lbs. /each)**
- **(2) DMP65R-BU8DA Antennas (96.0"x20.7"x7.7" – Wt. = 96 lbs. /each)**
- **(3) 4449 B5/B12 RRH's (17.9"x13.2"x10.4" – Wt. = 71 lbs. /each)**
- **(3) B2/B66A 8843 RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each)**
- **(1) Squid Surge Arrestor (24.0"x9.7"Ø – Wt. = 33 lbs.)**

**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 mounts on April 7, 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 120 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.5 in. An escalated ice thickness of 1.73 in was used for this analysis.
- HDG considers this site to be exposure category C; tower is located near large, flat, open, terrain/grasslands.
- HDG considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- AT&T policy forbids walking on or suspending below T-arm mounts. This analysis does not include live load conditions for this mount.
- The existing mount is secured to the existing monopole with a ring mount. The connection is considered OK by visual inspection.

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

- **Install new 3-1/2" std. (4.00" O.D.) horizontal face pipe secured to the existing pipe masts (typ. of 1 per sector, total of 3).**
- **Replace existing pipe masts at antenna positions 1 and 3 with new 2-1/2" std. (2.88" O.D.) pipe masts (typ. of 2 per sector, total of 6).**
- **Replace existing pipe masts at antenna position 2 with new 3" std. (3.50" O.D.) pipe masts (typ. of 1 per sector, total of 3).**

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing (LTE 2C/5G) Mount Rating	8	LC1	162%	**FAIL**
Modified (LTE 2C/5G) Mount Rating	2	LC8	91%	**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 mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

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

Respectfully Submitted,
Hudson Design Group LLC

Michael Cabral
Vice President

Daniel P. Hamm, PE
Principal

FIELD PHOTOS:

p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 203.208.3919 f: 203.234.6398 a: 110 Washington Avenue, 4th Floor, North Haven CT 06473

p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 203.208.3919 f: 203.234.6398 a: 110 Washington Avenue, 4th Floor, North Haven CT 06473

HUDSON
Design Group LLC

Wind & Ice
Calculations

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL **Checked By:** MSC

HUDSON Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

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

z=	139	(ft)
z_g=	900	(ft)
α=	9.5	
K_z=	**1.356**	

$Kzmin \le Kz \le 2.01$

Table 2-4

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

2.6.6.2 Topographic Factor:

Table 2-5

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

$K_{zt} = [1+(K_c\ K_t/K_h)]^2$ $K_h = e^{(f*z/H)}$

K_{zt}=	**1**	
K_h=	1	
K_c=	1	(from Table 2-4)
K_t=		(from Table 2-5)
f=		(from Table 2-5)
Category=	1	
z=	139	
z_s=	310	(Mean elevation of base of structure above sea level)
H=		(Ht. of the crest above surrounding terrain)
K_{zt}=	1.00	(from 2.6.6.2.1)
K_e=	0.99	(from 2.6.8)

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

2.6.10 Design Ice Thickness

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

Max Ice Thickness = t_i =	1.50	in
Importance Factor = I=	1.0	(from Table 2-3)
K_{iz} =	1.15	(from Sec. 2.6.10)
t_{iz} =	1.73	in

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

G_h = 1.0 Latticed Structures > 600 ft

G_h = 0.85 Latticed Structures 450 ft or less

G_h = 0.85 + 0.15 [h/150 - 3.0] h= ht. of structure

h=	180	G_h=	0.85

2.6.9.2 Guyed Masts G_h= 0.85

2.6.9.3 Pole Structures G_h= 1.1

2.6.9 Appurtenances G_h= 1.0

2.6.9.4 Structures Supported on Other Structures

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

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

2.6.11.2 Design Wind Force on Appurtenances

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

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

		K_z=	1.356	(from 2.6.5.2)
		K_{zt}=	1.0	(from 2.6.6.2.1)
		K_s=	1.0	(from 2.6.7)
q_z=	**46.97**	K_e=	0.99	(from 2.6.8)
$q_{z\ (ice)}$=	**8.16**	K_d=	0.95	(from Table 2-2)
$q_{z\ (30)}$=	**2.94**	V_{max}=	120	mph (Ultimate Wind Speed)
		$V_{max\ (ice)}$=	50	mph
		V_{30}=	30	mph

Table 2-2

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

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
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HUDSON Design Group LLC

Determine Ca:

Table 2-9

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

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

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

Ice Thickness = 1.73 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	259	63	16
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.39	1.24	605	128	38
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.44	1.24	597	127	37
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	4.57	1.29	850	178	53
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	4.64	1.30	839	176	52
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.36	1.20	92	24	6
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	3.44	1.24	38	13	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.20	77	21	5
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	2.73	1.21	32	11	2
LGP21401 TMA	14.4	9.0	2.7	0.90	1.60	1.20	51	15	3
LGP21901 Diplexer	6.3	4.4	3.0	0.19	1.43	1.20	11	5	1
2" Pipe	2.4	12.0		0.20	0.20	0.70	7	4	0
3.5" Pipe	4.0	12.0		0.33	0.33	0.70	11	5	1
HSS 4x4	4.0	12.0		0.33	0.33	0.70	11	5	1
Surge Arrestor	24.0	9.7		1.62	2.47	0.70	53	14	3

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

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

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	259	138	228
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	605	266	520
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	597	264	514
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	850	385	734
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	839	382	725
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	92	73	88
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	38	47	40
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	77	64	74
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	32	38	34
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	51	17	42
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	11	7	10

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.44	4.04	6.91	1.27	1.40	61	39	55
OPA65R-BU6D Antenna	74.7	24.5	11.3	12.68	5.84	3.05	6.63	1.22	1.38	127	66	111
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	125	65	110
OPA65R-BU8D Antenna	99.5	24.5	11.3	16.90	7.78	4.07	8.83	1.27	1.46	175	93	154
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.69	7.71	4.12	8.91	1.27	1.46	173	92	153
4449 B5/B12 RRH	21.4	16.7	13.9	2.47	2.06	1.28	1.54	1.20	1.20	24	20	23
4449 B5/B12 RRH (Shielded)	21.4	8.7	10.1	1.29	1.49	2.47	2.12	1.20	1.20	13	15	13
B2/B66A 8843 RRH	18.4	16.7	14.4	2.13	1.83	1.10	1.28	1.20	1.20	21	18	20
B2/B66A 8843 RRH (Shielded)	18.4	8.9	10.1	1.14	1.28	2.06	1.82	1.20	1.20	11	13	11
LGP21401 TMA	17.9	12.5	6.2	1.55	0.76	1.43	2.90	1.20	1.22	15	8	13
LGP21901 Diplexer	9.8	7.9	6.5	0.53	0.44	1.24	1.51	1.20	1.20	5	4	5

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	14
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	33
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	32
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	53	24	46
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	52	24	45
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	6	5	5
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	2	3	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	2	2	2
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	3	1	3
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	1	0	1

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

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

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	259	138	168
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	605	266	351
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	597	264	347
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	850	385	501
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	839	382	496
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	92	73	78
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	38	47	44
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	77	64	67
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	32	38	37
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	51	17	25
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	11	7	8

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.44	4.04	6.91	1.27	1.40	61	39	45
OPA65R-BU6D Antenna	74.7	24.5	11.3	12.68	5.84	3.05	6.63	1.22	1.38	127	66	81
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	125	65	80
OPA65R-BU8D Antenna	99.5	24.5	11.3	16.90	7.78	4.07	8.83	1.27	1.46	175	93	113
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.69	7.71	4.12	8.91	1.27	1.46	173	92	112
4449 B5/B12 RRH	21.4	16.7	13.9	2.47	2.06	1.28	1.54	1.20	1.20	24	20	21
4449 B5/B12 RRH (Shielded)	21.4	8.7	10.1	1.29	1.49	2.47	2.12	1.20	1.20	13	15	14
B2/B66A 8843 RRH	18.4	16.7	14.4	2.13	1.83	1.10	1.28	1.20	1.20	21	18	19
B2/B66A 8843 RRH (Shielded)	18.4	8.9	10.1	1.14	1.28	2.06	1.82	1.20	1.20	11	13	12
LGP21401 TMA	17.9	12.5	6.2	1.55	0.76	1.43	2.90	1.20	1.22	15	8	9
LGP21901 Diplexer	9.8	7.9	6.5	0.53	0.44	1.24	1.51	1.20	1.20	5	4	5

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	10
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	22
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	22
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	53	24	31
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	52	24	31
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	6	5	5
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	2	3	3
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	2	2	2
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	3	1	2
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	1	0	1

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	90	(deg)	Ice Thickness =	1.73	in.	Equivalent Angle =	270	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	259	138	138
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	605	266	266
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	597	264	264
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	850	385	385
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	839	382	382
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	92	73	73
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	38	47	47
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	77	64	64
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	32	38	38
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	51	17	17
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	11	7	7

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.44	4.04	6.91	1.27	1.40	61	39	39
OPA65R-BU6D Antenna	74.7	24.5	11.3	12.68	5.84	3.05	6.63	1.22	1.38	127	66	66
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	125	65	65
OPA65R-BU8D Antenna	99.5	24.5	11.3	16.90	7.78	4.07	8.83	1.27	1.46	175	93	93
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.69	7.71	4.12	8.91	1.27	1.46	173	92	92
4449 B5/B12 RRH	21.4	16.7	13.9	2.47	2.06	1.28	1.54	1.20	1.20	24	20	20
4449 B5/B12 RRH (Shielded)	21.4	8.7	10.1	1.29	1.49	2.47	2.12	1.20	1.20	13	15	15
B2/B66A 8843 RRH	18.4	16.7	14.4	2.13	1.83	1.10	1.28	1.20	1.20	21	18	18
B2/B66A 8843 RRH (Shielded)	18.4	8.9	10.1	1.14	1.28	2.06	1.82	1.20	1.20	11	13	13
LGP21401 TMA	17.9	12.5	6.2	1.55	0.76	1.43	2.90	1.20	1.22	15	8	8
LGP21901 Diplexer	9.8	7.9	6.5	0.53	0.44	1.24	1.51	1.20	1.20	5	4	4

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	9
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	17
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	16
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	53	24	24
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	52	24	24
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	6	5	5
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	2	3	3
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	2	2	2
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	3	1	1
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	1	0	0

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

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

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	259	138	168
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	605	266	351
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	597	264	347
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	850	385	501
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	839	382	496
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	92	73	78
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	38	47	44
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	77	64	67
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	32	38	37
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	51	17	25
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	11	7	8

WIND LOADS WITH ICE:

7770 Antenna	58.5	14.5	8.5	5.87	3.44	4.04	6.91	1.27	1.40	61	39	45
OPA65R-BU6D Antenna	74.7	24.5	11.3	12.68	5.84	3.05	6.63	1.22	1.38	127	66	81
DMP65R-BU6DA Antenna	74.7	24.2	11.2	12.53	5.79	3.09	6.69	1.23	1.39	125	65	80
OPA65R-BU8D Antenna	99.5	24.5	11.3	16.90	7.78	4.07	8.83	1.27	1.46	175	93	113
DMP65R-BU8DA Antenna	99.5	24.2	11.2	16.69	7.71	4.12	8.91	1.27	1.46	173	92	112
4449 B5/B12 RRH	21.4	16.7	13.9	2.47	2.06	1.28	1.54	1.20	1.20	24	20	21
4449 B5/B12 RRH (Shielded)	21.4	8.7	10.1	1.29	1.49	2.47	2.12	1.20	1.20	13	15	14
B2/B66A 8843 RRH	18.4	16.7	14.4	2.13	1.83	1.10	1.28	1.20	1.20	21	18	19
B2/B66A 8843 RRH (Shielded)	18.4	8.9	10.1	1.14	1.28	2.06	1.82	1.20	1.20	11	13	12
LGP21401 TMA	17.9	12.5	6.2	1.55	0.76	1.43	2.90	1.20	1.22	15	8	9
LGP21901 Diplexer	9.8	7.9	6.5	0.53	0.44	1.24	1.51	1.20	1.20	5	4	5

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	16	9	10
OPA65R-BU6D Antenna	71.2	21.0	7.8	10.38	3.86	3.39	9.13	1.24	1.47	38	17	22
DMP65R-BU6DA Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	37	16	22
OPA65R-BU8D Antenna	96.0	21.0	7.8	14.00	5.20	4.57	12.31	1.29	1.58	53	24	31
DMP65R-BU8DA Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	52	24	31
4449 B5/B12 RRH	17.9	13.2	10.4	1.64	1.29	1.36	1.72	1.20	1.20	6	5	5
4449 B5/B12 RRH (Shielded)	17.9	5.2	6.6	0.65	0.82	3.44	2.71	1.24	1.21	2	3	3
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
B2/B66A 8843 RRH (Shielded)	14.9	5.5	6.6	0.56	0.68	2.73	2.26	1.21	1.20	2	2	2
LGP21401 TMA	14.4	9.0	2.7	0.90	0.27	1.60	5.33	1.20	1.33	3	1	2
LGP21901 Diplexer	6.3	4.4	3.0	0.19	0.13	1.43	2.10	1.20	1.20	1	0	1

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL **Checked By:** MSC

HUDSON Design Group LLC

ICE WEIGHT CALCULATIONS

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

7770 Antenna

Weight of ice based on total radial SF area:

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

OPA65R-BU6D Antenna

Weight of ice based on total radial SF area:

Height (in):	71.2	
Width (in):	21.0	
Depth (in):	7.8	
Total weight of ice on object:		303 lbs
Weight of object:	63.0 lbs	
Combined weight of ice and object:		366 lbs

DMP65R-BU6DA Antenna

Weight of ice based on total radial SF area:

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

OPA65R-BU8D Antenna

Weight of ice based on total radial SF area:

Height (in):	96.0	
Width (in):	21.0	
Depth (in):	7.8	
Total weight of ice on object:		408 lbs
Weight of object:	77.0 lbs	
Combined weight of ice and object:		485 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:		403 lbs
Weight of object:	96.0 lbs	
Combined weight of ice and object:		499 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:

Height (in):	17.9	
Width (in):	13.2	
Depth (in):	10.4	
Total weight of ice on object:		58 lbs
Weight of object:	71.0 lbs	
Combined weight of ice and object:		129 lbs

B2/B66A 8843 RRH

Weight of ice based on total radial SF area:

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

LGP21401 TMA

Weight of ice based on total radial SF area:

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

Date: 4/17/2020
Project Name: COLLINSVILLE-POWDER MILL ROAD
Project No.: CT1114
Designed By: CL **Checked By:** MSC

HUDSON Design Group LLC

ICE WEIGHT CALCULATIONS

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

LGP21901 Diplexer

Weight of ice based on total radial SF area:

Height (in):	6.3	
Width (in):	4.4	
Depth (in):	3.0	
Total weight of ice on object:	8	lbs
Weight of object:	6.0	lbs
Combined weight of ice and object:	14	lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:

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

2" pipe

Per foot weight of ice:

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

3-1/2" Pipe

Per foot weight of ice:

diameter (in):	4	
Per foot weight of ice on object:	12	plf

HSS 4x4

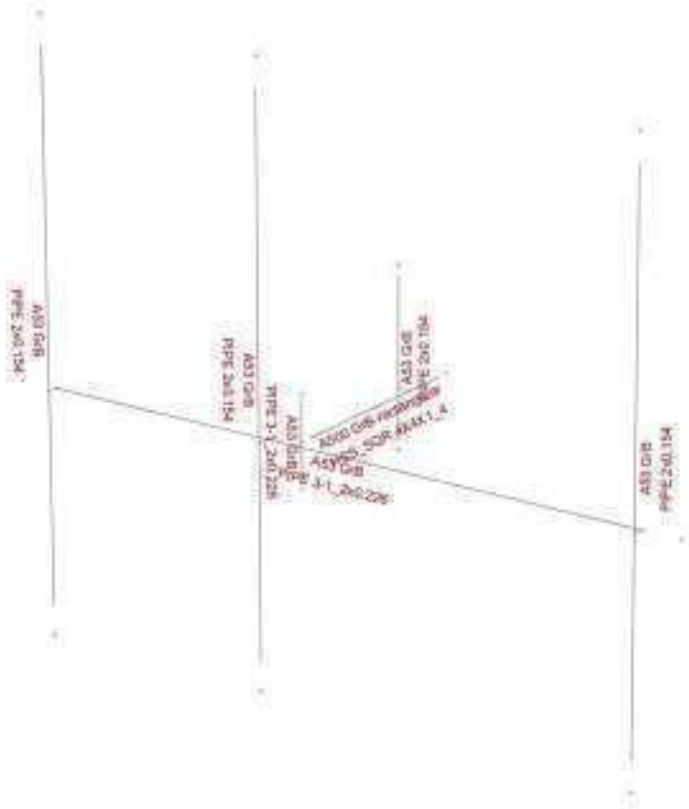
Weight of ice based on total radial SF area:

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

HUDSON
Design Group LLC

Mount Calculations
(Existing Conditions)


Y
Z
X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PIPE 2x0.154
A53 GR
PIPE 2x0.154
A53 GR
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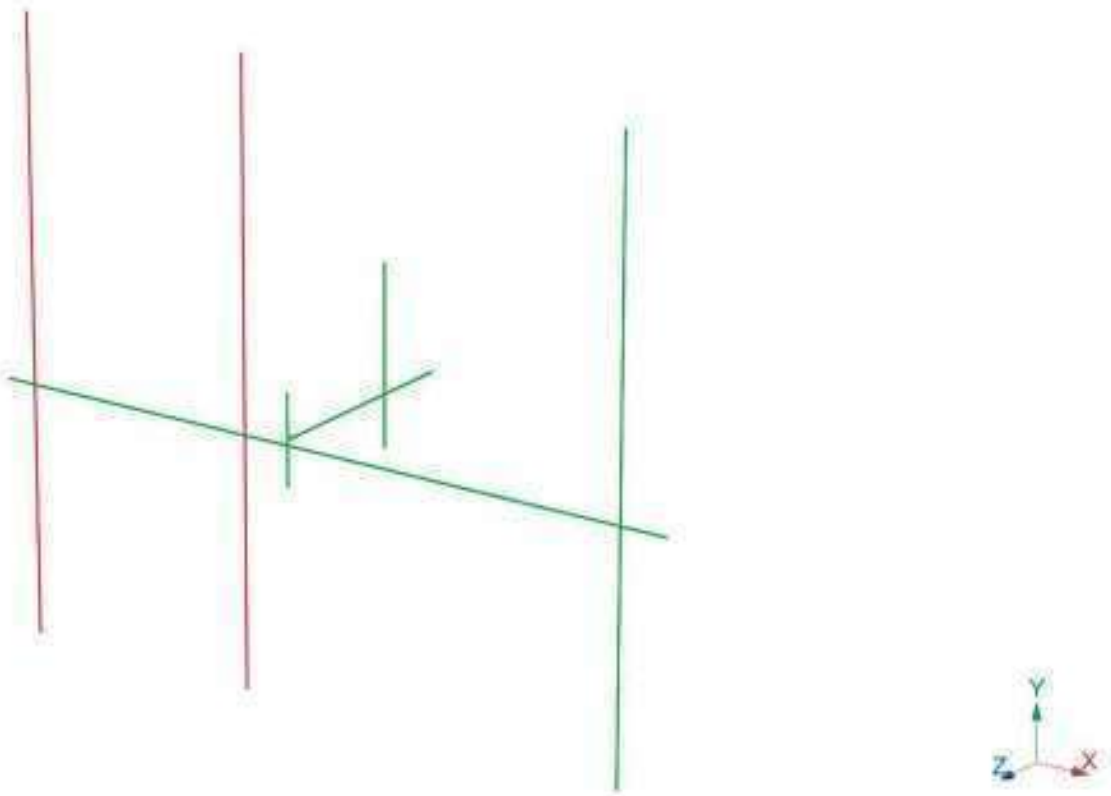
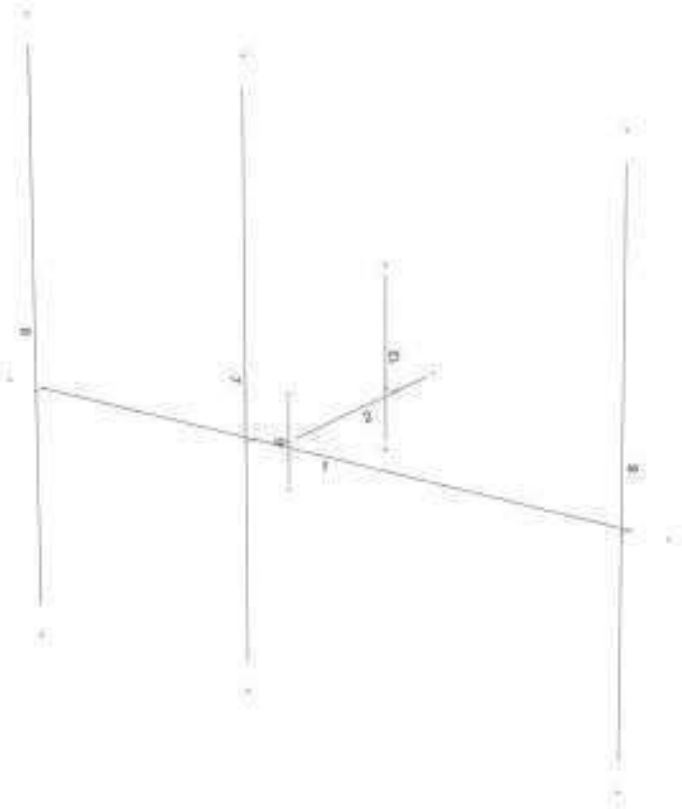
A53 GR
PIPE 2x0.154
Y
Z
X


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




Y
Z
X

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Load data

GLOSSARY

Comb : Indicates if load condition is a load combination

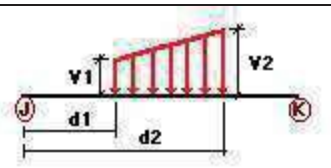
Load Conditions

Condition	Description	Comb.	Category
D	Dead Load	No	DL
Wo	Wind Load (NO ICE)	No	WIND
W30	WL 30deg	No	WIND
W60	WL 60deg	No	WIND
W90	WL 90deg	No	WIND
W120	WL 120deg	No	WIND
W150	WL 150deg	No	WIND
Di	Ice Load	No	LL
WI0	WL ICE 0deg	No	WIND
WI30	WL ICE 30deg	No	WIND
WI60	WL ICE 60deg	No	WIND
WI90	WL ICE 90deg	No	WIND
WI120	WL ICE 120deg	No	WIND
WI150	WL ICE 150deg	No	WIND
WL0	WL 30 mph 0deg	No	WIND
WL30	WL 30 mph 30deg	No	WIND
WL60	WL 30 mph 60deg	No	WIND
WL90	WL 30 mph 90deg	No	WIND
WL120	WL 30 mph 120deg	No	WIND
WL150	WL 30 mph 150deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load Right End of Mount	No	LL
LL3	250 lb Live Load Left End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
LLa4	250 lb Live Load Antenna 4	No	LL
LC1	1.2D+Wo	Yes	
LC2	1.2D+W30	Yes	
LC3	1.2D+W60	Yes	
LC4	1.2D+W90	Yes	
LC5	1.2D+W120	Yes	
LC6	1.2D+W150	Yes	
LC7	1.2D-Wo	Yes	
LC8	1.2D-W30	Yes	
LC9	1.2D-W60	Yes	
LC10	1.2D-W90	Yes	
LC11	1.2D-W120	Yes	
LC12	1.2D-W150	Yes	
LC13	0.9D+Wo	Yes	
LC14	0.9D+W30	Yes	
LC15	0.9D+W60	Yes	
LC16	0.9D+W90	Yes	
LC17	0.9D+W120	Yes	
LC18	0.9D+W150	Yes	

LC19	0.9D-Wo	Yes
LC20	0.9D-W30	Yes
LC21	0.9D-W60	Yes
LC22	0.9D-W90	Yes
LC23	0.9D-W120	Yes
LC24	0.9D-W150	Yes
LC25	1.2D+Di+WI0	Yes
LC26	1.2D+Di+WI30	Yes
LC27	1.2D+Di+WI60	Yes
LC28	1.2D+Di+WI90	Yes
LC29	1.2D+Di+WI120	Yes
LC30	1.2D+Di+WI150	Yes
LC31	1.2D+Di-WI0	Yes
LC32	1.2D+Di-WI30	Yes
LC33	1.2D+Di-WI60	Yes
LC34	1.2D+Di-WI90	Yes
LC35	1.2D+Di-WI120	Yes
LC36	1.2D+Di-WI150	Yes
LC38	1.2D+1.5LL1	Yes
LC39	1.2D+1.5LL2	Yes
LC40	1.2D+1.5LL3	Yes
LC41	1.2D+WL0+1.5LLa1	Yes
LC42	1.2D+WL30+1.5LLa1	Yes
LC43	1.2D+WL60+1.5LLa1	Yes
LC44	1.2D+WL90+1.5LLa1	Yes
LC45	1.2D+WL120+1.5LLa1	Yes
LC46	1.2D+WL150+1.5LLa1	Yes
LC47	1.2D-WL0+1.5LLa1	Yes
LC48	1.2D-WL30+1.5LLa1	Yes
LC49	1.2D-WL60+1.5LLa1	Yes
LC50	1.2D-WL90+1.5LLa1	Yes
LC51	1.2D-WL120+1.5LLa1	Yes
LC52	1.2D-WL150+1.5LLa1	Yes
LC53	1.2D+WL0+1.5LLa2	Yes
LC54	1.2D+WL30+1.5LLa2	Yes
LC55	1.2D+WL60+1.5LLa2	Yes
LC56	1.2D+WL90+1.5LLa2	Yes
LC57	1.2D+WL120+1.5LLa2	Yes
LC58	1.2D+WL150+1.5LLa2	Yes
LC59	1.2D-WL0+1.5LLa2	Yes
LC60	1.2D-WL30+1.5LLa2	Yes
LC61	1.2D-WL60+1.5LLa2	Yes
LC62	1.2D-WL90+1.5LLa2	Yes
LC63	1.2D-WL120+1.5LLa2	Yes
LC64	1.2D-WL150+1.5LLa2	Yes
LC65	1.2D+WL0+1.5LLa3	Yes
LC66	1.2D+WL30+1.5LLa3	Yes
LC67	1.2D+WL60+1.5LLa3	Yes
LC68	1.2D+WL90+1.5LLa3	Yes
LC69	1.2D+WL120+1.5LLa3	Yes
LC70	1.2D+WL150+1.5LLa3	Yes
LC71	1.2D-WL0+1.5LLa3	Yes
LC72	1.2D-WL30+1.5LLa3	Yes
LC73	1.2D-WL60+1.5LLa3	Yes
LC74	1.2D-WL90+1.5LLa3	Yes
LC75	1.2D-WL120+1.5LLa3	Yes
LC76	1.2D-WL150+1.5LLa3	Yes
LC77	1.2D+WL0+1.5LLa4	Yes
LC78	1.2D+WL30+1.5LLa4	Yes
LC79	1.2D+WL60+1.5LLa4	Yes

LC80	1.2D+WL90+1.5LLa4	Yes
LC81	1.2D+WL120+1.5LLa4	Yes
LC82	1.2D+WL150+1.5LLa4	Yes
LC83	1.2D-WL0+1.5LLa4	Yes
LC84	1.2D-WL30+1.5LLa4	Yes
LC85	1.2D-WL60+1.5LLa4	Yes
LC86	1.2D-WL90+1.5LLa4	Yes
LC87	1.2D-WL120+1.5LLa4	Yes
LC88	1.2D-WL150+1.5LLa4	Yes

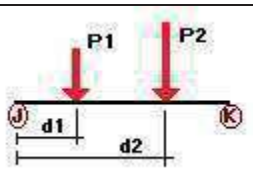
Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wo	1	z	-0.011	-0.011	0.00	No	100.00	Yes
	2	z	-0.011	-0.011	0.00	No	100.00	Yes
	6	z	-0.007	-0.007	0.00	No	100.00	Yes
	7	z	-0.007	-0.007	0.00	No	100.00	Yes
	8	z	-0.007	-0.007	0.00	No	100.00	Yes
	9	z	-0.011	-0.011	0.00	No	100.00	Yes
	12	z	-0.007	-0.007	0.00	No	100.00	Yes
W30	1	z	-0.011	-0.011	0.00	No	100.00	Yes
	2	z	-0.011	-0.011	0.00	No	100.00	Yes
	6	z	-0.007	-0.007	0.00	No	100.00	Yes
	7	z	-0.007	-0.007	0.00	No	100.00	Yes
	8	z	-0.007	-0.007	0.00	No	100.00	Yes
	9	z	-0.011	-0.011	0.00	No	100.00	Yes
	12	z	-0.007	-0.007	0.00	No	100.00	Yes
W60	1	x	-0.011	-0.011	0.00	No	100.00	Yes
	2	x	-0.011	-0.011	0.00	No	100.00	Yes
	6	x	-0.007	-0.007	0.00	No	100.00	Yes
	7	x	-0.007	-0.007	0.00	No	100.00	Yes
	8	x	-0.007	-0.007	0.00	No	100.00	Yes
	9	x	-0.011	-0.011	0.00	No	100.00	Yes
	12	x	-0.007	-0.007	0.00	No	100.00	Yes
W90	1	x	-0.011	-0.011	0.00	No	100.00	Yes
	2	x	-0.011	-0.011	0.00	No	100.00	Yes
	6	x	-0.007	-0.007	0.00	No	100.00	Yes
	7	x	-0.007	-0.007	0.00	No	100.00	Yes
	8	x	-0.007	-0.007	0.00	No	100.00	Yes
	9	x	-0.011	-0.011	0.00	No	100.00	Yes
	12	x	-0.007	-0.007	0.00	No	100.00	Yes
W120	1	x	-0.011	-0.011	0.00	No	100.00	Yes
	2	x	-0.011	-0.011	0.00	No	100.00	Yes
	6	x	-0.007	-0.007	0.00	No	100.00	Yes
	7	x	-0.007	-0.007	0.00	No	100.00	Yes
	8	x	-0.007	-0.007	0.00	No	100.00	Yes
	9	x	-0.011	-0.011	0.00	No	100.00	Yes
	12	x	-0.007	-0.007	0.00	No	100.00	Yes
W150	1	z	0.011	0.011	0.00	No	100.00	Yes

	2	z	0.011	0.011	0.00	No	100.00	Yes
	6	z	0.007	0.007	0.00	No	100.00	Yes
	7	z	0.007	0.007	0.00	No	100.00	Yes
	8	z	0.007	0.007	0.00	No	100.00	Yes
	9	z	0.011	0.011	0.00	No	100.00	Yes
	12	z	0.007	0.007	0.00	No	100.00	Yes
Di	1	y	-0.012	-0.012	0.00	No	100.00	Yes
	2	y	-0.016	-0.016	0.00	No	100.00	Yes
	6	y	-0.009	-0.009	0.00	No	100.00	Yes
	7	y	-0.009	-0.009	0.00	No	100.00	Yes
	8	y	-0.009	-0.009	0.00	No	100.00	Yes
	9	y	-0.012	-0.012	0.00	No	100.00	Yes
	12	y	-0.009	-0.009	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
D	6	y	-0.018	2.00	No
		y	-0.018	6.50	No
		y	-0.019	1.00	No
		y	-0.019	1.00	No
	7	y	-0.039	2.00	No
		y	-0.039	7.00	No
	8	y	-0.048	2.00	No
		y	-0.048	7.00	No
		y	-0.071	1.00	No
		y	-0.072	1.00	No
		y	-0.006	6.00	No
		y	-0.006	6.00	No
	12	y	-0.033	1.50	No
Wo	6	z	-0.13	2.00	No
		z	-0.13	6.50	No
		z	-0.051	1.00	No
		z	-0.051	1.00	No
	7	z	-0.425	2.00	No
		z	-0.425	7.00	No
	8	z	-0.42	2.00	No
		z	-0.42	7.00	No
		z	-0.038	1.00	No
		z	-0.032	1.00	No
		z	-0.011	6.00	No
		z	-0.011	6.00	No
	12	z	-0.053	1.50	No
W30	6	3	-0.114	2.00	No
		3	-0.114	6.50	No
		3	-0.042	1.00	No
		3	-0.042	1.00	No
	7	3	-0.367	2.00	No
		3	-0.367	7.00	No

	8	3	-0.363	2.00	No
		3	-0.363	7.00	No
		3	-0.088	1.00	No
		3	-0.074	1.00	No
		3	-0.01	6.00	No
		3	-0.01	6.00	No
	12	3	-0.053	1.50	No
W60	6	3	-0.084	2.00	No
		3	-0.084	6.50	No
		3	-0.025	1.00	No
		3	-0.025	1.00	No
	7	3	-0.251	2.00	No
		3	-0.251	7.00	No
	8	3	-0.248	2.00	No
		3	-0.248	7.00	No
		3	-0.078	1.00	No
		3	-0.067	1.00	No
		3	-0.008	6.00	No
		3	-0.008	6.00	No
	12	3	-0.053	1.50	No
W90	6	x	-0.069	2.00	No
		x	-0.069	6.50	No
		x	-0.017	1.00	No
		x	-0.017	1.00	No
	7	x	-0.193	2.00	No
		x	-0.193	7.00	No
	8	x	-0.191	2.00	No
		x	-0.191	7.00	No
		x	-0.073	1.00	No
		x	-0.064	1.00	No
		x	-0.007	6.00	No
		x	-0.007	6.00	No
	12	x	-0.053	1.50	No
W120	6	2	-0.084	2.00	No
		2	-0.084	6.50	No
		2	-0.025	1.00	No
		2	-0.025	1.00	No
	7	2	-0.251	2.00	No
		2	-0.251	7.00	No
	8	2	-0.248	2.00	No
		2	-0.248	7.00	No
		2	-0.078	1.00	No
		2	-0.067	1.00	No
		2	-0.008	6.00	No
		2	-0.008	6.00	No
	12	2	-0.053	1.50	No
W150	6	2	-0.114	2.00	No
		2	-0.114	6.50	No
		2	-0.042	1.00	No
		2	-0.042	1.00	No
	7	2	-0.367	2.00	No
		2	-0.367	7.00	No
	8	2	-0.363	2.00	No
		2	-0.363	7.00	No
		2	-0.088	1.00	No
		2	-0.074	1.00	No
		2	-0.01	6.00	No
		2	-0.01	6.00	No
	12	2	-0.053	1.50	No
Di	6	y	-0.067	2.00	No

		y	-0.067	6.50	No
		y	-0.028	1.00	No
		y	-0.028	1.00	No
	7	y	-0.204	2.00	No
		y	-0.204	7.00	No
	8	y	-0.202	2.00	No
		y	-0.202	7.00	No
		y	-0.058	1.00	No
		y	-0.049	1.00	No
		y	-0.008	6.00	No
		y	-0.008	6.00	No
	12	y	-0.048	1.50	No
WI0	6	z	-0.032	2.00	No
		z	-0.032	6.50	No
		z	-0.015	1.00	No
		z	-0.015	1.00	No
	7	z	-0.089	2.00	No
		z	-0.089	7.00	No
	8	z	-0.088	2.00	No
		z	-0.088	7.00	No
		z	-0.013	1.00	No
		z	-0.011	1.00	No
		z	-0.005	6.00	No
		z	-0.005	6.00	No
	12	z	-0.014	1.50	No
WI30	6	3	-0.028	2.00	No
		3	-0.028	6.50	No
		3	-0.013	1.00	No
		3	-0.013	1.00	No
	7	3	-0.077	2.00	No
		3	-0.077	7.00	No
	8	3	-0.077	2.00	No
		3	-0.077	7.00	No
		3	-0.023	1.00	No
		3	-0.02	1.00	No
		3	-0.005	6.00	No
		3	-0.005	6.00	No
	12	3	-0.014	1.50	No
WI60	6	3	-0.023	2.00	No
		3	-0.023	6.50	No
		3	-0.009	1.00	No
		3	-0.009	1.00	No
	7	3	-0.057	2.00	No
		3	-0.057	7.00	No
	8	3	-0.056	2.00	No
		3	-0.056	7.00	No
		3	-0.021	1.00	No
		3	-0.019	1.00	No
		3	-0.005	6.00	No
		3	-0.005	6.00	No
	12	3	-0.014	1.50	No
WI90	6	x	-0.02	2.00	No
		x	-0.02	6.50	No
		x	-0.008	1.00	No
		x	-0.008	1.00	No
	7	x	-0.047	2.00	No
		x	-0.047	7.00	No
	8	x	-0.046	2.00	No
		x	-0.046	7.00	No
		x	-0.02	1.00	No

		x	-0.018	1.00	No
		x	-0.004	6.00	No
		x	-0.004	6.00	No
	12	x	-0.014	1.50	No
WI120	6	2	-0.023	2.00	No
		2	-0.023	6.50	No
		2	-0.009	1.00	No
		2	-0.009	1.00	No
	7	2	-0.057	2.00	No
		2	-0.057	7.00	No
	8	2	-0.056	2.00	No
		2	-0.056	7.00	No
		2	-0.021	1.00	No
		2	-0.019	1.00	No
		2	-0.005	6.00	No
		2	-0.005	6.00	No
	12	2	-0.014	1.50	No
WI150	6	2	-0.028	2.00	No
		2	-0.028	6.50	No
		2	-0.013	1.00	No
		2	-0.013	1.00	No
	7	2	-0.077	2.00	No
		2	-0.077	7.00	No
	8	2	-0.077	2.00	No
		2	-0.077	7.00	No
		2	-0.023	1.00	No
		2	-0.02	1.00	No
		2	-0.005	6.00	No
		2	-0.005	6.00	No
	12	2	-0.014	1.50	No
WL0	6	z	-0.008	2.00	No
		z	-0.008	6.50	No
		z	-0.003	1.00	No
		z	-0.003	1.00	No
	7	z	-0.027	2.00	No
		z	-0.027	7.00	No
	8	z	-0.026	2.00	No
		z	-0.026	7.00	No
		z	-0.002	1.00	No
		z	-0.002	1.00	No
		z	-0.001	6.00	No
		z	-0.001	6.00	No
	12	z	-0.003	1.50	No
WL30	6	3	-0.007	2.00	No
		3	-0.007	6.50	No
		3	-0.003	1.00	No
		3	-0.003	1.00	No
	7	3	-0.023	2.00	No
		3	-0.023	7.00	No
	8	3	-0.023	2.00	No
		3	-0.023	7.00	No
		3	-0.002	1.00	No
		3	-0.002	1.00	No
		3	-0.001	6.00	No
		3	-0.001	6.00	No
	12	3	-0.003	1.50	No
WL60	6	3	-0.005	2.00	No
		3	-0.005	6.50	No
		3	-0.002	1.00	No
		3	-0.002	1.00	No

	7	3	-0.016	2.00	No
		3	-0.016	7.00	No
	8	3	-0.016	2.00	No
		3	-0.016	7.00	No
		3	-0.005	1.00	No
		3	-0.004	1.00	No
		3	-0.001	6.00	No
		3	-0.001	6.00	No
	12	3	-0.003	1.50	No
WL90	6	x	-0.005	2.00	No
		x	-0.005	6.50	No
		x	-0.001	1.00	No
		x	-0.001	1.00	No
	7	x	-0.012	2.00	No
		x	-0.012	7.00	No
	8	x	-0.012	2.00	No
		x	-0.012	7.00	No
		x	-0.005	1.00	No
		x	-0.004	1.00	No
		x	-0.001	6.00	No
		x	-0.001	6.00	No
	12	x	-0.003	1.50	No
WL120	6	2	-0.005	2.00	No
		2	-0.005	6.50	No
		2	-0.002	1.00	No
		2	-0.002	1.00	No
	7	2	-0.016	2.00	No
		2	-0.016	7.00	No
	8	2	-0.016	2.00	No
		2	-0.016	7.00	No
		2	-0.005	1.00	No
		2	-0.004	1.00	No
		2	-0.001	6.00	No
		2	-0.001	6.00	No
	12	2	-0.003	1.50	No
WL150	6	2	-0.007	2.00	No
		2	-0.007	6.50	No
		2	-0.003	1.00	No
		2	-0.003	1.00	No
	7	2	-0.023	2.00	No
		2	-0.023	7.00	No
	8	2	-0.023	2.00	No
		2	-0.023	7.00	No
		2	-0.002	1.00	No
		2	-0.002	1.00	No
		2	-0.001	6.00	No
		2	-0.001	6.00	No
	12	2	-0.003	1.50	No

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier Comb.	MultX	MultY	MultZ
D	Dead Load	No	0.00	-1.00	0.00
Wo	Wind Load (NO ICE)	No	0.00	0.00	0.00
W30	WL 30deg	No	0.00	0.00	0.00
W60	WL 60deg	No	0.00	0.00	0.00
W90	WL 90deg	No	0.00	0.00	0.00
W120	WL 120deg	No	0.00	0.00	0.00
W150	WL 150deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
WI0	WL ICE 0deg	No	0.00	0.00	0.00
WI30	WL ICE 30deg	No	0.00	0.00	0.00
WI60	WL ICE 60deg	No	0.00	0.00	0.00
WI90	WL ICE 90deg	No	0.00	0.00	0.00
WI120	WL ICE 120deg	No	0.00	0.00	0.00
WI150	WL ICE 150deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30deg	No	0.00	0.00	0.00
WL60	WL 30 mph 60deg	No	0.00	0.00	0.00
WL90	WL 30 mph 90deg	No	0.00	0.00	0.00
WL120	WL 30 mph 120deg	No	0.00	0.00	0.00
WL150	WL 30 mph 150deg	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 Right End of Mount	No	0.00	0.00	0.00
LL3	250 lb Live Load Left End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00
LC1	1.2D+Wo	Yes	0.00	0.00	0.00
LC2	1.2D+W30	Yes	0.00	0.00	0.00
LC3	1.2D+W60	Yes	0.00	0.00	0.00
LC4	1.2D+W90	Yes	0.00	0.00	0.00
LC5	1.2D+W120	Yes	0.00	0.00	0.00
LC6	1.2D+W150	Yes	0.00	0.00	0.00
LC7	1.2D-Wo	Yes	0.00	0.00	0.00
LC8	1.2D-W30	Yes	0.00	0.00	0.00
LC9	1.2D-W60	Yes	0.00	0.00	0.00
LC10	1.2D-W90	Yes	0.00	0.00	0.00
LC11	1.2D-W120	Yes	0.00	0.00	0.00
LC12	1.2D-W150	Yes	0.00	0.00	0.00
LC13	0.9D+Wo	Yes	0.00	0.00	0.00
LC14	0.9D+W30	Yes	0.00	0.00	0.00
LC15	0.9D+W60	Yes	0.00	0.00	0.00
LC16	0.9D+W90	Yes	0.00	0.00	0.00
LC17	0.9D+W120	Yes	0.00	0.00	0.00
LC18	0.9D+W150	Yes	0.00	0.00	0.00
LC19	0.9D-Wo	Yes	0.00	0.00	0.00
LC20	0.9D-W30	Yes	0.00	0.00	0.00
LC21	0.9D-W60	Yes	0.00	0.00	0.00
LC22	0.9D-W90	Yes	0.00	0.00	0.00
LC23	0.9D-W120	Yes	0.00	0.00	0.00
LC24	0.9D-W150	Yes	0.00	0.00	0.00
LC25	1.2D+Di+WI0	Yes	0.00	0.00	0.00
LC26	1.2D+Di+WI30	Yes	0.00	0.00	0.00
LC27	1.2D+Di+WI60	Yes	0.00	0.00	0.00
LC28	1.2D+Di+WI90	Yes	0.00	0.00	0.00
LC29	1.2D+Di+WI120	Yes	0.00	0.00	0.00
LC30	1.2D+Di+WI150	Yes	0.00	0.00	0.00
LC31	1.2D+Di-WI0	Yes	0.00	0.00	0.00
LC32	1.2D+Di-WI30	Yes	0.00	0.00	0.00

LC33	1.2D+Di-WI60	Yes	0.00	0.00	0.00
LC34	1.2D+Di-WI90	Yes	0.00	0.00	0.00
LC35	1.2D+Di-WI120	Yes	0.00	0.00	0.00
LC36	1.2D+Di-WI150	Yes	0.00	0.00	0.00
LC38	1.2D+1.5LL1	Yes	0.00	0.00	0.00
LC39	1.2D+1.5LL2	Yes	0.00	0.00	0.00
LC40	1.2D+1.5LL3	Yes	0.00	0.00	0.00
LC41	1.2D+WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC42	1.2D+WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC43	1.2D+WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC44	1.2D+WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC45	1.2D+WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC46	1.2D+WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC47	1.2D-WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC48	1.2D-WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC49	1.2D-WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC50	1.2D-WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC51	1.2D-WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC52	1.2D-WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC53	1.2D+WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC54	1.2D+WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC55	1.2D+WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC56	1.2D+WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC57	1.2D+WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC58	1.2D+WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC59	1.2D-WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC60	1.2D-WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC61	1.2D-WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC62	1.2D-WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC63	1.2D-WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC64	1.2D-WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC65	1.2D+WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC66	1.2D+WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC67	1.2D+WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC68	1.2D+WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC69	1.2D+WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC70	1.2D+WL150+1.5LLa3	Yes	0.00	0.00	0.00
LC71	1.2D-WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC72	1.2D-WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC73	1.2D-WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC74	1.2D-WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC75	1.2D-WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC76	1.2D-WL150+1.5LLa3	Yes	0.00	0.00	0.00
LC77	1.2D+WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC78	1.2D+WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC79	1.2D+WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC80	1.2D+WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC81	1.2D+WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC82	1.2D+WL150+1.5LLa4	Yes	0.00	0.00	0.00
LC83	1.2D-WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC84	1.2D-WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC85	1.2D-WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC86	1.2D-WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC87	1.2D-WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC88	1.2D-WL150+1.5LLa4	Yes	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
D	0.00	0.00	0.00
Wo	0.00	0.00	0.00
W30	0.00	0.00	0.00
W60	0.00	0.00	0.00
W90	0.00	0.00	0.00
W120	0.00	0.00	0.00
W150	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
WI60	0.00	0.00	0.00
WI90	0.00	0.00	0.00
WI120	0.00	0.00	0.00
WI150	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
WL60	0.00	0.00	0.00
WL90	0.00	0.00	0.00
WL120	0.00	0.00	0.00
WL150	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LL3	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00
LLa4	0.00	0.00	0.00
LC1	0.00	0.00	0.00
LC2	0.00	0.00	0.00
LC3	0.00	0.00	0.00
LC4	0.00	0.00	0.00
LC5	0.00	0.00	0.00
LC6	0.00	0.00	0.00
LC7	0.00	0.00	0.00
LC8	0.00	0.00	0.00
LC9	0.00	0.00	0.00
LC10	0.00	0.00	0.00
LC11	0.00	0.00	0.00
LC12	0.00	0.00	0.00
LC13	0.00	0.00	0.00
LC14	0.00	0.00	0.00
LC15	0.00	0.00	0.00
LC16	0.00	0.00	0.00
LC17	0.00	0.00	0.00
LC18	0.00	0.00	0.00
LC19	0.00	0.00	0.00
LC20	0.00	0.00	0.00
LC21	0.00	0.00	0.00
LC22	0.00	0.00	0.00
LC23	0.00	0.00	0.00
LC24	0.00	0.00	0.00
LC25	0.00	0.00	0.00
LC26	0.00	0.00	0.00
LC27	0.00	0.00	0.00
LC28	0.00	0.00	0.00
LC29	0.00	0.00	0.00
LC30	0.00	0.00	0.00
LC31	0.00	0.00	0.00
LC32	0.00	0.00	0.00
LC33	0.00	0.00	0.00

LC34	0.00	0.00	0.00
LC35	0.00	0.00	0.00
LC36	0.00	0.00	0.00
LC38	0.00	0.00	0.00
LC39	0.00	0.00	0.00
LC40	0.00	0.00	0.00
LC41	0.00	0.00	0.00
LC42	0.00	0.00	0.00
LC43	0.00	0.00	0.00
LC44	0.00	0.00	0.00
LC45	0.00	0.00	0.00
LC46	0.00	0.00	0.00
LC47	0.00	0.00	0.00
LC48	0.00	0.00	0.00
LC49	0.00	0.00	0.00
LC50	0.00	0.00	0.00
LC51	0.00	0.00	0.00
LC52	0.00	0.00	0.00
LC53	0.00	0.00	0.00
LC54	0.00	0.00	0.00
LC55	0.00	0.00	0.00
LC56	0.00	0.00	0.00
LC57	0.00	0.00	0.00
LC58	0.00	0.00	0.00
LC59	0.00	0.00	0.00
LC60	0.00	0.00	0.00
LC61	0.00	0.00	0.00
LC62	0.00	0.00	0.00
LC63	0.00	0.00	0.00
LC64	0.00	0.00	0.00
LC65	0.00	0.00	0.00
LC66	0.00	0.00	0.00
LC67	0.00	0.00	0.00
LC68	0.00	0.00	0.00
LC69	0.00	0.00	0.00
LC70	0.00	0.00	0.00
LC71	0.00	0.00	0.00
LC72	0.00	0.00	0.00
LC73	0.00	0.00	0.00
LC74	0.00	0.00	0.00
LC75	0.00	0.00	0.00
LC76	0.00	0.00	0.00
LC77	0.00	0.00	0.00
LC78	0.00	0.00	0.00
LC79	0.00	0.00	0.00
LC80	0.00	0.00	0.00
LC81	0.00	0.00	0.00
LC82	0.00	0.00	0.00
LC83	0.00	0.00	0.00
LC84	0.00	0.00	0.00
LC85	0.00	0.00	0.00
LC86	0.00	0.00	0.00
LC87	0.00	0.00	0.00
LC88	0.00	0.00	0.00

Current Date: 4/17/2020 12:36 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1114\CT1114 - LTE 5C.retx\

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2D+Wo
LC2=1.2D+W30
LC3=1.2D+W60
LC4=1.2D+W90
LC5=1.2D+W120
LC6=1.2D+W150
LC7=1.2D-Wo
LC8=1.2D-W30
LC9=1.2D-W60
LC10=1.2D-W90
LC11=1.2D-W120
LC12=1.2D-W150
LC13=0.9D+Wo
LC14=0.9D+W30
LC15=0.9D+W60
LC16=0.9D+W90
LC17=0.9D+W120
LC18=0.9D+W150
LC19=0.9D-Wo
LC20=0.9D-W30
LC21=0.9D-W60
LC22=0.9D-W90
LC23=0.9D-W120
LC24=0.9D-W150
LC25=1.2D+Di+WI0
LC26=1.2D+Di+WI30
LC27=1.2D+Di+WI60
LC28=1.2D+Di+WI90
LC29=1.2D+Di+WI120
LC30=1.2D+Di+WI150
LC31=1.2D+Di-WI0
LC32=1.2D+Di-WI30
LC33=1.2D+Di-WI60
LC34=1.2D+Di-WI90
LC35=1.2D+Di-WI120
LC36=1.2D+Di-WI150
LC38=1.2D+1.5LL1
LC39=1.2D+1.5LL2
LC40=1.2D+1.5LL3
LC41=1.2D+WL0+1.5LLa1
LC42=1.2D+WL30+1.5LLa1
LC43=1.2D+WL60+1.5LLa1
LC44=1.2D+WL90+1.5LLa1
LC45=1.2D+WL120+1.5LLa1
LC46=1.2D+WL150+1.5LLa1
LC47=1.2D-WL0+1.5LLa1
LC48=1.2D-WL30+1.5LLa1
LC49=1.2D-WL60+1.5LLa1
LC50=1.2D-WL90+1.5LLa1
LC51=1.2D-WL120+1.5LLa1
LC52=1.2D-WL150+1.5LLa1
LC53=1.2D+WL0+1.5LLa2
LC54=1.2D+WL30+1.5LLa2

LC55=1.2D+WL60+1.5LLa2
LC56=1.2D+WL90+1.5LLa2
LC57=1.2D+WL120+1.5LLa2
LC58=1.2D+WL150+1.5LLa2
LC59=1.2D-WL0+1.5LLa2
LC60=1.2D-WL30+1.5LLa2
LC61=1.2D-WL60+1.5LLa2
LC62=1.2D-WL90+1.5LLa2
LC63=1.2D-WL120+1.5LLa2
LC64=1.2D-WL150+1.5LLa2
LC65=1.2D+WL0+1.5LLa3
LC66=1.2D+WL30+1.5LLa3
LC67=1.2D+WL60+1.5LLa3
LC68=1.2D+WL90+1.5LLa3
LC69=1.2D+WL120+1.5LLa3
LC70=1.2D+WL150+1.5LLa3
LC71=1.2D-WL0+1.5LLa3
LC72=1.2D-WL30+1.5LLa3
LC73=1.2D-WL60+1.5LLa3
LC74=1.2D-WL90+1.5LLa3
LC75=1.2D-WL120+1.5LLa3
LC76=1.2D-WL150+1.5LLa3
LC77=1.2D+WL0+1.5LLa4
LC78=1.2D+WL30+1.5LLa4
LC79=1.2D+WL60+1.5LLa4
LC80=1.2D+WL90+1.5LLa4
LC81=1.2D+WL120+1.5LLa4
LC82=1.2D+WL150+1.5LLa4
LC83=1.2D-WL0+1.5LLa4
LC84=1.2D-WL30+1.5LLa4
LC85=1.2D-WL60+1.5LLa4
LC86=1.2D-WL90+1.5LLa4
LC87=1.2D-WL120+1.5LLa4
LC88=1.2D-WL150+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	**2**	LC8 at 100.00%	**0.85**	**OK**	
	PIPE 2x0.154	**6**	LC1 at 59.38%	0.87	OK	
		7	LC1 at 59.38%	1.36	N.G.	
		8	LC1 at 59.38%	**1.62**	**N.G.**	
		12	LC7 at 65.63%	0.03	OK	
	PIPE 3-1_2x0.226	**1**	LC2 at 57.50%	**0.97**	**OK**	
		9	LC8 at 50.00%	0.00	OK	

Current Date: 4/17/2020 12:35 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1114\CT1114 - LTE 5C.retx\

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
11	-0.50	6.00	0.20	0
12	6.166	6.00	0.20	0
13	-4.50	6.00	0.20	0
14	-0.50	-4.00	0.20	0
15	6.166	-4.00	0.20	0
16	-4.50	-4.00	0.20	0
18	0.00	0.75	-0.20	0
22	-0.20	2.00	-3.00	0
23	-0.20	-1.00	-3.00	0

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	6	4		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
2	17	7		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
6	12	15		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
7	11	14		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
8	13	16		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
9	19	18		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
12	22	23		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

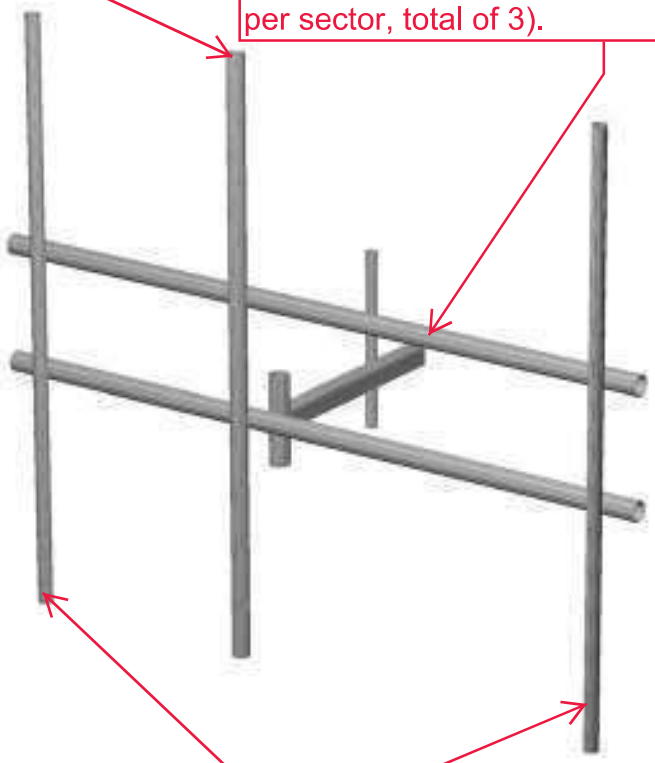
Member	Rotation [Deg]	Axes23	NX	NY	NZ
6	315.00	0	0.00	0.00	0.00
7	315.00	0	0.00	0.00	0.00
8	315.00	0	0.00	0.00	0.00
12	315.00	0	0.00	0.00	0.00

HUDSON
Design Group LLC

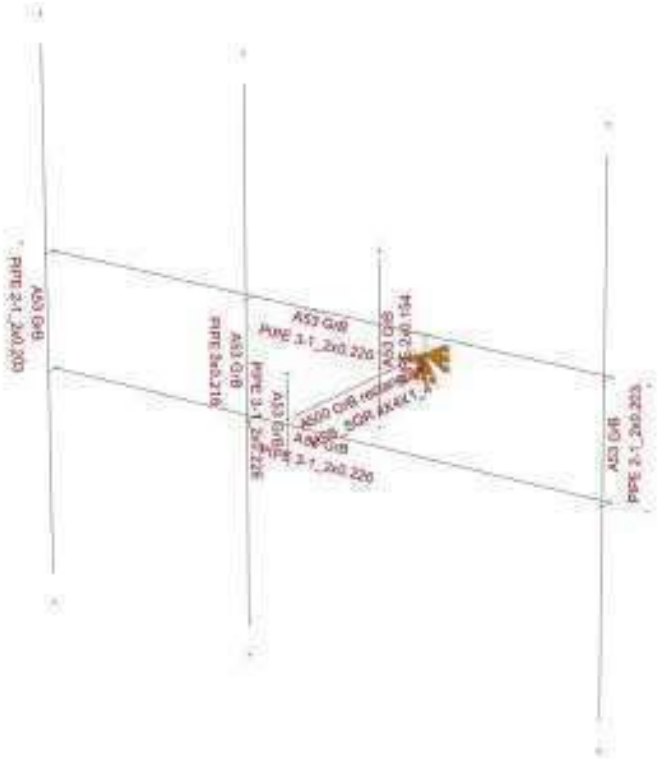
Mount Calculations
(Modified Conditions)

Replace existing pipe masts at antenna position 2 with new 3" std. (3.50" O.D.) pipe masts (typ. of 1 per sector, total of 3).

Install new 3-1/2" std. (4.00" O.D.) horizontal face pipe secured to the existing pipe masts (typ. of 1 per sector, total of 3).

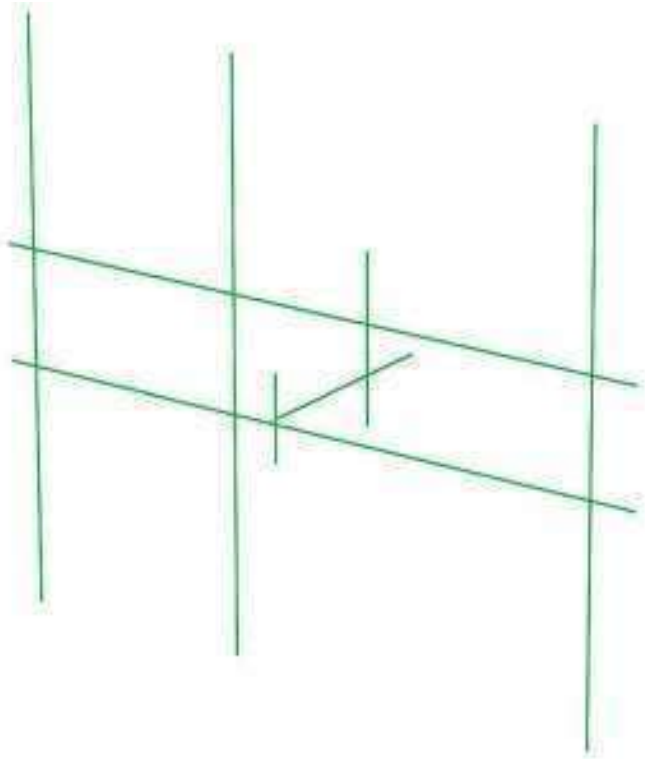


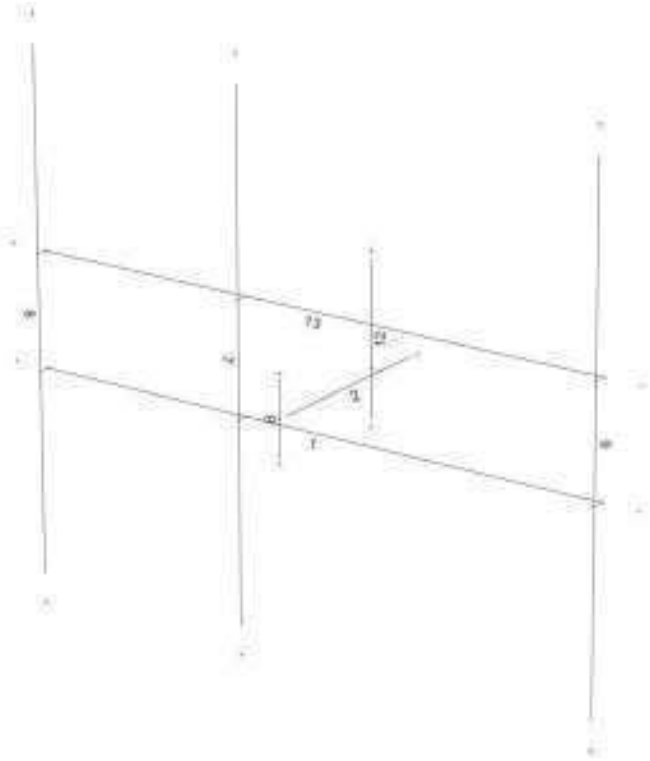
Replace existing pipe masts at antenna positions 1 and 3 with new 2-1/2" std. (2.88" O.D.) pipe masts (typ. of 2 per sector, total of 6).


A53 GrB
PIPE 2-1_2x0.203
A53 GrB
PIPE 3x0.216
A53 GrB
PIPE 3-1_2x0.226
A53 GrB
PIPE 3-1_2x0.226
A53 GrB
PIPE 3-1_2x0.226
A53 GrB
PIPE 3-1_2x0.226


Y
Z
X

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






Y
Z
X

Current Date: 4/22/2020 4:50 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1114\CT1114 - LTE 5C (MOD).retx\

Load data

GLOSSARY

Comb : Indicates if load condition is a load combination

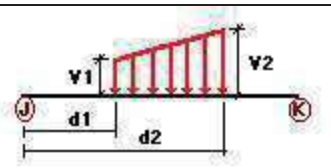
Load Conditions

Condition	Description	Comb.	Category
D	Dead Load	No	DL
Wo	Wind Load (NO ICE)	No	WIND
W30	WL 30deg	No	WIND
W60	WL 60deg	No	WIND
W90	WL 90deg	No	WIND
W120	WL 120deg	No	WIND
W150	WL 150deg	No	WIND
Di	Ice Load	No	LL
WI0	WL ICE 0deg	No	WIND
WI30	WL ICE 30deg	No	WIND
WI60	WL ICE 60deg	No	WIND
WI90	WL ICE 90deg	No	WIND
WI120	WL ICE 120deg	No	WIND
WI150	WL ICE 150deg	No	WIND
WL0	WL 30 mph 0deg	No	WIND
WL30	WL 30 mph 30deg	No	WIND
WL60	WL 30 mph 60deg	No	WIND
WL90	WL 30 mph 90deg	No	WIND
WL120	WL 30 mph 120deg	No	WIND
WL150	WL 30 mph 150deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load Right End of Mount	No	LL
LL3	250 lb Live Load Left End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
LLa4	250 lb Live Load Antenna 4	No	LL
LC1	1.2D+Wo	Yes	
LC2	1.2D+W30	Yes	
LC3	1.2D+W60	Yes	
LC4	1.2D+W90	Yes	
LC5	1.2D+W120	Yes	
LC6	1.2D+W150	Yes	
LC7	1.2D-Wo	Yes	
LC8	1.2D-W30	Yes	
LC9	1.2D-W60	Yes	
LC10	1.2D-W90	Yes	
LC11	1.2D-W120	Yes	
LC12	1.2D-W150	Yes	
LC13	0.9D+Wo	Yes	
LC14	0.9D+W30	Yes	
LC15	0.9D+W60	Yes	
LC16	0.9D+W90	Yes	
LC17	0.9D+W120	Yes	
LC18	0.9D+W150	Yes	

LC19	0.9D-Wo	Yes
LC20	0.9D-W30	Yes
LC21	0.9D-W60	Yes
LC22	0.9D-W90	Yes
LC23	0.9D-W120	Yes
LC24	0.9D-W150	Yes
LC25	1.2D+Di+WI0	Yes
LC26	1.2D+Di+WI30	Yes
LC27	1.2D+Di+WI60	Yes
LC28	1.2D+Di+WI90	Yes
LC29	1.2D+Di+WI120	Yes
LC30	1.2D+Di+WI150	Yes
LC31	1.2D+Di-WI0	Yes
LC32	1.2D+Di-WI30	Yes
LC33	1.2D+Di-WI60	Yes
LC34	1.2D+Di-WI90	Yes
LC35	1.2D+Di-WI120	Yes
LC36	1.2D+Di-WI150	Yes
LC38	1.2D+1.5LL1	Yes
LC39	1.2D+1.5LL2	Yes
LC40	1.2D+1.5LL3	Yes
LC41	1.2D+WL0+1.5LLa1	Yes
LC42	1.2D+WL30+1.5LLa1	Yes
LC43	1.2D+WL60+1.5LLa1	Yes
LC44	1.2D+WL90+1.5LLa1	Yes
LC45	1.2D+WL120+1.5LLa1	Yes
LC46	1.2D+WL150+1.5LLa1	Yes
LC47	1.2D-WL0+1.5LLa1	Yes
LC48	1.2D-WL30+1.5LLa1	Yes
LC49	1.2D-WL60+1.5LLa1	Yes
LC50	1.2D-WL90+1.5LLa1	Yes
LC51	1.2D-WL120+1.5LLa1	Yes
LC52	1.2D-WL150+1.5LLa1	Yes
LC53	1.2D+WL0+1.5LLa2	Yes
LC54	1.2D+WL30+1.5LLa2	Yes
LC55	1.2D+WL60+1.5LLa2	Yes
LC56	1.2D+WL90+1.5LLa2	Yes
LC57	1.2D+WL120+1.5LLa2	Yes
LC58	1.2D+WL150+1.5LLa2	Yes
LC59	1.2D-WL0+1.5LLa2	Yes
LC60	1.2D-WL30+1.5LLa2	Yes
LC61	1.2D-WL60+1.5LLa2	Yes
LC62	1.2D-WL90+1.5LLa2	Yes
LC63	1.2D-WL120+1.5LLa2	Yes
LC64	1.2D-WL150+1.5LLa2	Yes
LC65	1.2D+WL0+1.5LLa3	Yes
LC66	1.2D+WL30+1.5LLa3	Yes
LC67	1.2D+WL60+1.5LLa3	Yes
LC68	1.2D+WL90+1.5LLa3	Yes
LC69	1.2D+WL120+1.5LLa3	Yes
LC70	1.2D+WL150+1.5LLa3	Yes
LC71	1.2D-WL0+1.5LLa3	Yes
LC72	1.2D-WL30+1.5LLa3	Yes
LC73	1.2D-WL60+1.5LLa3	Yes
LC74	1.2D-WL90+1.5LLa3	Yes
LC75	1.2D-WL120+1.5LLa3	Yes
LC76	1.2D-WL150+1.5LLa3	Yes
LC77	1.2D+WL0+1.5LLa4	Yes
LC78	1.2D+WL30+1.5LLa4	Yes
LC79	1.2D+WL60+1.5LLa4	Yes

LC80	1.2D+WL90+1.5LLa4	Yes
LC81	1.2D+WL120+1.5LLa4	Yes
LC82	1.2D+WL150+1.5LLa4	Yes
LC83	1.2D-WL0+1.5LLa4	Yes
LC84	1.2D-WL30+1.5LLa4	Yes
LC85	1.2D-WL60+1.5LLa4	Yes
LC86	1.2D-WL90+1.5LLa4	Yes
LC87	1.2D-WL120+1.5LLa4	Yes
LC88	1.2D-WL150+1.5LLa4	Yes

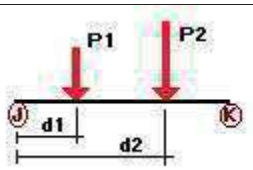
Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wo	1	z	-0.011	-0.011	0.00	No	100.00	Yes
	2	z	-0.011	-0.011	0.00	No	100.00	Yes
	6	z	-0.007	-0.007	0.00	No	100.00	Yes
	7	z	-0.007	-0.007	0.00	No	100.00	Yes
	8	z	-0.007	-0.007	0.00	No	100.00	Yes
	9	z	-0.011	-0.011	0.00	No	100.00	Yes
	12	z	-0.007	-0.007	0.00	No	100.00	Yes
	13	z	-0.011	-0.011	0.00	No	100.00	Yes
W30	1	z	-0.011	-0.011	0.00	No	100.00	Yes
	2	z	-0.011	-0.011	0.00	No	100.00	Yes
	6	z	-0.007	-0.007	0.00	No	100.00	Yes
	7	z	-0.007	-0.007	0.00	No	100.00	Yes
	8	z	-0.007	-0.007	0.00	No	100.00	Yes
	9	z	-0.011	-0.011	0.00	No	100.00	Yes
	12	z	-0.007	-0.007	0.00	No	100.00	Yes
	13	z	-0.011	-0.011	0.00	No	100.00	Yes
W60	1	x	-0.011	-0.011	0.00	No	100.00	Yes
	2	x	-0.011	-0.011	0.00	No	100.00	Yes
	6	x	-0.007	-0.007	0.00	No	100.00	Yes
	7	x	-0.007	-0.007	0.00	No	100.00	Yes
	8	x	-0.007	-0.007	0.00	No	100.00	Yes
	9	x	-0.011	-0.011	0.00	No	100.00	Yes
	12	x	-0.007	-0.007	0.00	No	100.00	Yes
	13	x	-0.011	-0.011	0.00	No	100.00	Yes
W90	1	x	-0.011	-0.011	0.00	No	100.00	Yes
	2	x	-0.011	-0.011	0.00	No	100.00	Yes
	6	x	-0.007	-0.007	0.00	No	100.00	Yes
	7	x	-0.007	-0.007	0.00	No	100.00	Yes
	8	x	-0.007	-0.007	0.00	No	100.00	Yes
	9	x	-0.011	-0.011	0.00	No	100.00	Yes
	12	x	-0.007	-0.007	0.00	No	100.00	Yes
	13	x	-0.011	-0.011	0.00	No	100.00	Yes
W120	1	x	-0.011	-0.011	0.00	No	100.00	Yes
	2	x	-0.011	-0.011	0.00	No	100.00	Yes
	6	x	-0.007	-0.007	0.00	No	100.00	Yes
	7	x	-0.007	-0.007	0.00	No	100.00	Yes

	8	x	-0.007	-0.007	0.00	No	100.00	Yes
	9	x	-0.011	-0.011	0.00	No	100.00	Yes
	12	x	-0.007	-0.007	0.00	No	100.00	Yes
	13	x	-0.011	-0.011	0.00	No	100.00	Yes
W150	1	z	0.011	0.011	0.00	No	100.00	Yes
	2	z	0.011	0.011	0.00	No	100.00	Yes
	6	z	0.007	0.007	0.00	No	100.00	Yes
	7	z	0.007	0.007	0.00	No	100.00	Yes
	8	z	0.007	0.007	0.00	No	100.00	Yes
	9	z	0.011	0.011	0.00	No	100.00	Yes
	12	z	0.007	0.007	0.00	No	100.00	Yes
	13	z	0.011	0.011	0.00	No	100.00	Yes
Di	1	y	-0.012	-0.012	0.00	No	100.00	Yes
	2	y	-0.016	-0.016	0.00	No	100.00	Yes
	6	y	-0.009	-0.009	0.00	No	100.00	Yes
	7	y	-0.009	-0.009	0.00	No	100.00	Yes
	8	y	-0.009	-0.009	0.00	No	100.00	Yes
	9	y	-0.012	-0.012	0.00	No	100.00	Yes
	12	y	-0.009	-0.009	0.00	No	100.00	Yes
	13	y	-0.012	-0.012	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
D	6	y	-0.018	2.00	No
		y	-0.018	6.50	No
		y	-0.019	1.00	No
		y	-0.019	1.00	No
	7	y	-0.039	2.00	No
		y	-0.039	7.00	No
	8	y	-0.048	2.00	No
		y	-0.048	7.00	No
		y	-0.071	1.00	No
		y	-0.072	1.00	No
		y	-0.006	6.00	No
		y	-0.006	6.00	No
	12	y	-0.033	1.50	No
Wo	6	z	-0.13	2.00	No
		z	-0.13	6.50	No
		z	-0.051	1.00	No
		z	-0.051	1.00	No
	7	z	-0.425	2.00	No
		z	-0.425	7.00	No
	8	z	-0.42	2.00	No
		z	-0.42	7.00	No
		z	-0.038	1.00	No
		z	-0.032	1.00	No
		z	-0.011	6.00	No
		z	-0.011	6.00	No

	12	z	-0.053	1.50	No
W30	6	3	-0.114	2.00	No
		3	-0.114	6.50	No
		3	-0.042	1.00	No
		3	-0.042	1.00	No
	7	3	-0.367	2.00	No
		3	-0.367	7.00	No
	8	3	-0.363	2.00	No
		3	-0.363	7.00	No
		3	-0.088	1.00	No
		3	-0.074	1.00	No
		3	-0.01	6.00	No
		3	-0.01	6.00	No
	12	3	-0.053	1.50	No
W60	6	3	-0.084	2.00	No
		3	-0.084	6.50	No
		3	-0.025	1.00	No
		3	-0.025	1.00	No
	7	3	-0.251	2.00	No
		3	-0.251	7.00	No
	8	3	-0.248	2.00	No
		3	-0.248	7.00	No
		3	-0.078	1.00	No
		3	-0.067	1.00	No
		3	-0.008	6.00	No
		3	-0.008	6.00	No
	12	3	-0.053	1.50	No
W90	6	x	-0.069	2.00	No
		x	-0.069	6.50	No
		x	-0.017	1.00	No
		x	-0.017	1.00	No
	7	x	-0.193	2.00	No
		x	-0.193	7.00	No
	8	x	-0.191	2.00	No
		x	-0.191	7.00	No
		x	-0.073	1.00	No
		x	-0.064	1.00	No
		x	-0.007	6.00	No
		x	-0.007	6.00	No
	12	x	-0.053	1.50	No
W120	6	2	-0.084	2.00	No
		2	-0.084	6.50	No
		2	-0.025	1.00	No
		2	-0.025	1.00	No
	7	2	-0.251	2.00	No
		2	-0.251	7.00	No
	8	2	-0.248	2.00	No
		2	-0.248	7.00	No
		2	-0.078	1.00	No
		2	-0.067	1.00	No
		2	-0.008	6.00	No
		2	-0.008	6.00	No
	12	2	-0.053	1.50	No
W150	6	2	-0.114	2.00	No
		2	-0.114	6.50	No
		2	-0.042	1.00	No
		2	-0.042	1.00	No
	7	2	-0.367	2.00	No
		2	-0.367	7.00	No
	8	2	-0.363	2.00	No

		2	-0.363	7.00	No
		2	-0.088	1.00	No
		2	-0.074	1.00	No
		2	-0.01	6.00	No
		2	-0.01	6.00	No
	12	2	-0.053	1.50	No
Di	6	y	-0.067	2.00	No
		y	-0.067	6.50	No
		y	-0.028	1.00	No
		y	-0.028	1.00	No
	7	y	-0.204	2.00	No
		y	-0.204	7.00	No
	8	y	-0.202	2.00	No
		y	-0.202	7.00	No
		y	-0.058	1.00	No
		y	-0.049	1.00	No
		y	-0.008	6.00	No
		y	-0.008	6.00	No
	12	y	-0.048	1.50	No
WI0	6	z	-0.032	2.00	No
		z	-0.032	6.50	No
		z	-0.015	1.00	No
		z	-0.015	1.00	No
	7	z	-0.089	2.00	No
		z	-0.089	7.00	No
	8	z	-0.088	2.00	No
		z	-0.088	7.00	No
		z	-0.013	1.00	No
		z	-0.011	1.00	No
		z	-0.005	6.00	No
		z	-0.005	6.00	No
	12	z	-0.014	1.50	No
WI30	6	3	-0.028	2.00	No
		3	-0.028	6.50	No
		3	-0.013	1.00	No
		3	-0.013	1.00	No
	7	3	-0.077	2.00	No
		3	-0.077	7.00	No
	8	3	-0.077	2.00	No
		3	-0.077	7.00	No
		3	-0.023	1.00	No
		3	-0.02	1.00	No
		3	-0.005	6.00	No
		3	-0.005	6.00	No
	12	3	-0.014	1.50	No
WI60	6	3	-0.023	2.00	No
		3	-0.023	6.50	No
		3	-0.009	1.00	No
		3	-0.009	1.00	No
	7	3	-0.057	2.00	No
		3	-0.057	7.00	No
	8	3	-0.056	2.00	No
		3	-0.056	7.00	No
		3	-0.021	1.00	No
		3	-0.019	1.00	No
		3	-0.005	6.00	No
		3	-0.005	6.00	No
	12	3	-0.014	1.50	No
WI90	6	x	-0.02	2.00	No
		x	-0.02	6.50	No

		x	-0.008	1.00	No
		x	-0.008	1.00	No
	7	x	-0.047	2.00	No
		x	-0.047	7.00	No
	8	x	-0.046	2.00	No
		x	-0.046	7.00	No
		x	-0.02	1.00	No
		x	-0.018	1.00	No
		x	-0.004	6.00	No
		x	-0.004	6.00	No
	12	x	-0.014	1.50	No
WI120	6	2	-0.023	2.00	No
		2	-0.023	6.50	No
		2	-0.009	1.00	No
		2	-0.009	1.00	No
	7	2	-0.057	2.00	No
		2	-0.057	7.00	No
	8	2	-0.056	2.00	No
		2	-0.056	7.00	No
		2	-0.021	1.00	No
		2	-0.019	1.00	No
		2	-0.005	6.00	No
		2	-0.005	6.00	No
	12	2	-0.014	1.50	No
WI150	6	2	-0.028	2.00	No
		2	-0.028	6.50	No
		2	-0.013	1.00	No
		2	-0.013	1.00	No
	7	2	-0.077	2.00	No
		2	-0.077	7.00	No
	8	2	-0.077	2.00	No
		2	-0.077	7.00	No
		2	-0.023	1.00	No
		2	-0.02	1.00	No
		2	-0.005	6.00	No
		2	-0.005	6.00	No
	12	2	-0.014	1.50	No
WL0	6	z	-0.008	2.00	No
		z	-0.008	6.50	No
		z	-0.003	1.00	No
		z	-0.003	1.00	No
	7	z	-0.027	2.00	No
		z	-0.027	7.00	No
	8	z	-0.026	2.00	No
		z	-0.026	7.00	No
		z	-0.002	1.00	No
		z	-0.002	1.00	No
		z	-0.001	6.00	No
		z	-0.001	6.00	No
	12	z	-0.003	1.50	No
WL30	6	3	-0.007	2.00	No
		3	-0.007	6.50	No
		3	-0.003	1.00	No
		3	-0.003	1.00	No
	7	3	-0.023	2.00	No
		3	-0.023	7.00	No
	8	3	-0.023	2.00	No
		3	-0.023	7.00	No
		3	-0.002	1.00	No
		3	-0.002	1.00	No

		3	-0.001	6.00	No
		3	-0.001	6.00	No
	12	3	-0.003	1.50	No
WL60	6	3	-0.005	2.00	No
		3	-0.005	6.50	No
		3	-0.002	1.00	No
		3	-0.002	1.00	No
	7	3	-0.016	2.00	No
		3	-0.016	7.00	No
	8	3	-0.016	2.00	No
		3	-0.016	7.00	No
		3	-0.005	1.00	No
		3	-0.004	1.00	No
		3	-0.001	6.00	No
		3	-0.001	6.00	No
	12	3	-0.003	1.50	No
WL90	6	x	-0.005	2.00	No
		x	-0.005	6.50	No
		x	-0.001	1.00	No
		x	-0.001	1.00	No
	7	x	-0.012	2.00	No
		x	-0.012	7.00	No
	8	x	-0.012	2.00	No
		x	-0.012	7.00	No
		x	-0.005	1.00	No
		x	-0.004	1.00	No
		x	-0.001	6.00	No
		x	-0.001	6.00	No
	12	x	-0.003	1.50	No
WL120	6	2	-0.005	2.00	No
		2	-0.005	6.50	No
		2	-0.002	1.00	No
		2	-0.002	1.00	No
	7	2	-0.016	2.00	No
		2	-0.016	7.00	No
	8	2	-0.016	2.00	No
		2	-0.016	7.00	No
		2	-0.005	1.00	No
		2	-0.004	1.00	No
		2	-0.001	6.00	No
		2	-0.001	6.00	No
	12	2	-0.003	1.50	No
WL150	6	2	-0.007	2.00	No
		2	-0.007	6.50	No
		2	-0.003	1.00	No
		2	-0.003	1.00	No
	7	2	-0.023	2.00	No
		2	-0.023	7.00	No
	8	2	-0.023	2.00	No
		2	-0.023	7.00	No
		2	-0.002	1.00	No
		2	-0.002	1.00	No
		2	-0.001	6.00	No
		2	-0.001	6.00	No
	12	2	-0.003	1.50	No

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier Comb.	MultX	MultY	MultZ
D	Dead Load	No	0.00	-1.00	0.00
Wo	Wind Load (NO ICE)	No	0.00	0.00	0.00
W30	WL 30deg	No	0.00	0.00	0.00
W60	WL 60deg	No	0.00	0.00	0.00
W90	WL 90deg	No	0.00	0.00	0.00
W120	WL 120deg	No	0.00	0.00	0.00
W150	WL 150deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
WI0	WL ICE 0deg	No	0.00	0.00	0.00
WI30	WL ICE 30deg	No	0.00	0.00	0.00
WI60	WL ICE 60deg	No	0.00	0.00	0.00
WI90	WL ICE 90deg	No	0.00	0.00	0.00
WI120	WL ICE 120deg	No	0.00	0.00	0.00
WI150	WL ICE 150deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30deg	No	0.00	0.00	0.00
WL60	WL 30 mph 60deg	No	0.00	0.00	0.00
WL90	WL 30 mph 90deg	No	0.00	0.00	0.00
WL120	WL 30 mph 120deg	No	0.00	0.00	0.00
WL150	WL 30 mph 150deg	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 Right End of Mount	No	0.00	0.00	0.00
LL3	250 lb Live Load Left End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00
LC1	1.2D+Wo	Yes	0.00	0.00	0.00
LC2	1.2D+W30	Yes	0.00	0.00	0.00
LC3	1.2D+W60	Yes	0.00	0.00	0.00
LC4	1.2D+W90	Yes	0.00	0.00	0.00
LC5	1.2D+W120	Yes	0.00	0.00	0.00
LC6	1.2D+W150	Yes	0.00	0.00	0.00
LC7	1.2D-Wo	Yes	0.00	0.00	0.00
LC8	1.2D-W30	Yes	0.00	0.00	0.00
LC9	1.2D-W60	Yes	0.00	0.00	0.00
LC10	1.2D-W90	Yes	0.00	0.00	0.00
LC11	1.2D-W120	Yes	0.00	0.00	0.00
LC12	1.2D-W150	Yes	0.00	0.00	0.00
LC13	0.9D+Wo	Yes	0.00	0.00	0.00
LC14	0.9D+W30	Yes	0.00	0.00	0.00
LC15	0.9D+W60	Yes	0.00	0.00	0.00
LC16	0.9D+W90	Yes	0.00	0.00	0.00
LC17	0.9D+W120	Yes	0.00	0.00	0.00
LC18	0.9D+W150	Yes	0.00	0.00	0.00
LC19	0.9D-Wo	Yes	0.00	0.00	0.00
LC20	0.9D-W30	Yes	0.00	0.00	0.00
LC21	0.9D-W60	Yes	0.00	0.00	0.00
LC22	0.9D-W90	Yes	0.00	0.00	0.00
LC23	0.9D-W120	Yes	0.00	0.00	0.00
LC24	0.9D-W150	Yes	0.00	0.00	0.00
LC25	1.2D+Di+WI0	Yes	0.00	0.00	0.00
LC26	1.2D+Di+WI30	Yes	0.00	0.00	0.00
LC27	1.2D+Di+WI60	Yes	0.00	0.00	0.00
LC28	1.2D+Di+WI90	Yes	0.00	0.00	0.00
LC29	1.2D+Di+WI120	Yes	0.00	0.00	0.00
LC30	1.2D+Di+WI150	Yes	0.00	0.00	0.00
LC31	1.2D+Di-WI0	Yes	0.00	0.00	0.00
LC32	1.2D+Di-WI30	Yes	0.00	0.00	0.00

LC33	1.2D+Di-WI60	Yes	0.00	0.00	0.00
LC34	1.2D+Di-WI90	Yes	0.00	0.00	0.00
LC35	1.2D+Di-WI120	Yes	0.00	0.00	0.00
LC36	1.2D+Di-WI150	Yes	0.00	0.00	0.00
LC38	1.2D+1.5LL1	Yes	0.00	0.00	0.00
LC39	1.2D+1.5LL2	Yes	0.00	0.00	0.00
LC40	1.2D+1.5LL3	Yes	0.00	0.00	0.00
LC41	1.2D+WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC42	1.2D+WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC43	1.2D+WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC44	1.2D+WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC45	1.2D+WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC46	1.2D+WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC47	1.2D-WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC48	1.2D-WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC49	1.2D-WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC50	1.2D-WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC51	1.2D-WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC52	1.2D-WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC53	1.2D+WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC54	1.2D+WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC55	1.2D+WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC56	1.2D+WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC57	1.2D+WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC58	1.2D+WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC59	1.2D-WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC60	1.2D-WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC61	1.2D-WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC62	1.2D-WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC63	1.2D-WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC64	1.2D-WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC65	1.2D+WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC66	1.2D+WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC67	1.2D+WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC68	1.2D+WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC69	1.2D+WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC70	1.2D+WL150+1.5LLa3	Yes	0.00	0.00	0.00
LC71	1.2D-WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC72	1.2D-WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC73	1.2D-WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC74	1.2D-WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC75	1.2D-WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC76	1.2D-WL150+1.5LLa3	Yes	0.00	0.00	0.00
LC77	1.2D+WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC78	1.2D+WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC79	1.2D+WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC80	1.2D+WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC81	1.2D+WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC82	1.2D+WL150+1.5LLa4	Yes	0.00	0.00	0.00
LC83	1.2D-WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC84	1.2D-WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC85	1.2D-WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC86	1.2D-WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC87	1.2D-WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC88	1.2D-WL150+1.5LLa4	Yes	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
D	0.00	0.00	0.00
Wo	0.00	0.00	0.00
W30	0.00	0.00	0.00
W60	0.00	0.00	0.00
W90	0.00	0.00	0.00
W120	0.00	0.00	0.00
W150	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
WI60	0.00	0.00	0.00
WI90	0.00	0.00	0.00
WI120	0.00	0.00	0.00
WI150	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
WL60	0.00	0.00	0.00
WL90	0.00	0.00	0.00
WL120	0.00	0.00	0.00
WL150	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LL3	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00
LLa4	0.00	0.00	0.00
LC1	0.00	0.00	0.00
LC2	0.00	0.00	0.00
LC3	0.00	0.00	0.00
LC4	0.00	0.00	0.00
LC5	0.00	0.00	0.00
LC6	0.00	0.00	0.00
LC7	0.00	0.00	0.00
LC8	0.00	0.00	0.00
LC9	0.00	0.00	0.00
LC10	0.00	0.00	0.00
LC11	0.00	0.00	0.00
LC12	0.00	0.00	0.00
LC13	0.00	0.00	0.00
LC14	0.00	0.00	0.00
LC15	0.00	0.00	0.00
LC16	0.00	0.00	0.00
LC17	0.00	0.00	0.00
LC18	0.00	0.00	0.00
LC19	0.00	0.00	0.00
LC20	0.00	0.00	0.00
LC21	0.00	0.00	0.00
LC22	0.00	0.00	0.00
LC23	0.00	0.00	0.00
LC24	0.00	0.00	0.00
LC25	0.00	0.00	0.00
LC26	0.00	0.00	0.00
LC27	0.00	0.00	0.00
LC28	0.00	0.00	0.00
LC29	0.00	0.00	0.00
LC30	0.00	0.00	0.00
LC31	0.00	0.00	0.00
LC32	0.00	0.00	0.00
LC33	0.00	0.00	0.00

LC34	0.00	0.00	0.00
LC35	0.00	0.00	0.00
LC36	0.00	0.00	0.00
LC38	0.00	0.00	0.00
LC39	0.00	0.00	0.00
LC40	0.00	0.00	0.00
LC41	0.00	0.00	0.00
LC42	0.00	0.00	0.00
LC43	0.00	0.00	0.00
LC44	0.00	0.00	0.00
LC45	0.00	0.00	0.00
LC46	0.00	0.00	0.00
LC47	0.00	0.00	0.00
LC48	0.00	0.00	0.00
LC49	0.00	0.00	0.00
LC50	0.00	0.00	0.00
LC51	0.00	0.00	0.00
LC52	0.00	0.00	0.00
LC53	0.00	0.00	0.00
LC54	0.00	0.00	0.00
LC55	0.00	0.00	0.00
LC56	0.00	0.00	0.00
LC57	0.00	0.00	0.00
LC58	0.00	0.00	0.00
LC59	0.00	0.00	0.00
LC60	0.00	0.00	0.00
LC61	0.00	0.00	0.00
LC62	0.00	0.00	0.00
LC63	0.00	0.00	0.00
LC64	0.00	0.00	0.00
LC65	0.00	0.00	0.00
LC66	0.00	0.00	0.00
LC67	0.00	0.00	0.00
LC68	0.00	0.00	0.00
LC69	0.00	0.00	0.00
LC70	0.00	0.00	0.00
LC71	0.00	0.00	0.00
LC72	0.00	0.00	0.00
LC73	0.00	0.00	0.00
LC74	0.00	0.00	0.00
LC75	0.00	0.00	0.00
LC76	0.00	0.00	0.00
LC77	0.00	0.00	0.00
LC78	0.00	0.00	0.00
LC79	0.00	0.00	0.00
LC80	0.00	0.00	0.00
LC81	0.00	0.00	0.00
LC82	0.00	0.00	0.00
LC83	0.00	0.00	0.00
LC84	0.00	0.00	0.00
LC85	0.00	0.00	0.00
LC86	0.00	0.00	0.00
LC87	0.00	0.00	0.00
LC88	0.00	0.00	0.00

Current Date: 4/22/2020 4:50 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1114\CT1114 - LTE 5C (MOD).retx\

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2D+Wo
LC2=1.2D+W30
LC3=1.2D+W60
LC4=1.2D+W90
LC5=1.2D+W120
LC6=1.2D+W150
LC7=1.2D-Wo
LC8=1.2D-W30
LC9=1.2D-W60
LC10=1.2D-W90
LC11=1.2D-W120
LC12=1.2D-W150
LC13=0.9D+Wo
LC14=0.9D+W30
LC15=0.9D+W60
LC16=0.9D+W90
LC17=0.9D+W120
LC18=0.9D+W150
LC19=0.9D-Wo
LC20=0.9D-W30
LC21=0.9D-W60
LC22=0.9D-W90
LC23=0.9D-W120
LC24=0.9D-W150
LC25=1.2D+Di+WI0
LC26=1.2D+Di+WI30
LC27=1.2D+Di+WI60
LC28=1.2D+Di+WI90
LC29=1.2D+Di+WI120
LC30=1.2D+Di+WI150
LC31=1.2D+Di-WI0
LC32=1.2D+Di-WI30
LC33=1.2D+Di-WI60
LC34=1.2D+Di-WI90
LC35=1.2D+Di-WI120
LC36=1.2D+Di-WI150
LC38=1.2D+1.5LL1
LC39=1.2D+1.5LL2
LC40=1.2D+1.5LL3
LC41=1.2D+WL0+1.5LLa1
LC42=1.2D+WL30+1.5LLa1
LC43=1.2D+WL60+1.5LLa1
LC44=1.2D+WL90+1.5LLa1
LC45=1.2D+WL120+1.5LLa1
LC46=1.2D+WL150+1.5LLa1
LC47=1.2D-WL0+1.5LLa1
LC48=1.2D-WL30+1.5LLa1
LC49=1.2D-WL60+1.5LLa1
LC50=1.2D-WL90+1.5LLa1
LC51=1.2D-WL120+1.5LLa1
LC52=1.2D-WL150+1.5LLa1
LC53=1.2D+WL0+1.5LLa2
LC54=1.2D+WL30+1.5LLa2

LC55=1.2D+WL60+1.5LLa2
LC56=1.2D+WL90+1.5LLa2
LC57=1.2D+WL120+1.5LLa2
LC58=1.2D+WL150+1.5LLa2
LC59=1.2D-WL0+1.5LLa2
LC60=1.2D-WL30+1.5LLa2
LC61=1.2D-WL60+1.5LLa2
LC62=1.2D-WL90+1.5LLa2
LC63=1.2D-WL120+1.5LLa2
LC64=1.2D-WL150+1.5LLa2
LC65=1.2D+WL0+1.5LLa3
LC66=1.2D+WL30+1.5LLa3
LC67=1.2D+WL60+1.5LLa3
LC68=1.2D+WL90+1.5LLa3
LC69=1.2D+WL120+1.5LLa3
LC70=1.2D+WL150+1.5LLa3
LC71=1.2D-WL0+1.5LLa3
LC72=1.2D-WL30+1.5LLa3
LC73=1.2D-WL60+1.5LLa3
LC74=1.2D-WL90+1.5LLa3
LC75=1.2D-WL120+1.5LLa3
LC76=1.2D-WL150+1.5LLa3
LC77=1.2D+WL0+1.5LLa4
LC78=1.2D+WL30+1.5LLa4
LC79=1.2D+WL60+1.5LLa4
LC80=1.2D+WL90+1.5LLa4
LC81=1.2D+WL120+1.5LLa4
LC82=1.2D+WL150+1.5LLa4
LC83=1.2D-WL0+1.5LLa4
LC84=1.2D-WL30+1.5LLa4
LC85=1.2D-WL60+1.5LLa4
LC86=1.2D-WL90+1.5LLa4
LC87=1.2D-WL120+1.5LLa4
LC88=1.2D-WL150+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	**2**	LC8 at 100.00%	**0.91**	**OK**	
	PIPE 2-1_2x0.203	**6**	LC7 at 58.33%	0.37	OK	
		8	LC1 at 58.33%	**0.53**	**OK**	
	PIPE 2x0.154	**12**	LC7 at 65.63%	**0.03**	**OK**	
	PIPE 3-1_2x0.226	**1**	LC2 at 57.50%	**0.70**	**OK**	
		9	LC3 at 50.00%	0.00	OK	
		13	LC7 at 60.94%	0.30	OK	
	PIPE 3x0.216	**7**	LC1 at 58.33%	**0.72**	**OK**	

Current Date: 4/22/2020 4:50 PM
Units system: English
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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
7	0.00	0.00	-4.00	0
11	-0.50	6.00	0.20	0
12	6.166	6.00	0.20	0
13	-4.50	6.00	0.20	0
14	-0.50	-4.00	0.20	0
15	6.166	-4.00	0.20	0
16	-4.50	-4.00	0.20	0
18	0.00	0.75	-0.20	0
19	0.00	-0.75	-0.20	0
22	-0.20	2.00	-3.00	0
23	-0.20	-1.00	-3.00	0
31	-5.166	2.00	0.00	0
1	0.00	0.00	0.00	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
7	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	lg factor
1	6	4		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
2	17	7		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
6	12	15		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
7	11	14		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
8	13	16		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
9	19	18		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
12	22	23		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
13	30	31		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
6	315.00	0	0.00	0.00	0.00
7	315.00	0	0.00	0.00	0.00
8	315.00	0	0.00	0.00	0.00
12	315.00	0	0.00	0.00	0.00

TENTION OF THE CONSTRUCTION

STEEL SHALL CONFORM TO THE
ON "SPECIFICATION FOR THE DESIGN,
STEEL FOR BUILDINGS".
M A992 (Fy=50 ksi),
ASTM A36 UNLESS OTHERWISE

"COLD-FORMED WELDED &
NG", GRADE B, OR ASTM A53 PIPE
D WELDED AND SEAMLESS TYPE E
NOMINAL. ACTUAL OUTSIDE

HIGH STRENGTH BOLTS (BEARING
X "HIGH STRENGTH BOLTS FOR
UTS AND PLAIN HARDENED
UON.
AFTER FABRICATION IN
DIP GALVANIZED) COATINGS ON IRON
NOTED.
HARDWARE SHALL BE GALVANIZED IN
NG (HOT-DIP) ON IRON AND STEEL

ALL DAMAGED GALVANIZED
GANIC ZINC REPAIR PAINT
780. GALVANIZING REPAIR PAINT
ZIRP BY DUNCAN GALVANIZING,
AL. THICKNESS OF APPLIED
NOT LESS THAN 4 COATS (ALLOW
ULTING COATING THICKNESS
LICABLE.
E FOR PROCEDURES, APPEARANCE
S USED IN CORRECTING WELDING.
ALL BE QUALIFIED IN ACCORDANCE
DURES". ALL WELDING SHALL BE
ING SHALL CONFORM TO AISC AND
HOWN, PROVIDE THE MINIMUM SIZE
RUCTION MANUAL". 14TH EDITION.
ERWISE MISFITTING OR
S SHALL BE REPORTED TO THE
L OR CORRECTIVE ACTION. ANY
N MANAGER APPROVAL.
L STRUT FRAMING AS
, MI OR EQUAL. STRUT MEMBERS
THERWISE NOTED, AND SHALL BE

OF STAINLESS STEEL ANCHOR ROD
READED INSERT, A SCREEN TUBE
YSTEM SHALL BE THE HILTI-HIT
ECIFIED IN DWG.) OR ENGINEERS

ERAL SPECIFICATION FF-S-325,
T III OR APPROVED EQUAL.
H THE MANUFACTURER'S

MENTS OF THE AMERICAN INSTITUTE
AL FOREST PRODUCTS ASSOCIATION'S
CONSTRUCTION. ALL LUMBER SHALL
UCTURAL GRADE NO. 2 OR BETTER.
THE CONTRACTOR SHALL CONTACT
BUILDING OWNER AND THE EXISTING
ED IN SUCH A MANNER AS TO NOT
SHALL BE WATERTIGHT.
ANUFACTURED BY STRONGWELL
GN CRITERIA FOR THESE MEMBERS
E DESIGN MANUAL. ALL
MUST BE STRICTLY ADHERED TO.
RK TO BE COMPLETED UNTIL SHOP
OVED IN WRITING.
EL TO PRE-EXISTING CONDITIONS.

TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

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

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

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

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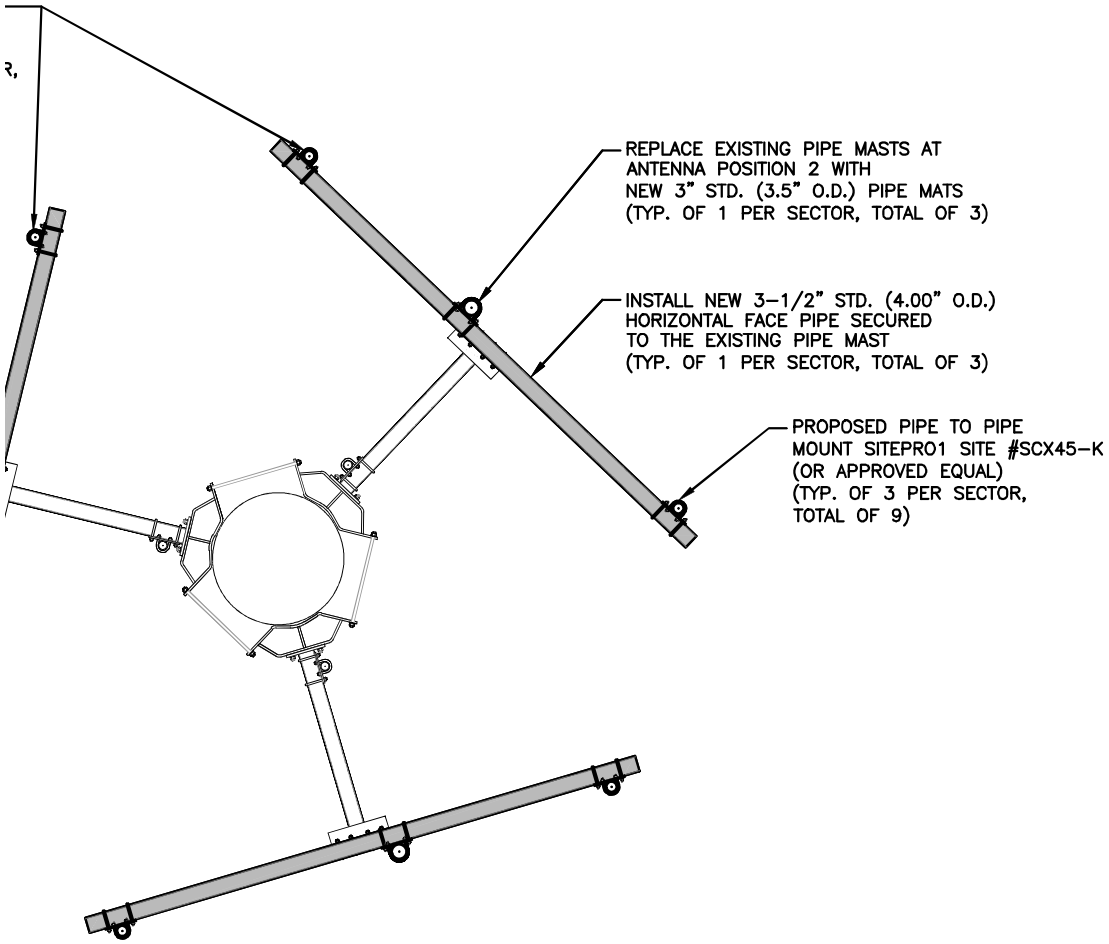
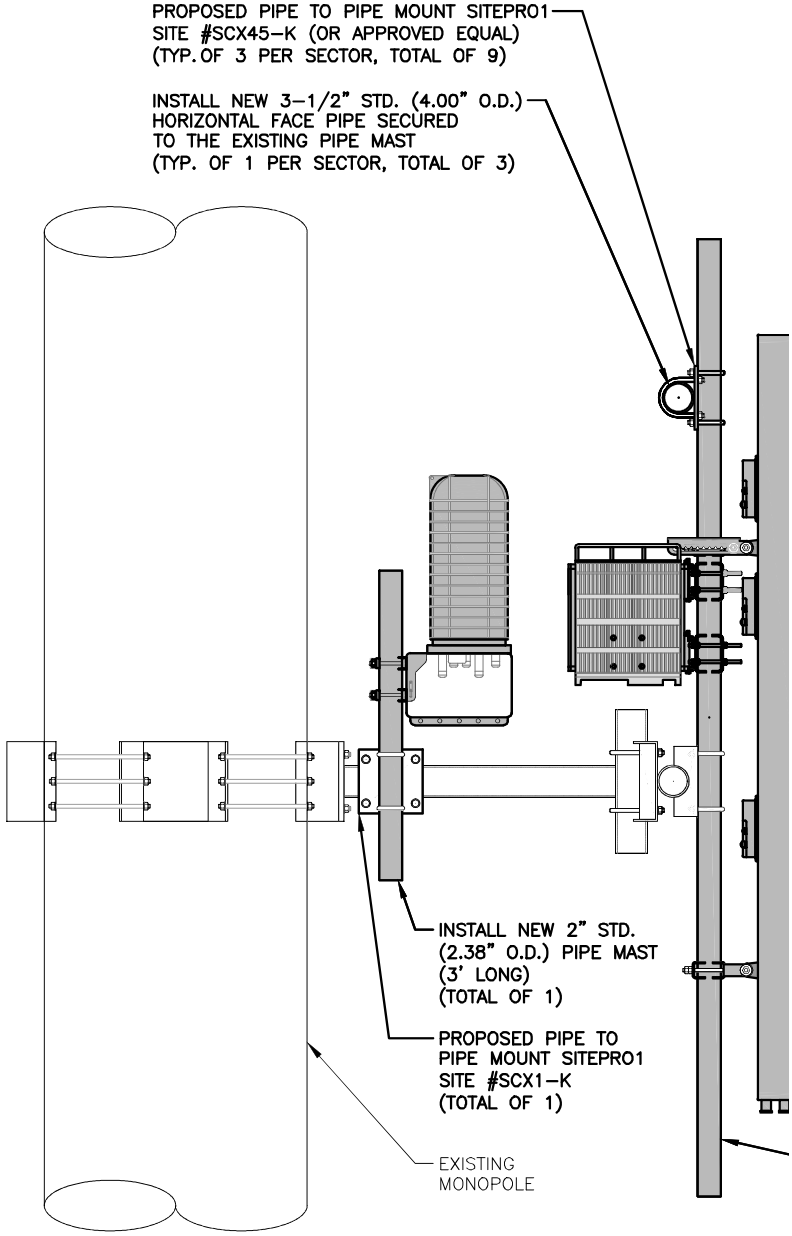
STATE OF CONNE
DANIEL P. HAM



OUNT MODIFICATIONS PLAN 1 / S-1

"=1'-0"
"=1'-0"

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



PROPOSED MOUNT MODIFICATIONS DETAIL 2 / S-1

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

0 0'-6" 1'-0"

STATE OF CONNE
DANIEL P. HAM

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2018.

TOWN OF CANTON CT

Information on the Property Records for the Municipality of Canton was last updated on 5/18/2020.

Parcel Information

Location:	96 POWDER MILL ROAD	Property Use:	Farms/Barns	Primary Use:	Storage Building
Unique ID:	4310096	Map Block Lot:	26/431/0096	Acres:	1.61
490 Acres:	0.00	Zone:	I	Volume / Page:	219 /467
Developers Map / Lot:		Census:			

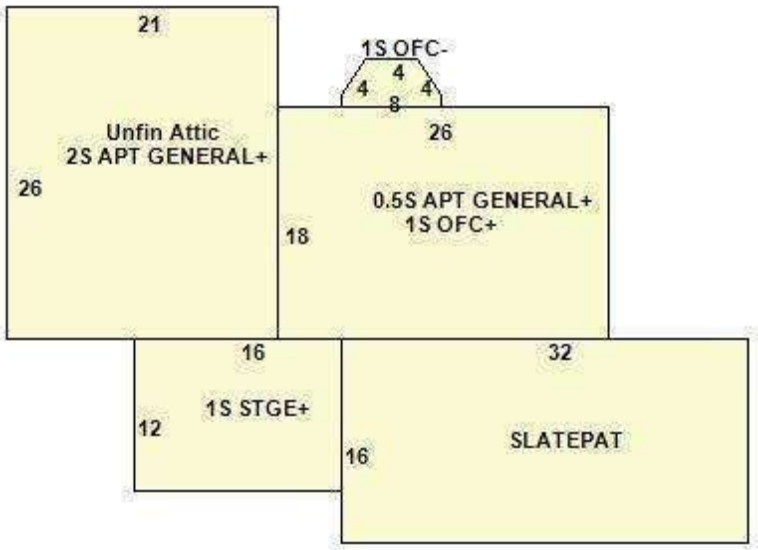
Value Information

	Appraised Value	Assessed Value
Land	141,680	99,180
Buildings	286,850	200,790
Detached Outbuildings	0	0
Total	428,530	299,970

Owner's Information

Owner's Data
PROPERTIES ONE LLC P O BOX 125 COLLINSVILLE, CT 06022

Building 1



Category:	Retail	Use:	Mixed Use - Retail / Apartment	GLA:	2,012
Stories:	2.00	Construction:	Wood Frame	Year Built:	1910

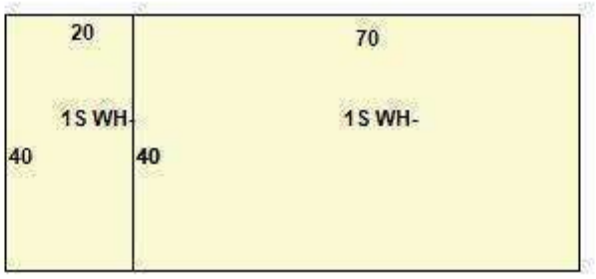
Heating:	FHA	Fuel:	Oil	Cooling Percent:	0
Siding:	Wood Frame	Roof Material:	Asphalt	Beds/Units:	0

Special Features

Attached Components

Type:	Year Built:	Area:
Unfinished Attic	1910	546
Stone Patio	1910	512

Building 2



Category:	Industrial	Use:	Warehouse	GLA:	3,600
Stories:	1.00	Construction:	Metal	Year Built:	1998
Heating:		Fuel:	UnKnown	Cooling Percent:	0
Siding:	Metal	Roof Material:	Tar and Gravel	Beds/Units:	0

Special Features

Overhead Doors	80
Overhead Doors	168

Attached Components

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
PROPERTIES ONE LLC	0219	0467	04/17/1997		No	$140,000

Town of Canton, Connecticut - Assessment Parcel Map

Unique ID: 4310096 Address: 96 POWDER MILL ROAD

N W E S

Approximate Scale:

1 inch = 100 feet

Disclaimer:
This map is for informational purposes only.
All information is subject to verification by any user.
The Town of Canton and its mapping contractors
assume no legal responsibility for the information contained herein.

Map Produced
June 2019

Sublot
Easement
4850007 Parcel ID
89' Dimension

ZONING COMMISSION
Canton, Connecticut INC. 1806
4 Market Street, Collinsville, Connecticut 06022

September 7, 2000

Certified Mail 7000 0600 0029 3243 7698
RETURN RECEIPT REQUESTED

SBA Communication, Inc
c/o Thomas F. Flynn, II
80 Eastern BLVD
Glastonbury, CT 06033

RE: Special Exception and Site Plan Approval for a Wireless Telecommunications Facility; File #20.Apln. #843; 96 Powder Mill Road; Zone LI; Properties One, LLC, owner/SBA, Inc. and Sprint Spectrum, LLC, applicant

Dear Mr. Flynn:

At a regular meeting held on Wednesday, July 19, 2000 at the Library Community Center at 40 Dyer Avenue in Canton, following a public hearing, the Canton Zoning Commission voted to approve with conditions the above-captioned request for a special exception and a site plan approval.

This action of the Commission shall be effective 14 days after publication of the decision in the Hartford Courant on Friday, August 25, 2000.

RECORDING YOUR APPROVAL:

Enclosed you will find the Certificate of Action. In order to validate the certificate and make the action of the Commission effective, you must bring the original Certificate of Action to the Canton Town Clerk to be recorded on the Canton Land Records. Recording fees may be obtained by calling the Town Clerk's office at 693-7870.

OTHER PERMITS:

The Certificate of Action is not a permit to commence with your plans. It entitles you to make application for a Building Permit, a Sign Permit or any other permit. Please call this office if you need further details, 693-7856.

Sincerely,

Eric M. Barz

Eric M. Barz, A.I.C.P.
Director of Planning and Community Development

Telephone (860) 693-7856 **Fax (860) 693-7840**

c:\msoffice\wordpdf\zoning\letters\2000\07-19-00 F 20, A 843 96 Powder Mill Road

CERTIFICATE OF ACTION

CANTON ZONING COMMISSION

OWNER OF RECORD:	[	**ZONING FILE** *20*
Properties One, LLC	[	**APPLICATION** *843*
54 Church Street	[	**District** *LI*
Canton, CT	[	**Map** *6-6* **Lot** *3*
APPLICANT: *SBA, Inc. and Sprint Spectrum, LLC*	[	**Location** *96 Powder Mill Road*

APPROVAL OF SPECIAL EXCEPTION AND SITE PLAN

As Secretary of the Canton Zoning Commission, I certify that at the regular meeting on July 19, 2000, following a public hearing, the Zoning Commission approved with conditions your request for a special exception and site plan approval. This approval is subject to the following conditions:

1) approval is for a five year period which may be renewed for additional five year periods upon successful submission of a re-inspection report and renewals of removal bond;
2) the height of the main tower shall be 180 feet and if more than five carriers are to be installed on the tower the applicant will submit for a site plan modification;
3) the re-inspection of the tower structure for structural integrity be done at five year intervals concurrent with the renewal of the removal bond;
4) removal bond be posted in the initial amount of $50,000 and may be adjusted concurrent with the renewal dates to reflect the true cost of removing the tower;
5) the height and fall zone waivers as established in paragraph 67.4.14 of the regulations are granted in lieu of the engineering report;
6) parking layout as shown and the landscaping as shown shall be adjusted as directed by staff.

In so approving, the Commission finds the proposal to be consistent with the adjacent uses and the Master Plan of Development. And further finds this application to be in conformance with Section 51 and Section 52 of the Canton Zoning Regulations.

Dated at Canton, Connecticut on September 7, 2000.

Douglas Kress, Secretary
CANTON ZONING COMMISSION

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: CT01722-S, South Canton

Property Located at: 96 Powder Mill Road, Canton, CT, 06019-3501

THE CITY/COUNTY OF: Canton / Hartford

APPLICATION FOR ZONING/USE/BUILDING PERMIT

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

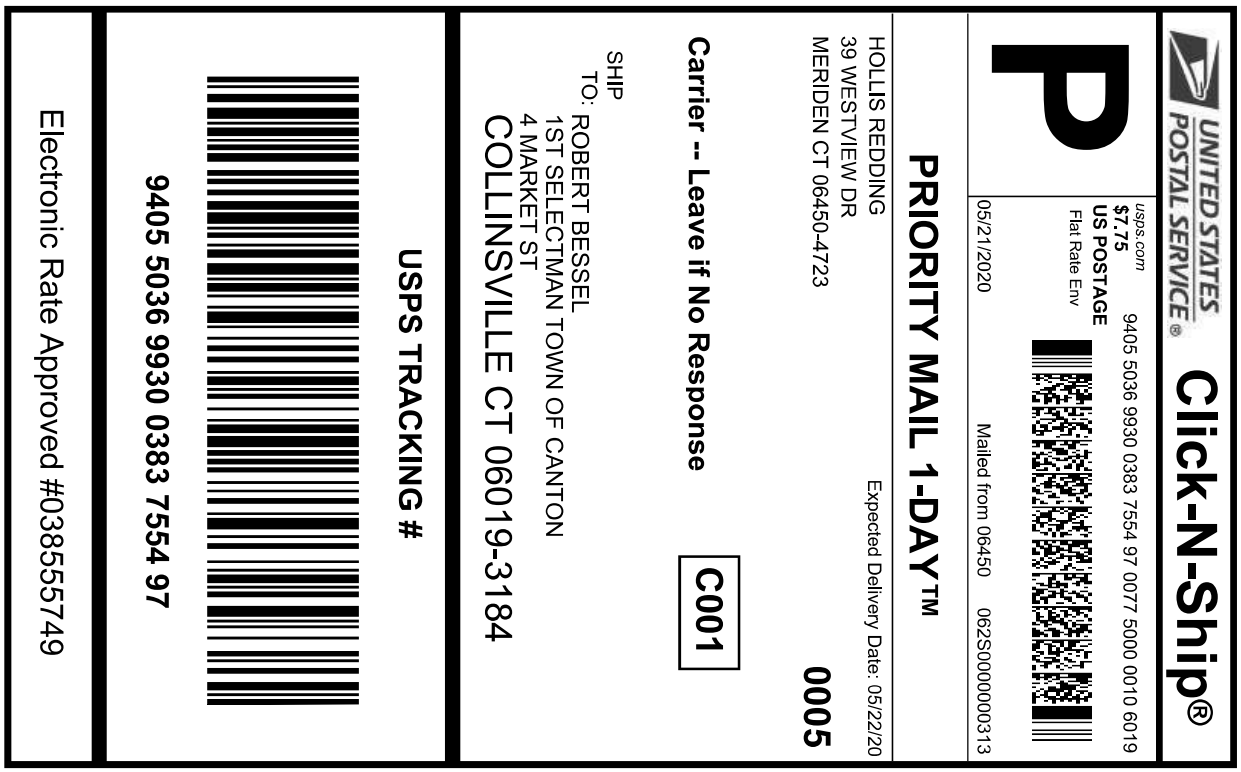
All approval conditions that may be granted to AT&T in connection with above referenced facility relating to this specific application are the sole responsibility of AT&T.

SBA Towers, LLC

Jason Silberstein

Executive VP, Site Leasing

Date: 5/19/2020



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Priority Mail® Postage:	**$7.75**
Total:	**$7.75**

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39 WESTVIEW DR
MERIDEN CT 06450-4723

To: ROBERT BESSEL
1ST SELECTMAN TOWN OF CANTON
4 MARKET ST
COLLINSVILLE CT 06019-3184

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$7.75
US POSTAGE
Flat Rate Env

05/21/2020 Mailed from 06450 062S0000001301

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PRIORITY MAIL 1-DAY™

HOLLIS REDDING
39 WESTVIEW DR
MERIDEN CT 06450-4723

Expected Delivery Date: 05/22/20

0005

Carrier -- Leave if No Response

C002

SHIP TO: NEIL PADE
DIRECTOR OF PLANNING TOWN OF CANTON
5 MARKET ST
COLLINSVILLE CT 06019

USPS TRACKING #

9405 5036 9930 0383 7555 03

Electronic Rate Approved #038555749

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From: HOLLIS REDDING
39 WESTVIEW DR
MERIDEN CT 06450-4723

To: NEIL PADE
DIRECTOR OF PLANNING TOWN OF CANTON
5 MARKET ST
COLLINSVILLE CT 06019

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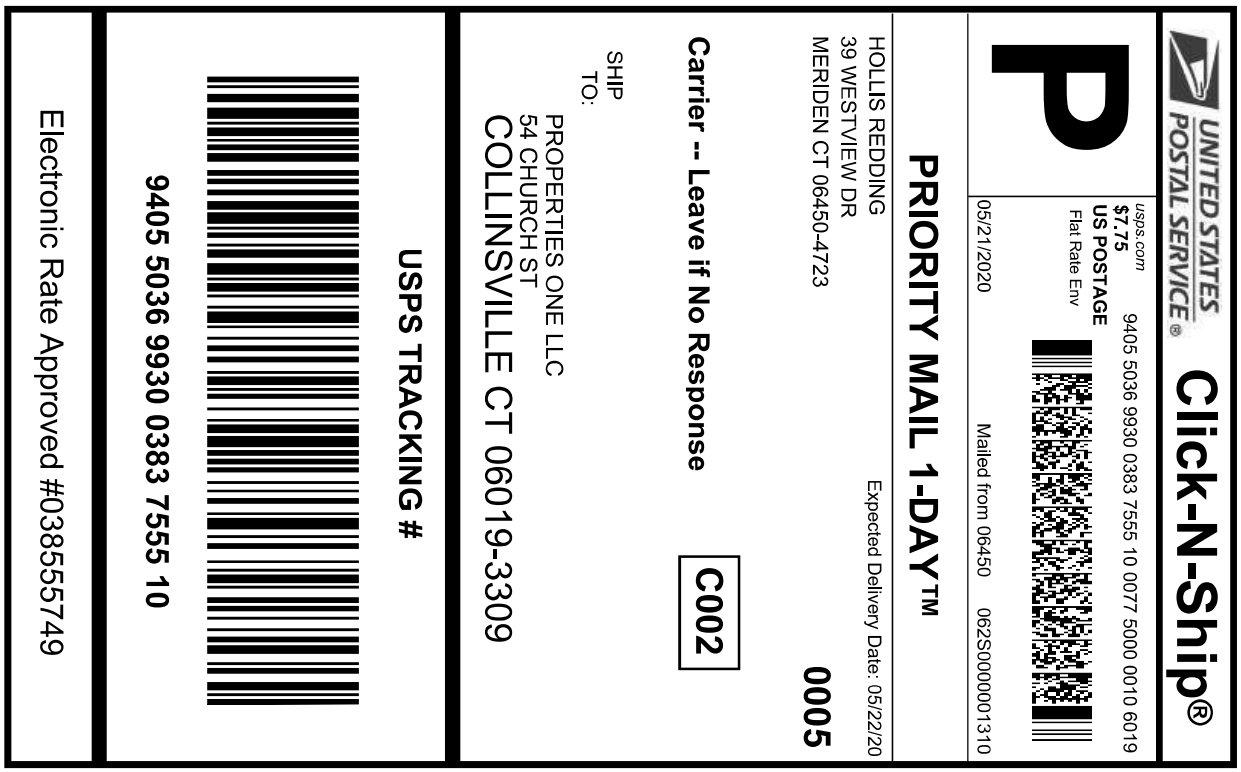

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USPS TRACKING # :
9405 5036 9930 0383 7555 10

Trans. #:	494131608
Print Date:	05/19/2020
Ship Date:	05/21/2020
Expected Delivery Date:	05/22/2020

Priority Mail® Postage:	$7.75
Total:	$7.75

From: HOLLIS REDDING
39 WESTVIEW DR
MERIDEN CT 06450-4723

To: PROPERTIES ONE LLC
54 CHURCH ST
COLLINSVILLE CT 06019-3309

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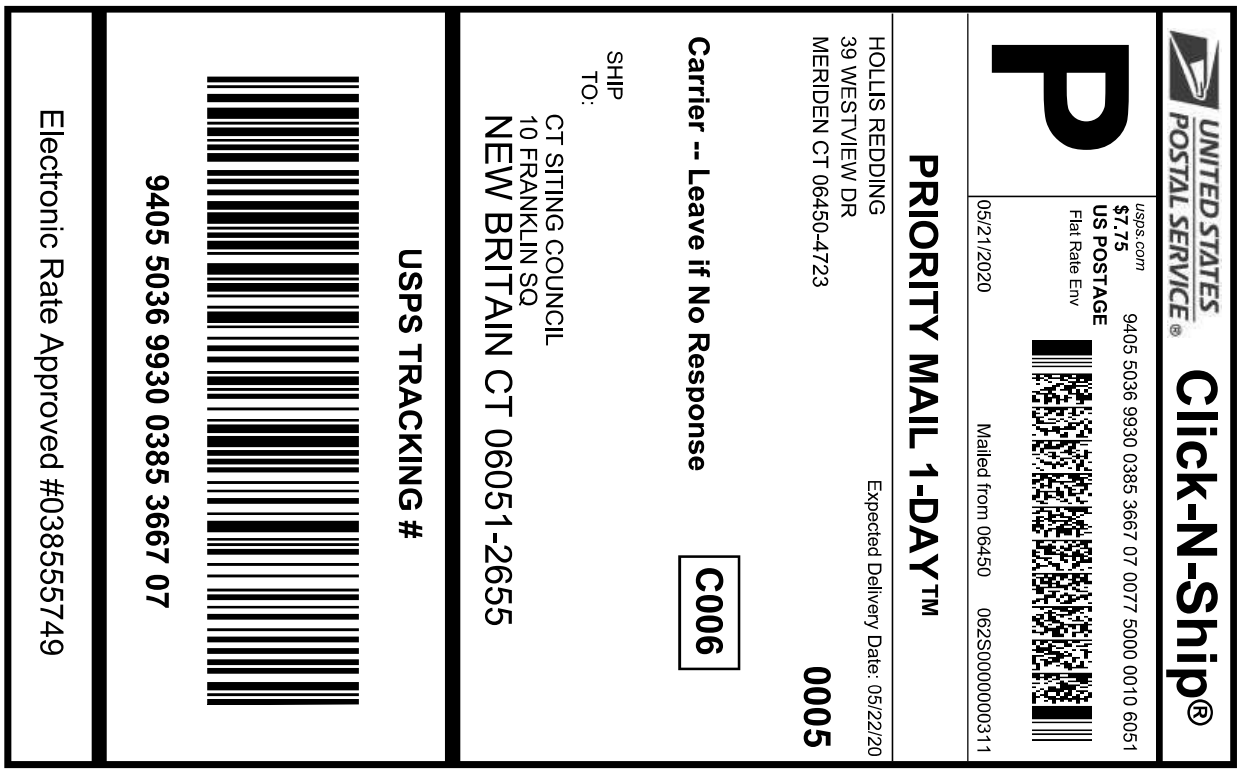

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9405 5036 9930 0385 3667 07

Trans. #:	494258102
Print Date:	05/20/2020
Ship Date:	05/21/2020
Expected Delivery Date:	05/22/2020

Priority Mail® Postage:	$7.75
Total:	$7.75

From: HOLLIS REDDING
39 WESTVIEW DR
MERIDEN CT 06450-4723

To: CT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN CT 06051-2655

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Hollis Redding

To: Michael McNamara
Subject: Canton 96 Powder Mill Rd SBA IDCT01722-S AT&T ID CT1114

Mike-

Attached please find an Exempt Modification which will be filed with the CT Siting Council on May 21, 2020. Thank you.
Hollis

Hollis M. Redding

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