



Greg Milano
SAI Group, LLC
12 Industrial Way
Salem, NH 03079
860-707-9001
gmilano@saigrp.com

October 15, 2019

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

Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T) CT2234
153 East Haddam Road, Salem, CT 06420
N 41.468463
W -72.273305

Dear Ms. Bachman:

AT&T currently maintains nine (9) antennas at the 187-foot level of the existing 190-foot self-support lattice at 153 East Haddam Road, Salem, CT. The tower and the property are owned by American Tower Corporation (ATC). AT&T now intends to remove (6) CCI antennas and replace them with six (6) DMP65R-BU8DA CCI antennas. These antennas would be installed at the 187-foot level of the tower. AT&T also intends to remove three (3) Ericsson RRUS-11 remote radio units and install three (3) Ericsson 4449 B5/B12 RRUS, three (3) Ericsson B14 4475 RRUS and three (3) Ericsson 8843 B2/B66A RRUS.

This facility was approved by the Salem Planning and Zoning Commission on July 27, 1999. This approval included no conditions which could feasibly be violated by this modification, including total facility height or mounting restrictions. This modification complies with all conditions of approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Kevin T. Lyden, First Selectman for the Town of Salem, Salem Planning Zoning and Wetlands Department, as well as the property and tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the 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 replacement antennas 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 with mount modifications and its foundation can support the proposed loading.

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

Sincerely,



Greg Milano



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Attachments

cc: Kevin T. Lyden - First Selectman
Justin LaFountain – Town Planner; Planning, Zoning and Wetlands Department
American Tower - Property Owner
American Tower - Tower Owner (via e-mail)

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*							2.02%
AT&T UMTS	2	565	187	0.0124	880	0.5867	0.21%
AT&T LTE	2	875	187	0.0192	1900	1.0000	0.19%
AT&T GSM	1	283	187	0.0031	880	0.5867	0.05%
AT&T UMTS	4	575	187	0.0231	1900	1.0000	0.23%
AT&T LTE	1	1615	187	0.0177	734	0.4893	0.36%
Site Total							3.07%

*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*							2.02%
AT&T UMTS	1	565	187	0.0062	850	0.5667	0.11%
AT&T LTE	1	2951	187	0.0324	700	0.4667	0.69%
AT&T LTE	1	1476	187	0.0162	700	0.4667	0.35%
AT&T LTE	2	3664	187	0.0804	1900	1.0000	0.80%
AT&T AWS	2	3837	187	0.0842	2100	1.0000	0.84%
AT&T LTE	1	1000	187	0.0110	850	0.5667	0.19%
AT&T 5G	1	1000	187	0.0110	850	0.5667	0.19%
Site Total							5.21%

*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 ANTENNA (DMP65R-BU8DA) @ POS. 3 & POS. 4 (TYP. OF 2 PER SECTOR, TOTAL OF 6)
- NEW AT&T RRUS: B14 4478 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 4449 B5/B12 (700/850) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 8843 B2/B66A (AWS/PCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- PROPOSED AT&T SURGE ARRESTOR (DC9-48-60-24-8C-EV) (TOTAL OF 1) WITH (3) DC POWER CABLES & (1) FIBER (TO FOLLOW EXISTING ROUTE).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- SWAP BASEBAND FOR RBS 6630.
- ADD IDLE, XMU & DC12.
- ADD 5G RBS 6630.
- SWAP EXISTING POWER PLANT FOR NETSURE 7100 WITH BATTERY.

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNA (P65-17-XLH-RR) @ POS. 3 (TYP. OF 1 PER ALPHA & GAMMA SECTORS, TOTAL OF 2).
- EXISTING AT&T ANTENNA (SBNH-1D6565C) @ POS. 3 (TOTAL OF 1 PER BETA SECTOR)
- EXISTING AT&T ANTENNA (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).

SITE ADDRESS: 153 EAST HADDAM ROAD
SALEM, CT 06420

LATITUDE: 41.468463 N, 41° 28' 06.47" N

LONGITUDE: 72.273305 W, 72° 16' 23.90" W

TYPE OF SITE: LATTICE TOWER / INDOOR EQUIPMENT

STRUCTURE HEIGHT: 190'-0"±

RAD CENTER: 187'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT2234

SITE NAME: SALEM E. HADDAM RD.

FA CODE: 10035321

PACE ID: MRCTB041429, MRCTB041441, MRCTB041715

PROJECT: LTE 2C_3C_4C_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. 0.2 MI. MERGE ONTO I-91 N VIA THE RAMP ON THE LEFT TOWARD HARTFORD. 4.4 MI. MERGE ONTO CT-3 N VIA EXIT 25 TOWARD GLASTONBURY. 2.4 MI. MERGE ONTO CT-2 E TOWARD NORWICH. 20.1 MI. MERGE ONTO CT-11 S VIA EXIT 19 TOWARD NEW LONDON. 7.4 MI. TAKE THE CT-82 EXIT, EXIT 4, TOWARD SALEM/HADLYME. 0.3 MI. TURN LEFT ONTO E HADDAM RD/CT-82. 0.3 MI. END AT 153 E HADDAM RD SALEM, CT 06420.



GENERAL NOTES

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

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	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	STRUCTURAL DETAILS	1
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1

**ATC SITE NAME: SALEM
ATC SITE #: 10027**

72 HOURS



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

UNDERGROUND SERVICE ALERT

HGD 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: CT2234
SITE NAME: SALEM E. HADDAM RD.
ATC SITE #: 10027
153 EAST HADDAM ROAD
SALEM, CT 06420
NEW LONDON COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	09/04/19	ISSUED FOR CONSTRUCTION	JW	AT	DPH
A	08/29/19	ISSUED FOR REVIEW	AM	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AM



AT&T	
TITLE SHEET (LTE 2C_3C_4C)	
SITE NUMBER	DRAWING NUMBER
CT2234	T-1
REV	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) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER 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-G, 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		

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

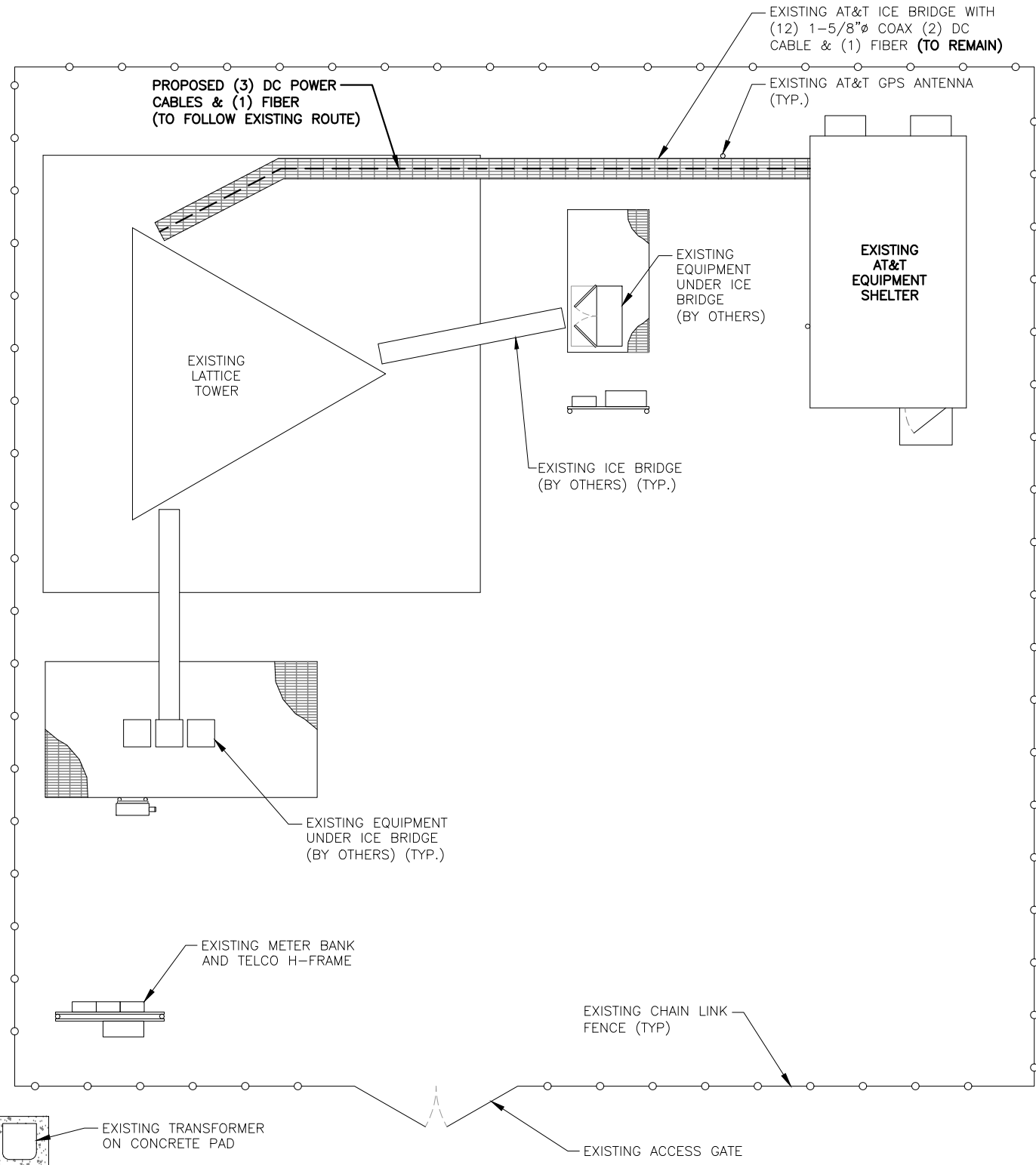
12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT2234
 SITE NAME: SALEM E. HADDAM RD.
 ATC SITE #: 10027
 153 EAST HADDAM ROAD
 SALEM, CT 06420
 NEW LONDON COUNTY

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

1	09/04/19	ISSUED FOR CONSTRUCTION	JW	AT	DPH
A	08/29/19	ISSUED FOR REVIEW	AM	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: AM		

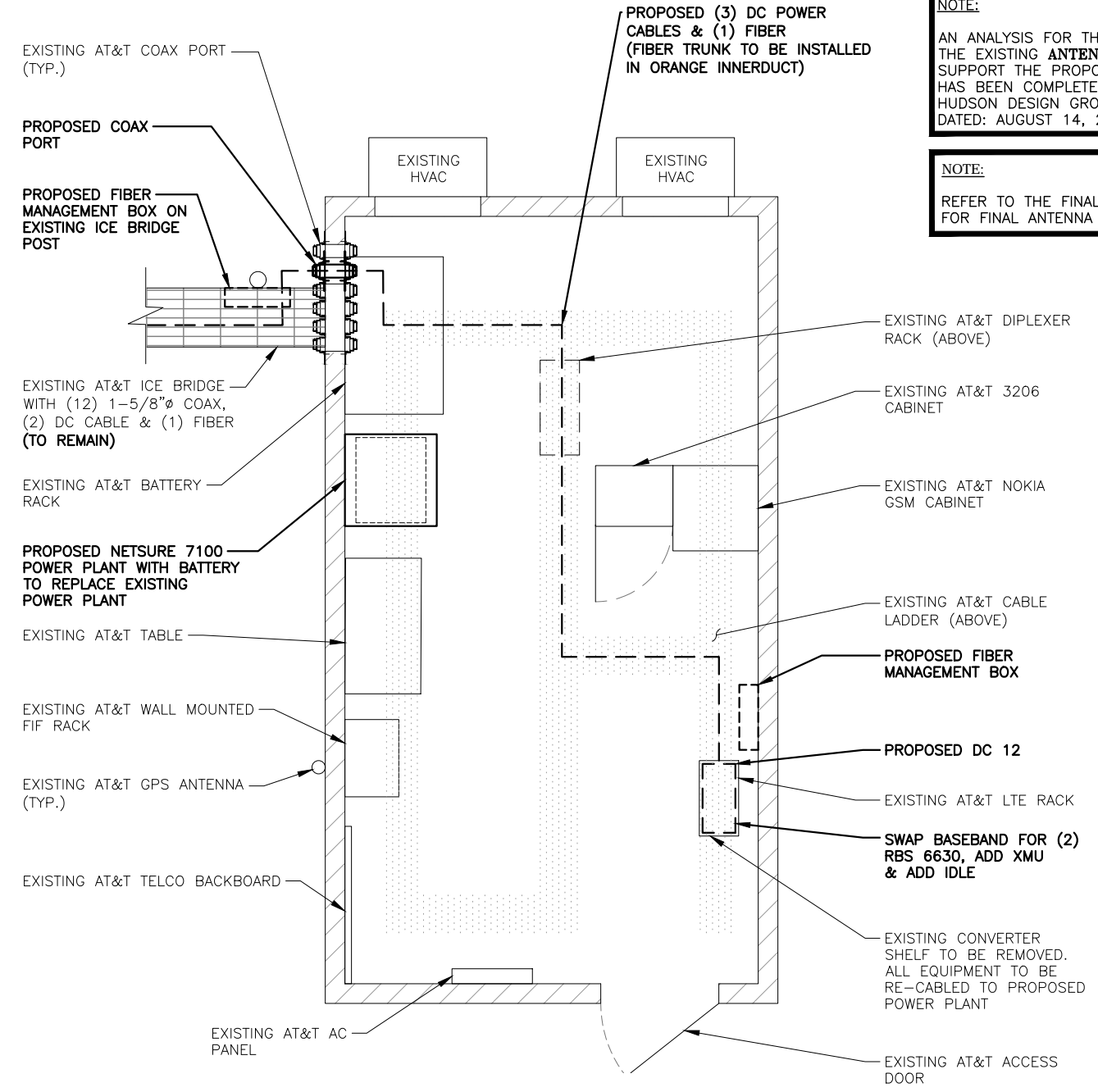
AT&T		
GENERAL NOTES (LTE 2C_3C_4C)		
SITE NUMBER	DRAWING NUMBER	REV
CT2234	GN-1	1



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

1
A-1

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



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

2
A-1

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

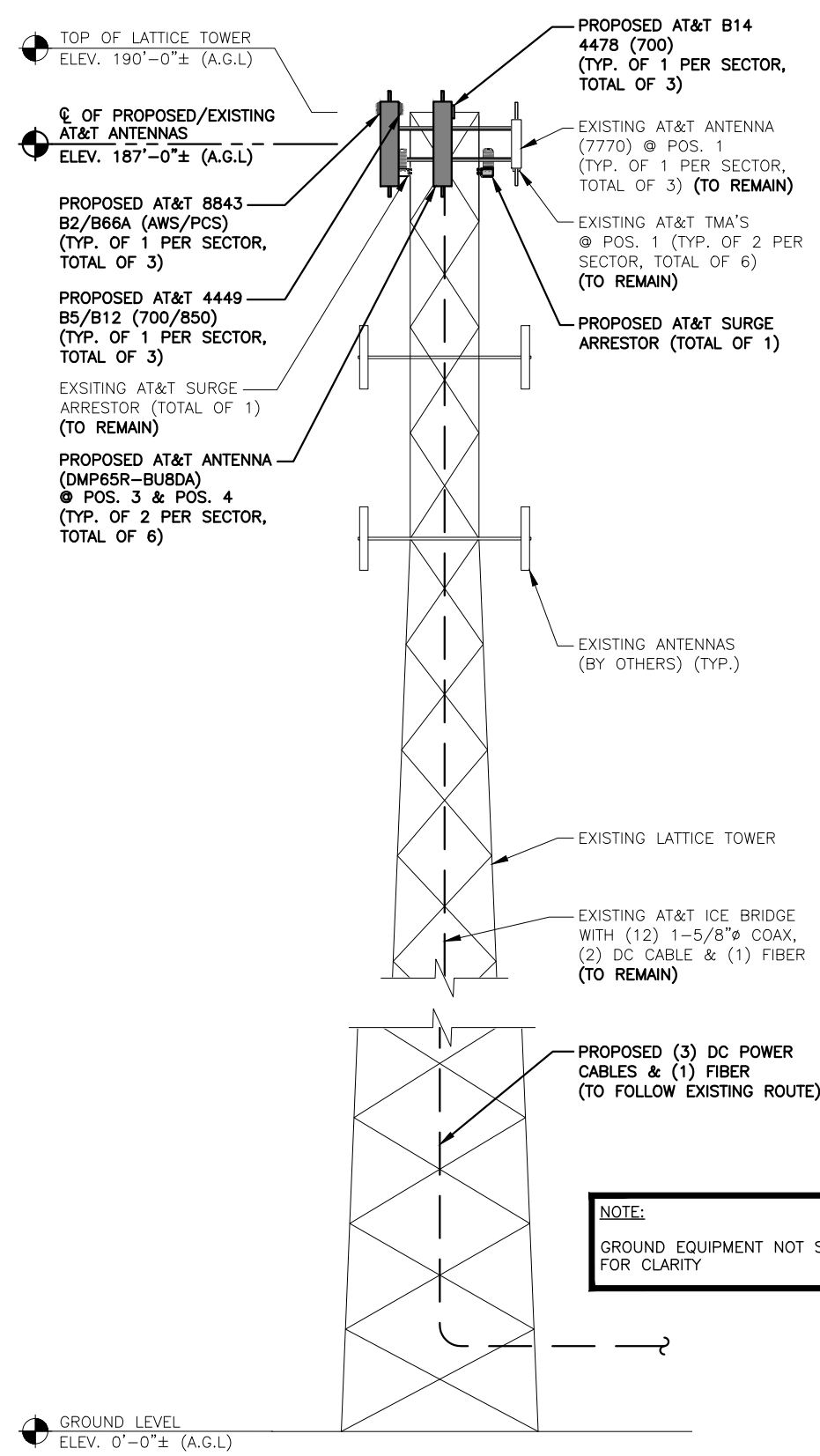
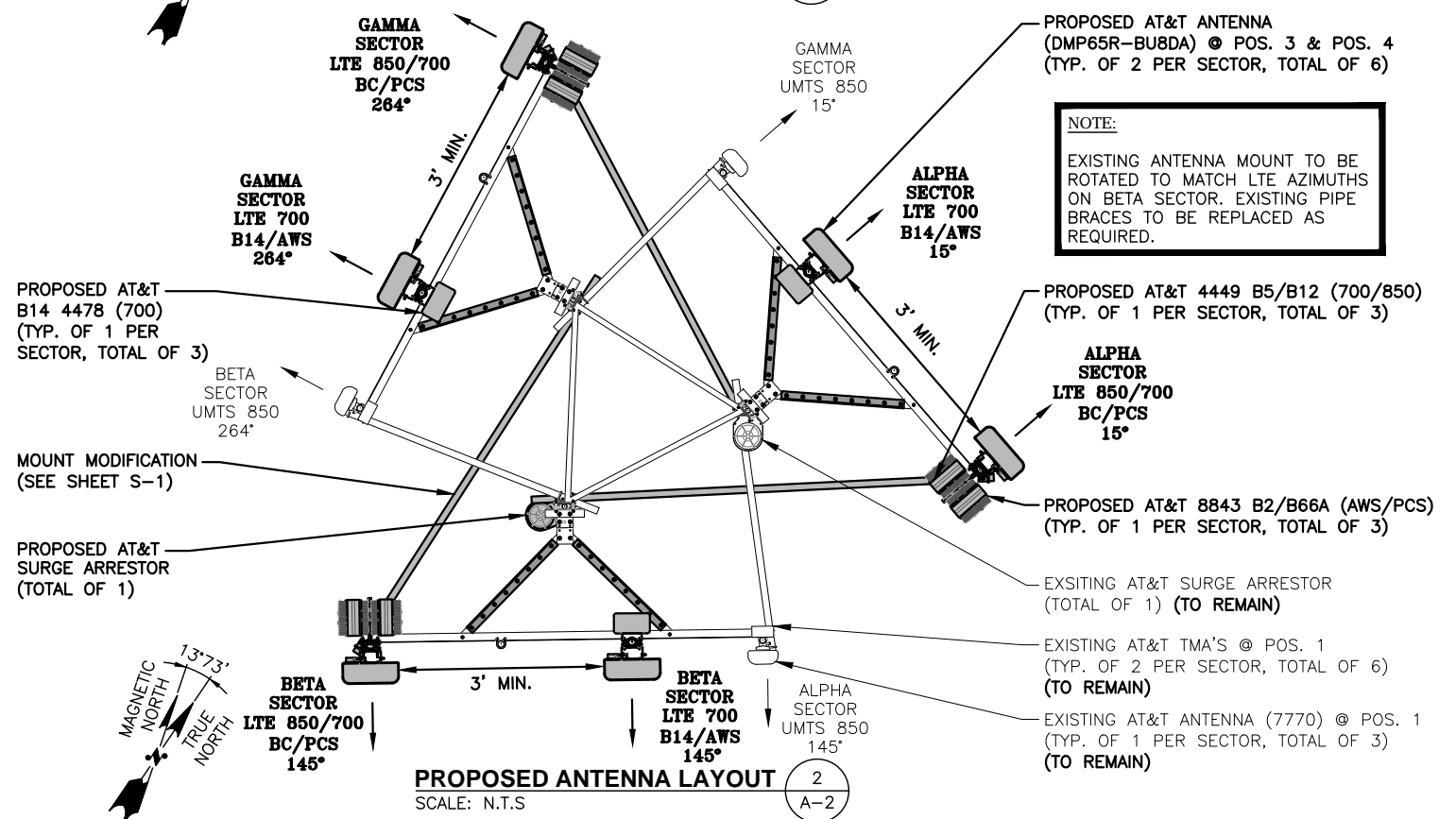
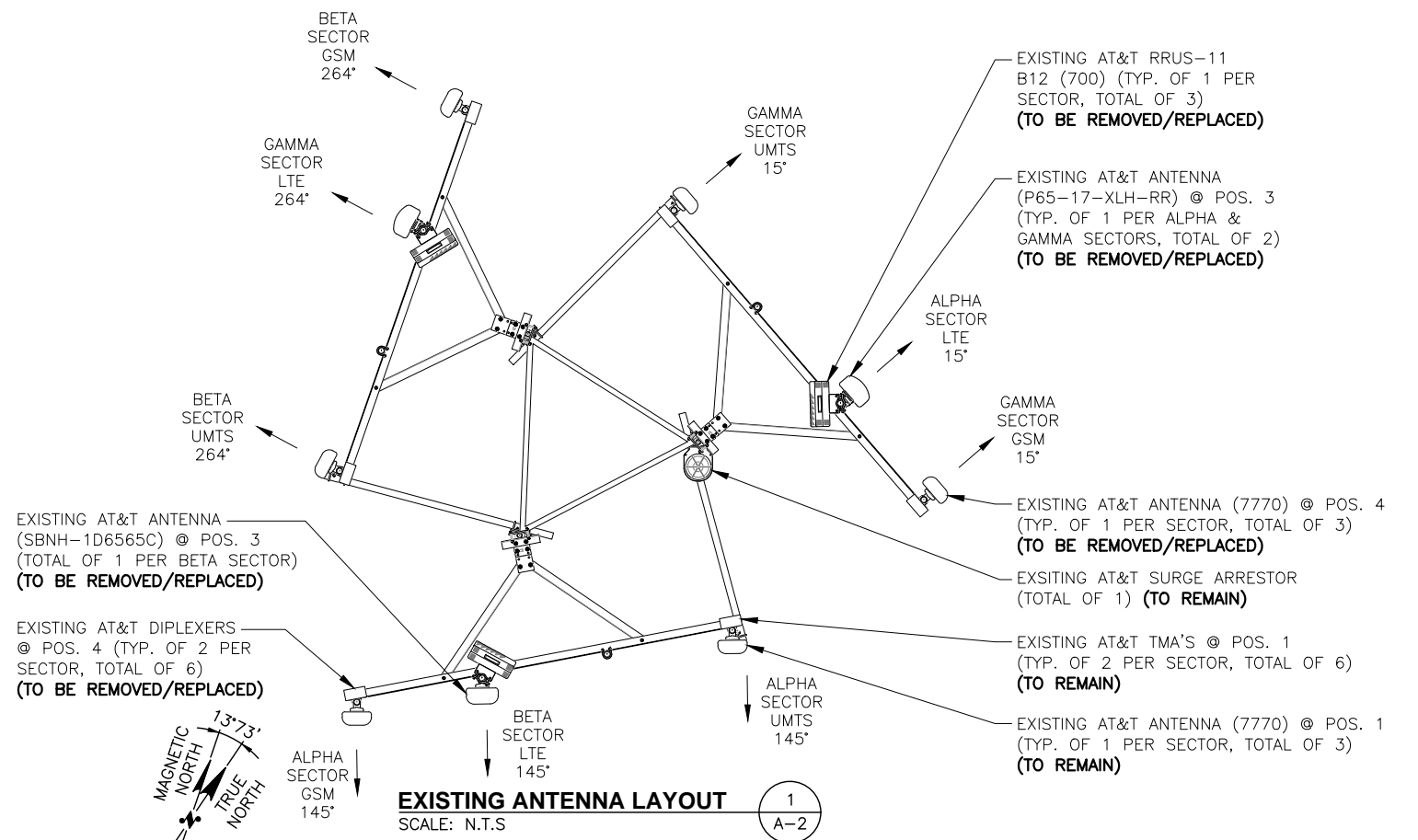
NOTE:
 ALL ANTENNAS AND RRHS TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER AND FINAL RF DATA SHEET

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: AUGUST 14, 2019

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

1	09/04/19	ISSUED FOR CONSTRUCTION	JW	AT	DPH
A	08/29/19	ISSUED FOR REVIEW	AM	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: AM		





NOTE:
ALL ANTENNAS AND RRUS TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER AND FINAL RF DATA SHEET

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HGD 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: CT2234
SITE NAME: SALEM E. HADDAM RD.
ATC SITE #: 10027
153 EAST HADDAM ROAD SALEM, CT 06420
NEW LONDON COUNTY

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

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SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: AM		

Daniel P. Hamm
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T
ANTENNA LAYOUTS & ELEVATION (LTE 2C_3C_4C)
SITE NUMBER: CT2234
DRAWING NUMBER: A-2
REV: 1

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA Ø HEIGHT	AZIMUTH	TMA/DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	7770	55X11X5	187'-0"±	145°	(E)(2)(G) POWERWAVE /LGP21901 (E)(2) POWERWAVE /LGP21401	-	-	(2) 1-5/8" COAX (LENGTH 260'±)	(E) (1) RAYCAP DC6-48-60-18-8C
A2	-	-	-	-	-	-	-	-	-	(2) 1-5/8" COAX (LENGTH 260'±)	
A3	PROPOSED	LTE 700 B14/AWS	DMP65R-BU8DA	96.0X20.7X7.7	187'-0"±	15°	-	(P)(1) 4478 B14 (700)	18.1x13.4x8.3	-	
A4	PROPOSED	LTE 850/700 BC/PCS	DMP65R-BU8DA	96.0X20.7X7.7	187'-0"±	15°	-	(P)(1) 4449 B5/B12 (700/850) (P)(1) 8843 B2/B66A (AWS/PCS)	14.9X13.2X10.4 14.9X13.2X10.9	-	
B1	EXISTING	UMTS 850	7770	55X11X5	187'-0"±	264°	(E)(2)(G) POWERWAVE /LGP21901 (E)(2) POWERWAVE /LGP21401	-	-	(2) 1-5/8" COAX (LENGTH 260'±)	(P) (1) RAYCAP DC9-48-60-24-8C-EV
B2	-	-	-	-	-	-	-	-	-	(2) 1-5/8" COAX (LENGTH 260'±)	
B3	PROPOSED	LTE 700 B14/AWS	DMP65R-BU8DA	96.0X20.7X7.7	187'-0"±	145°	-	(P)(1) 4478 B14 (700)	18.1x13.4x8.3	-	
B4	PROPOSED	LTE 850/700 BC/PCS	DMP65R-BU8DA	96.0X20.7X7.7	187'-0"±	145°	-	(P)(1) 4449 B5/B12 (700/850) (P)(1) 8843 B2/B66A (AWS/PCS)	14.9X13.2X10.4 14.9X13.2X10.9	-	
C1	EXISTING	UMTS 850	7770	55X11X5	187'-0"±	15°	(E)(2)(G) POWERWAVE /LGP21901 (E)(2) POWERWAVE /LGP21401	-	-	(2) 1-5/8" COAX (LENGTH 260'±)	SHARED
C2	-	-	-	-	-	-	-	-	-	(2) 1-5/8" COAX (LENGTH 260'±)	
C3	PROPOSED	LTE 700 B14/AWS	DMP65R-BU8DA	96.0X20.7X7.7	187'-0"±	264°	-	(P)(1) 4478 B14 (700)	18.1x13.4x8.3	-	
C4	PROPOSED	LTE 850/700 BC/PCS	DMP65R-BU8DA	96.0X20.7X7.7	187'-0"±	264°	-	(P)(1) 4449 B5/B12 (700/850) (P)(1) 8843 B2/B66A (AWS/PCS)	14.9X13.2X10.4 14.9X13.2X10.9	-	

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

NOTE:
ALL ANTENNAS AND RRHS TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER AND FINAL RF DATA SHEET

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: AUGUST 14, 2019

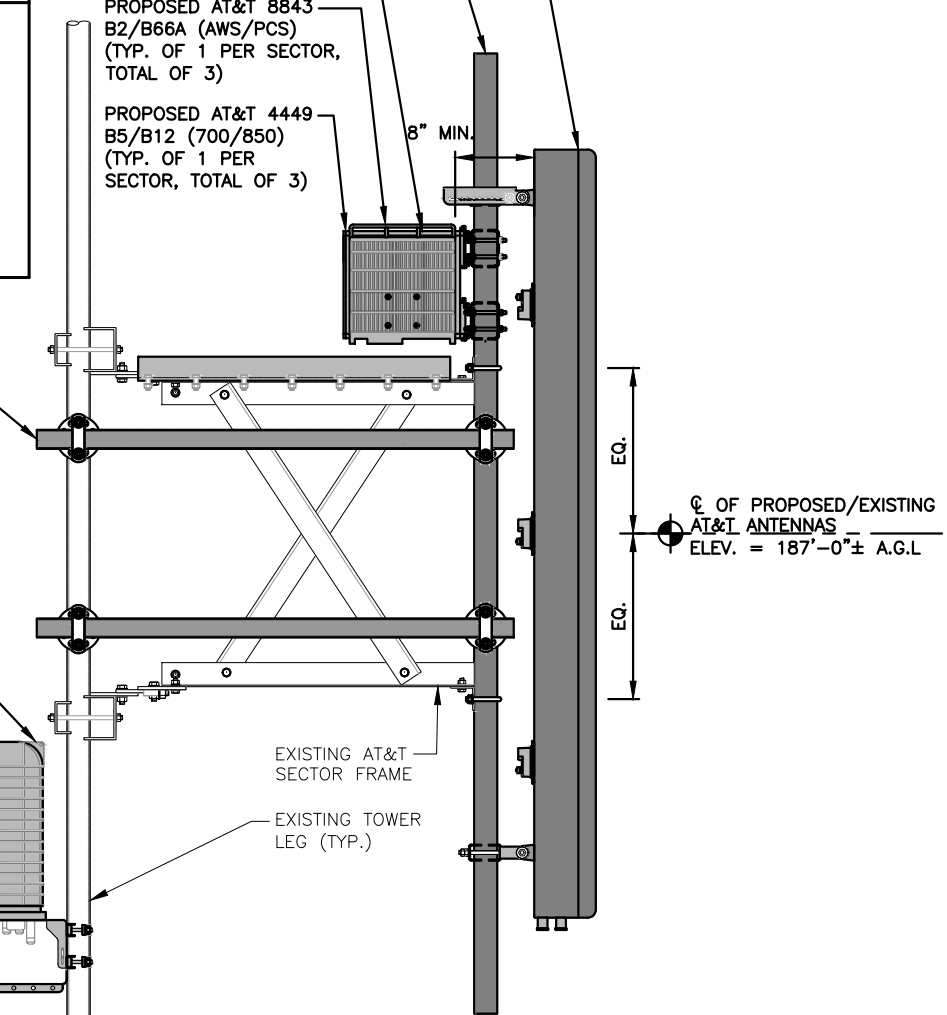
PROPOSED AT&T ANTENNA (DMP65R-BU8DA) @ POS. 3 & POS. 4 (TYP. OF 2 PER SECTOR, TOTAL OF 6)

PROPOSE 2-1/2" STD. (2.88" O.D) 10' LONG PIPE MAST (TYP. OF 2 PER SECTOR, TOTAL OF 6)

PROPOSED RRU BACK TO BACK MOUNT ERICSSON PART# SXK1250461-1 (OR APPROVED EQUAL)

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

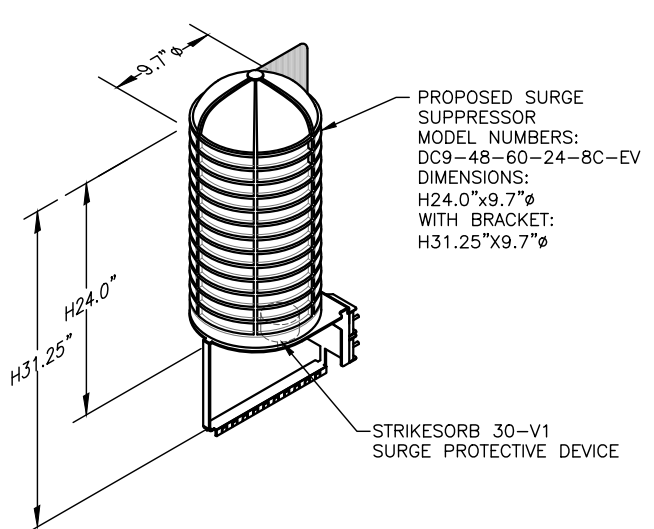
PROPOSED AT&T 4449 B5/B12 (700/850) (TYP. OF 1 PER SECTOR, TOTAL OF 3)



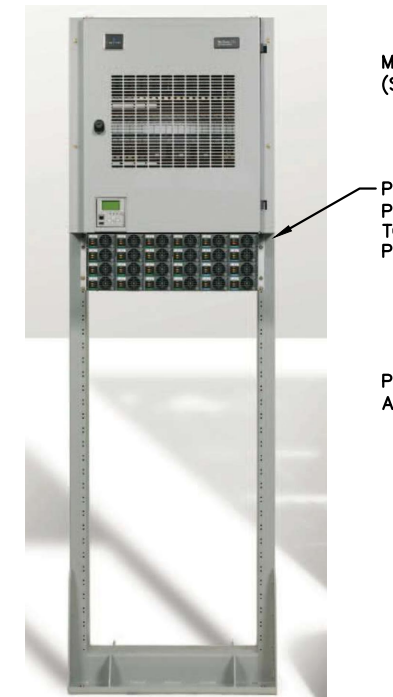
FINAL ANTENNA SCHEDULE 1
SCALE: N.T.S. A-3

QUANTITY	MODEL	L	W	D
3(P)	B14 4478 (700)	18.1"	13.4"	8.3"
3(P)	4449 B5/B12 (700/850)	14.9"	13.2"	10.4"
3(P)	8843 B2/B66A (AWS/PCS)	14.9"	13.2"	10.9"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS



DC SURGE SUPPRESSOR DETAIL 3
SCALE: N.T.S. A-3



PROPOSED NETSURE 7100 POWER PLANT DETAIL 4
SCALE: N.T.S. A-3

PROPOSED LTE ANTENNA, SURGE ARRESTOR & RRU MOUNTING DETAIL 5
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"
SCALE: N.T.S. A-3

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 2
SCALE: N.T.S. A-3

1	09/04/19	ISSUED FOR CONSTRUCTION	JW	AT	DPH
A	08/29/19	ISSUED FOR REVIEW	AM	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: AM		

STRUCTURAL NOTES:

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

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

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

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

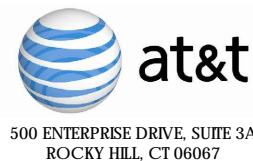
STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

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

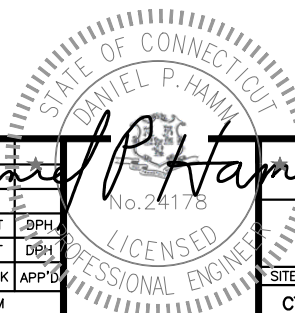
SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL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



SITE NUMBER: CT2234
 SITE NAME: SALEM E. HADDAM RD.
 ATC SITE #: 10027
 153 EAST HADDAM ROAD
 SALEM, CT 06420
 NEW LONDON COUNTY



1	09/04/19	ISSUED FOR CONSTRUCTION	JW	AT	DPH
A	08/29/19	ISSUED FOR REVIEW	AM	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: AM		



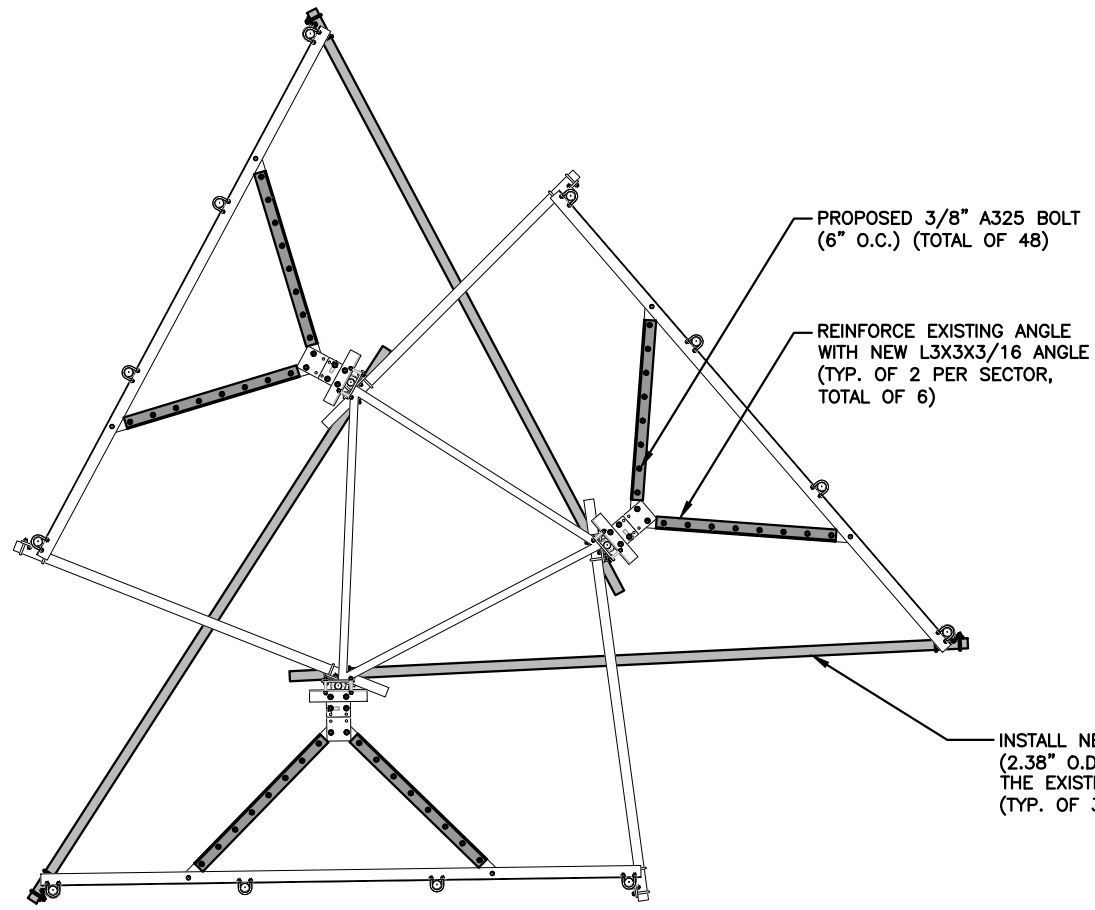
AT&T		
STRUCTURAL NOTES (LTE 2C_3C_4C)		
SITE NUMBER	DRAWING NUMBER	REV
CT2234	SN-1	1

NOTE:
ALL ANTENNAS AND RRHS TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER AND FINAL RF DATA SHEET

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: AUGUST 14, 2019

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

NOTE:
EXISTING ANTENNA MOUNT TO BE ROTATED TO MATCH LTE AZIMUTHS ON BETA SECTOR. EXISTING PIPE BRACES TO BE REPLACED AS REQUIRED.



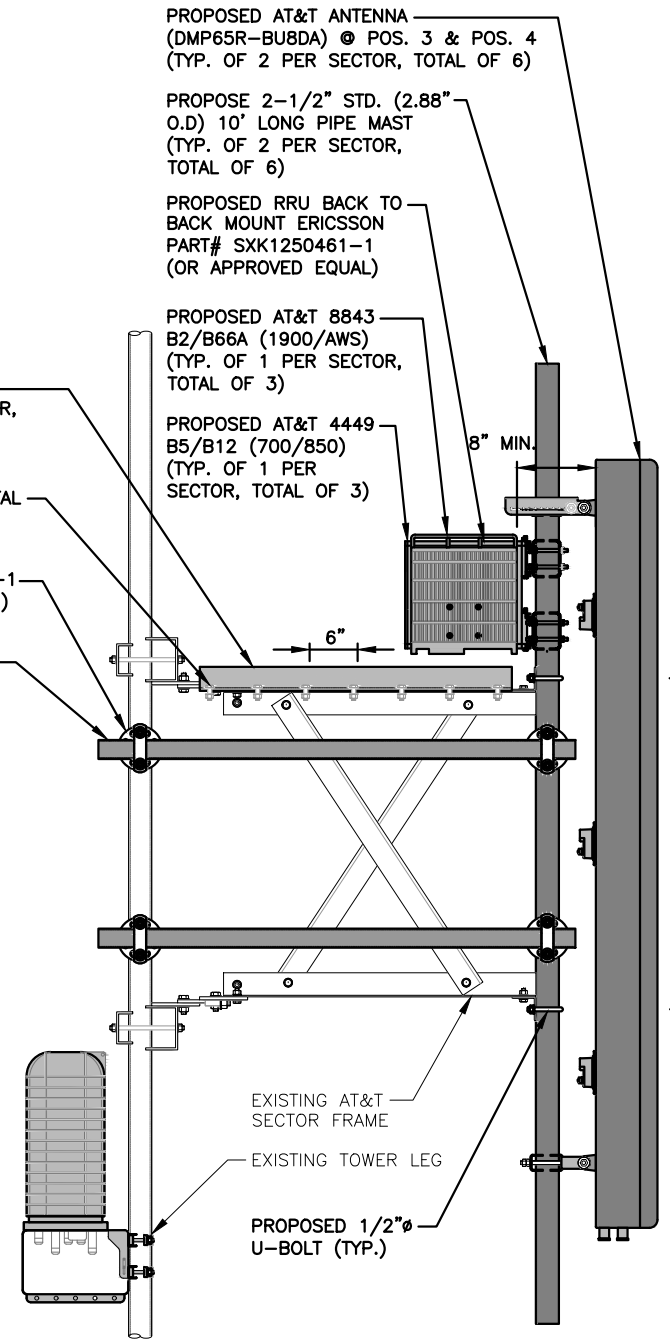
REINFORCE EXISTING ANGLE WITH NEW L3X3X3/16 ANGLE (TYP. OF 2 PER SECTOR, TOTAL OF 6)

PROPOSED 3/8" A325 BOLT (6" O.C.) (TOTAL OF 48)

PROPOSED PIPE TO PIPE CLAMP, SITEPRO-1 PART # PUCK (OR APPROVED EQUAL (TYP.))

INSTALL NEW ADDITIONAL 2" STD. (2.38" O.D) PIPE BRACE, SECURED TO THE EXISTING MOUNT AND TOWER LEG (TYP. OF 3 PER SECTOR, TOTAL OF 9)

INSTALL NEW ADDITIONAL 2" STD. (2.38" O.D) PIPE BRACE, SECURED TO THE EXISTING MOUNT AND TOWER LEG (TYP. OF 3 PER SECTOR, TOTAL OF 9)



PROPOSED AT&T ANTENNA (DMP65R-BU8DA) @ POS. 3 & POS. 4 (TYP. OF 2 PER SECTOR, TOTAL OF 6)

PROPOSE 2-1/2" STD. (2.88" O.D) 10' LONG PIPE MAST (TYP. OF 2 PER SECTOR, TOTAL OF 6)

PROPOSED RRU BACK TO BACK MOUNT ERICSSON PART# SXK1250461-1 (OR APPROVED EQUAL)

PROPOSED AT&T 8843 B2/B66A (1900/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

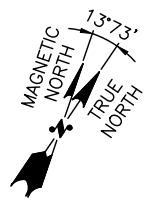
PROPOSED AT&T 4449 B5/B12 (700/850) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

EXISTING AT&T SECTOR FRAME

EXISTING TOWER LEG

PROPOSED 1/2" U-BOLT (TYP.)

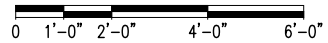
EQ. OF PROPOSED/EXISTING AT&T ANTENNAS
ELEV. = 187'-0"± A.G.L.



PLATFORM REINFORCEMENT PLAN

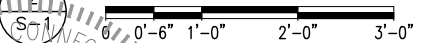
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

1
S-1



PROPOSED MOUNT MODIFICATION DETAIL

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



HGD 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: CT2234
SITE NAME: SALEM E. HADDAM RD.
ATC SITE #: 10027
153 EAST HADDAM ROAD
SALEM, CT 06420
NEW LONDON COUNTY

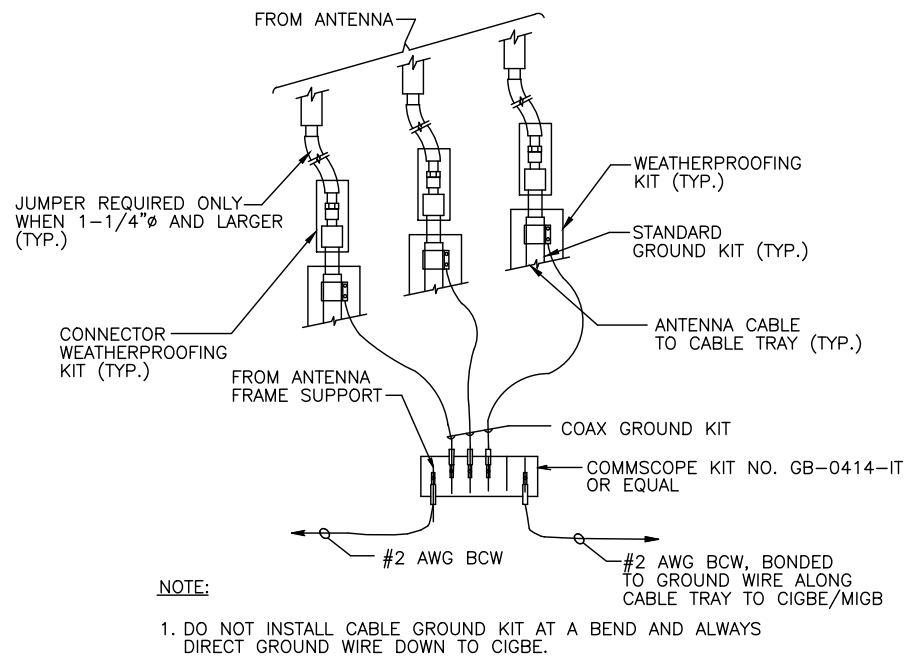
at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

Professional Engineer Seal for Daniel P. Hamm, No. 24178, State of Connecticut.
Signature of Daniel P. Hamm

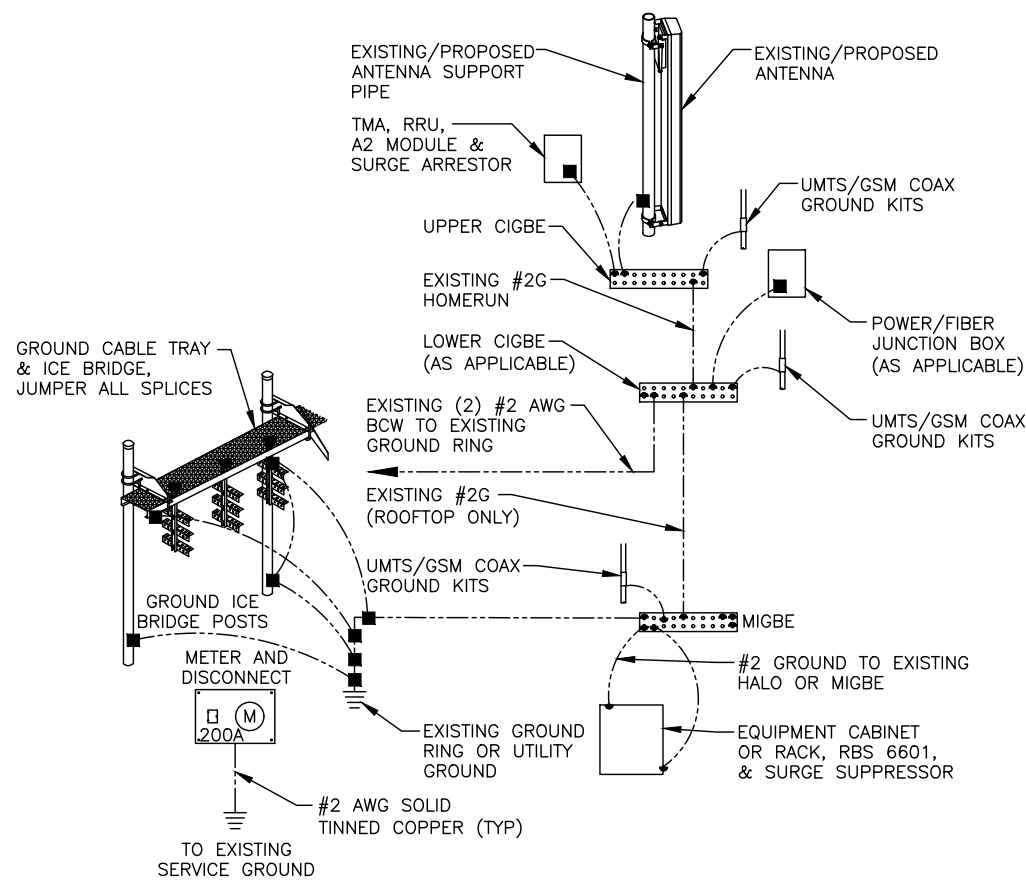
AT&T	
STRUCTURAL DETAILS (LTE 2C_3C_4C)	
SITE NUMBER	DRAWING NUMBER
CT2234	S-1
REV	1

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	09/04/19	ISSUED FOR CONSTRUCTION	JW	AT	DPH
A	08/29/19	ISSUED FOR REVIEW	AM	AT	DPH

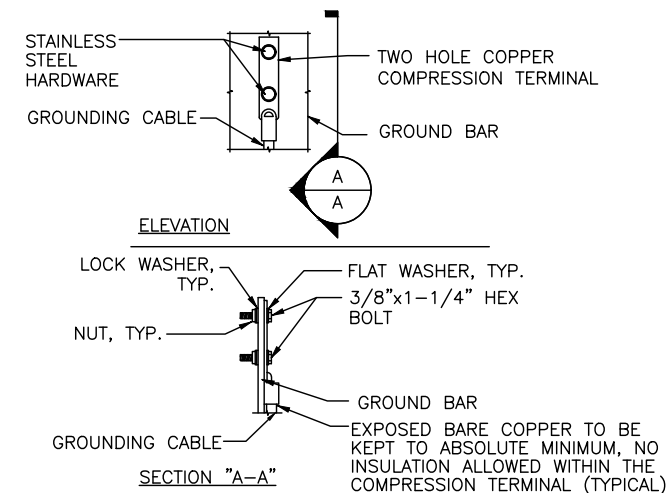
SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AM



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



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



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

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

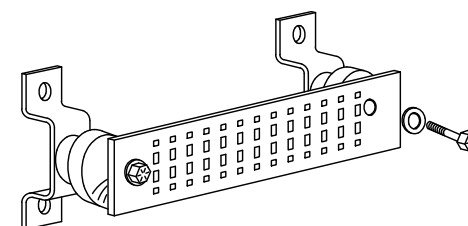
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

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

SECTION "A" - SURGE ABSORBERS

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



GROUND BAR - DETAIL 4
SCALE: N.T.S. G-1

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	09/04/19	ISSUED FOR CONSTRUCTION	JW	AT	DPH
A	08/29/19	ISSUED FOR REVIEW	AM	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AM



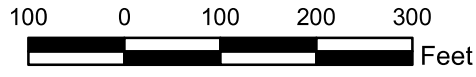
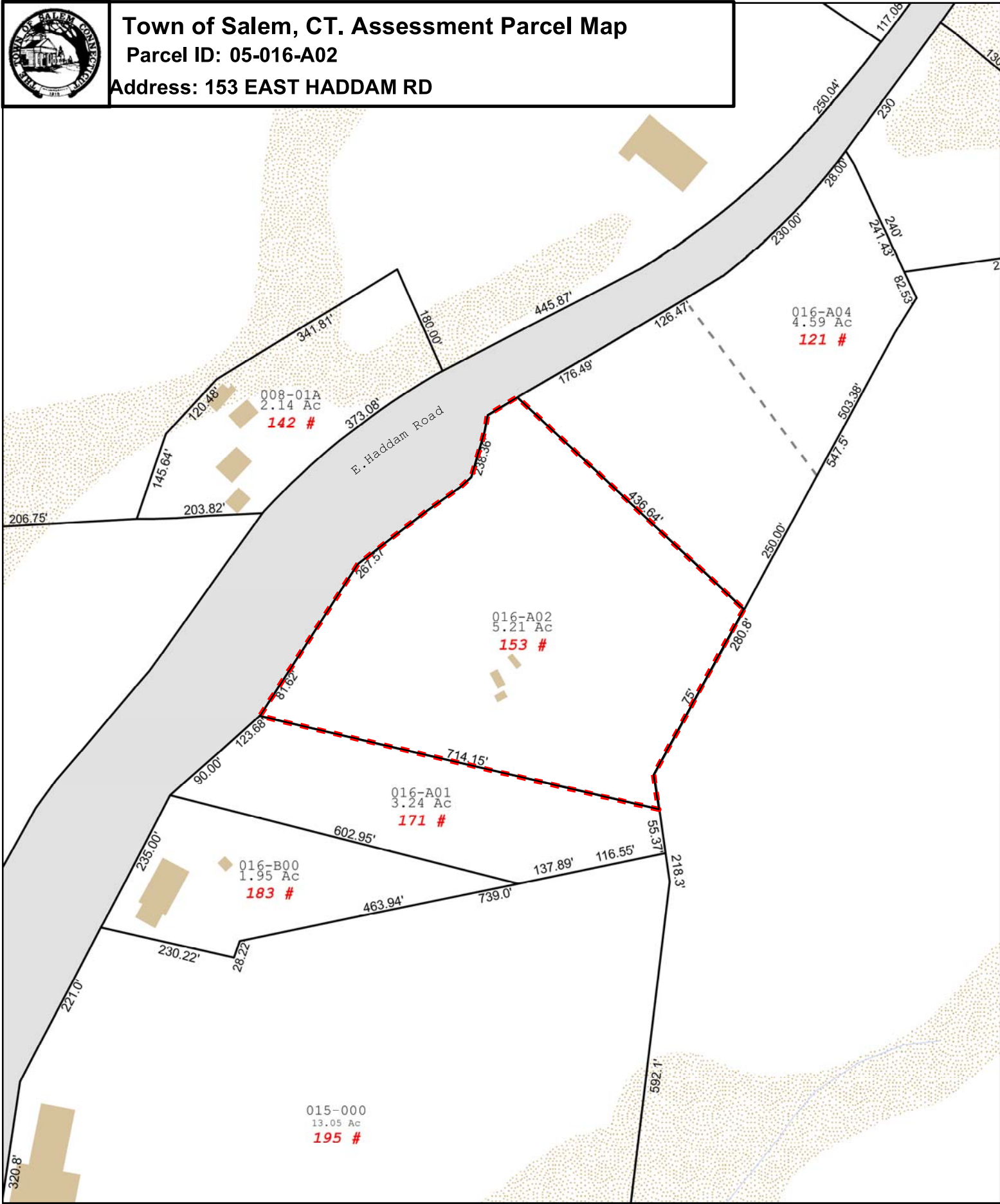
AT&T		
GROUNDING DETAILS (LTE 2C_3C_4C)		
SITE NUMBER	DRAWING NUMBER	REV
CT2234	G-1	1



Town of Salem, CT. Assessment Parcel Map

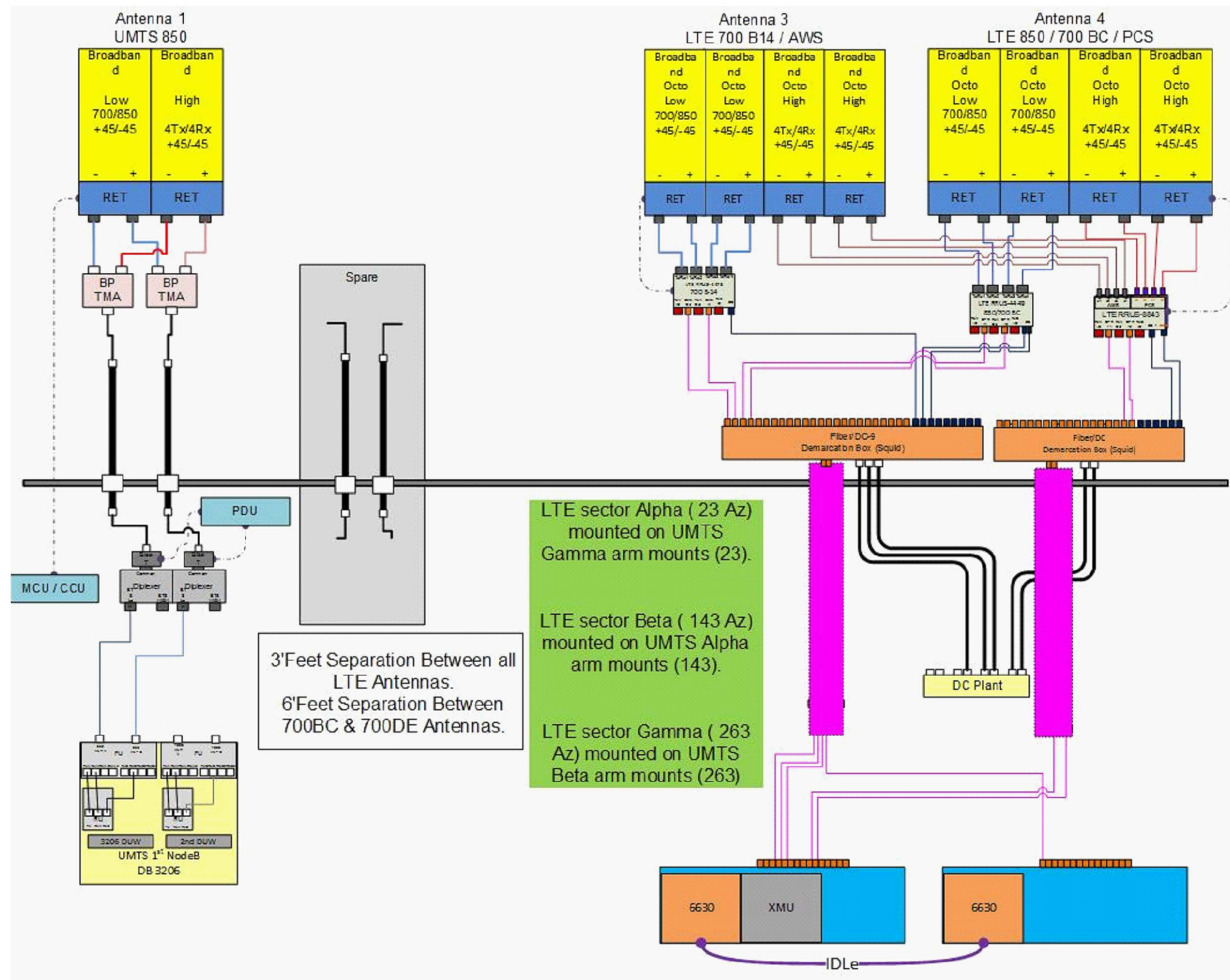
Parcel ID: 05-016-A02

Address: 153 EAST HADDAM RD



Map Produced: December 2018

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



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.

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



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 190 ft Self Supported Tower
ATC Site Name : SALEM CT, CT
ATC Asset Number : 10027
Engineering Number : OAA751835_C3_01
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : SALEM E. HADDAM RD.
Carrier Site Number : CT2234
Site Location : 153 East Haddam Road
Salem, CT 06420-3903
41.468500,-72.273300
County : New London
Date : September 4, 2019
Max Usage : 65%
Result : Pass

Prepared By:
Biraj Rawal
Structural Engineer I

Reviewed By:



COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
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Proposed Equipment	2
Structure Usages	3
Foundations	3
Deflection, Twist, and Sway.....	3
Standard Conditions	4
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 190 ft self supported tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	PiRod 204997-B, dated September 21, 1999
Foundation Drawing	PiRod 204997-B, dated September 21, 1999
Geotechnical Report	Tectonic Engineering Consultants P.C 2174.Salem, dated August 27, 1999

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	124 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Feature:	Flat
Crest Length (L):	0 ft
Spectral Response:	$S_s = 0.20, S_1 = 0.05$
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
187.0	6	Powerwave Allgon LGP21401	Sector Frame	(1) 0.33" (8.7mm) Fiber (2) 0.65" (16.4mm) 8 AWG 2C (12) 1 5/8" Coax	AT&T MOBILITY
	6	LGP Allgon LGP21903			
	3	Allgon 7770.00			
175.0	3	Ericsson RRUS 11 B2	Sector Frame	(1) 1 1/4" Hybriflex Cable (3) 1 5/8" (1.63"-41.3mm) Fiber	T-MOBILE
	3	Ericsson RRUS 11 B4			
	3	Ericsson Radio 4449 B12,B71			
	3	RFS APX16DWV-16DWVS-E-A20 (60" Height)			
	3	RFS APXVAARR24_43-U-NA20			
155.0	-	-	-	(6) 1 5/8" Coax	
150.0	6	Alcatel-Lucent RRH2x50-08	Leg	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	3	Alcatel-Lucent 1900 MHz 4X45 RRH			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVTM14-ALU-I20			
	3	Commscope NNVV-65B-R4			
75.0	1	Generic GPS	Leg	(1) 1/2" Coax	

Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
187.0	3	Ericsson RRUS-11 800 MHz	-	-	AT&T MOBILITY
	2	Powerwave Allgon P65-17-XLH-RR			
	1	Andrew SBNH-1D6565C (60.8 lbs)			
	1	Raycap DC6-48-60-18-8F			
	3	Allgon 7770.00			

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
187.0	3	Ericsson RRUS 8843 B2, B66A	Sector Frame	(1) 0.39" (10mm) Fiber Trunk (3) 0.78" (19.7mm) 8 AWG 6	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14 (15")			
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC6-48-60-18-8C			
	1	Raycap DC9-48-60-24-8C-EV			
	6	CCI DMP65R-BU8D			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax on top of the existing AT&T MOBILITY coax.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	61%	Pass
Diagonals	65%	Pass
Horizontals	38%	Pass
Anchor Bolts	44%	Pass
Leg Bolts	44%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	344.3	464.8	220.2	47%
Axial (Kips)	385.3	520.2	258.3	50%
Shear (Kips)	59.7	80.6	38.0	47%

* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
187.0	Ericsson RRUS 8843 B2, B66A	AT&T MOBILITY	0.389	0.082	0.302
	Ericsson RRUS 4478 B14 (15")				
	Ericsson RRUS 4449 B5, B12				
	Raycap DC6-48-60-18-8C				
	CCI DMP65R-BU8D				

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Quadrant 1

190.00

Sect 10

170.00

Sect 9

150.00

Sect 8

140.00

Sect 7

120.00

Sect 6

100.00

Sect 5

80.00

Sect 4

60.00

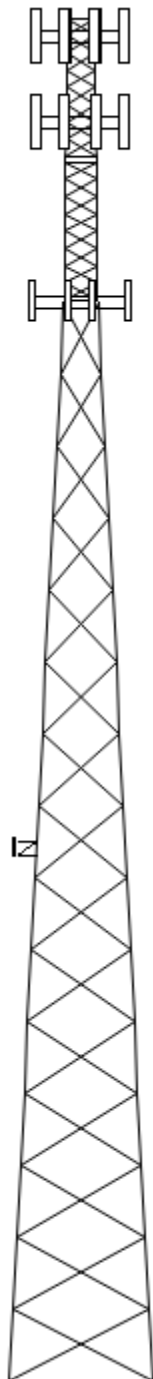
Sect 3

40.00

Sect 2

20.00

Sect 1



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Loads: 124 mph no ice
 50 mph w/ 1" radial ice
 Site Class: D Ss: 0.20 S1: 0.05
 60 mph Serviceability

Job Information

Client : AT&T MOBILITY		
Tower : 10027	Location : SALEM CT, CT	Base Width : 20.00 ft
Code : ANSI/TIA-222-H	Topo Method: Method 1	Top Width : 4.00 ft
Risk Cat : II	Topo: 1	Tower Ht : 190.00 ft
	Exposure : B	Shape : Triangle

Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1 - 2	12B 50 ksi 12"BD 2.25"	SAE 36 ksi 3.5X3.5X0.3125	
3 - 4	12B 50 ksi 12"BD 2"	SAE 36 ksi 3X3X0.3125	
5	12B 50 ksi 12"BD 1.75"	SAE 36 ksi 3X3X0.1875	
6 - 7	12B 50 ksi 12"BD 1.5"	SAE 36 ksi 3X3X0.1875	
8	12B 50 ksi 12"BD 1.25"	SAE 36 ksi 2.5X2.5X0.1875	
9	SOL 50 ksi 2" SOLID	SOL 50 ksi 1" SOLID	SOL 50 ksi 1" SOLID
10	SOL 50 ksi 1 1/2" SOLID	SOL 50 ksi 3/4" SOLID	SOL 50 ksi 3/4" SOLID

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
187.00	Mounting Frame	3	Flat Light Sector Frame
187.00	Panel	6	CCI DMP65R-BU8D
187.00	Panel	3	Allgon 7770.00
187.00		1	Raycap DC6-48-60-18-8C
187.00		3	Ericsson RRUS 4449 B5, B12
187.00		3	Ericsson RRUS 4478 B14 (15")
187.00		3	Ericsson RRUS 8843 B2, B66A
187.00		6	Powerwave Allgon LGP21401
187.00		6	LGP Allgon LGP21903
175.00	Mounting Frame	3	Flat Light Sector Frame
175.00	Panel	3	RFS APXVAARR24_43-U-NA20
175.00	Panel	3	RFS APX16DWV-16DWVS-E-A20
175.00		3	Ericsson RRUS 11 B2
175.00		3	Ericsson RRUS 11 B4
175.00		3	Ericsson Radio 4449 B12,B71
150.00	Mounting Frame	3	Site Pro 1 STK-U Stabilizer
150.00	Mounting Frame	3	Round Sector Frame
150.00	Panel	3	Commscope NNVV-65B-R4
150.00	Panel	3	RFS APXVTM14-ALU-I20
150.00		3	Alcatel-Lucent TD-RRH8x20-25 w
150.00		3	Alcatel-Lucent 1900 MHz 4X45 R
150.00		6	Alcatel-Lucent RRH2x50-08
75.00	Straight Arm	1	Stand-Off
75.00	Whip	1	Generic GPS

Linear Appurtenance

Elev (ft)	From	To	Qty	Description
0.00	187.00	187.00	1	Waveguide
0.00	187.00	187.00	12	1 5/8" Coax
0.00	187.00	187.00	3	0.78" (19.7mm) 8 AWG
0.00	187.00	187.00	2	0.65" (16.4mm) 8 AWG
0.00	187.00	187.00	1	0.39" (10mm) Fiber T
0.00	187.00	187.00	1	0.33" (8.7mm) Fiber
0.00	175.00	175.00	1	Waveguide
0.00	175.00	175.00	3	1 5/8" (1.63"-41.3mm
0.00	175.00	175.00	1	1 1/4" Hybriflex Cab
0.00	155.00	155.00	6	1 5/8" Coax
0.00	150.00	150.00	1	Waveguide
0.00	150.00	150.00	4	1 1/4" Hybriflex Cab
0.00	75.00	75.00	1	1/2" Coax

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Job Information		
Client : AT&T MOBILITY		
Tower : 10027	Location : SALEM CT, CT	Base Width : 20.00 ft
Code : ANSI/TIA-222-H	Topo Method: Method 1	Top Width : 4.00 ft
Risk Cat : II	Topo: 1	Tower Ht : 190.00 ft
	Exposure : B	Shape : Triangle

Global Base Foundation Design Loads			
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	4,170.86	52.35	37.97
DL + WL + IL	1,134.64	93.55	10.48

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
258.26	220.19	25.06

Site Number: 10027
Site Name: SALEM CT, CT
Customer: AT&T MOBILITY

Code: ANSI/TIA-222-H
Engineering Number: OAA751835_C3_01

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Analysis Parameters

Location:	New London County, CT	Height (ft):	190
Code:	ANSI/TIA-222-H	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	20.00
Tower Manufacturer:	Pirod	Top Face Width (ft):	4.00
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:	0.85		
Ke:	0.99		

Ice & Wind Parameters

Exposure Category:	B	Design Windspeed Without Ice:	124 mph
Risk Category:	II	Design Windspeed With Ice:	50 mph
Topographic Factor Procedure:	Method 1	Operational Windspeed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.00 in
Crest Height:	0 ft	HMSL:	351.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	1.06				
T_L (sec):	6	p:	1.3	C_S :	0.030
S_S :	0.205	S_1 :	0.055	C_S , Max:	0.030
F_a :	1.600	F_v :	2.400	C_S , Min:	0.030
S_{ds} :	0.219	S_{d1} :	0.088		

Load Cases

1.2D + 1.0W Normal	124 mph Normal with No Ice
1.2D + 1.0W 60 deg	124 mph 60 degree with No Ice
1.2D + 1.0W 90 deg	124 mph 90 degree with No Ice
0.9D + 1.0W Normal	124 mph Normal with No Ice (Reduced DL)
0.9D + 1.0W 60 deg	124 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.0W 90 deg	124 mph 90 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 1.00 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 1.00 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic Normal
1.2D + 1.0Ev + 1.0Eh 60 deg	Seismic 60 deg
1.2D + 1.0Ev + 1.0Eh 90 deg	Seismic 90 deg
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL) Normal
0.9D - 1.0Ev + 1.0Eh 60 deg	Seismic (Reduced DL) 60 deg
0.9D - 1.0Ev + 1.0Eh 90 deg	Seismic (Reduced DL) 90 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: AT&T MOBILITY

Code: ANSI/TIA-222-H
 Engineering Number: OAA751835_C3_01

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Tower Loading

Discrete Appurtenance Properties 1.2D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
187.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	2.0	572.2	39.16	286	126
187.0	CCI DMP65R-BU8D	6	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.0	39.04	1793	689
187.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	39.04	78	256
187.0	Ericsson RRUS 4478	3	59	1.6	1.3	13.2	7.3	0.80	0.50	0.0	0.0	39.04	66	214
187.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	39.04	65	259
187.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	39.04	1002	1440
187.0	LGP Allgon	6	6	0.2	0.4	6.3	3.0	0.80	0.50	2.0	36.7	39.16	18	40
187.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	2.0	175.7	39.16	88	102
187.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	0.0	0.0	39.04	54	19
175.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	38.31	64	266
175.0	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	4.0	438.9	38.56	110	183
175.0	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	4.0	438.9	38.56	110	183
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	38.31	984	1440
175.0	RFS APX16DWV-	3	42	7.0	5.0	13.0	3.1	0.80	0.60	4.0	1323.3	38.56	331	151
175.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	38.31	996	460
150.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	36.66	87	216
150.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	36.66	127	381
150.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.50	0.0	0.0	36.66	151	252
150.0	Commscope NNVV-	3	77	12.3	6.0	19.6	7.8	0.80	0.64	0.0	0.0	36.66	587	279
150.0	RFS APXVTM14-ALU-	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	36.66	313	202
150.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	36.66	757	1080
150.0	Site Pro 1 STK-U	3	64	2.5	12.5	2.4	2.4	0.75	0.75	0.0	0.0	36.66	130	230
75.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	30.07	23	12
75.00	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.07	77	120
Totals		78	7165	500.0									8298	8598

Discrete Appurtenance Properties 0.9D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
187.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	2.0	572.2	39.16	286	95
187.0	CCI DMP65R-BU8D	6	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.0	39.04	1793	517
187.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	39.04	78	192
187.0	Ericsson RRUS 4478	3	59	1.6	1.3	13.2	7.3	0.80	0.50	0.0	0.0	39.04	66	160
187.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	39.04	65	194
187.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	39.04	1002	1080
187.0	LGP Allgon	6	6	0.2	0.4	6.3	3.0	0.80	0.50	2.0	36.7	39.16	18	30
187.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	2.0	175.7	39.16	88	76
187.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	0.0	0.0	39.04	54	14
175.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	38.31	64	200
175.0	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	4.0	438.9	38.56	110	137
175.0	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	4.0	438.9	38.56	110	137
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	38.31	984	1080
175.0	RFS APX16DWV-	3	42	7.0	5.0	13.0	3.1	0.80	0.60	4.0	1323.3	38.56	331	113
175.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	38.31	996	345
150.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	36.66	87	162
150.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	36.66	127	286
150.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.50	0.0	0.0	36.66	151	189
150.0	Commscope NNVV-	3	77	12.3	6.0	19.6	7.8	0.80	0.64	0.0	0.0	36.66	587	209
150.0	RFS APXVTM14-ALU-	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	36.66	313	152
150.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	36.66	757	810
150.0	Site Pro 1 STK-U	3	64	2.5	12.5	2.4	2.4	0.75	0.75	0.0	0.0	36.66	130	172

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: AT&T MOBILITY

Code: ANSI/TIA-222-H
 Engineering Number: OAA751835_C3_01

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Tower Loading

75.00 Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	30.07	23	9
75.00 Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.07	77	90
Totals	78	7165	500.0									8298	6449

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
187.0	Allgon 7770.00	3	120	6.2	4.6	11.0	5.0	0.80	0.65	2.0	104.8	6.37	52	381
187.0	CCI DMP65R-BU8D	6	327	20.4	8.0	20.7	7.7	0.80	0.63	0.0	0.0	6.35	332	2076
187.0	Ericsson RRUS 4449	3	115	2.6	1.5	13.2	9.4	0.80	0.50	0.0	0.0	6.35	17	387
187.0	Ericsson RRUS 4478	3	93	2.2	1.3	13.2	7.3	0.80	0.50	0.0	0.0	6.35	14	315
187.0	Ericsson RRUS 8843	3	114	2.2	1.2	13.2	10.9	0.80	0.50	0.0	0.0	6.35	14	384
187.0	Flat Light Sector	3	605	28.2	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.35	256	2054
187.0	LGP Allgon	6	11	0.5	0.4	6.3	3.0	0.80	0.50	2.0	11.9	6.37	6	74
187.0	Powerwave Allgon	6	31	1.6	1.2	9.2	2.6	0.80	0.50	2.0	41.1	6.37	21	203
187.0	Raycap DC6-48-60-	1	56	2.5	1.7	18.2	6.4	0.80	1.00	0.0	0.0	6.35	11	59
175.0	Ericsson Radio 4449	3	112	2.2	1.2	13.2	9.3	0.80	0.50	0.0	0.0	6.23	14	381
175.0	Ericsson RRUS 11 B2	3	100	3.5	1.6	17.0	7.2	0.80	0.50	4.0	90.4	6.27	23	330
175.0	Ericsson RRUS 11 B4	3	100	3.5	1.6	17.0	7.2	0.80	0.50	4.0	90.4	6.27	23	330
175.0	Flat Light Sector	3	605	28.2	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.23	252	2054
175.0	RFS APX16DWV-	3	125	8.6	5.0	13.0	3.1	0.80	0.60	4.0	263.5	6.27	66	401
175.0	RFS	3	395	22.8	8.0	24.0	8.7	0.80	0.63	0.0	0.0	6.23	182	1262
150.0	Alcatel-Lucent 1900	3	114	3.0	2.1	11.1	10.7	0.80	0.50	0.0	0.0	5.96	18	377
150.0	Alcatel-Lucent	6	92	2.3	1.3	13.0	9.8	0.80	0.50	0.0	0.0	5.96	28	618
150.0	Alcatel-Lucent TD-	3	133	4.9	2.2	18.6	6.7	0.80	0.50	0.0	0.0	5.96	30	441
150.0	Commscope NNVV-	3	245	14.1	6.0	19.6	7.8	0.80	0.64	0.0	0.0	5.96	110	781
150.0	RFS APXVTM14-ALU-	3	148	7.8	4.7	12.6	6.3	0.80	0.66	0.0	0.0	5.96	63	477
150.0	Round Sector Frame	3	545	25.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.96	217	1815
150.0	Site Pro 1 STK-U	3	79	3.0	12.5	2.4	2.4	0.75	0.75	0.0	0.0	5.96	26	274
75.00	Generic GPS	1	28	1.3	1.0	9.0	6.0	1.00	1.00	0.0	0.0	4.89	5	30
75.00	Stand-Off	1	130	4.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.89	16	150
Totals		78	14223	661.7									1797	15656

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
187.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	2.0	134.0	9.17	67	105
187.0	CCI DMP65R-BU8D	6	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.0	9.14	420	574
187.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	9.14	18	213
187.0	Ericsson RRUS 4478	3	59	1.6	1.3	13.2	7.3	0.80	0.50	0.0	0.0	9.14	15	178
187.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	9.14	15	216
187.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.14	235	1200
187.0	LGP Allgon	6	6	0.2	0.4	6.3	3.0	0.80	0.50	2.0	8.6	9.17	4	33
187.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	2.0	41.1	9.17	21	85
187.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	0.0	0.0	9.14	13	16
175.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	8.97	15	222
175.0	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	4.0	102.8	9.03	26	152
175.0	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	4.0	102.8	9.03	26	152
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.97	230	1200
175.0	RFS APX16DWV-	3	42	7.0	5.0	13.0	3.1	0.80	0.60	4.0	309.8	9.03	77	126
175.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	8.97	233	384
150.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	8.58	20	180

Site Number: 10027
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Tower Loading

150.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	8.58	30	317
150.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.50	0.0	0.0	8.58	35	210
150.0	Commscope NNVV-	3	77	12.3	6.0	19.6	7.8	0.80	0.64	0.0	0.0	8.58	137	232
150.0	RFS APXVTM14-ALU-	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	8.58	73	169
150.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.58	177	900
150.0	Site Pro 1 STK-U	3	64	2.5	12.5	2.4	2.4	0.75	0.75	0.0	0.0	8.58	30	191
75.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	7.04	5	10
75.00	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.04	18	100
	Totals	78	7165	500.0									1943	7165

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Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	187.0	0.33" (8.7mm) Fiber	1	0.33	0.05	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	187.0	0.39" (10mm) Fiber	1	0.39	0.06	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	187.0	0.65" (16.4mm) 8	2	0.65	0.31	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	187.0	0.78" (19.7mm) 8	3	0.78	0.59	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	187.0	1 5/8" Coax	12	1.98	0.82	50	Lin App	Block	0.00	N	1.00	1.00	0.00
0.00	187.0	Waveguide	1	2.00	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	175.0	1 1/4" Hybriflex	1	1.54	1.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	175.0	1 5/8" (1.63"-	3	1.63	1.61	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	175.0	Waveguide	1	2.00	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	1 5/8" Coax	6	1.98	0.82	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	1 1/4" Hybriflex	4	1.54	1.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	Waveguide	1	2.00	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	75.00	1/2" Coax	1	0.63	0.15	100	Lin App	Individual	0.00	N	1.00	1.00	0.00

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Equivalent Lateral Force Method

Spectral Response Acceleration for Short Period (S_s):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.05
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s :	0.03
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	1.06
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.28
Total Unfactored Dead Load:	43.63 k
Seismic Base Shear (E):	1.70 k

LoadCase 1.2D + 1.0Ev + 1.0Eh

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
10	180.00	1,122	858,551	0.059	100	1,396
9	160.00	2,029	1,334,90	0.091	155	2,523
8	145.00	1,352	784,542	0.054	91	1,682
7	130.00	3,189	1,608,76	0.110	187	3,966
6	110.00	3,244	1,321,94	0.090	154	4,035
5	90.00	3,685	1,161,96	0.080	135	4,584
4	70.00	4,870	1,113,37	0.076	130	6,056
3	50.00	4,989	741,911	0.051	86	6,205
2	30.00	5,915	457,703	0.031	53	7,356
1	10.00	6,066	115,207	0.008	13	7,544
Allgon 7770.00	187.00	105	84,328	0.006	10	131
CCI DMP65R-BU8D	187.00	574	461,154	0.032	54	714
Ericsson RRUS 4449 B5, B12	187.00	213	171,065	0.012	20	265
Ericsson RRUS 4478 B14 (15")	187.00	178	143,117	0.010	17	222
Ericsson RRUS 8843 B2, B66A	187.00	216	173,475	0.012	20	269
Flat Light Sector Frame	187.00	1,200	963,749	0.066	112	1,492
LGP Allgon LGP21903	187.00	33	26,503	0.002	3	41
Powerwave Allgon LGP21401	187.00	85	67,944	0.005	8	105
Raycap DC6-48-60-18-8C	187.00	16	12,850	0.001	1	20
Ericsson Radio 4449 B12,B71	175.00	222	163,797	0.011	19	276
Ericsson RRUS 11 B2	175.00	152	112,223	0.008	13	189
Ericsson RRUS 11 B4	175.00	152	112,223	0.008	13	189
Flat Light Sector Frame	175.00	1,200	885,392	0.061	103	1,492
RFS APX16DWV-16DWVS-E-A20 (60"	175.00	126	92,745	0.006	11	156
RFS APXVAARR24_43-U-NA20	175.00	384	283,104	0.019	33	477

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Equivalent Lateral Force Method

Alcatel-Lucent 1900 MHz 4X45 RRH	150.00	180	109,051	0.007	13	224
Alcatel-Lucent RRH2x50-08	150.00	317	192,293	0.013	22	395
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	150.00	210	127,226	0.009	15	261
Commscope NNVV-65B-R4	150.00	232	140,675	0.010	16	289
RFS APXVTM14-ALU-I20	150.00	169	102,144	0.007	12	210
Round Sector Frame	150.00	900	545,253	0.037	63	1,119
Site Pro 1 STK-U Stabilizer	150.00	191	115,957	0.008	14	238
Generic GPS	75.00	10	2,497	0.000	0	12
Stand-Off	75.00	100	24,972	0.002	3	124
		43,626	14,612,600	1.000	1,701	54,259

LoadCase 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
10	180.00	1,122	858,551	0.059	100	961
9	160.00	2,029	1,334,90	0.091	155	1,737
8	145.00	1,352	784,542	0.054	91	1,158
7	130.00	3,189	1,608,76	0.110	187	2,730
6	110.00	3,244	1,321,94	0.090	154	2,778
5	90.00	3,685	1,161,96	0.080	135	3,156
4	70.00	4,870	1,113,37	0.076	130	4,170
3	50.00	4,989	741,911	0.051	86	4,272
2	30.00	5,915	457,703	0.031	53	5,065
1	10.00	6,066	115,207	0.008	13	5,194
Allgon 7770.00	187.00	105	84,328	0.006	10	90
CCI DMP65R-BU8D	187.00	574	461,154	0.032	54	492
Ericsson RRUS 4449 B5, B12	187.00	213	171,065	0.012	20	182
Ericsson RRUS 4478 B14 (15")	187.00	178	143,117	0.010	17	153
Ericsson RRUS 8843 B2, B66A	187.00	216	173,475	0.012	20	185
Flat Light Sector Frame	187.00	1,200	963,749	0.066	112	1,028
LGP Allgon LGP21903	187.00	33	26,503	0.002	3	28
Powerwave Allgon LGP21401	187.00	85	67,944	0.005	8	72
Raycap DC6-48-60-18-8C	187.00	16	12,850	0.001	1	14
Ericsson Radio 4449 B12,B71	175.00	222	163,797	0.011	19	190
Ericsson RRUS 11 B2	175.00	152	112,223	0.008	13	130
Ericsson RRUS 11 B4	175.00	152	112,223	0.008	13	130
Flat Light Sector Frame	175.00	1,200	885,392	0.061	103	1,028
RFS APX16DWV-16DWVS-E-A20 (60")	175.00	126	92,745	0.006	11	108
RFS APXVAARR24_43-U-NA20	175.00	384	283,104	0.019	33	329
Alcatel-Lucent 1900 MHz 4X45 RRH	150.00	180	109,051	0.007	13	154
Alcatel-Lucent RRH2x50-08	150.00	317	192,293	0.013	22	272
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	150.00	210	127,226	0.009	15	180
Commscope NNVV-65B-R4	150.00	232	140,675	0.010	16	199
RFS APXVTM14-ALU-I20	150.00	169	102,144	0.007	12	144
Round Sector Frame	150.00	900	545,253	0.037	63	771
Site Pro 1 STK-U Stabilizer	150.00	191	115,957	0.008	14	164
Generic GPS	75.00	10	2,497	0.000	0	9
Stand-Off	75.00	100	24,972	0.002	3	86
		43,626	14,612,600	1.000	1,701	37,356

Site Number: 10027
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Force/Stress Summary

Section: 1		U20		Bot Elev (ft): 0.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	12B - 12"BD 2.25"	-252.34	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	512.40	0	0	0.00	0.00	49 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.3125	-6.10	1.2D + 1.0W Normal	21.91	50	50	50	190.6	36.0	16.47	1	1	55.22	43.50	37 Member Z
Max Tension Member															
LEG	12B - 12"BD 2.25"	216.27	0.9D + 1.0W 60 deg	50	65	536.80	0	0	0.00	0.00	0.00	0.00		40	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.3125	5.88	1.2D + 1.0W 90 deg	36	58	54.80	1	1	55.22	26.64	26.64	20.54	20.54	28	Blk Shear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
Top Tension		202.93	0.9D + 1.0W 60 deg		0.00	0	0								
Top Compression		237.08	1.2D + 1.0W Normal		0.00	0									
Bot Tension		221.68	0.9D + 1.0W 60 deg		654.15	12	6	1.25" A687							
Bot Compression		258.44	1.2D + 1.0W Normal		610.54	44									

Section: 2		U18		Bot Elev (ft): 20.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	12B - 12"BD 2.25"	-231.20	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	512.40	0	0	0.00	0.00	45 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.3125	-6.03	1.2D + 1.0W 90 deg	20.15	50	50	50	175.3	36.0	19.47	1	1	55.22	43.50	30 Member Z
Max Tension Member															
LEG	12B - 12"BD 2.25"	198.92	0.9D + 1.0W 60 deg	50	65	536.80	0	0	0.00	0.00	0.00	0.00		37	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.3125	5.80	1.2D + 1.0W 90 deg	36	58	54.80	1	1	55.22	26.64	26.64	20.54	20.54	28	Blk Shear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
Top Tension		184.09	0.9D + 1.0W 60 deg		0.00	0	0								
Top Compression		213.62	1.2D + 1.0W Normal		0.00	0									
Bot Tension		202.93	0.9D + 1.0W 60 deg		523.32	39	6	1.25" A325							
Bot Compression		0.00			0.00	0									

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Force/Stress Summary

Section: 3		U16		Bot Elev (ft): 40.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	12B - 12"BD 2"	-207.07	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	399.90	0	0	0.00	0.00	51 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.3125	-5.75	1.2D + 1.0W 90 deg	18.44	50	50	50	187.9	36.0	14.43	1	1	55.22	43.50	39 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	12B - 12"BD 2"	180.08	0.9D + 1.0W 60 deg	50	65	424.10	0	0	0.00	0.00		42	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3X3X0.3125	5.52	1.2D + 1.0W 90 deg	36	58	44.69	1	1	55.22	26.64	17.14	32	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		164.61	0.9D + 1.0W 60 deg	0.00	0	0	
Top Compression		189.24	1.2D + 1.0W Normal	0.00	0		
Bot Tension		184.09	0.9D + 1.0W 60 deg	523.32	35	6	1.25" A325
Bot Compression		0.00		0.00	0		

Section: 4		U14		Bot Elev (ft): 60.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	12B - 12"BD 2"	-182.61	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	399.90	0	0	0.00	0.00	45 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.3125	-5.45	1.2D + 1.0W 90 deg	16.80	50	50	50	171.2	36.0	17.39	1	1	55.22	43.50	31 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	12B - 12"BD 2"	157.95	1.2D + 1.0W 60 deg	50	65	424.10	0	0	0.00	0.00		37	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3X3X0.3125	5.26	1.2D + 1.0W 90 deg	36	58	44.69	1	1	55.22	26.64	17.14	30	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		144.02	0.9D + 1.0W 60 deg	0.00	0	0	
Top Compression		164.11	1.2D + 1.0W Normal	0.00	0		
Bot Tension		164.61	0.9D + 1.0W 60 deg	523.32	31	6	1.25" A325
Bot Compression		0.00		0.00	0		

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Force/Stress Summary

Section: 5		U12		Bot Elev (ft): 80.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	12B - 12"BD 1.75"	-157.18	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	300.70	0	0	0.00	0.00	52 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.1875	-5.07	1.2D + 1.0W 90 deg	15.24	50	50	50	153.4	36.0	13.25	1	1	35.34	20.88	38 Member Z
Max Tension Member															
LEG	12B - 12"BD 1.75"	137.58	1.2D + 1.0W 60 deg	50	65	324.70	0	0	0.00	0.00	0	0	0.00	0.00	42 User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.1875	4.82	1.2D + 1.0W 90 deg	36	58	29.06	1	1	35.34	12.72	1	1	10.16	47	Blk Shear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	122.79	0.9D + 1.0W 60 deg		0.00	0	0								
	Top Compression	138.97	1.2D + 1.0W Normal		0.00	0									
	Bot Tension	144.02	0.9D + 1.0W 60 deg		327.10	44	6	1 A325							
	Bot Compression	0.00			0.00	0									

Section: 6		U10		Bot Elev (ft): 100.0				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	12B - 12"BD 1.5"	-131.77	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	214.90	0	0	0.00	0.00	61 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.1875	-4.99	1.2D + 1.0W 90 deg	13.79	50	50	50	138.9	36.0	16.17	1	1	35.34	20.88	30 Member Z
Max Tension Member															
LEG	12B - 12"BD 1.5"	117.44	0.9D + 1.0W 60 deg	50	65	238.60	0	0	0.00	0.00	0	0	0.00	0.00	49 User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.1875	4.68	1.2D + 1.0W 90 deg	36	58	29.06	1	1	35.34	12.72	1	1	10.16	46	Blk Shear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	99.23	0.9D + 1.0W 60 deg		0.00	0	0								
	Top Compression	112.25	1.2D + 1.0W Normal		0.00	0									
	Bot Tension	122.79	0.9D + 1.0W 60 deg		327.10	38	6	1 A325							
	Bot Compression	0.00			0.00	0									

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Force/Stress Summary

Section: 7		U8		Bot Elev (ft): 120.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	12B - 12"BD 1.5"	-104.23	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	214.90	0	0	0.00	0.00	48 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.1875	-5.01	1.2D + 1.0W 90 deg	12.50	50	50	50	125.9	36.0	19.69	1	1	35.34	20.88	25 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	12B - 12"BD 1.5"	91.89	1.2D + 1.0W 60 deg	50	65	238.60	0	0	0.00	0.00		38	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3X3X0.1875	5.11	1.2D + 1.0W 90 deg	36	58	29.06	1	1	35.34	12.72	10.16	50	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		72.21	0.9D + 1.0W 60 deg	0.00	0	0	
Top Compression		82.50	1.2D + 1.0W Normal	0.00	0		
Bot Tension		99.23	0.9D + 1.0W 60 deg	327.10	30	6	1 A325
Bot Compression		0.00		0.00	0		

Section: 8		U-6.0		Bot Elev (ft): 140.0				Height (ft): 10.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	12B - 12"BD 1.25"	-71.13	1.2D + 1.0W Normal	10.02	100	100	100	0.0	0.0	142.50	0	0	0.00	0.00	49 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2.5X2.5X0.1875	-6.24	1.2D + 1.0W Normal	11.41	50	50	50	138.4	36.0	13.48	1	1	35.34	20.88	46 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	12B - 12"BD 1.25"	63.03	0.9D + 1.0W 60 deg	50	65	165.70	0	0	0.00	0.00		38	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.1875	5.69	0.9D + 1.0W 60 deg	36	58	22.93	1	1	35.34	12.72	9.14	62	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		57.49	0.9D + 1.0W 60 deg	0.00	0	0	
Top Compression		66.81	1.2D + 1.0W Normal	0.00	0		
Bot Tension		72.21	0.9D + 1.0W 60 deg	327.10	22	6	1 A325
Bot Compression		0.00		0.00	0		

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Force/Stress Summary

Section: 9		H-5.0		Bot Elev (ft): 150.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SOL - 2" SOLID	-62.76	1.2D + 1.0W Normal	2.41	100	100	100	57.8	50.0	110.77	0	0	0.00	0.00	56 Member X
HORIZ	SOL - 1" SOLID	-1.45	1.2D + 1.0W 60 deg	4.509	100	100	100	140.7	50.0	8.97	0	0	0.00	0.00	16 Member X
DIAG	SOL - 1" SOLID	-3.26	1.2D + 1.0W 90 deg	5.513	50	50	50	119.1	50.0	12.51	0	0	0.00	0.00	26 Member X

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SOL - 2" SOLID	58.11	1.2D + 1.0W 60 deg	50	65	141.37	0	0	0.00	0.00		41	Member
HORIZ	SOL - 1" SOLID	1.55	1.2D + 1.0W Normal	50	65	35.34	0	0	0.00	0.00	0.00	4	Member
DIAG	SOL - 1" SOLID	3.57	1.2D + 1.0W 90 deg	50	65	35.34	0	0	0.00	0.00	0.00	10	Member

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		20.88	0.9D + 1.0W 60 deg	87.50	24	0	
Top Compression		26.30	1.2D + 1.0W Normal	141.40	19		
Bot Tension		57.49	0.9D + 1.0W 60 deg	327.10	18	6	1 A325
Bot Compression		0.00		0.00	0		

Section: 10		S-4.5		Bot Elev (ft): 170.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SOL - 1 1/2" SOLID	-23.80	1.2D + 1.0W Normal	2.41	100	100	100	77.0	50.0	51.54	0	0	0.00	0.00	46 Member X
HORIZ	SOL - 3/4" SOLID	-1.11	1.2D + 1.0W Normal	4.491	100	100	100	186.8	50.0	2.86	0	0	0.00	0.00	38 Member X
DIAG	SOL - 3/4" SOLID	-3.06	1.2D + 1.0W 90 deg	5.068	50	50	50	145.9	50.0	4.69	0	0	0.00	0.00	65 Member X

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SOL - 1 1/2" SOLID	20.94	0.9D + 1.0W 60 deg	50	65	79.52	0	0	0.00	0.00		26	Member
HORIZ	SOL - 3/4" SOLID	1.13	1.2D + 1.0W 60 deg	50	65	19.88	0	0	0.00	0.00	0.00	5	Member
DIAG	SOL - 3/4" SOLID	3.07	1.2D + 1.0W 90 deg	50	65	19.88	0	0	0.00	0.00	0.00	15	Member

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00		0.00	0	0	
Top Compression		0.25	1.2D + 1.0Ev + 1.0Eh	0.00	0		
Bot Tension		20.88	0.9D + 1.0W 60 deg	0.00	0		
Bot Compression		0.00		0.00	0		

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Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.0W Normal	11.55	00.00	0	1	0.00	258.26	-25.06	
	11.55	00.00	120	1a	8.54	-102.95	-6.46	
	11.55	00.00	240	1b	-8.54	-102.95	-6.46	
1.2D + 1.0W 60 deg	11.55	00.00	0	1	-1.15	134.41	-12.73	
	11.55	00.00	120	1a	-11.60	134.14	5.37	
	11.55	00.00	240	1b	-18.75	-216.20	-10.82	
1.2D + 1.0W 90 deg	11.55	00.00	0	1	-1.40	17.46	-1.30	
	11.55	00.00	120	1a	-18.77	221.21	10.06	
	11.55	00.00	240	1b	-16.62	-186.32	-8.76	
0.9D + 1.0W Normal	11.55	00.00	0	1	0.00	253.54	-24.74	
	11.55	00.00	120	1a	8.83	-107.14	-6.64	
	11.55	00.00	240	1b	-8.83	-107.14	-6.64	
0.9D + 1.0W 60 deg	11.55	00.00	0	1	-1.16	129.86	-12.40	
	11.55	00.00	120	1a	-11.31	129.60	5.20	
	11.55	00.00	240	1b	-19.03	-220.19	-10.98	
0.9D + 1.0W 90 deg	11.55	00.00	0	1	-1.40	13.09	-0.97	
	11.55	00.00	120	1a	-18.48	216.53	9.89	
	11.55	00.00	240	1b	-16.90	-190.36	-8.92	
1.2D + 1.0Di + 1.0Wi Normal	11.55	00.00	0	1	0.00	96.69	-3.75	
	11.55	00.00	120	1a	5.08	-1.57	-3.37	
	11.55	00.00	240	1b	-5.08	-1.57	-3.37	
1.2D + 1.0Di + 1.0Wi 60 deg	11.55	00.00	0	1	-0.35	63.43	-0.41	
	11.55	00.00	120	1a	-0.53	63.38	-0.10	
	11.55	00.00	240	1b	-7.99	-33.26	-4.61	
1.2D + 1.0Di + 1.0Wi 90 deg	11.55	00.00	0	1	-0.41	31.18	2.80	
	11.55	00.00	120	1a	-2.51	87.19	1.21	
	11.55	00.00	240	1b	-7.37	-24.83	-4.02	
1.2D + 1.0Ev + 1.0Eh Normal M1	11.55	00.00	0	1	0.00	30.36	-2.48	
	11.55	00.00	120	1a	-0.70	10.69	0.41	
	11.55	00.00	240	1b	0.70	10.69	0.41	
1.2D + 1.0Ev + 1.0Eh 60 deg M1	11.55	00.00	0	1	0.00	23.71	-1.91	
	11.55	00.00	120	1a	-1.66	23.71	0.96	
	11.55	00.00	240	1b	0.23	4.33	0.13	
1.2D + 1.0Ev + 1.0Eh 90 deg M1	11.55	00.00	0	1	0.00	17.25	-1.36	
	11.55	00.00	120	1a	-2.01	28.61	1.16	
	11.55	00.00	240	1b	0.35	5.89	0.20	
0.9D - 1.0Ev + 1.0Eh Normal M1	11.55	00.00	0	1	0.00	24.96	-2.05	
	11.55	00.00	120	1a	-0.33	5.33	0.19	
	11.55	00.00	240	1b	0.33	5.33	0.19	
0.9D - 1.0Ev + 1.0Eh 60 deg M1	11.55	00.00	0	1	0.00	18.32	-1.49	
	11.55	00.00	120	1a	-1.29	18.32	0.74	
	11.55	00.00	240	1b	-0.14	-1.02	-0.08	
0.9D - 1.0Ev + 1.0Eh 90 deg M1	11.55	00.00	0	1	0.00	11.87	-0.94	
	11.55	00.00	120	1a	-1.65	23.21	0.95	

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	11.55	00.00	240	1b	-0.02	0.54	-0.01
1.0D + 1.0W Service Normal	11.55	00.00	0	1	0.00	71.54	-6.77
	11.55	00.00	120	1a	1.35	-13.96	-1.15
	11.55	00.00	240	1b	-1.35	-13.96	-1.15
1.0D + 1.0W Service 60 deg	11.55	00.00	0	1	-0.29	42.23	-3.83
	11.55	00.00	120	1a	-3.46	42.17	1.66
	11.55	00.00	240	1b	-3.78	-40.78	-2.18
1.0D + 1.0W Service 90 deg	11.55	00.00	0	1	-0.35	14.54	-1.10
	11.55	00.00	120	1a	-5.17	62.78	2.79
	11.55	00.00	240	1b	-3.28	-33.70	-1.69

Max Uplift:	220.19(kip)	Moment Ice:	1,134.64 (kip-ft)	Moment:	4,170.86 (kip-ft)	1.2D + 1.0W Normal
Max Down:	258.26(kip)	Total Down Ice:	93.55 (kip)	Total Down:	52.35 (kip)	
Max Shear:	25.06 (kip)	Total Shear Ice:	10.48 (kip)	Total Shear:	37.97 (kip)	

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Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
124 mph Normal with No Ice	70.00	0.173	0.0112	0.2843	0.2845
124 mph Normal with No Ice	150.00	0.948	0.0335	0.9217	0.9223
124 mph Normal with No Ice	175.19	1.411	0.1703	1.4705	1.4803
124 mph Normal with No Ice	187.22	1.655	0.2304	1.2863	1.3068
124 mph 60 degree with No Ice	70.00	0.168	0.0137	0.2771	0.2774
124 mph 60 degree with No Ice	150.00	0.929	0.0450	0.9059	0.9070
124 mph 60 degree with No Ice	175.19	1.384	0.5065	1.0568	1.1719
124 mph 60 degree with No Ice	187.22	1.623	0.6519	1.0919	1.2712
124 mph 90 degree with No Ice	70.00	0.168	-0.0154	0.2786	0.2790
124 mph 90 degree with No Ice	150.00	0.932	-0.0500	0.9175	0.9188
124 mph 90 degree with No Ice	175.19	1.387	-0.2920	0.8543	0.8904
124 mph 90 degree with No Ice	187.22	1.625	-0.3622	1.0246	1.0867
124 mph Normal with No Ice (Reduced DL)	70.00	0.172	0.0112	0.2837	0.2839
124 mph Normal with No Ice (Reduced DL)	150.00	0.946	0.0334	0.9182	0.9188
124 mph Normal with No Ice (Reduced DL)	175.19	1.407	0.1704	1.4662	1.4761
124 mph Normal with No Ice (Reduced DL)	187.22	1.650	0.2305	1.2822	1.3028
124 mph 60 deg with No Ice (Reduced DL)	70.00	0.167	0.0137	0.2765	0.2768
124 mph 60 deg with No Ice (Reduced DL)	150.00	0.927	0.0449	0.9035	0.9046
124 mph 60 deg with No Ice (Reduced DL)	175.19	1.380	0.5055	1.0526	1.1677
124 mph 60 deg with No Ice (Reduced DL)	187.22	1.618	0.6506	1.0879	1.2670
124 mph 90 deg with No Ice (Reduced DL)	70.00	0.168	-0.0154	0.2780	0.2784
124 mph 90 deg with No Ice (Reduced DL)	150.00	0.930	-0.0499	0.9145	0.9159
124 mph 90 deg with No Ice (Reduced DL)	175.19	1.383	-0.2918	0.8501	0.8865
124 mph 90 deg with No Ice (Reduced DL)	187.22	1.620	-0.3620	1.0206	1.0829
50 mph Normal with 1.00 in Radial Ice	70.00	0.047	0.0032	0.0768	0.0769
50 mph Normal with 1.00 in Radial Ice	150.00	0.253	0.0091	0.2451	0.2452
50 mph Normal with 1.00 in Radial Ice	175.19	0.373	0.0301	0.3612	0.3625
50 mph Normal with 1.00 in Radial Ice	187.22	0.435	0.0410	0.3228	0.3253
50 mph 60 deg with 1.00 in Radial Ice	70.00	0.047	-0.0035	0.0758	0.0758
50 mph 60 deg with 1.00 in Radial Ice	150.00	0.250	-0.0106	0.2394	0.2394
50 mph 60 deg with 1.00 in Radial Ice	175.19	0.368	0.0562	0.2748	0.2805
50 mph 60 deg with 1.00 in Radial Ice	187.22	0.430	0.0714	0.2835	0.2921
50 mph 90 deg with 1.00 in Radial Ice	70.00	0.047	-0.0041	0.0760	0.0760
50 mph 90 deg with 1.00 in Radial Ice	150.00	0.251	-0.0128	0.2408	0.2411
50 mph 90 deg with 1.00 in Radial Ice	175.19	0.369	-0.0605	0.2378	0.2414
50 mph 90 deg with 1.00 in Radial Ice	187.22	0.430	-0.0736	0.2705	0.2799
Seismic Normal M1	70.00	0.010	0.0007	0.0165	0.0165
Seismic Normal M1	150.00	0.057	0.0024	0.0606	0.0606
Seismic Normal M1	175.19	0.086	0.0015	0.0742	0.0742
Seismic Normal M1	187.22	0.101	0.0011	0.0725	0.0725
Seismic 60 deg M1	70.00	0.009	-0.0007	0.0162	0.0162
Seismic 60 deg M1	150.00	0.056	-0.0023	0.0596	0.0596
Seismic 60 deg M1	175.19	0.085	0.0014	0.0733	0.0733
Seismic 60 deg M1	187.22	0.100	0.0010	0.0709	0.0709
Seismic 90 deg M1	70.00	0.010	-0.0008	0.0165	0.0165
Seismic 90 deg M1	150.00	0.057	-0.0027	0.0608	0.0608
Seismic 90 deg M1	175.19	0.086	-0.0017	0.0746	0.0746
Seismic 90 deg M1	187.22	0.101	-0.0013	0.0725	0.0725
Seismic (Reduced DL) Normal M1	70.00	0.010	0.0007	0.0164	0.0164
Seismic (Reduced DL) Normal M1	150.00	0.057	0.0024	0.0595	0.0596
Seismic (Reduced DL) Normal M1	175.19	0.086	0.0015	0.0738	0.0738
Seismic (Reduced DL) Normal M1	187.22	0.101	0.0011	0.0721	0.0721
Seismic (Reduced DL) 60 deg M1	70.00	0.009	-0.0007	0.0162	0.0162
Seismic (Reduced DL) 60 deg M1	150.00	0.056	-0.0023	0.0579	0.0579
Seismic (Reduced DL) 60 deg M1	175.19	0.084	0.0014	0.0729	0.0729

Site Number: 10027

Code:

ANSI/TIA-222-H

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Site Name: SALEM CT, CT

Engineering Number: OAA751835_C3_01

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Customer: AT&T MOBILITY

Seismic (Reduced DL) 60 deg M1	187.22	0.099	0.0010	0.0706	0.0706
Seismic (Reduced DL) 90 deg M1	70.00	0.010	-0.0008	0.0164	0.0164
Seismic (Reduced DL) 90 deg M1	150.00	0.057	-0.0027	0.0593	0.0593
Seismic (Reduced DL) 90 deg M1	175.19	0.086	-0.0017	0.0742	0.0742
Seismic (Reduced DL) 90 deg M1	187.22	0.101	-0.0013	0.0721	0.0721
Serviceability - 60 mph Wind Normal	70.00	0.041	0.0027	0.0671	0.0672
Serviceability - 60 mph Wind Normal	150.00	0.223	0.0079	0.2180	0.2182
Serviceability - 60 mph Wind Normal	175.19	0.332	0.0382	0.3450	0.3471
Serviceability - 60 mph Wind Normal	187.22	0.389	0.0511	0.3017	0.3060
Serviceability - 60 mph Wind 60 deg	70.00	0.040	-0.0030	0.0654	0.0654
Serviceability - 60 mph Wind 60 deg	150.00	0.219	-0.0097	0.2109	0.2111
Serviceability - 60 mph Wind 60 deg	175.19	0.325	0.0637	0.2452	0.2534
Serviceability - 60 mph Wind 60 deg	187.22	0.381	0.0810	0.2562	0.2678
Serviceability - 60 mph Wind 90 deg	70.00	0.040	-0.0036	0.0658	0.0659
Serviceability - 60 mph Wind 90 deg	150.00	0.219	-0.0117	0.2153	0.2156
Serviceability - 60 mph Wind 90 deg	175.19	0.326	-0.0670	0.2008	0.2083
Serviceability - 60 mph Wind 90 deg	187.22	0.382	-0.0823	0.2404	0.2539

Maximum Reactions Summary

Anchor Group	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	52.35	93.55	258.26	25.06	37.97	10.48	4170.86	1134.64

August 14, 2019



SAI Communications
12 Industrial Way
Salem NH, 03079

RE: Site Number: CT2234 (LTE 2C/3C/4C/5C)
 FA Number: 10035321
 PACE Number: MRCTB041429
 PT Number: 2051A0Q8T8
 Site Name: SALEM
 Site Address: 153 East Haddam Road
 Salem, CT 06420

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)
- (1) Squid Surge Arrestor (24.0"x9.7" Φ - Wt. = 33 lbs. /each) (Tower Mount)
- **(6) DMPR65R-BU8D Antennas (96.0"x20.7"x7.7" - Wt. = 95.7 lbs. /each)**
- **(3) B14 4478 RRH's (18.1"x13.4"x8.3" - Wt. = 60 lbs. /each)**
- **(3) B5/B12 4449 RRH's (14.9"x13.2"x10.4" - Wt. = 73 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" Φ - Wt. = 33 lbs. /each)**

**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 May 28, 2018.

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 135 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.0 in. An escalated ice thickness of 1.19 in was used for this analysis.
- HDG considers this site to be exposure category B; tower is located in an urban/suburban or wooded area with numerous closely spaced obstructions.
- HDG considers this site to be topographic category 3; tower is located at the upper half of a hill.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 4.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the existing tower with bent plates. 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:

- **Reinforce existing angle with new L3x3x3/16 angle (typ. of 2 per sector, total of 6).**
- **Install new additional 2" std. (2.38" O.D.) pipe brace secured to the existing mount and tower leg (typ. of 4 per sector, total of 12).**

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing (LTE 2C/3C/4C/5C) Mount Rating	32	LC15	174%	FAIL
Modified Mount Rating	32	LC10	95%	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:







HUDSON
Design Group LLC

Wind & Ice Calculations

Date: 8/14/2019
 Project Name: SALEM
 Project No.: CT2234
 Designed By: BCP Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

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

z = 187 (ft)
 z_g = 1200 (ft)
 α = 7.0

K_z = 1.182

K_{zmin} ≤ K_z ≤ 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

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

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

K_{zt} = 1.001873481

K_h = 509.45083

K_c = 0.9 (from Table 2-4)

K_t = 0.53 (from Table 2-5)

f = 2 (from Table 2-5)

z = 187

z_s = 358 (Mean elevation of base of structure above sea level)

H = 60 (Ht. of the crest above surrounding terrain)

K_{zt} = 1.00 (from 2.6.6.2.1)

K_e = 0.99 (from 2.6.8)

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

Category = 3

2.6.10 Design Ice Thickness

Max Ice Thickness =

t_i = 1.00 in

Importance Factor =

I = 1.0 (from Table 2-3)

K_{iz} = 1.19 (from Sec. 2.6.10)

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

t_{iz} = 1.19 in

Date: 8/14/2019
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 Designed By: BCP Checked By: MSC



2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

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

h= ht. of structure

h= 190

$G_h = 0.85$

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)

$G_h = 1.35$

$G_h = 1.00$

2.6.11.2 Design Wind Force on Appurtenances

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

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

$K_z = 1.182$ (from 2.6.5.2)

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

$K_s = 1.0$ (from 2.6.7)

$K_e = 0.99$ (from 2.6.8)

$K_d = 0.85$ (from Table 2-2)

$V_{max} = 135$ mph (Ultimate Wind Speed)

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

$V_{30} = 30$ mph

$q_z = 46.35$

$q_z (ice) = 6.36$

$q_z (30) = 2.29$

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

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 = **1.19 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	255	44	13
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	4.64	1.30	828	130	41
B14 4478 RRH	18.1	13.4	8.3	1.68	1.35	1.20	94	17	5
B14 4478 RRH (Shielded)	18.1	-7.3	8.3	-0.92	-2.48	1.20	-51	-5	-3
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.13	1.20	76	14	4
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.20	76	14	4
LGP21401 TMA	14.4	2.7	9.0	0.27	5.33	1.33	17	5	1
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	52	10	3
2" Pipe	2.4	12.0		0.20	0.20	1.20	11	4	1
3x3 Angle	3.0	12.0		0.25	0.25	2.00	23	7	1

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WIND LOADS

Angle = 30 (deg)

Ice Thickness = 1.19 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	255	136	225
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	828	376	715
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	94	58	85
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	47	58	50
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	76	60	72
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	76	63	73
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	17	50	25

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.93	2.94	4.29	7.77	1.28	1.43	43	27	39
DMPR65R-BU8D Antenna	98.4	23.1	10.1	15.77	6.89	4.26	9.76	1.28	1.49	128	65	112
B14 4478 RRH	20.5	15.8	10.7	2.24	1.52	1.30	1.92	1.20	1.20	17	12	16
B14 4478 RRH (Shielded)	20.5	7.9	10.7	1.12	1.52	2.60	1.92	1.20	1.20	9	12	9
B5/B12 4449 RRH	17.3	15.6	12.8	1.87	1.53	1.11	1.35	1.20	1.20	14	12	14
B2/B66A 8843 RRH	17.3	15.6	13.3	1.87	1.59	1.11	1.30	1.20	1.20	14	12	14
LGP21401 TMA	16.8	5.1	11.4	0.59	1.33	3.30	1.47	1.24	1.20	5	10	6

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	19	7	11
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	35
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	4
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	2	3	2
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	4
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	4
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	2	1

Date: 8/14/2019
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WIND LOADS

Angle = 60 (deg)

Ice Thickness = 1.19 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	255	136	166
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	828	376	489
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	94	58	67
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.26	1.04	1.80	2.18	1.20	1.20	70	58	61
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	76	60	64
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	76	63	66
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	17	50	42

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.33	2.94	4.29	7.77	1.28	1.43	43	27	31
DMPR65R-BU8D Antenna	98.4	23.1	10.1	15.77	6.89	4.26	9.76	1.28	1.49	128	65	81
B14 4478 RRH	20.5	15.8	10.7	2.24	1.52	1.30	1.92	1.20	1.20	17	12	13
B14 4478 RRH (Shielded)	20.5	11.8	10.7	1.68	1.52	1.73	1.92	1.20	1.20	13	12	12
B5/B12 4449 RRH	17.3	15.6	12.8	1.87	1.53	1.11	1.35	1.20	1.20	14	12	12
B2/B66A 8843 RRH	17.3	15.6	13.3	1.87	1.59	1.11	1.30	1.20	1.20	14	12	13
LGP21401 TMA	16.8	5.1	11.4	0.59	1.33	3.30	1.47	1.24	1.20	5	10	9

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	8
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	24
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	3
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.26	1.04	1.80	2.18	1.20	1.20	3	3	3
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	3
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	2	2

Date: 8/14/2019
 Project Name: SALEM
 Project No.: CT2234
 Designed By: BCP Checked By: MSC



WIND LOADS

Angle = 90 (deg) Ice Thickness = 1.19 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	255	136	136
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	828	376	376
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	94	58	58
B14 4478 RRH (Shielded)	18.1	-7.3	8.3	-0.92	1.04	-2.48	2.18	1.20	1.20	-51	58	58
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	76	60	60
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	76	63	63
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	17	50	50

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.33	2.94	4.29	7.77	1.28	1.43	43	27	27
DMPR65R-BU8D Antenna	98.4	23.1	10.1	15.77	6.89	4.26	9.76	1.28	1.49	128	65	65
B14 4478 RRH	20.5	15.8	10.7	2.24	1.52	1.30	1.92	1.20	1.20	17	12	12
B14 4478 RRH (Shielded)	20.5	-4.9	10.7	-0.70	1.52	-4.16	1.92	1.20	1.20	-5	12	12
B5/B12 4449 RRH	17.3	15.6	12.8	1.87	1.53	1.11	1.35	1.20	1.20	14	12	12
B2/B66A 8843 RRH	17.3	15.6	13.3	1.87	1.59	1.11	1.30	1.20	1.20	14	12	12
LGP21401 TMA	16.8	5.1	11.4	0.59	1.33	3.30	1.47	1.24	1.20	5	10	10

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	7
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	19
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	3
B14 4478 RRH (Shielded)	18.1	-7.3	8.3	-0.92	1.04	-2.48	2.18	1.20	1.20	-3	3	3
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	3
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	2	2

Date: 8/14/2019
 Project Name: SALEM
 Project No.: CT2234
 Designed By: BCP Checked By: MSC



WIND LOADS

Angle = 120 (deg)

Ice Thickness = 1.19 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	255	136	166
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	828	376	489
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	94	58	67
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.26	1.04	1.80	2.18	1.20	1.20	70	58	61
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	76	60	64
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	76	63	66
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	17	50	42

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.33	2.94	4.29	7.77	1.28	1.43	43	27	31
DMPR65R-BU8D Antenna	98.4	23.1	10.1	15.77	6.89	4.26	9.76	1.28	1.49	128	65	81
B14 4478 RRH	20.5	15.8	10.7	2.24	1.52	1.30	1.92	1.20	1.20	17	12	13
B14 4478 RRH (Shielded)	20.5	11.8	10.7	1.68	1.52	1.73	1.92	1.20	1.20	13	12	12
B5/B12 4449 RRH	17.3	15.6	12.8	1.87	1.53	1.11	1.35	1.20	1.20	14	12	12
B2/B66A 8843 RRH	17.3	15.6	13.3	1.87	1.59	1.11	1.30	1.20	1.20	14	12	13
LGP21401 TMA	16.8	5.1	11.4	0.59	1.33	3.30	1.47	1.24	1.20	5	10	9

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	8
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	24
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	3
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.26	1.04	1.80	2.18	1.20	1.20	3	3	3
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	3
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	2	2

Date: 8/14/2019
 Project Name: SALEM
 Project No.: CT2234
 Designed By: BCP Checked By: MSC



WIND LOADS

Angle = 150 (deg) Ice Thickness = 1.19 in. Equivalent Angle = 330 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	255	136	225
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	828	376	715
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	94	58	85
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	47	58	50
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	76	60	72
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	76	63	73
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	17	50	25

WIND LOADS WITH ICE:

7770 Antenna	57.4	13.4	7.4	5.33	2.94	4.29	7.77	1.28	1.43	43	27	39
DMPR65R-BU8D Antenna	98.4	23.1	10.1	15.77	6.89	4.26	9.76	1.28	1.49	128	65	112
B14 4478 RRH	20.5	15.8	10.7	2.24	1.52	1.30	1.92	1.20	1.20	17	12	16
B14 4478 RRH (Shielded)	20.5	7.9	10.7	1.12	1.52	2.60	1.92	1.20	1.20	9	12	9
B5/B12 4449 RRH	17.3	15.6	12.8	1.87	1.53	1.11	1.35	1.20	1.20	14	12	14
B2/B66A 8843 RRH	17.3	15.6	13.3	1.87	1.59	1.11	1.30	1.20	1.20	14	12	14
LGP21401 TMA	16.8	5.1	11.4	0.59	1.33	3.30	1.47	1.24	1.20	5	10	6

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	13	7	11
DMPR65R-BU8D Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	35
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	4
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	2	3	2
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	4	3	4
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	4	3	4
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	2	1

Date: 8/14/2019

Project Name: SALEM

Project No.: CT2234

Designed By: BCP Checked By: MSC



HUDSON
Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 1.19 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: 88 lbs
Weight of object: 35.0 lbs
Combined weight of ice and object: 123 lbs

DMPR65R-BU8D 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: 271 lbs
Weight of object: 95.7 lbs
Combined weight of ice and object: 366 lbs

B14 4478 RRH

Weight of ice based on total radial SF area:
Height (in): 18.1
Width (in): 13.4
Depth (in): 8.3
Total weight of ice on object: 37 lbs
Weight of object: 60.0 lbs
Combined weight of ice and object: 97 lbs

B5/B12 4449 RRH

Weight of ice based on total radial SF area:
Height (in): 14.9
Width (in): 13.2
Depth (in): 10.4
Total weight of ice on object: 32 lbs
Weight of object: 73.0 lbs
Combined weight of ice and object: 105 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: 33 lbs
Weight of object: 72.0 lbs
Combined weight of ice and object: 105 lbs

LGP21401 TMA

Weight of ice based on total radial SF area:
Height (in): 14.4
Width (in): 2.7
Depth (in): 9.0
Total weight of ice on object: 18 lbs
Weight of object: 19.0 lbs
Combined weight of ice and object: 37 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: 32 lbs
Weight of object: 33 lbs
Combined weight of ice and object: 65 lbs

L 3x3 Angles

Weight of ice based on total radial SF area:
Height (in): 3
Width (in): 3
Per foot weight of ice on object: 8 plf

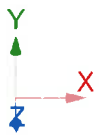
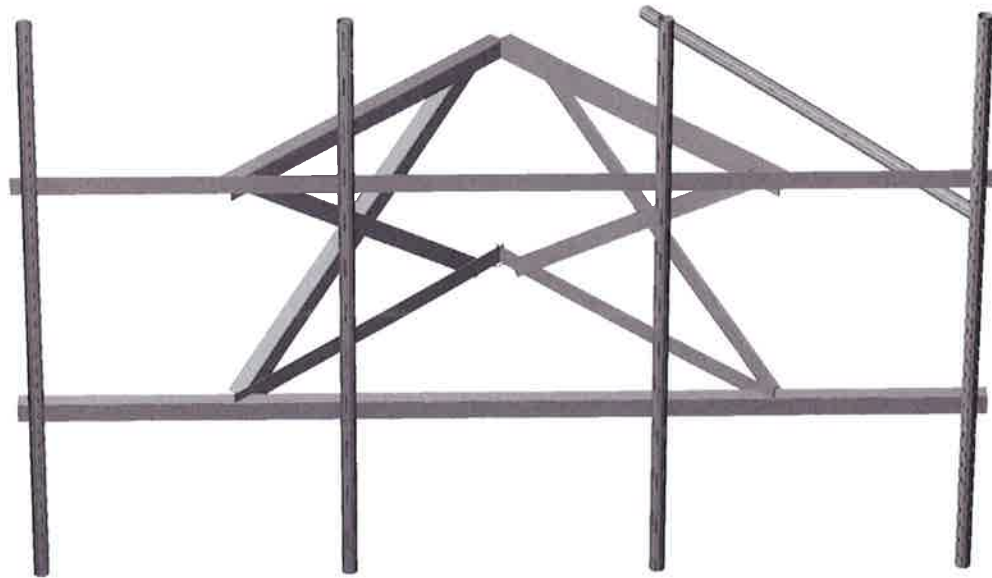
2" pipe

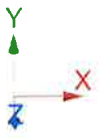
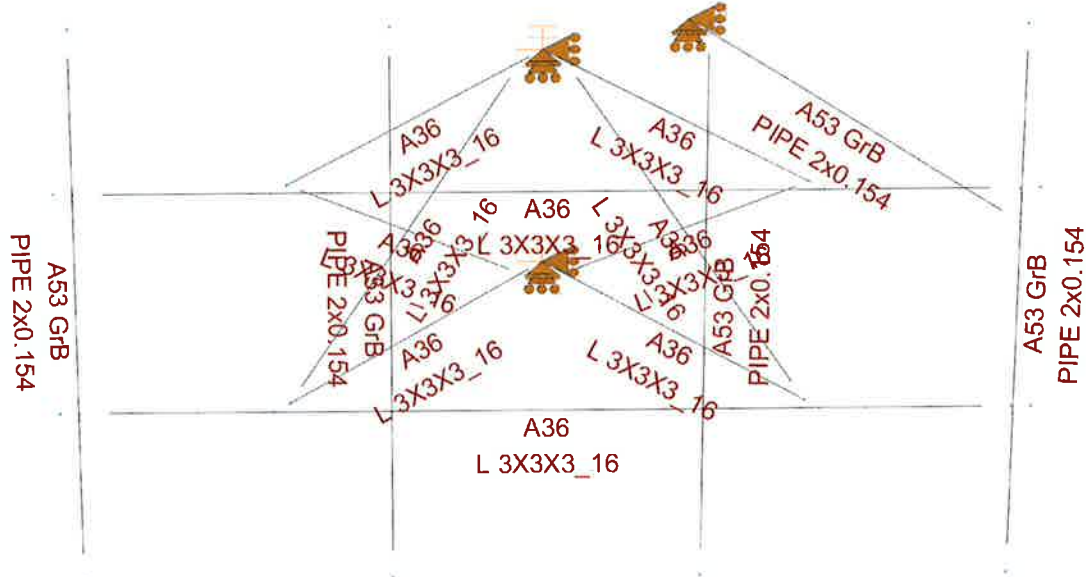
Per foot weight of ice:
diameter (in): 2.38
Per foot weight of ice on object: 5 plf



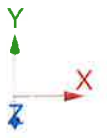
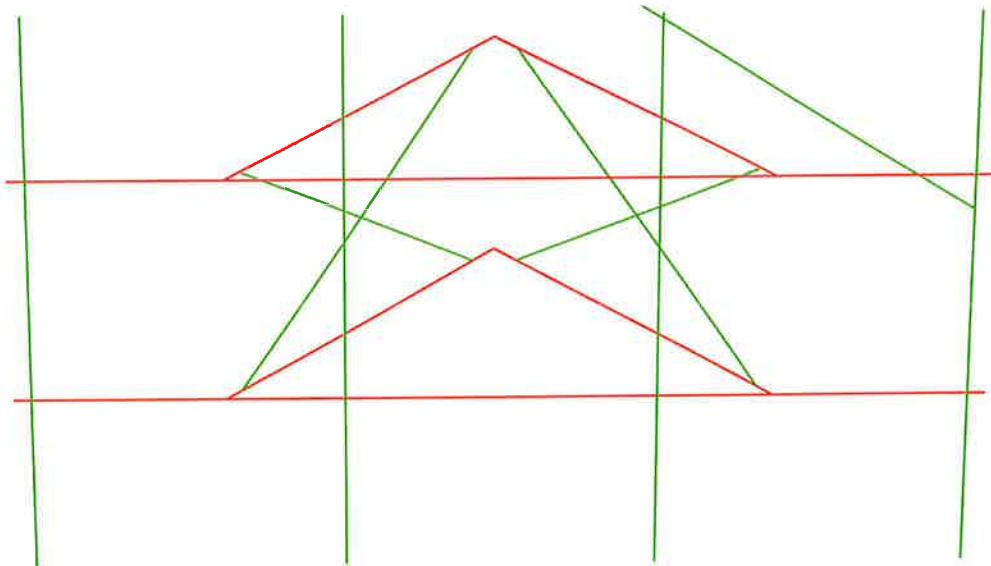
HUDSON
Design Group LLC

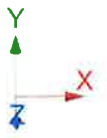
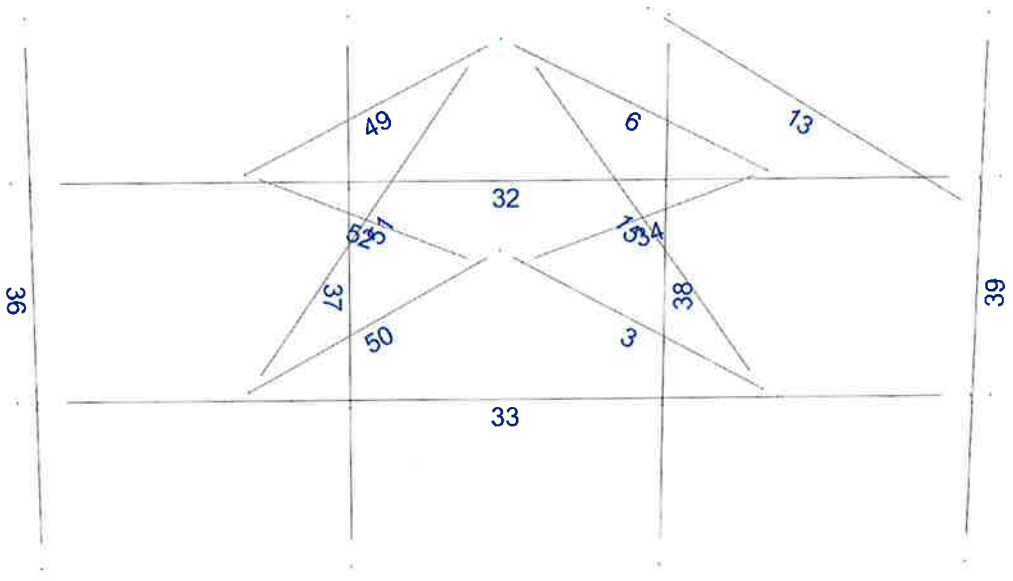
**Mount Calculations
(Existing Conditions)**





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





Current Date: 8/14/2019 3:41 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2234\LTE (2C-3C-4C-5C)\CT2234.re

Load data

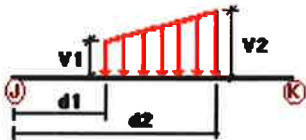
GLOSSARY

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 <td 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

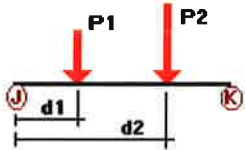
Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wo	3	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	32	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	33	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	39	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	52	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
W30	3	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	32	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	33	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	39	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	52	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
W60	3	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	36	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	37	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	38	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	39	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	X	-0.023	-0.023	0.00	Yes	100.00	Yes
52	X	-0.023	-0.023	0.00	Yes	100.00	Yes	
W90	3	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	36	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	37	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	38	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	39	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	X	-0.023	-0.023	0.00	Yes	100.00	Yes
52	X	-0.023	-0.023	0.00	Yes	100.00	Yes	
W120	3	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	36	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	37	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	38	X	-0.011	-0.011	0.00	Yes	100.00	Yes
39	X	-0.011	-0.011	0.00	Yes	100.00	Yes	
49	X	-0.023	-0.023	0.00	Yes	100.00	Yes	

	50	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	52	X	-0.023	-0.023	0.00	Yes	100.00	Yes
W150	3	Z	0.023	0.023	0.00	Yes	100.00	Yes
	6	Z	0.023	0.023	0.00	Yes	100.00	Yes
	13	Z	0.011	0.011	0.00	Yes	100.00	Yes
	15	Z	0.023	0.023	0.00	Yes	100.00	Yes
	32	Z	0.023	0.023	0.00	Yes	100.00	Yes
	33	Z	0.023	0.023	0.00	Yes	100.00	Yes
	34	Z	0.023	0.023	0.00	Yes	100.00	Yes
	39	Z	0.011	0.011	0.00	Yes	100.00	Yes
	49	Z	0.023	0.023	0.00	Yes	100.00	Yes
	50	Z	0.023	0.023	0.00	Yes	100.00	Yes
	51	Z	0.023	0.023	0.00	Yes	100.00	Yes
	52	Z	0.023	0.023	0.00	Yes	100.00	Yes
Di	3	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	6	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	13	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	15	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	32	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	33	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	34	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	36	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	37	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	38	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	39	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	49	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	50	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	51	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	52	Y	-0.008	-0.008	0.00	Yes	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
D	36	Y	-0.048	0.50	No
		Y	-0.048	7.50	No
	37	Y	-0.012	5.00	No
		Y	-0.048	0.50	No
		Y	-0.048	7.50	No
		Y	-0.06	5.00	No
	38	Y	-0.073	2.00	No
		Y	-0.072	5.00	No
	39	Y	-0.018	2.50	No
		Y	-0.018	6.50	No
Y		-0.038	5.00	No	
Wo	36	z	-0.415	0.50	No
		z	-0.415	7.50	No
		z	-0.022	5.00	No
	37	z	-0.415	0.50	No

		z	-0.415	7.50	No
	38	z	-0.076	2.00	No
		z	-0.076	5.00	No
	39	z	-0.128	2.50	No
		z	-0.128	6.50	No
		z	-0.034	5.00	No
W30	36	3	-0.358	0.50	No
		3	-0.358	7.50	No
		3	-0.02	5.00	No
	37	3	-0.358	0.50	No
		3	-0.358	7.50	No
		3	-0.05	5.00	No
	38	3	-0.072	2.00	No
		3	-0.073	5.00	No
	39	3	-0.113	2.50	No
		3	-0.113	6.50	No
		3	-0.05	5.00	No
W60	36	3	-0.245	0.50	No
		3	-0.245	7.50	No
		3	-0.016	5.00	No
	37	3	-0.245	0.50	No
		3	-0.245	7.50	No
		3	-0.061	5.00	No
	38	3	-0.064	2.00	No
		3	-0.066	5.00	No
	39	3	-0.083	2.50	No
		3	-0.083	6.50	No
		3	-0.084	5.00	No
W90	36	x	-0.189	0.50	No
		x	-0.189	7.50	No
		x	-0.014	5.00	No
	37	x	-0.189	0.50	No
		x	-0.189	7.50	No
		x	-0.058	5.00	No
	38	x	-0.06	2.00	No
		x	-0.063	5.00	No
	39	x	-0.068	2.50	No
		x	-0.068	6.50	No
		x	-0.10	5.00	No
W120	36	2	-0.245	0.50	No
		2	-0.245	7.50	No
		2	-0.016	5.00	No
	37	2	-0.245	0.50	No
		2	-0.245	7.50	No
		2	-0.061	5.00	No
	38	2	-0.064	2.00	No
		2	-0.066	5.00	No
	39	2	-0.083	2.50	No
		2	-0.083	6.50	No
		2	-0.084	5.00	No
W150	36	2	-0.358	0.50	No
		2	-0.358	7.50	No
		2	-0.02	5.00	No
	37	2	-0.358	0.50	No
		2	-0.358	7.50	No
		2	-0.05	5.00	No
	38	2	-0.072	2.00	No
		2	-0.073	5.00	No
	39	2	-0.113	2.50	No
		2	-0.113	6.50	No

		2	-0.05	5.00	No
Di	36	Y	-0.135	0.50	No
		Y	-0.135	7.50	No
		Y	-0.01	5.00	No
	37	Y	-0.135	0.50	No
		Y	-0.135	7.50	No
		Y	-0.037	5.00	No
38	Y	-0.032	2.00	No	
	Y	-0.033	5.00	No	
39	Y	-0.044	2.50	No	
	Y	-0.044	6.50	No	
	Y	-0.036	5.00	No	
W10	36	z	-0.065	0.50	No
		z	-0.065	7.50	No
		z	-0.006	5.00	No
	37	z	-0.065	0.50	No
		z	-0.065	7.50	No
		z	-0.014	2.00	No
	38	z	-0.014	5.00	No
		z	-0.023	2.50	No
		z	-0.023	6.50	No
W130	36	3	-0.057	0.50	No
		3	-0.057	7.50	No
		3	-0.006	5.00	No
	37	3	-0.057	0.50	No
		3	-0.057	7.50	No
		3	-0.009	5.00	No
	38	3	-0.014	2.00	No
		3	-0.014	5.00	No
		3	-0.02	2.50	No
W160	36	3	-0.02	6.50	No
		3	-0.012	5.00	No
		3	-0.041	0.50	No
	37	3	-0.041	7.50	No
		3	-0.006	5.00	No
		3	-0.041	0.50	No
	38	3	-0.041	7.50	No
		3	-0.012	5.00	No
		3	-0.012	2.00	No
W190	36	3	-0.013	5.00	No
		3	-0.016	2.50	No
		3	-0.016	6.50	No
	37	3	-0.018	5.00	No
		x	-0.033	0.50	No
		x	-0.033	7.50	No
W1120	36	x	-0.004	5.00	No
		x	-0.033	0.50	No
		x	-0.033	7.50	No
	37	x	-0.012	5.00	No
		x	-0.012	2.00	No
		x	-0.012	5.00	No
W120	36	x	-0.014	2.50	No
		x	-0.014	6.50	No
		x	-0.02	5.00	No
	37	2	-0.041	0.50	No
		2	-0.041	7.50	No
		2	-0.006	5.00	No
37	2	-0.041	0.50	No	
	2	-0.041	7.50	No	

		2	-0.012	5.00	No
	38	2	-0.012	2.00	No
		2	-0.013	5.00	No
	39	2	-0.016	2.50	No
		2	-0.016	6.50	No
WI150		2	-0.018	5.00	No
	36	2	-0.057	0.50	No
		2	-0.057	7.50	No
		2	-0.006	5.00	No
	37	2	-0.057	0.50	No
		2	-0.057	7.50	No
		2	-0.009	5.00	No
	38	2	-0.014	2.00	No
		2	-0.014	5.00	No
	39	2	-0.02	2.50	No
		2	-0.02	6.50	No
WLO		2	-0.012	5.00	No
	36	z	-0.021	0.50	No
		z	-0.021	7.50	No
		z	-0.002	5.00	No
	37	z	-0.021	0.50	No
		z	-0.021	7.50	No
	38	z	-0.004	2.00	No
		z	-0.004	5.00	No
	39	z	-0.007	2.50	No
		z	-0.007	6.50	No
WL30		z	-0.002	5.00	No
	36	3	-0.018	0.50	No
		3	-0.018	7.50	No
		3	-0.001	5.00	No
	37	3	-0.018	0.50	No
		3	-0.018	7.50	No
		3	-0.002	5.00	No
	38	3	-0.004	2.00	No
		3	-0.004	5.00	No
	39	3	-0.006	2.50	No
		3	-0.006	6.50	No
		3	-0.002	5.00	No
WL60		3	-0.013	0.50	No
	36	3	-0.013	7.50	No
		3	-0.013	0.50	No
	37	3	-0.013	7.50	No
		3	-0.003	5.00	No
	38	3	-0.003	2.00	No
		3	-0.003	5.00	No
	39	3	-0.005	2.50	No
		3	-0.005	6.50	No
		3	-0.004	5.00	No
WL90		x	-0.01	0.50	No
	36	x	-0.01	7.50	No
		x	-0.01	0.50	No
	37	x	-0.01	7.50	No
		x	-0.003	5.00	No
	38	x	-0.003	2.00	No
		x	-0.003	5.00	No
	39	x	-0.004	2.50	No
		x	-0.004	6.50	No
		x	-0.004	5.00	No
WL120		2	-0.013	0.50	No
	36	2	-0.013	7.50	No

	37	2	-0.013	0.50	No
		2	-0.013	7.50	No
		2	-0.003	5.00	No
	38	2	-0.003	2.00	No
		2	-0.003	5.00	No
	39	2	-0.005	2.50	No
		2	-0.005	6.50	No
		2	-0.004	5.00	No
WL150	36	2	-0.018	0.50	No
		2	-0.018	7.50	No
		2	-0.001	5.00	No
	37	2	-0.018	0.50	No
		2	-0.018	7.50	No
		2	-0.002	5.00	No
	38	2	-0.004	2.00	No
		2	-0.004	5.00	No
	39	2	-0.006	2.50	No
		2	-0.006	6.50	No
		2	-0.002	5.00	No
LL1	32	Y	-0.25	0.00	No
LL2	32	Y	-0.25	6.25	No
LL3	32	Y	-0.25	12.50	No
LLa1	39	Y	-0.25	4.00	No
LLa2	38	Y	-0.25	4.00	No
LLa3	37	Y	-0.25	4.00	No
LLa4	36	Y	-0.25	4.00	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

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
W10	0.00	0.00	0.00
W130	0.00	0.00	0.00
W160	0.00	0.00	0.00
W190	0.00	0.00	0.00
W1120	0.00	0.00	0.00
W1150	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

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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+W10
LC26=1.2D+Di+W130
LC27=1.2D+Di+W160
LC28=1.2D+Di+W190
LC29=1.2D+Di+W120
LC30=1.2D+Di+W150
LC31=1.2D+Di-W10
LC32=1.2D+Di-W130
LC33=1.2D+Di-W160
LC34=1.2D+Di-W190
LC35=1.2D+Di-W120
LC36=1.2D+Di-W150
LC38=1.2D+1.5LL1
LC39=1.2D+1.5LL2
LC40=1.2D+1.5LL3
LC41=1.2D+W10+1.5LLa1
LC42=1.2D+W130+1.5LLa1
LC43=1.2D+W160+1.5LLa1
LC44=1.2D+W190+1.5LLa1
LC45=1.2D+W120+1.5LLa1
LC46=1.2D+W150+1.5LLa1
LC47=1.2D-W10+1.5LLa1
LC48=1.2D-W130+1.5LLa1
LC49=1.2D-W160+1.5LLa1
LC50=1.2D-W190+1.5LLa1
LC51=1.2D-W120+1.5LLa1
LC52=1.2D-W150+1.5LLa1
LC53=1.2D+W10+1.5LLa2
LC54=1.2D+W130+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
	L 3X3X3_16	3	LC9 at 0.00%	1.39	N.G.	Sec. F1
		6	LC21 at 0.00%	1.51	N.G.	Sec. F1
		15	LC9 at 100.00%	0.23	OK	Eq. H2-1
		32	LC15 at 21.43%	1.74	N.G.	Eq. H2-1
		33	LC1 at 78.57%	0.96	With warnings	Sec. F1
		34	LC3 at 100.00%	0.44	OK	Eq. H2-1
		49	LC15 at 100.00%	0.99	OK	Sec. F1
		50	LC15 at 0.00%	1.13	N.G.	Sec. F1
		51	LC7 at 100.00%	0.22	OK	Eq. H2-1
		52	LC1 at 100.00%	0.31	OK	Eq. H2-1
	PIPE 2x0.154	13	LC9 at 50.00%	0.08	OK	Eq. H1-1b
		36	LC7 at 31.25%	0.58	OK	Eq. H1-1b
		37	LC7 at 29.17%	0.58	OK	Eq. H1-1b
		38	LC39 at 31.25%	0.10	OK	Eq. H1-1b
		39	LC3 at 35.94%	0.28	OK	Eq. H1-1b

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Geometry data

GLOSSARY

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

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	-6.25	0.00	0.00	0
3	-6.25	3.1875	0.00	0
5	-3.50	0.00	0.00	0
6	-3.50	3.1875	0.00	0
7	3.50	0.00	0.00	0
8	3.50	3.1875	0.00	0
11	0.00	0.00	-4.00	0
14	0.00	3.1875	-4.00	0
25	2.00	2.625	-6.00	0
27	0.2917	3.1875	-3.6667	0
28	0.2917	0.00	-3.6667	0
40	3.3056	3.1875	-0.2222	0
41	3.3056	0.00	-0.2222	0
59	-6.00	5.625	0.20	0
60	-2.00	5.625	0.20	0
61	2.00	5.625	0.20	0
62	6.00	5.625	0.20	0
63	-6.00	-2.375	0.20	0
64	-2.00	-2.375	0.20	0
65	2.00	-2.375	0.20	0
66	6.00	-2.375	0.20	0
84	-0.2917	3.1875	-3.6667	0

85	-0.2917	0.00	-3.6667	0
86	-3.3056	3.1875	-0.2222	0
87	-3.3056	0.00	-0.2222	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
11	1	1	1	1	1	1
14	1	1	1	1	1	1
25	1	1	1	0	0	0

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
3	11	7		L 3X3X3_16	A36	0.00	0.00	0.00
6	14	8		L 3X3X3_16	A36	0.00	0.00	0.00
13	42	25		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
15	27	41		L 3X3X3_16	A36	0.00	0.00	0.00
32	4	3		L 3X3X3_16	A36	0.00	0.00	0.00
33	2	1		L 3X3X3_16	A36	0.00	0.00	0.00
34	28	40		L 3X3X3_16	A36	0.00	0.00	0.00
36	59	63		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
37	60	64		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
38	61	65		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
39	62	66		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
49	6	14		L 3X3X3_16	A36	0.00	0.00	0.00
50	11	5		L 3X3X3_16	A36	0.00	0.00	0.00
51	84	87		L 3X3X3_16	A36	0.00	0.00	0.00
52	85	86		L 3X3X3_16	A36	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
3	270.00	0	0.00	0.00	0.00
6	180.00	0	0.00	0.00	0.00
15	270.00	0	0.00	0.00	0.00
33	90.00	0	0.00	0.00	0.00
34	90.00	0	0.00	0.00	0.00
36	315.00	0	0.00	0.00	0.00
37	315.00	0	0.00	0.00	0.00
38	315.00	0	0.00	0.00	0.00
39	315.00	0	0.00	0.00	0.00
49	180.00	0	0.00	0.00	0.00
51	90.00	0	0.00	0.00	0.00
52	180.00	0	0.00	0.00	0.00

Rigid end offsets

Member	DJX	DJY	DJZ	DKX	DKY	DKZ
	[in]	[in]	[in]	[in]	[in]	[in]
15	2.00	0.00	0.00	2.00	0.00	0.00
34	-2.00	0.00	0.00	-2.00	0.00	0.00
51	-1.00	0.00	0.00	-1.00	0.00	0.00
52	1.00	0.00	0.00	1.00	0.00	0.00

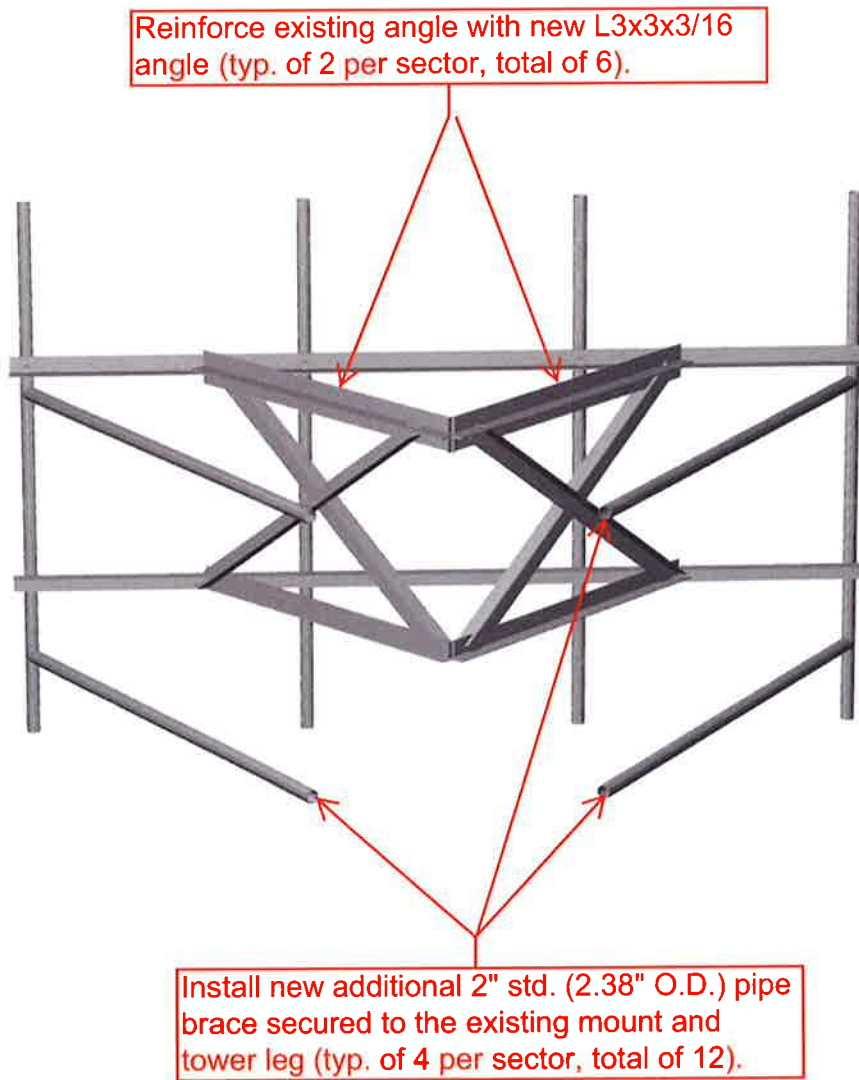
Hinges

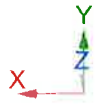
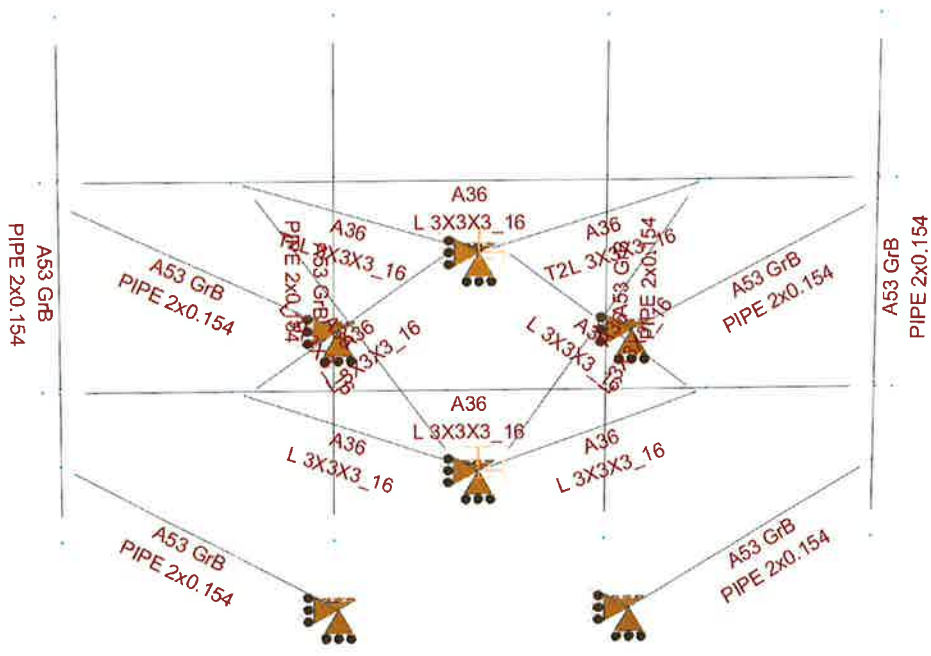
Member	Node-J				Node-K				TOR	AXL	Axial rigidity
	M33	M22	V3	V2	M33	M22	V3	V2			
13	1	1	0	0	0	0	0	0	0	0	Full



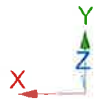
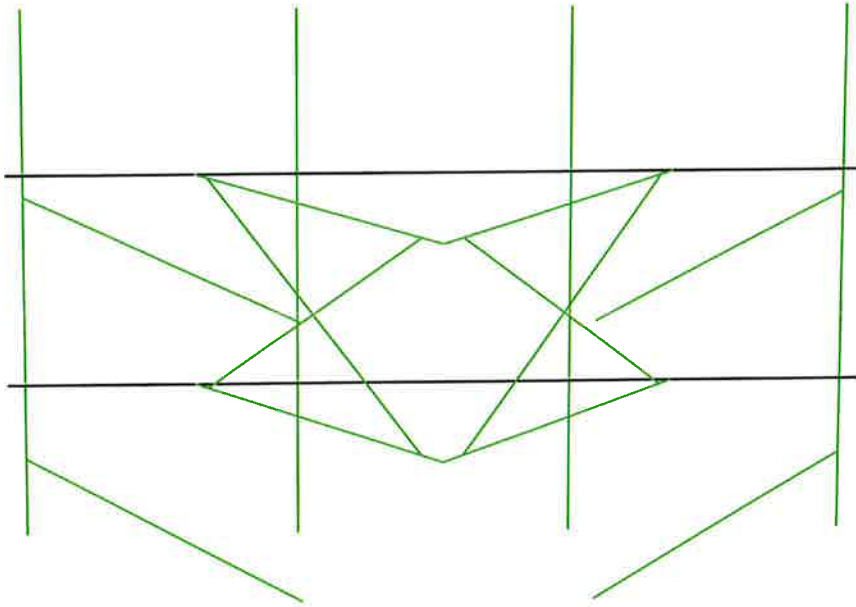
HUDSON
Design Group LLC

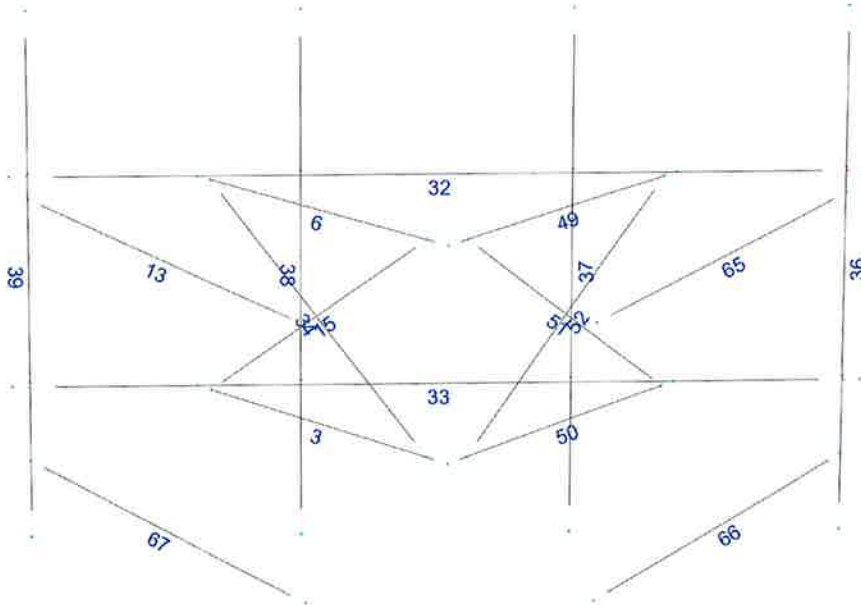
**Mount Calculations
(Modified Conditions)**





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





Current Date: 8/14/2019 3:39 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2234\LTE (2C-3C-4C-5C)\CT2234 (MOD).retx\

Load data

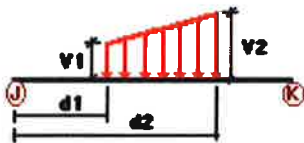
GLOSSARY

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

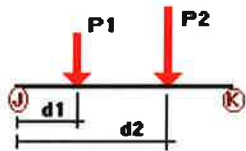
Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wo	3	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	32	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	33	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	39	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	52	Z	-0.023	-0.023	0.00	Yes	100.00	Yes
	65	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	66	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	67	Z	-0.011	-0.011	0.00	Yes	100.00	Yes
	W30	3	Z	-0.023	-0.023	0.00	Yes	100.00
6		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
13		Z	-0.011	-0.011	0.00	Yes	100.00	Yes
15		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
32		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
33		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
34		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
39		Z	-0.011	-0.011	0.00	Yes	100.00	Yes
49		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
50		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
51		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
52		Z	-0.023	-0.023	0.00	Yes	100.00	Yes
65		Z	-0.011	-0.011	0.00	Yes	100.00	Yes
66		Z	-0.011	-0.011	0.00	Yes	100.00	Yes
67		Z	-0.011	-0.011	0.00	Yes	100.00	Yes
W60		3	X	-0.023	-0.023	0.00	Yes	100.00
	6	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	36	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	37	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	38	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	39	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	52	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	65	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	66	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	67	X	-0.011	-0.011	0.00	Yes	100.00	Yes
W90	3	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	36	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	37	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	38	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	39	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	52	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	65	X	-0.011	-0.011	0.00	Yes	100.00	Yes

	66	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	67	X	-0.011	-0.011	0.00	Yes	100.00	Yes
W120	3	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	6	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	13	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	15	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	34	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	36	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	37	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	38	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	39	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	49	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	50	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	51	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	52	X	-0.023	-0.023	0.00	Yes	100.00	Yes
	65	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	66	X	-0.011	-0.011	0.00	Yes	100.00	Yes
	67	X	-0.011	-0.011	0.00	Yes	100.00	Yes
W150	3	Z	0.023	0.023	0.00	Yes	100.00	Yes
	6	Z	0.023	0.023	0.00	Yes	100.00	Yes
	13	Z	0.011	0.011	0.00	Yes	100.00	Yes
	15	Z	0.023	0.023	0.00	Yes	100.00	Yes
	32	Z	0.023	0.023	0.00	Yes	100.00	Yes
	33	Z	0.023	0.023	0.00	Yes	100.00	Yes
	34	Z	0.023	0.023	0.00	Yes	100.00	Yes
	39	Z	0.011	0.011	0.00	Yes	100.00	Yes
	49	Z	0.023	0.023	0.00	Yes	100.00	Yes
	50	Z	0.023	0.023	0.00	Yes	100.00	Yes
	51	Z	0.023	0.023	0.00	Yes	100.00	Yes
	52	Z	0.023	0.023	0.00	Yes	100.00	Yes
	65	Z	0.011	0.011	0.00	Yes	100.00	Yes
	66	Z	0.011	0.011	0.00	Yes	100.00	Yes
	67	Z	0.011	0.011	0.00	Yes	100.00	Yes
Di	3	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	6	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	13	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	15	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	32	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	33	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	34	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	36	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	37	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	38	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	39	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	49	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	50	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	51	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	52	Y	-0.008	-0.008	0.00	Yes	100.00	Yes
	65	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	66	Y	-0.005	-0.005	0.00	Yes	100.00	Yes
	67	Y	-0.005	-0.005	0.00	Yes	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
D	36	Y	-0.048	0.50	No
		Y	-0.048	7.50	No
	37	Y	-0.048	0.50	No
		Y	-0.048	7.50	No
	38	Y	-0.06	5.00	No
		Y	-0.073	2.00	No
		Y	-0.072	5.00	No
		Y	-0.018	2.50	No
	39	Y	-0.018	6.50	No
		Y	-0.038	5.00	No
Y		-0.038	5.00	No	
Wo	36	z	-0.415	0.50	No
		z	-0.415	7.50	No
	37	z	-0.415	0.50	No
		z	-0.415	7.50	No
	38	z	-0.076	2.00	No
		z	-0.076	5.00	No
	39	z	-0.128	2.50	No
		z	-0.128	6.50	No
W30	36	3	-0.358	0.50	No
		3	-0.358	7.50	No
	37	3	-0.358	0.50	No
		3	-0.358	7.50	No
	38	3	-0.05	5.00	No
		3	-0.072	2.00	No
		3	-0.073	5.00	No
		3	-0.113	2.50	No
	39	3	-0.113	6.50	No
		3	-0.05	5.00	No
W60	36	3	-0.245	0.50	No
		3	-0.245	7.50	No
	37	3	-0.245	0.50	No
		3	-0.245	7.50	No
	38	3	-0.061	5.00	No
		3	-0.064	2.00	No
	39	3	-0.066	5.00	No
		3	-0.083	2.50	No
W90	36	x	-0.189	0.50	No
		x	-0.189	7.50	No
	37	x	-0.189	0.50	No
		x	-0.189	7.50	No
	38	x	-0.058	5.00	No
		x	-0.06	2.00	No
	39	x	-0.063	5.00	No
		x	-0.068	2.50	No
	39	x	-0.068	6.50	No
		x	-0.10	5.00	No
W120	36	2	-0.245	0.50	No
		2	-0.245	7.50	No
	37	2	-0.245	0.50	No
		2	-0.245	7.50	No
	37	2	-0.245	7.50	No
		2	-0.061	5.00	No

	38	2	-0.064	2.00	No
		2	-0.066	5.00	No
	39	2	-0.083	2.50	No
		2	-0.083	6.50	No
		2	-0.084	5.00	No
W150	36	2	-0.358	0.50	No
		2	-0.358	7.50	No
	37	2	-0.358	0.50	No
		2	-0.358	7.50	No
		2	-0.05	5.00	No
	38	2	-0.072	2.00	No
		2	-0.073	5.00	No
	39	2	-0.113	2.50	No
		2	-0.113	6.50	No
		2	-0.05	5.00	No
Di	36	Y	-0.135	0.50	No
		Y	-0.135	7.50	No
	37	Y	-0.135	0.50	No
		Y	-0.135	7.50	No
		Y	-0.037	5.00	No
	38	Y	-0.032	2.00	No
		Y	-0.033	5.00	No
	39	Y	-0.044	2.50	No
		Y	-0.044	6.50	No
		Y	-0.036	5.00	No
WI0	36	z	-0.065	0.50	No
		z	-0.065	7.50	No
	37	z	-0.065	0.50	No
		z	-0.065	7.50	No
	38	z	-0.014	2.00	No
		z	-0.014	5.00	No
	39	z	-0.023	2.50	No
		z	-0.023	6.50	No
		z	-0.01	5.00	No
WI30	36	3	-0.057	0.50	No
		3	-0.057	7.50	No
	37	3	-0.057	0.50	No
		3	-0.057	7.50	No
		3	-0.009	5.00	No
	38	3	-0.014	2.00	No
		3	-0.014	5.00	No
	39	3	-0.02	2.50	No
		3	-0.02	6.50	No
		3	-0.012	5.00	No
WI60	36	3	-0.041	0.50	No
		3	-0.041	7.50	No
	37	3	-0.041	0.50	No
		3	-0.041	7.50	No
		3	-0.012	5.00	No
	38	3	-0.012	2.00	No
		3	-0.013	5.00	No
	39	3	-0.016	2.50	No
		3	-0.016	6.50	No
		3	-0.018	5.00	No
WI90	36	x	-0.033	0.50	No
		x	-0.033	7.50	No
	37	x	-0.033	0.50	No
		x	-0.033	7.50	No
		x	-0.012	5.00	No
	38	x	-0.012	2.00	No

		x	-0.012	5.00	No
	39	x	-0.014	2.50	No
		x	-0.014	6.50	No
		x	-0.02	5.00	No
WI120	36	2	-0.041	0.50	No
		2	-0.041	7.50	No
	37	2	-0.041	0.50	No
		2	-0.041	7.50	No
		2	-0.012	5.00	No
	38	2	-0.012	2.00	No
		2	-0.013	5.00	No
	39	2	-0.016	2.50	No
		2	-0.016	6.50	No
		2	-0.018	5.00	No
WI150	36	2	-0.057	0.50	No
		2	-0.057	7.50	No
	37	2	-0.057	0.50	No
		2	-0.057	7.50	No
		2	-0.009	5.00	No
	38	2	-0.014	2.00	No
		2	-0.014	5.00	No
	39	2	-0.02	2.50	No
		2	-0.02	6.50	No
		2	-0.012	5.00	No
WLO	36	z	-0.021	0.50	No
		z	-0.021	7.50	No
	37	z	-0.021	0.50	No
		z	-0.021	7.50	No
	38	z	-0.004	2.00	No
		z	-0.004	5.00	No
	39	z	-0.007	2.50	No
		z	-0.007	6.50	No
		z	-0.002	5.00	No
WL30	36	3	-0.018	0.50	No
		3	-0.018	7.50	No
	37	3	-0.018	0.50	No
		3	-0.018	7.50	No
		3	-0.002	5.00	No
	38	3	-0.004	2.00	No
		3	-0.004	5.00	No
	39	3	-0.006	2.50	No
		3	-0.006	6.50	No
		3	-0.002	5.00	No
WL60	36	3	-0.013	0.50	No
		3	-0.013	7.50	No
	37	3	-0.013	0.50	No
		3	-0.013	7.50	No
		3	-0.003	5.00	No
	38	3	-0.003	2.00	No
		3	-0.003	5.00	No
	39	3	-0.005	2.50	No
		3	-0.005	6.50	No
		3	-0.004	5.00	No
WL90	36	x	-0.01	0.50	No
		x	-0.01	7.50	No
	37	x	-0.01	0.50	No
		x	-0.01	7.50	No
		x	-0.003	5.00	No
	38	x	-0.003	2.00	No
		x	-0.003	5.00	No

	39	x	-0.004	2.50	No
		x	-0.004	6.50	No
		x	-0.004	5.00	No
WL120	36	2	-0.013	0.50	No
		2	-0.013	7.50	No
	37	2	-0.013	0.50	No
		2	-0.013	7.50	No
		2	-0.003	5.00	No
	38	2	-0.003	2.00	No
		2	-0.003	5.00	No
	39	2	-0.005	2.50	No
		2	-0.005	6.50	No
		2	-0.004	5.00	No
WL150	36	2	-0.018	0.50	No
		2	-0.018	7.50	No
	37	2	-0.018	0.50	No
		2	-0.018	7.50	No
		2	-0.002	5.00	No
	38	2	-0.004	2.00	No
		2	-0.004	5.00	No
	39	2	-0.006	2.50	No
		2	-0.006	6.50	No
		2	-0.002	5.00	No
LL1	32	Y	-0.25	0.00	No
LL2	32	Y	-0.25	6.25	No
LL3	32	Y	-0.25	12.50	No
LLa1	39	Y	-0.25	4.00	No
LLa2	38	Y	-0.25	4.00	No
LLa3	37	Y	-0.25	4.00	No
LLa4	36	Y	-0.25	4.00	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

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
W10	0.00	0.00	0.00
W130	0.00	0.00	0.00
W160	0.00	0.00	0.00
W190	0.00	0.00	0.00
W120	0.00	0.00	0.00
W150	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

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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+Wl0
LC26=1.2D+Di+Wl30
LC27=1.2D+Di+Wl60
LC28=1.2D+Di+Wl90
LC29=1.2D+Di+Wl120
LC30=1.2D+Di+Wl150
LC31=1.2D+Di-Wl0
LC32=1.2D+Di-Wl30
LC33=1.2D+Di-Wl60
LC34=1.2D+Di-Wl90
LC35=1.2D+Di-Wl120
LC36=1.2D+Di-Wl150
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
	L 3X3X3_16	3	LC3 at 0.00%	0.73	OK	Eq. H2-1
		15	LC9 at 100.00%	0.18	OK	Eq. H2-1
		32	LC10 at 78.57%	0.95	With warnings	Eq. H2-1
		33	LC15 at 21.43%	0.77	With warnings	Eq. H2-1
		34	LC4 at 46.88%	0.20	OK	Eq. H2-1
		50	LC9 at 0.00%	0.73	OK	Eq. H2-1
		51	LC3 at 100.00%	0.18	OK	Eq. H2-1
		52	LC11 at 46.88%	0.19	OK	Eq. H2-1
	PIPE 2x0.154	13	LC10 at 50.00%	0.07	OK	Eq. H1-1b
		36	LC7 at 35.00%	0.71	OK	Eq. H1-1b
		37	LC1 at 29.17%	0.58	OK	Eq. H1-1b
		38	LC4 at 31.25%	0.11	OK	Eq. H1-1b
		39	LC11 at 71.25%	0.22	OK	Eq. H1-1b
		65	LC3 at 50.00%	0.08	OK	Eq. H1-1b
		66	LC3 at 50.00%	0.06	OK	Eq. H1-1b
		67	LC11 at 50.00%	0.06	OK	Eq. H1-1b
	T2L 3X3X3_16	6	LC9 at 0.00%	0.63	OK	Eq. H2-1
		49	LC3 at 100.00%	0.60	OK	Eq. H2-1

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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
2	6.25	0.00	0.00	0
3	-6.25	3.1875	0.00	0
5	-3.50	0.00	0.00	0
6	-3.50	3.1875	0.00	0
7	3.50	0.00	0.00	0
8	3.50	3.1875	0.00	0
11	0.00	0.00	-4.00	0
14	0.00	3.1875	-4.00	0
25	2.00	2.625	-6.00	0
27	0.2917	3.1875	-3.6667	0
28	0.2917	0.00	-3.6667	0
40	3.3056	3.1875	-0.2222	0
41	3.3056	0.00	-0.2222	0
59	-6.00	5.625	0.20	0
60	-2.00	5.625	0.20	0
61	2.00	5.625	0.20	0
62	6.00	5.625	0.20	0
63	-6.00	-2.375	0.20	0
64	-2.00	-2.375	0.20	0
65	2.00	-2.375	0.20	0
66	6.00	-2.375	0.20	0

84	-0.2917	3.1875	-3.6667	0
85	-0.2917	0.00	-3.6667	0
86	-3.3056	3.1875	-0.2222	0
87	-3.3056	0.00	-0.2222	0
111	-6.00	2.80	0.20	0
112	-2.00	2.625	-6.00	0
113	6.00	-1.20	0.20	0
114	2.00	-1.375	-6.00	0
115	-2.00	-1.375	-6.00	0
116	-6.00	-1.20	0.20	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
11	1	1	1	1	1	1
14	1	1	1	1	1	1
25	1	1	1	0	0	0
112	1	1	1	0	0	0
114	1	1	1	0	0	0
115	1	1	1	0	0	0

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
3	11	7		L 3X3X3_16	A36	0.00	0.00	0.00
6	14	8		T2L 3X3X3_16	A36	0.00	0.00	0.00
13	42	25		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
15	27	41		L 3X3X3_16	A36	0.00	0.00	0.00
32	4	3		L 3X3X3_16	A36	0.00	0.00	0.00
33	2	1		L 3X3X3_16	A36	0.00	0.00	0.00
34	28	40		L 3X3X3_16	A36	0.00	0.00	0.00
36	59	63		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
37	60	64		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
38	61	65		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
39	62	66		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
49	6	14		T2L 3X3X3_16	A36	0.00	0.00	0.00
50	11	5		L 3X3X3_16	A36	0.00	0.00	0.00
51	84	87		L 3X3X3_16	A36	0.00	0.00	0.00
52	85	86		L 3X3X3_16	A36	0.00	0.00	0.00
65	111	112		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
66	116	115		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
67	113	114		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
3	270.00	0	0.00	0.00	0.00
6	90.00	0	0.00	0.00	0.00
15	270.00	0	0.00	0.00	0.00
33	90.00	0	0.00	0.00	0.00
34	90.00	0	0.00	0.00	0.00
36	315.00	0	0.00	0.00	0.00
37	315.00	0	0.00	0.00	0.00
38	315.00	0	0.00	0.00	0.00
39	315.00	0	0.00	0.00	0.00
49	90.00	0	0.00	0.00	0.00
51	90.00	0	0.00	0.00	0.00
52	180.00	0	0.00	0.00	0.00

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
15	2.00	0.00	0.00	2.00	0.00	0.00
34	-2.00	0.00	0.00	-2.00	0.00	0.00
51	-1.00	0.00	0.00	-1.00	0.00	0.00
52	1.00	0.00	0.00	1.00	0.00	0.00

Hinges

Member	Node-J				Node-K				TOR	AXL	Axial rigidity
	M33	M22	V3	V2	M33	M22	V3	V2			
13	1	1	0	0	0	0	0	0	0	0	Full
65	1	1	0	0	0	0	0	0	0	0	Full
66	1	1	0	0	0	0	0	0	0	0	Full
67	1	1	0	0	0	0	0	0	0	0	Full

153 EAST HADDAM RD

Location 153 EAST HADDAM RD

Mblu 05/ / 016/ A02/

Acct# 1997

Owner AMERICAN TOWER CORP

Assessment \$224,200

Appraisal \$320,200

PID 1798

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$16,700	\$303,500	\$320,200
Assessment			
Valuation Year	Improvements	Land	Total
2016	\$11,700	\$212,500	\$224,200

Owner of Record

Owner AMERICAN TOWER CORP
Co-Owner
Address P O BOX 723597
 ATLANTA , GA 31139

Sale Price \$180,000
Certificate
Book & Page 0122/0251
Sale Date 11/01/1999
Instrument 1N

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
AMERICAN TOWER CORP	\$180,000		0122/0251	1N	11/01/1999

Building Information

Building 1 : Section 1

Year Built:

Living Area: 0

Replacement Cost: \$0

Building Percent

Good:

Replacement Cost

Less Depreciation: \$0

Building Attributes	
Field	Description
Style	Outbuildings
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	

Building Photo



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

Building Layout

Building Layout (http://images.vgsi.com/photos/SalemCTPhotos//Sketches/1798_1798.jpg)

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

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 4331
Description Cell Tower
Zone HC
Neighborhood C100
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 6.21
Frontage
Depth
Assessed Value \$212,500
Appraised Value \$303,500

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	Paving-Asphalt			9600 S.F.	\$7,200	1
SHP5	W/Improv Good			500 S.F.	\$9,500	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2018	\$16,700	\$303,500	\$320,200
2017	\$16,700	\$303,500	\$320,200
2016	\$16,700	\$303,500	\$320,200

Assessment			
Valuation Year	Improvements	Land	Total
2018	\$11,700	\$212,500	\$224,200
2017	\$11,700	\$212,500	\$224,200
2016	\$11,700	\$212,500	\$224,200

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*Approved as amended
8/17/99 (DJK)*

file

SALEM PLANNING AND ZONING COMMISSION

June 27, 1999

July

UNAPPROVED

Present: Balavender, G.
Baran, W., Alt.
Duncan, J.
Jensen, M.
Mullin, M., Alt.
Samokar, H. - Town Planner
Thill, T., Alt.

Absent: Burnett, D.
Mullin, D.
Stevens, L.
Vacancy

TOWN OF SALEM
JUL 28 2 43 PM '99

RECEIVED



Guests: See attached.

CALL TO ORDER:

M. Jensen, chairman, called the meeting to order at 7:35 pm.

The chairman seated M. Mullin in the Vacancy, T. Thill for L. Stevens and W. Baran for D. Burnett.

PUBLIC HEARINGS:

None Scheduled.

ENFORCEMENT OFFICER'S REPORT: N/A

INLAND WETLANDS AND CONSERVATION COMMISSION REPORT: N/A

APPROVAL OF MINUTES OF PREVIOUS MEETINGS:

- 1. July 13, 1999 - Special Meeting Workshop (tabled 7/20/97)

M/S/C (Baran/Balavender) to approve the minutes of the July 13, 1999, Salem Planning and Zoning Commission Special Meeting Workshop as presented. Vote: For approval - Balavender, Baran, Duncan and Thill. For denial - no one. Abstaining - Jensen and Mullin, M.
MOTION CARRIED.

PETITIONERS:

There were no PETITIONERS.

OLD BUSINESS:

1. Possible action on Public Hearing closed 7/20/99 - American Tower Corp. - Special Exception application for the construction of a telecommunications tower on East Haddam Road (Map #5; Lot #16A)

H. Samokar, Town Planner, review:

Submitted and read memo of 7/27/99 (see attached).

Commission discussion:

Voting requirements; bonding; easements.

M/S/W (Baran/Thill) to approve the Special Exception application and site plan of American Tower Corp. for the construction of a telecommunications tower on East Haddam Road (Map #5; Lot #16A) subject to the following conditions:

- 1) The applicant must submit the cash removal bond (\$25,000) before a zoning or building permit is issued.
- 2) The applicant must submit the signed access and drainage easements, to be approved by the Commission's attorney, prior to the issuance of the zoning or building permit.

MOTION WITHDRAWN.

Lengthy discussion regarding the two conditions stated in the withdrawn motion stated above:

Should they be completed before Commission approval or stated as conditions on the approval?

After discussion the following action was taken:

M/S/C (Balavender/Baran) to approve the Special Exception application and site plan of American Tower Corp. for the construction of a telecommunications tower on East Haddam Road (Map #5; lot #16A) subject to the following conditions:

- 1) The applicant must submit the removal bond (\$25,000) before a zoning or building permit is issued.
- 2) The applicant must submit the signed access and drainage easements prior to the issuance of the zoning or building permit.

Vote: For approval - Balavender, Baran, Duncan and Thill. For denial - no one. Abstaining - Jensen and Mullin, M. due to the fact that neither was present at the public hearing or has reviewed the tapes.

MOTION CARRIED.

The Town Planner will investigate the following for discussion at the 8/17/99 PZC Regular Meeting:

- ◆ Recovery of PZC expenses for engineering and legal fees on applications.

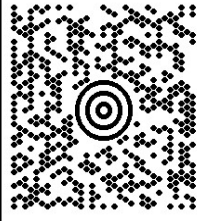
JHANA ARSENAULT
6034210470
SAI COMMUNICATIONS
12 INDUSTRIAL WAY
SALEM NH 03079

1 LBS

1 OF 1

SHIP TO:

JUSTIN LAFOUNTAIN-TOWN PLANNER
6034210470
SALEM TOWN OFFICE
270 HARTFORD RD.
SALEM CT 06420

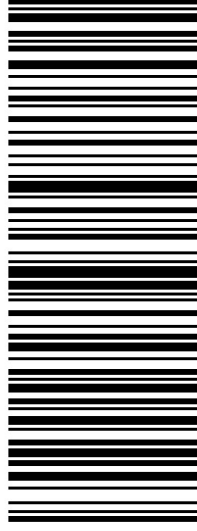


CT 063 0-01



UPS GROUND

TRACKING #: 1Z 9V0 F66 03 9504 3810



BILLING: P/P

Reference No.1: CT22234/CT-102-19001/CSC Mailing-tow

XDL19.10.06

NV45 15.0A.07/2019



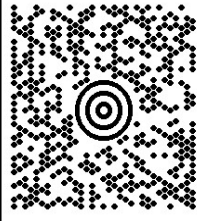
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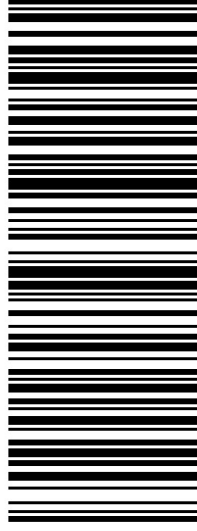


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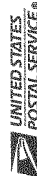
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Country of Destination/Pays de destination:



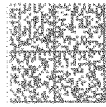
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