

April 2, 2020

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

**Regarding: Notice of Exempt Modification – AT&T Site CT1855**  
**Address: 320 Old Stagecoach Road, Ridgefield, CT**

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains a wireless telecommunications facility on an existing +/- 150’ monopole tower at the above-referenced address, latitude 41.3303080, longitude -73.5168190. Said monopole tower is owned and managed by InSite Towers Development, LLC.

AT&T desires to modify its existing telecommunications facility by swapping three (3) remote radio units and adding (3) remote radio units as more particularly detailed and described on the enclosed Construction Drawings prepared by Hudson Design Group LLC, last revised March 25, 2020. The centerline height of the existing antennas is and will remain at 146 feet.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the following individuals: Rudy Marconi, First Selectman of the Town of Ridgefield; Richard Baldelli, Director of Planning & Zoning/ZEO of the Town of Ridgefield and InSite Towers Development, LLC, as 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). Specifically:

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require an extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety

standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*

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

6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated March 18, 2020 and prepared by Engineered Tower Solutions, PLLC enclosed herewith.*

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

Sincerely,



Jennifer Iliades  
Site Acquisition Consultant  
Centerline Communications, LLC  
750 West Center Street, Suite 301  
West Bridgewater, MA 02379  
jiliades@clinellc.com

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

cc:             Rudy Marconi, First Selectman, Town of Ridgefield, as elected official  
                  Richard Baldelli, Director of Planning & Zoning/ZEO, Town of Ridgefield  
                  InSite Towers Development, LLC, Owner

# EXHIBIT 1

PROJECT INFORMATION	
SCOPE OF WORK:	<p><u>ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:</u></p> <ul style="list-style-type: none"> <li>• NEW AT&amp;T RRUS: RRUS-E2 B29 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).</li> <li>• NEW AT&amp;T RRUS: 8843 B2/B66A (PCS/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).</li> </ul> <p><u>ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:</u></p> <ul style="list-style-type: none"> <li>• ADD (1) IDLe.</li> </ul> <p><u>ITEMS TO BE REMOVED:</u></p> <ul style="list-style-type: none"> <li>• EXISTING AT&amp;T RRUS: RRUS-12 B2+A2 MODULE (TYP. OF 1 PER SECTOR, TOTAL OF 3).</li> <li>• REMOVE (1) XMU.</li> </ul> <p><u>ITEMS TO REMAIN:</u></p> <ul style="list-style-type: none"> <li>• (12) ANTENNAS, (15) RRU'S, (4) SURGE ARRESTORS, (8) DC POWER &amp; (3) FIBER.</li> </ul>
SITE ADDRESS:	320 OLD STAGECOACH ROAD RIDGEFIELD, CT 06877
LATITUDE:	41.330308° N, 41° 19' 49.10" N
LONGITUDE:	73.516819° W, 73° 31' 0.54" W
TYPE OF SITE:	MONOPOLE / EQUIPMENT SHELTER
STRUCTURE HEIGHT:	151'-0"±
RAD CENTER:	146'-0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY



**SITE NAME: RIDGEFIELD OLD STAGECOACH**

**FA CODE: 10128094**

**PACE ID: MRCTB045150,MRCTB045190**

**PROJECT: LTE 6C 7C 2020 UPGRADE**

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
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1

VICINITY MAP

GENERAL NOTES
---------------

DIRECTIONS TO SITE:

An aerial photograph of a wooded area with several roads. A white star marks the 'PROJECT SITE' in the center. Roads labeled include Regan Rd, Ledges Rd, Ridgebury Rd, and Highway 116. Other roads shown are Quail Dr, Partridge Dr, Rolling Ridge Rd, Fox Dr, Aspen Ledges Rd, Bob Hill Rd, Summit Ln, Topcrest Ln, Highview Dr, and Barlow Mountain Rd. A green triangle is also visible on the map.

- 72 HOURS
-  CALL   
BEFORE YOU DIG
- CALL TOLL FREE 1-800-922-4455  
OR CALL 811
- UNDERGROUND SERVICE ALERT


**INSITE TOWERS SITE NAME:** RIDGEFIELD  
**INSITE TOWERS SITE #:** CT897



**SITE NUMBER: CT1855**  
**SITE NAME: RIDGEFIELD OLD STAGECOACH**  
**INSITE TOWERS SITE # ID: CT897**

**320 OLD STAGECOACH ROAD**  
**RIDGEFIELD, CT 06877**  
**FAIRFIELD COUNTY**

[illegible]

		AT&T
TITLE SHEET		
LTE 6C_7C 2020 UPGRADE		
SITE NUMBER	DRAWING NUMBER	REV
CT1855	T-1	1

**FOR ZONING  
NOT FOR CONSTRUCTION**



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

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

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 ( $F_y = 36$  ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E ( $F_y = 36$  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 EDITIONS OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.


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

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

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		

			AT&T	
DESIGNED FOR ZONING DESIGNED FOR REVIEW REVISIONS DESIGNED BY: AT DRAWN BY: TR			GENERAL NOTES LTE 6C_7C 2020 UPGRADE DRAWING NUMBER CT1855 GN-1	



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

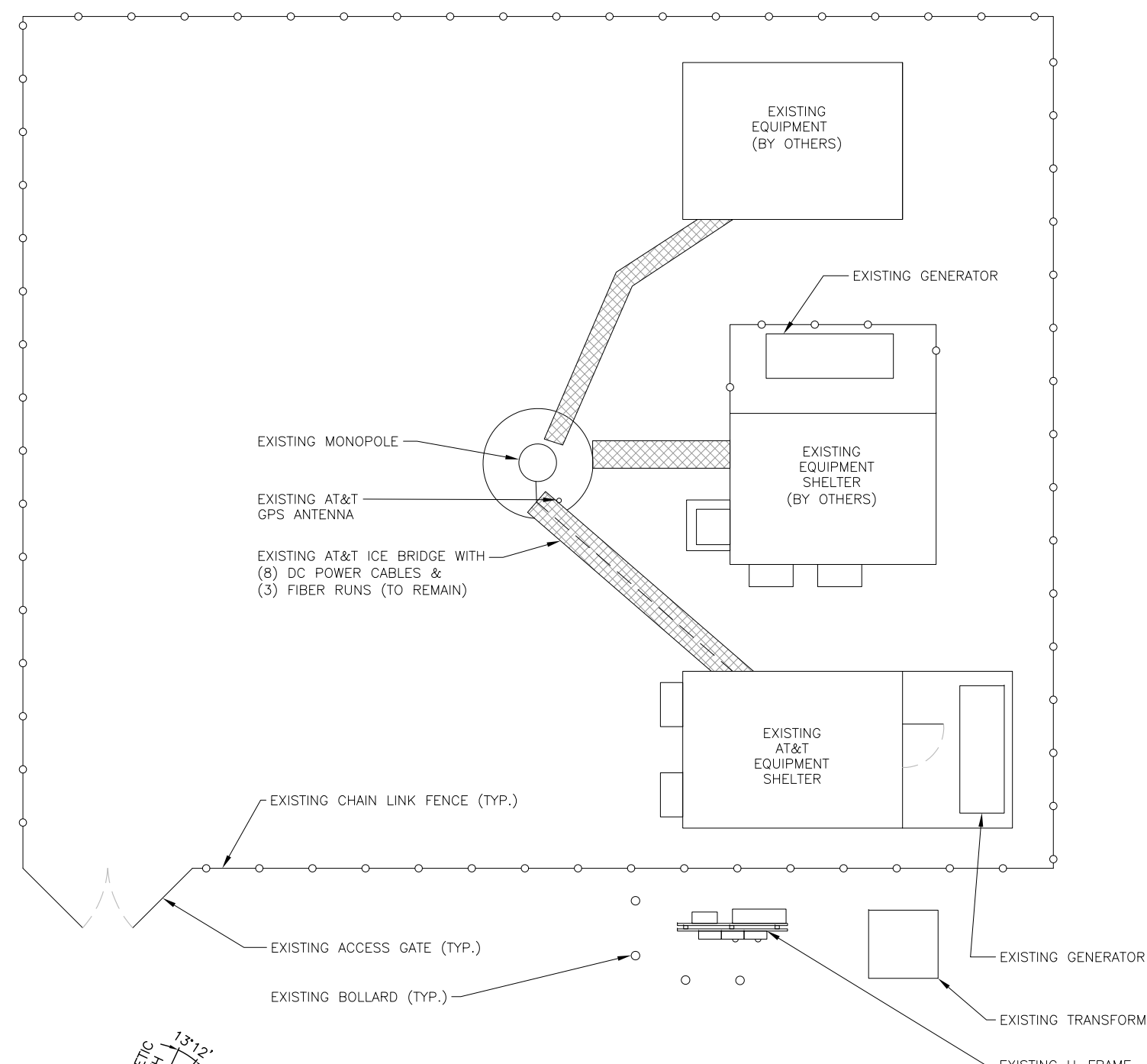
**SITE NUMBER: CT1855**  
**SITE NAME: RIDGEFIELD OLD STAGECOACH**  
**INSITE TOWERS SITE # ID: CT897**

320 OLD STAGECOACH ROAD  
RIDGEFIELD, CT 06877  
FAIRFIELD COUNTY



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

[illegible]

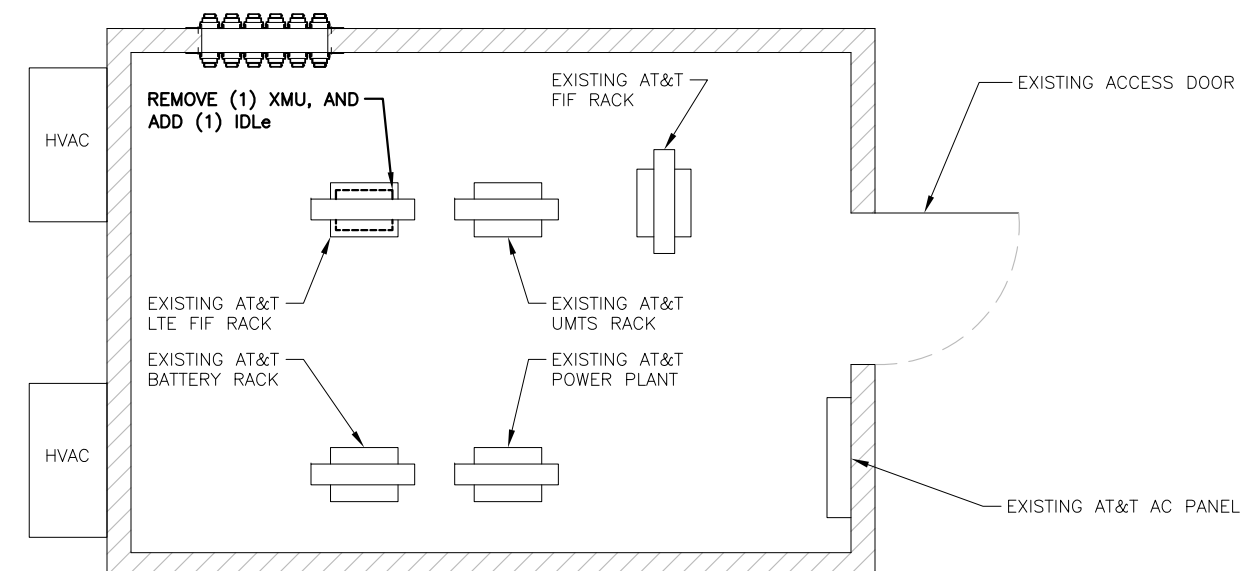


**COMPOUND PLAN**  
22x34 SCALE: 3/16"=1'-0"  
11x17 SCALE: 3/32"=1'-0"

1  
A-1

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

MAGNETIC NORTH 13°12' TRUE NORTH



**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"

MAGNETIC NORTH 13°12' TRUE NORTH

**SPECIAL CONSTRUCTION/PLANNING NOTE:**  
EQUIPMENT SHOWN AS "TO BE INSTALLED AS PART OF LTE 3C/4C/5C PROJECT" REFERS TO RECORD DRAWINGS AND NOT ACTUAL FIELD CONDITIONS. DEPLOYMENT OF EQUIPMENT "TO BE INSTALLED AS PART OF LTE 3C/4C/5C PROJECT" UNDER A SEPARATE BUILDING PERMIT PRIOR TO CONSTRUCTION START OF THIS PROJECT.

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

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

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

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

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

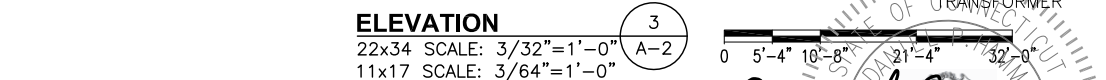
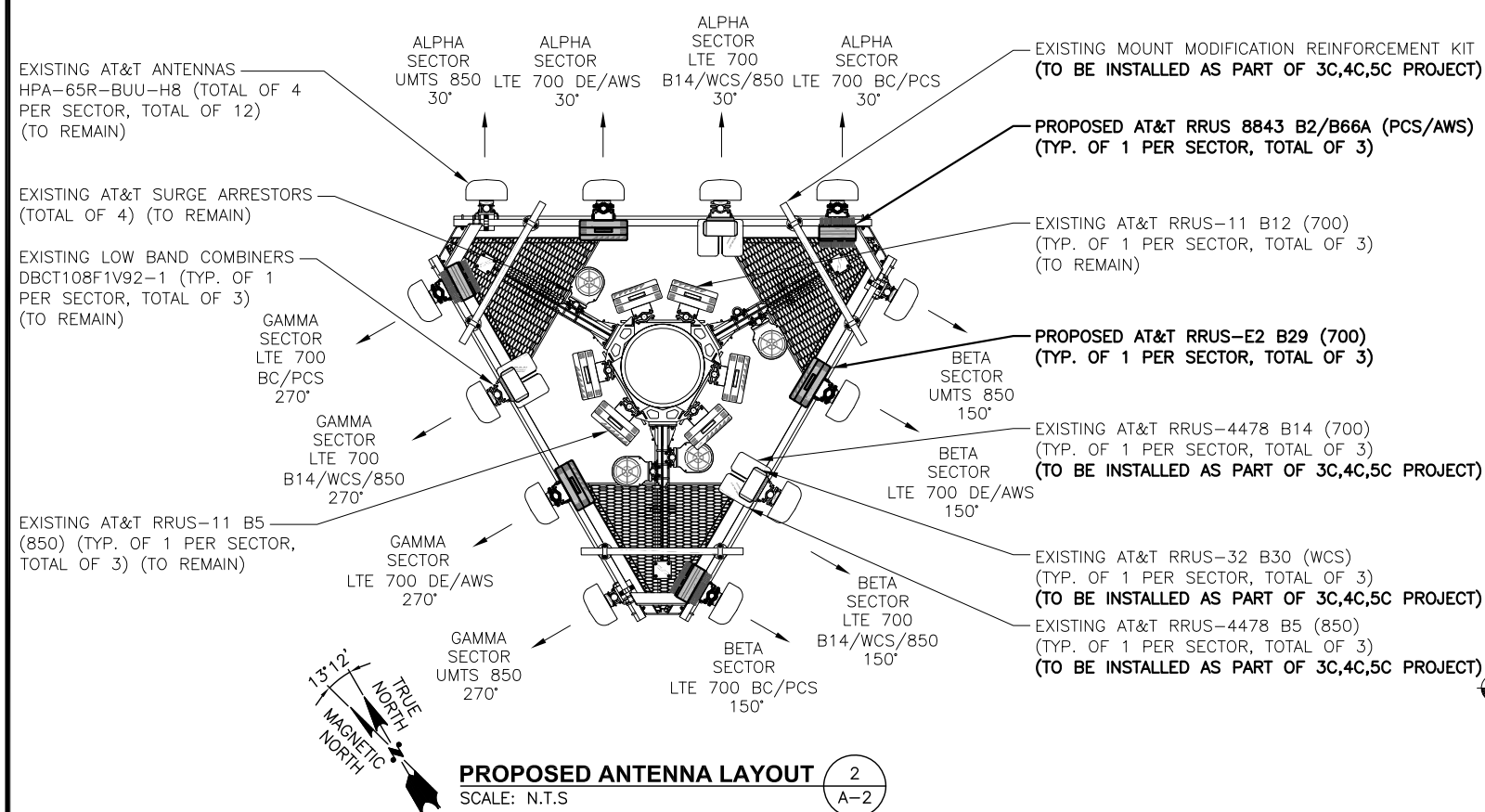
**SITE NUMBER: CT1855**  
**SITE NAME: RIDGEFIELD OLD STAGECOACH**  
**INSITE TOWERS SITE # ID: CT897**  
**320 OLD STAGECOACH ROAD**  
**RIDGEFIELD, CT 06877**  
**FAIRFIELD COUNTY**

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

1	03/25/20	ISSUED FOR ZONING	VP	AT	DPH
A	01/27/20	ISSUED FOR REVIEW	TR	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT		DRAWN BY: TR	

**AT&T**  
**COMPOUND & EQUIPMENT PLANS**  
**LTE 6C\_7C 2020 UPGRADE**

SITE NUMBER	DRAWING NUMBER	REV
CT1855	A-1	1



SPECIAL CONSTRUCTION/PLANNING NOTE:

EQUIPMENT SHOWN AS "TO BE INSTALLED AS PART OF LTE 3C/4C/5C PROJECT" REFERS TO RECORD DRAWINGS AND NOT ACTUAL FIELD CONDITIONS. DEPLOYMENT OF EQUIPMENT "TO BE INSTALLED AS PART OF LTE 3C/4C/5C PROJECT" UNDER A SEPARATE BUILDING PERMIT PRIOR TO CONSTRUCTION START OF THIS PROJECT.



ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA Ø HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	FREQUENCY	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	30°	-	(1)(E) RRUS-11 (850)		-	-	(E) (1) RAYCAP DC6-48-60-18-8F (E) (1) RAYCAP DC6-48-60-18-8F
A2	EXISTING	LTE 700 DE/AWS	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	30°	-	(1)(P) RRUS-E2 B29 (700 DE)		20.4X18.5X7.5	-	
A3	EXISTING	LTE 700 B14/WCS/850	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	30°	(1)(E) DBCT108F1V92-1	(1)(E) RRUS-4478 B14 (700) (1)(E) RRUS-4478 B5 (850) (1)(E) RRUS-32 B30 (WCS)		-	-	
A4	EXISTING	LTE 700 BC/PCS	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	30°	-	(1)(E) RRUS-11 B12 (700 BC) (1)(P) RRUS-8843 (PCS/AWS)		14.9X13.2X10.9	-	
B1	EXISTING	UMTS 850	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	150°	-	(1)(E) RRUS-11 (850)		-	-	(E) (1) RAYCAP DC6-48-60-18-8F (E) (1) RAYCAP DC6-48-60-18-8F
B2	EXISTING	LTE 700 DE/AWS	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	150°	-	(1)(P) RRUS-E2 B29 (700 DE)		20.4X18.5X7.5	-	
B3	EXISTING	LTE 700 B14/WCS/850	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	150°	(1)(E) DBCT108F1V92-1	(1)(E) RRUS-4478 B14 (700) (1)(E) RRUS-4478 B5 (850) (1)(E) RRUS-32 B30 (WCS)		-	-	
B4	EXISTING	LTE 700 BC/PCS	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	150°	-	(1)(E) RRUS-11 B12 (700 BC) (1)(P) RRUS-8843 (PCS/AWS)		14.9X13.2X10.9	-	
C1	EXISTING	UMTS 850	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	270°	-	(1)(E) RRUS-11 (850)		-	-	(E) (1) RAYCAP DC6-48-60-18-8F (E) (1) RAYCAP DC6-48-60-18-8F
C2	EXISTING	LTE 700 DE/AWS	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	270°	-	(1)(P) RRUS-E2 B29 (700 DE)		20.4X18.5X7.5	-	
C3	EXISTING	LTE 700 B14/WCS/850	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	270°	(1)(E) DBCT108F1V92-1	(1)(E) RRUS-4478 B14 (700) (1)(E) RRUS-4478 B5 (850) (1)(E) RRUS-32 B30 (WCS)		-	-	
C4	EXISTING	LTE 700 BC/PCS	HPA-65R-BUU-H8	92.4X14.8X7.4	146'-0"±	270°	-	(1)(E) RRUS-11 B12 (700 BC) (1)(P) RRUS-8843 (PCS/AWS)		14.9X13.2X10.9	-	

SPECIAL CONSTRUCTION/PLANNING NOTE:

EQUIPMENT SHOWN AS "TO BE INSTALLED AS PART OF LTE 3C/4C/5C PROJECT" REFERS TO RECORD DRAWINGS AND NOT ACTUAL FIELD CONDITIONS. DEPLOYMENT OF EQUIPMENT "TO BE INSTALLED AS PART OF LTE 3C/4C/5C PROJECT" UNDER A SEPARATE BUILDING PERMIT PRIOR TO CONSTRUCTION START OF THIS PROJECT.

NOTE:

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

NOTE:

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

NOTE:

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

FINAL ANTENNA SCHEDULE

SCALE: N.T.S

1

A-3

RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
3(E)	RRUS-11	19.7"x17.0"x7.2"
3(P)	RRUS-E2 B29 (700)	20.4"x18.5"x7.5"
3(E)	4478 B14 (700)	18.1"x13.4"x8.3"
3(E)	4478 B5 (850)	18.1"x13.4"x8.3"
3(E)	RRUS-32 B30 (WCS)	27.2"x12.1"x7.0"
3(E)	RRUS-11 B12 (700)	19.7"x17.0"x7.2"
3(P)	8843 (PCS/AWS)	14.9"x13.2"x10.9"

NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:

SEE RFDS FOR RRH  
FREQUENCY AND  
MODEL NUMBER

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

NOTE:  
MOUNT PER MANUFACTURER'S  
SPECIFICATIONS.

PROPOSED RRU DETAIL

SCALE: N.T.S

2

A-3

EXISTING ANTENNA PIPE  
MAST (TYP.)

EXISTING HANDRAIL KIT

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

EXISTING PLATFORM

EXISTING REINFORCEMENT KIT  
(TO BE INSTALLED AS PART OF  
3C,4C,5C PROJECT)

EXISTING AT&T ANTENNAS HPA-65R-BUU-H8  
(TOTAL OF 4 PER SECTOR, TOTAL OF 12)  
(TO REMAIN)

PROPOSED RRU MOUNTING DETAIL

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

3

A-3



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



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

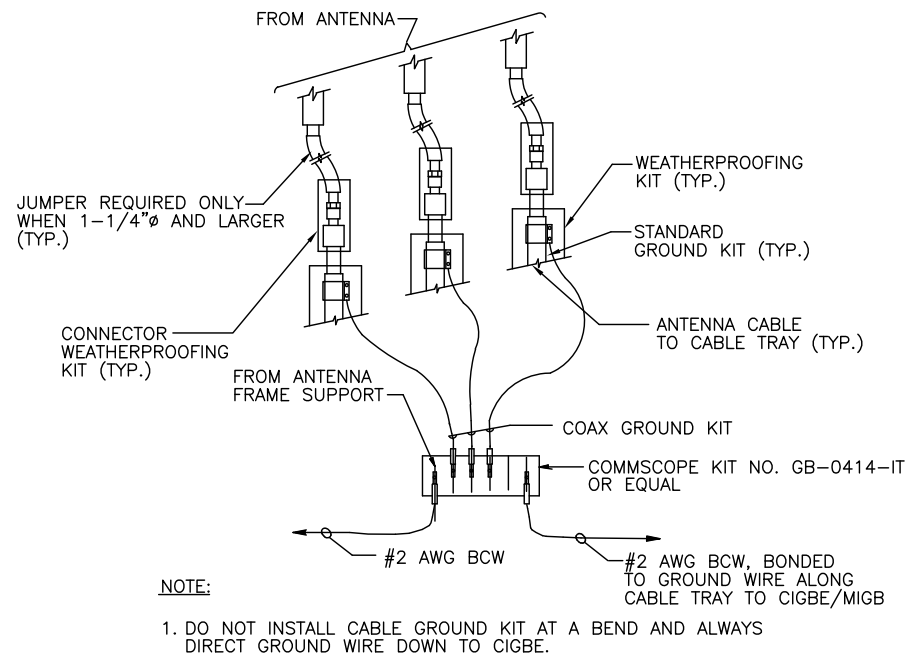
SITE NUMBER: CT1855  
SITE NAME: RIDGEFIELD OLD STAGECOACH  
INSITE TOWERS SITE # ID: CT897

320 OLD STAGECOACH ROAD  
RIDGEFIELD, CT 06877  
FAIRFIELD COUNTY



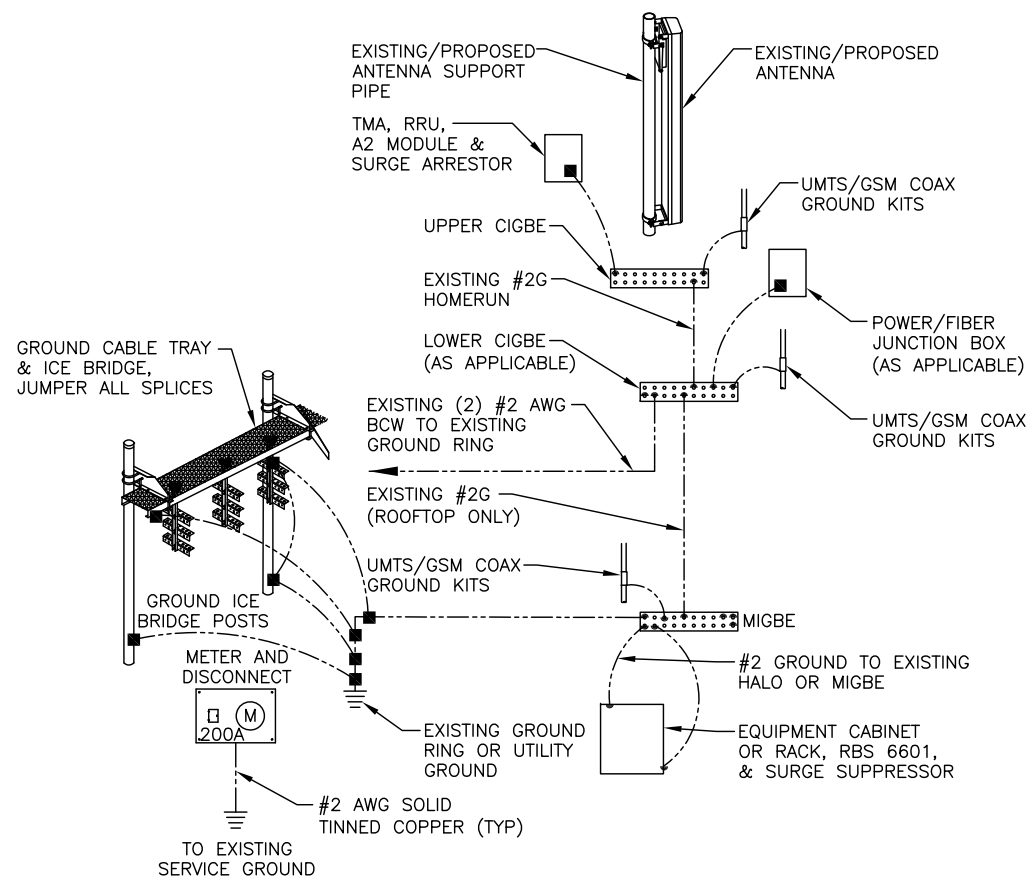
500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06067

						AT&T		
						DETAILS		
						LTE 6C_7C 2020 UPGRADE		
NO.		DATE		REVISIONS		BY		CHK
1		03/25/20		ISSUED FOR ZONING		VP		AT
A		01/27/20		ISSUED FOR REVIEW		TR		AT
SCALE:		AS SHOWN		DESIGNED BY:		AT		DRAWN BY:
						TR		
SITE NUMBER		DRAWING NUMBER		REV				
CT1855		A-3		1				



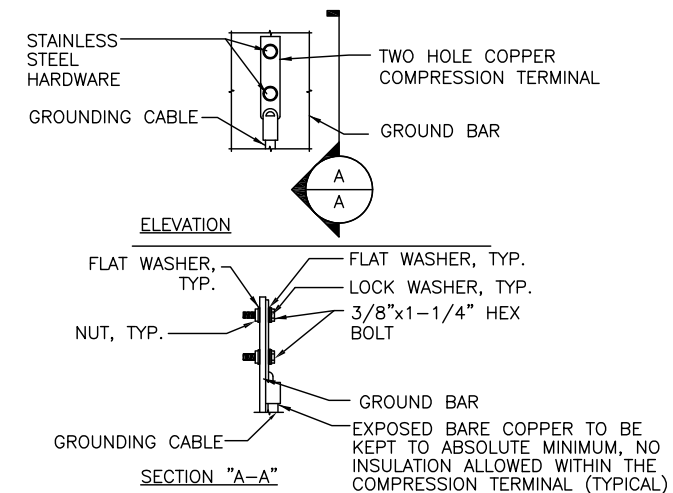
**GROUND WIRE TO GROUND BAR CONNECTION DETAIL**  
SCALE: N.T.S

1  
G-1



**GROUNDING RISER DIAGRAM**  
SCALE: N.T.S

2  
G-1



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

**TYPICAL GROUND BAR CONNECTION DETAIL**  
SCALE: N.T.S

3  
G-1

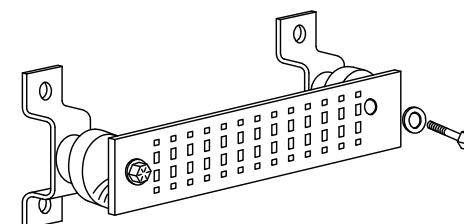
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

**SECTION "P" - SURGE PRODUCERS**

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

**SECTION "A" - SURGE ABSORBERS**

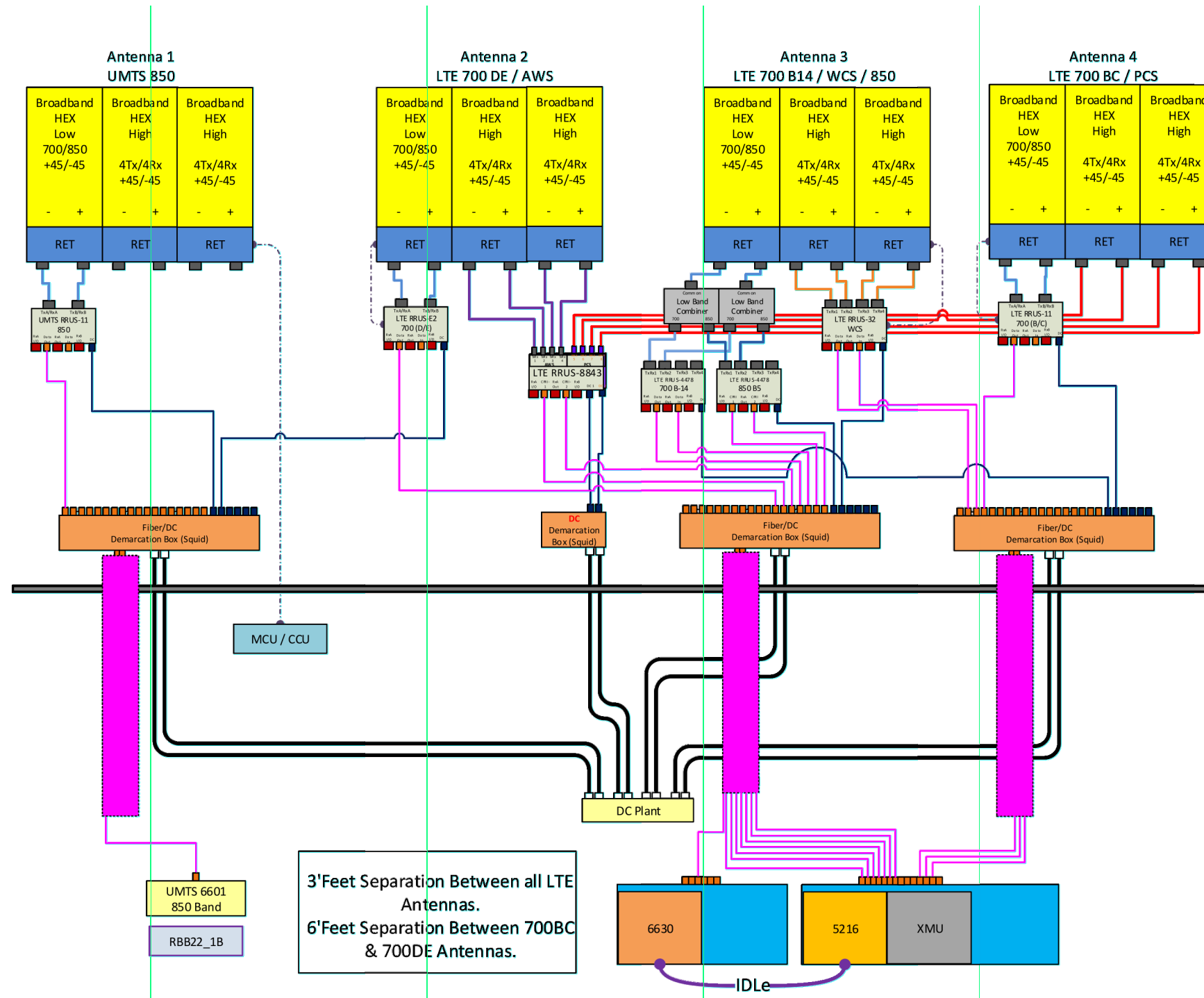
INTERIOR GROUND RING (#2 AWG)  
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)  
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)  
BUILDING STEEL (IF AVAILABLE) (#2 AWG)



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

4  
G-1





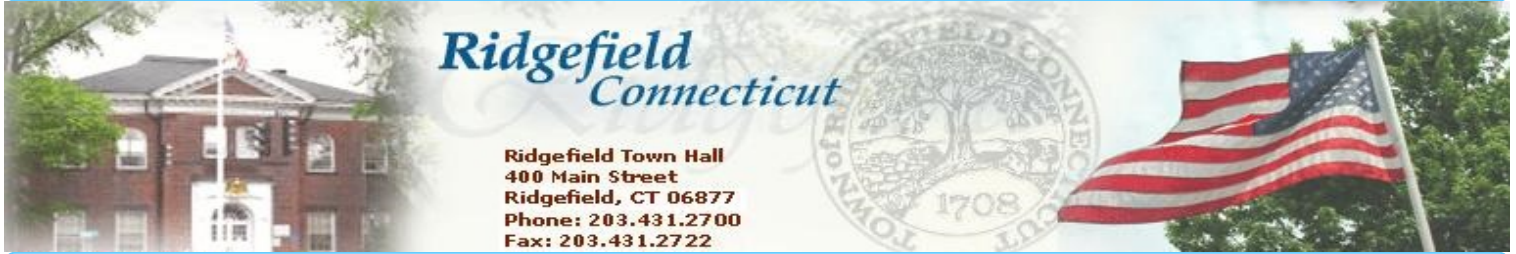
RF PLUMBING DIAGRAM 1  
SCALE: N.T.S. RF-1

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

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

# EXHIBIT 2

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2017.



Information on the Property Records for the Municipality of Ridgefield was last updated on 3/30/2020.

### Parcel Information

Location:	320 OLD STAGECOACH RD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	D080124	Map Block Lot:	D08-0124	Acres:	3.18
490 Acres:	0.00	Zone:	RAAA	Volume / Page:	0993/0673
Developers Map / Lot:	9269/D-1	Census:			

### Value Information

	Appraised Value	Assessed Value
Land	625,900	438,130
Buildings	0	0
Detached Outbuildings	0	0
Total	625,900	438,130

## Owner History - Sales

Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
0993	0673	11/14/2013	Warranty Deed	No	\$10
0981	0949	05/07/2013	Quit Claim	No	\$265,000
890	1029	05/04/2009	Foreclosure	No	\$0

Information Published With Permission From The Assessor

## Google Maps 320 Old Stagecoach Rd



Imagery ©2020 Maxar Technologies, New York GIS, USDA Farm Service Agency, Map data ©2020 50 ft



## 320 Old Stagecoach Rd

Ridgefield, CT 06877



Directions



Save



Nearby

Send to your  
phone

Share



8FJM+8P Ridgefield, Connecticut



# EXHIBIT 3



Date: **March 18, 2020**

Mikala Charron  
InSite Wireless  
1199 North Fairfax Street, Suite 700  
Alexandria, VA 22314

Engineered Tower Solutions, PLLC  
3227 Wellington Court  
Raleigh, NC 27615  
(919) 782-2710

**Subject:** **Structural Analysis Report**

**Carrier Designation:** **AT&T Co-Locate**  
**Carrier Site Number:** CT1855  
**Carrier Site Name:** Ridgefield Old Stagecoach Road

**Insite Wireless Designation:** **Insite Wireless Site Number:** CT897  
**Insite Wireless Site Name:** Ridgefield

**Engineering Firm Designation:** **ETS Project Number:** 201466.14

**Site Data:** **320 Old Stagecoach Rd, Ridgefield, Fairfield County, CT 06877**  
**Latitude 41° 19' 49.1", Longitude -73° 31' 0.6"**  
**149 Foot - Monopole Tower**

Dear Mikala Charron,

Engineered Tower Solutions, PLLC is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

Proposed Equipment Configuration	<b>Tower: 57.5%</b>	<b>Sufficient Capacity</b>
	<b>Foundation: 42.4%</b>	<b>Sufficient Capacity</b>

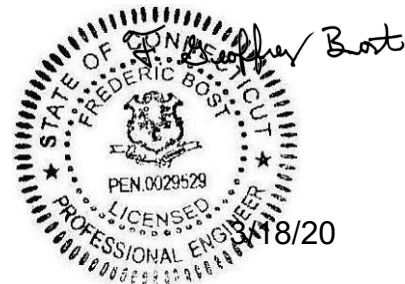
This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by:

Tomas Martin Sosa  
Structural Engineer I

Respectfully submitted by:

Frederic G. Bost, PE, GC, CWI  
President/Owner



## TABLE OF CONTENTS

### 1) INTRODUCTION

### 2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

Table 2 - Other Considered Equipment

### 3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

### 4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Table 5 - Tower Component Stresses vs. Capacity

4.1) Recommendations

### 5) APPENDIX A

tnxTower Output

### 6) APPENDIX B

Base Level Drawing

### 7) APPENDIX C

Additional Calculations

## 1) INTRODUCTION

This tower is a 149 ft Monopole tower designed by Valmont in November of 2014. The tower was originally designed for a wind speed of 100 mph per ANSI/TIA-222-G.

## 2) ANALYSIS CRITERIA

TIA-222 Revision: TIA-222-H  
Risk Category: III  
Wind Speed: 125 mph  
Exposure Category: B  
Topographic Factor: 1  
Ice Thickness: 1.5 in  
Wind Speed with Ice: 50 mph  
Service Wind Speed: 60 mph

**Table 1 - Proposed Equipment Configuration**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
146.0	146.0	12	CCI	HPA-65R-BUU-H8	2 8 3	1/2 5/8 3/8
		6	Ericsson	RRUS 11		
		3	Ericsson	RRUS 32		
		3	Ericsson	RRUS 4478 B14		
		3	Ericsson	RRUS 4478 B5		
		3	Ericsson	RRUS 8843 B2/B66A		
		6	Ericsson	RRUS A2 MODULE		
		3	Ericsson	RRUS-E2		
		3	Kaelus	DBCT108F1V92-1		
		4	Raycap	DC6-48-60-18-8F		
		1	Tower Mounts	12' Platform Mount (Commscope P/N MTC3607)		

**Table 2 - Other Considered Equipment**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
148.0	153.0	1	RFI	BA40-41	1	7/8
	148.0	1	Tower Mounts	2' Side Arm Mount		
136.0	136.0	3	Commscope	CBC78T-DS-43-2X	2	1-5/8
		9	Commscope	JAHH-1D65B		
		1	RFS	DB-C1-12C-24AB-OZ		
		3	Samsung	B2/B66 RRH BR049		
		3	Samsung	B5/B13 RRH BR04C		
		1	Site Pro 1	RMQP-496-HK		
129.0	129.0	1	Commscope	VSR-MS-B Kit	3	1-1/4
		3	-	2.5 Sch 40 x 12.5' Horiz. Pipe		
126.0	126.0	3	Ericsson	4449 B71+B12		
		3	Ericsson	RRUS 11 B4		
		3	RFS	APXV18-206516S-C-A20		
		3	RFS	APXVAARR24-43-U-NA20		
		3	Tower Mounts	8' T-Arm Mounts		
72.0	72.0	1	Tower Mount	3.5" Ø x 4' Pipe Mount	1	EW90
	71.5	1	Commscope	VHLP3-11W-6GR		
65.5	67.5	1	Sinclair	SD210R-SF2P90LDF	1	7/8
	65.5	1	Tower Mount	3' Side Arm		

### 3) ANALYSIS PROCEDURE

**Table 3 - Documents Provided**

Document	Remarks	Reference	Source
Tower Design Drawings	Valmont	11/18/2014	InSite
Tower Erection Drawings	Valmont	11/25/2014	InSite
Foundation Design Drawings	Valmont	11/19/2014	InSite
Geotechnical Report	Terracon Consultants, Inc	10/07/2014	InSite
Mount Analysis Report	ProTerra Design Group, LLC	06/11/2019	InSite
Tower Mapping Report	Structural Components	09/26/2019	InSite
Mount Analysis Report	Hudson Design Group LLC	02/04/2020	InSite

#### 3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.



### 3.2) Assumptions

- 1) Tower and structures were built and have been maintained in accordance with the manufacturer's specifications.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Engineered Tower Solutions, PLLC should be notified to determine the effect on the structural integrity of the tower.

## 4) ANALYSIS RESULTS

**Table 4 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	149 - 116.67	Pole	TP28.81x20.5x0.219	1	-13.50	1173.23	51.7	Pass
L2	116.67 - 89.25	Pole	TP35.43x27.259x0.313	2	-17.92	2060.51	57.5	Pass
L3	89.25 - 46.25	Pole	TP45.86x33.4529x0.438	3	-291.42	3470.04	54.6	Pass
L4	46.25 - 0	Pole	TP56.88x43.3331x0.5	4	-49.42	5496.00	47.3	Pass
							Summary	
						Pole (L2)	57.5	Pass
						<b>RATING =</b>	<b>57.5</b>	<b>Pass</b>

**Table 5 - Tower Component Stresses vs. Capacity**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	43.9	Pass
1	Base Plate	0	23.7	Pass
1	Base Foundation Structural	0	42.4	Pass
1	Base Foundation Soil Interaction	0	42.3	Pass

<b>Structure Rating (max from all components) =</b>	<b>57.5%</b>
---	--------------

Notes:

- 1) See additional documentation in "Appendix C - Additional Calculations" for calculations supporting the % capacity consumed.

### 4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

## **APPENDIX A**

### **TNXTOWER OUTPUT**

Section	1	2	3	4	
Length (ft)	32.330	31.750	48.250	52.670	
Number of Sides	18	18	18	18	
Thickness (in)	0.2190	0.3130	0.4380	0.5000	
Socket Length (ft)	4.330	5.250	6.420	43.3331	
Top Dia (in)	20.5000	27.2590	33.4529	43.3331	
Bot Dia (in)	28.8100	35.4300	45.8600	56.8800	
Grade			A572-65		
Weight (K)	1.9	3.3	9.0	14.1	28.3

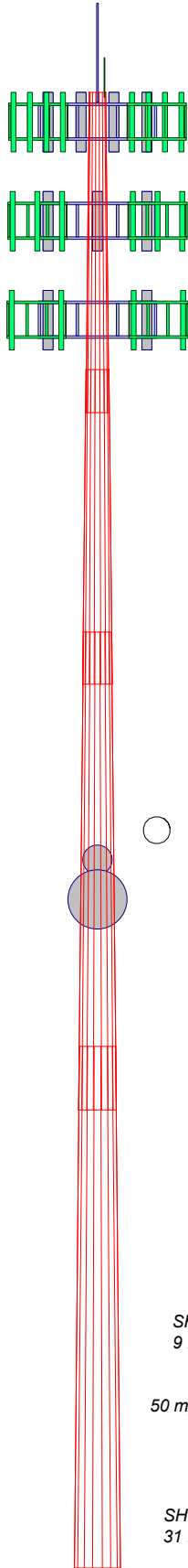
149.0 ft

116.7 ft

89.3 ft

46.3 ft

0.0 ft



## MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

## TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category III.
6. Topographic Category 1 with Crest Height of 0.000 ft
7. TOWER RATING: 57.5%

ALL REACTIONS  
ARE FACTORED

AXIAL  
323 K

SHEAR  
9 K

MOMENT  
2508 kip-ft

TORQUE 4 kip-ft  
50 mph WIND - 1.5000 in ICE

AXIAL  
49 K

SHEAR  
31 K

MOMENT  
3581 kip-ft

TORQUE 2 kip-ft  
REACTIONS - 125 mph WIND

**Engineered Tower Solutions, PLLC**

3227 Wellington Court  
Raleigh, NC 27615  
Phone: (919) 782-2710  
FAX:

Job: **CT897 Ridgefield**

Project: **ETS Job No. 201466.14**

Client: InSite Wireless Drawn by: Tomas Martin Sosa App'd:

Code: TIA-222-H Date: 03/18/20 Scale: NTS

Path: C:\Users\Tomas Sosa\Desktop\Towers\2020\1466\SA\Analysis\Tower\Ridgefield.eri Dwg No. E-1

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b> CT897 Ridgefield	<b>Page</b> 1 of 18
	<b>Project</b> ETS Job No. 201466.14	<b>Date</b> 10:02:23 03/18/20
	<b>Client</b> InSite Wireless	<b>Designed by</b> Tomas Martin Sosa

## Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower base elevation above sea level: 802.130 ft.

Basic wind speed of 125 mph.

Risk Category III.

Exposure Category B.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.000 ft.

Nominal ice thickness of 1.5000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.05.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

## Options

Consider Moments - Legs

Consider Moments - Horizontals

Consider Moments - Diagonals

Use Moment Magnification

Use Code Stress Ratios

Use Code Safety Factors - Guys

Escalate Ice

Always Use Max Kz

Use Special Wind Profile

Include Bolts In Member Capacity

Leg Bolts Are At Top Of Section

Secondary Horizontal Braces Leg

Use Diamond Inner Bracing (4 Sided)

SR Members Have Cut Ends

SR Members Are Concentric

Distribute Leg Loads As Uniform

Assume Legs Pinned

✓ Assume Rigid Index Plate

✓ Use Clear Spans For Wind Area

Use Clear Spans For KL/r

Retension Guys To Initial Tension

✓ Bypass Mast Stability Checks

✓ Use Azimuth Dish Coefficients

✓ Project Wind Area of Appurt.

Autocalc Torque Arm Areas

Add IBC .6D+W Combination

✓ Sort Capacity Reports By Component

Triangulate Diamond Inner Bracing

Treat Feed Line Bundles As Cylinder

Ignore KL/ry For 60 Deg. Angle Legs

Use ASCE 10 X-Brace Ly Rules

Calculate Redundant Bracing Forces

Ignore Redundant Members in FEA

SR Leg Bolts Resist Compression

All Leg Panels Have Same Allowable

Offset Girt At Foundation

✓ Consider Feed Line Torque

Include Angle Block Shear Check

Use TIA-222-H Bracing Resist. Exemption

Use TIA-222-H Tension Splice Exemption

### Poles

✓ Include Shear-Torsion Interaction

Always Use Sub-Critical Flow

Use Top Mounted Sockets

✓ Pole Without Linear Attachments

Pole With Shroud Or No Appurtenances

Outside and Inside Corner Radii Are

Known

## Tapered Pole Section Geometry

Section	Elevation	Section Length	Splice Length	Number of Sides	Top Diameter	Bottom Diameter	Wall Thickness	Bend Radius	Pole Grade
	ft	ft	ft		in	in	in	in	

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b> CT897 Ridgefield	<b>Page</b> 2 of 18
	<b>Project</b> ETS Job No. 201466.14	<b>Date</b> 10:02:23 03/18/20
	<b>Client</b> InSite Wireless	<b>Designed by</b> Tomas Martin Sosa

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	149.000-116.670	32.330	4.330	18	20.5000	28.8100	0.2190	0.8760	A572-65 (65 ksi)
L2	116.670-89.250	31.750	5.250	18	27.2590	35.4300	0.3130	1.2520	A572-65 (65 ksi)
L3	89.250-46.250	48.250	6.420	18	33.4529	45.8600	0.4380	1.7520	A572-65 (65 ksi)
L4	46.250-0.000	52.670		18	43.3331	56.8800	0.5000	2.0000	A572-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	It/Q in <sup>2</sup>	w in	w/t
L1	20.7825	14.0974	732.5826	7.1998	10.4140	70.3459	1466.1291	7.0501	3.2226	14.715
	29.2207	19.8738	2052.4686	10.1498	14.6355	140.2392	4107.6379	9.9388	4.6851	21.393
L2	28.7628	26.7699	2455.6876	9.5658	13.8476	177.3369	4914.6065	13.3875	4.2467	13.568
	35.9283	34.8874	5435.5179	12.4665	17.9984	301.9994	10878.1881	17.4470	5.6848	18.162
L3	35.2722	45.8977	6320.4536	11.7203	16.9941	371.9211	12649.2237	22.9532	5.1168	11.682
	46.4999	63.1462	16459.5229	16.1248	23.2969	706.5119	32940.7036	31.5791	7.3005	16.668
L4	45.6012	67.9762	15756.3043	15.2058	22.0132	715.7649	31533.3411	33.9946	6.7466	13.493
	57.6803	89.4751	35932.6785	20.0149	28.8950	1243.5587	71912.6381	44.7460	9.1309	18.262

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A <sub>f</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft <sup>2</sup>	in					in	in	in
L1 149.000-116.670				1	1	1			
L2 116.670-89.250				1	1	1			
L3 89.250-46.250				1	1	1			
L4 46.250-0.000				1	1	1			

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C <sub>A</sub> A <sub>A</sub> ft <sup>2</sup> /ft	Weight plf
***Town of Ridgefield*** 7/8	A	No	No	Inside Pole	149.000 - 5.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.60 0.60 0.60 0.60
7/8	A	No	No	Inside Pole	65.500 - 5.000	1	No Ice 1/2" Ice	0.000 0.000	0.60 0.60



<b><i>tnxTower</i></b>  <b><i>Engineered Tower Solutions, PLLC</i></b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	3 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

<i>Description</i>	<i>Face or Leg</i>	<i>Allow Shield</i>	<i>Exclude From Torque Calculation</i>	<i>Component Type</i>	<i>Placement  ft</i>	<i>Total Number</i>		<i>C<sub>AA</sub>  ft<sup>2</sup>/ft</i>	<i>Weight  plf</i>
EW90	A	No	No	Inside Pole	72.000 - 5.000	1	1" Ice	0.000	0.60
							2" Ice	0.000	0.60
							No Ice	0.000	0.32
							1/2" Ice	0.000	0.32
							1" Ice	0.000	0.32
							2" Ice	0.000	0.32
***AT&T***									
FSJ4-50B(1/2")	A	No	No	Inside Pole	146.000 - 5.000	2	No Ice	0.000	0.14
							1/2" Ice	0.000	0.14
							1" Ice	0.000	0.14
							2" Ice	0.000	0.14
							No Ice	0.000	0.08
FSJ2-50 (3/8" RET)	A	No	No	Inside Pole	146.000 - 5.000	3	1/2" Ice	0.000	0.08
							1" Ice	0.000	0.08
							2" Ice	0.000	0.08
							No Ice	0.000	0.40
							1/2" Ice	0.000	0.40
5/8	A	No	No	Inside Pole	146.000 - 5.000	8	1" Ice	0.000	0.40
							2" Ice	0.000	0.40
							No Ice	0.000	0.40
							1/2" Ice	0.000	0.40
							2" Ice	0.000	0.40
***T-Mobile***									
942-98887-1FXXX(1-1/4)	A	No	No	Inside Pole	126.000 - 5.000	3	No Ice	0.000	1.26
							1/2" Ice	0.000	1.26
							1" Ice	0.000	1.26
							2" Ice	0.000	1.26
							No Ice	0.000	2.33
***Verizon***	A	No	No	Inside Pole	136.000 - 5.000	2	1/2" Ice	0.000	2.33
							1" Ice	0.000	2.33
							2" Ice	0.000	2.33
							No Ice	0.000	2.33
							1/2" Ice	0.000	2.33
***									
Safety Line 3/8	C	No	No	CaAa (Out Of Face)	149.000 - 0.000	1	No Ice	0.037	0.22
							1/2" Ice	0.137	0.75
							1" Ice	0.238	1.28
							2" Ice	0.437	2.34
							No Ice	0.035	0.49
Step Pegs (5/8" SR) 7-in. w/ 30" Step	C	No	No	CaAa (Out Of Face)	149.000 - 0.000	2	1/2" Ice	0.135	1.01
							1" Ice	0.235	2.14
							2" Ice	0.435	6.23
							No Ice	0.035	0.49
							1/2" Ice	0.135	1.01

## Feed Line/Linear Appurtenances Section Areas

<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A<sub>R</sub>  ft<sup>2</sup></i>	<i>A<sub>F</sub>  ft<sup>2</sup></i>	<i>C<sub>AA</sub> In Face ft<sup>2</sup></i>	<i>C<sub>AA</sub> Out Face ft<sup>2</sup></i>	<i>Weight  K</i>
L1	149.000-116.670	A	0.000	0.000	0.000	0.000	0.25
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	3.476	0.04
L2	116.670-89.250	A	0.000	0.000	0.000	0.000	0.35
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	2.948	0.03
L3	89.250-46.250	A	0.000	0.000	0.000	0.000	0.57
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.623	0.05
L4	46.250-0.000	A	0.000	0.000	0.000	0.000	0.56

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	4 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A<sub>R</sub></i> <i>ft<sup>2</sup></i>	<i>A<sub>F</sub></i> <i>ft<sup>2</sup></i>	<i>C<sub>AA</sub></i> <i>In Face</i> <i>ft<sup>2</sup></i>	<i>C<sub>AA</sub></i> <i>Out Face</i> <i>ft<sup>2</sup></i>	<i>Weight</i> <i>K</i>
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.972	0.06

### Feed Line/Linear Appurtenances Section Areas - With Ice

<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face or Leg</i>	<i>Ice Thickness in</i>	<i>A<sub>R</sub></i> <i>ft<sup>2</sup></i>	<i>A<sub>F</sub></i> <i>ft<sup>2</sup></i>	<i>C<sub>AA</sub></i> <i>In Face</i> <i>ft<sup>2</sup></i>	<i>C<sub>AA</sub></i> <i>Out Face</i> <i>ft<sup>2</sup></i>	<i>Weight</i> <i>K</i>
L1	149.000-116.670	A	1.982	0.000	0.000	0.000	0.000	0.25
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	41.915	0.47
L2	116.670-89.250	A	1.932	0.000	0.000	0.000	0.000	0.35
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	35.549	0.40
L3	89.250-46.250	A	1.852	0.000	0.000	0.000	0.000	0.57
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	54.466	0.61
L4	46.250-0.000	A	1.660	0.000	0.000	0.000	0.000	0.56
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	56.373	0.62

### Feed Line Center of Pressure

<i>Section</i>	<i>Elevation ft</i>	<i>CP<sub>x</sub></i> <i>in</i>	<i>CP<sub>z</sub></i> <i>in</i>	<i>CP<sub>x</sub></i> <i>Ice</i> <i>in</i>	<i>CP<sub>z</sub></i> <i>Ice</i> <i>in</i>
L1	149.000-116.670	-0.8082	0.4666	-3.5026	2.0223
L2	116.670-89.250	-0.8224	0.4748	-3.8724	2.2358
L3	89.250-46.250	-0.8329	0.4809	-4.1203	2.3789
L4	46.250-0.000	-0.8411	0.4856	-4.2722	2.4666

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

### Shielding Factor Ka

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub></i> <i>No Ice</i>	<i>K<sub>a</sub></i> <i>Ice</i>
----------------------	-----------------------------	--------------------	--------------------------------	---------------------------------------	------------------------------------

### Discrete Tower Loads

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>						<b>Page</b>		
	CT897 Ridgefield						5 of 18		
	<b>Project</b>						<b>Date</b>		
	ETS Job No. 201466.14						10:02:23 03/18/20		
	<b>Client</b>						<b>Designed by</b>		
	InSite Wireless						Tomas Martin Sosa		

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C<sub>AA</sub> Front ft<sup>2</sup></i>	<i>C<sub>AA</sub> Side ft<sup>2</sup></i>	<i>Weight K</i>
***									
1/2-in x 3-ft Lightning Rod	B	From Leg	0.000 0.000 1.500	0.0000	149.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.150 0.460 0.648 1.052	0.150 0.460 0.648 1.052	0.00 0.00 0.01 0.02
5' x 2" Pipe Mount	B	From Leg	0.000 0.000 2.500	0.0000	149.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.188 1.496 1.807 2.458	1.188 1.496 1.807 2.458	0.02 0.03 0.04 0.08
***									
BA40-41	A	From Leg	2.000 0.000 5.000	0.0000	148.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.147 5.792 6.784 8.196	4.147 5.792 6.784 8.196	0.03 0.06 0.10 0.21
Side Arm Mount [SO 301-1]	A	From Leg	1.000 0.000 0.000	0.0000	148.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.460 0.650 0.870 1.410	0.910 1.300 1.710 2.620	0.02 0.03 0.05 0.09
***AT&T***									
Platform Mount [LP 1301-1]	C	None		0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	51.700 62.700 73.700 95.700	51.700 62.700 73.700 95.700	2.26 2.94 3.61 4.95
(4) HPA-65R-BUU-H8 w/ 7.5' MP	A	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	12.976 13.558 14.147 15.346	9.297 10.647 11.773 13.891	0.10 0.19 0.29 0.53
(4) HPA-65R-BUU-H8 w/ 7.5' MP	B	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	12.976 13.558 14.147 15.346	9.297 10.647 11.773 13.891	0.10 0.19 0.29 0.53
(4) HPA-65R-BUU-H8 w/ 7.5' MP	C	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	12.976 13.558 14.147 15.346	9.297 10.647 11.773 13.891	0.10 0.19 0.29 0.53
RRUS-E2	A	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.143 3.363 3.590 4.067	1.282 1.434 1.595 1.950	0.05 0.08 0.10 0.17
RRUS-E2	B	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.143 3.363 3.590 4.067	1.282 1.434 1.595 1.950	0.05 0.08 0.10 0.17
RRUS-E2	C	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.143 3.363 3.590 4.067	1.282 1.434 1.595 1.950	0.05 0.08 0.10 0.17
(2) RRUS 11	A	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.791 2.998 3.213 3.666	1.192 1.340 1.496 1.839	0.05 0.07 0.10 0.15
(2) RRUS 11	B	From Leg	4.000 0.000 0.000	0.0000	146.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.791 2.998 3.213 3.666	1.192 1.340 1.496 1.839	0.05 0.07 0.10 0.15
(2) RRUS 11	C	From Leg	4.000 0.000	0.0000	146.000	No Ice 1/2" Ice	2.791 2.998	1.192 1.340	0.05 0.07

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	6 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>	<i>C<sub>AA</sub> Front ft<sup>2</sup></i>	<i>C<sub>AA</sub> Side ft<sup>2</sup></i>	<i>Weight K</i>
			0.000			1" Ice 3.213	1.496	0.10
						2" Ice 3.666	1.839	0.15
(2) RRUS A2 MODULE	A	From Leg	4.000	0.0000	146.000	No Ice 1.600	0.380	0.02
			0.000			1/2" Ice 1.758	0.470	0.03
			0.000			1" Ice 1.924	0.568	0.04
(2) RRUS A2 MODULE	B	From Leg	4.000	0.0000	146.000	2" Ice 2.277	0.783	0.08
			0.000			No Ice 1.600	0.380	0.02
			0.000			1/2" Ice 1.758	0.470	0.03
			0.000			1" Ice 1.924	0.568	0.04
(2) RRUS A2 MODULE	C	From Leg	4.000	0.0000	146.000	2" Ice 2.277	0.783	0.08
			0.000			No Ice 1.600	0.380	0.02
			0.000			1/2" Ice 1.758	0.470	0.03
			0.000			1" Ice 1.924	0.568	0.04
RRUS 32	A	From Leg	4.000	0.0000	146.000	2" Ice 2.277	0.783	0.08
			0.000			No Ice 2.857	1.777	0.06
			0.000			1/2" Ice 3.083	1.968	0.08
RRUS 32	B	From Leg	4.000	0.0000	146.000	1" Ice 3.316	2.166	0.10
			0.000			2" Ice 3.805	2.583	0.16
			0.000			No Ice 2.857	1.777	0.06
RRUS 32	C	From Leg	4.000	0.0000	146.000	1/2" Ice 3.083	1.968	0.08
			0.000			1" Ice 3.316	2.166	0.10
			0.000			2" Ice 3.805	2.583	0.16
RRUS 4478 B5	A	From Leg	4.000	0.0000	146.000	No Ice 1.843	1.059	0.06
			0.000			1/2" Ice 2.012	1.197	0.08
			0.000			1" Ice 2.190	1.342	0.09
RRUS 4478 B5	B	From Leg	4.000	0.0000	146.000	2" Ice 2.566	1.656	0.14
			0.000			No Ice 1.843	1.059	0.06
			0.000			1/2" Ice 2.012	1.197	0.08
			0.000			1" Ice 2.190	1.342	0.09
RRUS 4478 B5	C	From Leg	4.000	0.0000	146.000	2" Ice 2.566	1.656	0.14
			0.000			No Ice 1.843	1.059	0.06
			0.000			1/2" Ice 2.012	1.197	0.08
			0.000			1" Ice 2.190	1.342	0.09
RRUS 8843 B2/B66A	A	From Leg	4.000	0.0000	146.000	2" Ice 2.566	1.656	0.14
			0.000			No Ice 1.639	1.353	0.07
			0.000			1/2" Ice 1.799	1.500	0.09
RRUS 8843 B2/B66A	B	From Leg	4.000	0.0000	146.000	1" Ice 1.966	1.655	0.11
			0.000			2" Ice 2.323	1.986	0.16
			0.000			No Ice 1.639	1.353	0.07
			0.000			1/2" Ice 1.799	1.500	0.09
			0.000			1" Ice 1.966	1.655	0.11
RRUS 8843 B2/B66A	C	From Leg	4.000	0.0000	146.000	2" Ice 2.323	1.986	0.16
			0.000			No Ice 1.639	1.353	0.07
			0.000			1/2" Ice 1.799	1.500	0.09
			0.000			1" Ice 1.966	1.655	0.11
RRUS 4478 B14	A	From Leg	4.000	0.0000	146.000	2" Ice 2.323	1.986	0.16
			0.000			No Ice 1.843	1.059	0.06
			0.000			1/2" Ice 2.012	1.197	0.08
			0.000			1" Ice 2.190	1.342	0.09
RRUS 4478 B14	B	From Leg	4.000	0.0000	146.000	2" Ice 2.566	1.656	0.14
			0.000			No Ice 1.843	1.059	0.06
			0.000			1/2" Ice 2.012	1.197	0.08
			0.000			1" Ice 2.190	1.342	0.09

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b> CT897 Ridgefield	<b>Page</b> 7 of 18
	<b>Project</b> ETS Job No. 201466.14	<b>Date</b> 10:02:23 03/18/20
	<b>Client</b> InSite Wireless	<b>Designed by</b> Tomas Martin Sosa

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
RRUS 4478 B14	C	From Leg	4.000 0.000 0.000	0.0000	146.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.566 1.843 2.012 2.190 2.566	1.656 1.059 1.197 1.342 1.656	0.14 0.06 0.08 0.09 0.14
DBCT108F1V92-1	A	From Leg	4.000 0.000 0.000	0.0000	146.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.566 0.606 0.707 0.816 1.054	1.656 0.642 0.745 0.856 1.099	0.14 0.03 0.04 0.05 0.07
DBCT108F1V92-1	B	From Leg	4.000 0.000 0.000	0.0000	146.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	1.054 0.606 0.707 0.816 1.054	1.099 0.642 0.745 0.856 1.099	0.07 0.03 0.04 0.05 0.07
DBCT108F1V92-1	C	From Leg	4.000 0.000 0.000	0.0000	146.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	1.054 0.606 0.707 0.816 1.054	1.099 0.642 0.745 0.856 1.099	0.07 0.03 0.04 0.05 0.07
(2) DC6-48-60-18-8F	A	From Leg	4.000 0.000 0.000	0.0000	146.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	1.054 1.212 1.892 2.105 2.570	1.099 1.212 1.892 2.105 2.570	0.07 0.03 0.05 0.08 0.14
DC6-48-60-18-8F	B	From Leg	4.000 0.000 0.000	0.0000	146.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.570 1.212 1.892 2.105 2.570	2.570 1.212 1.892 2.105 2.570	0.14 0.03 0.05 0.08 0.14
DC6-48-60-18-8F	C	From Leg	4.000 0.000 0.000	0.0000	146.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	2.570 1.212 1.892 2.105 2.570	2.570 1.212 1.892 2.105 2.570	0.14 0.03 0.05 0.08 0.14
*** 4' x 3.5" Mount Pipe	A	From Leg	0.500 0.000 0.000	0.0000	72.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.107 1.357 1.617 2.163	1.107 1.357 1.617 2.163	0.03 0.04 0.05 0.09
*** SD210R-SF2P90LDF	A	From Leg	3.000 0.000 2.000	0.0000	65.500	No Ice 1/2" Ice 1" Ice 2" Ice	3.720 6.950 10.180 16.640	3.720 6.950 10.180 16.640	0.04 91.00 144.00 250.00
Side Arm Mount [SO 305-1]	A	From Leg	1.500 0.000 0.000	0.0000	65.500	No Ice 1/2" Ice 1" Ice 2" Ice	0.530 0.780 1.060 1.730	1.520 2.070 2.660 3.910	0.03 0.04 0.06 0.13
***T-Mobile*** T-Arm Mount [TA 601-3]	C	None		0.0000	126.000	No Ice 1/2" Ice 1" Ice 2" Ice	12.560 15.360 18.040 23.690	12.560 15.360 18.040 23.690	0.73 0.94 1.21 1.92
(2) Miscellaneous [NA 509-3]	C	None		0.0000	129.000	No Ice 1/2" Ice 1" Ice 2" Ice	11.840 16.960 22.080 32.320	11.840 16.960 22.080 32.320	0.28 0.30 0.32 0.36
Miscellaneous [NA 507-1]	C	None		0.0000	129.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.560 6.390 8.180 11.660	4.560 6.390 8.180 11.660	0.25 0.31 0.40 0.66
APXV18-206516S-C-A20 W/	A	From Leg	4.000	0.0000	126.000	No Ice	3.882	3.428	0.04

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>		CT897 Ridgefield	<b>Page</b>		8 of 18
	<b>Project</b>		ETS Job No. 201466.14	<b>Date</b>		10:02:23 03/18/20
	<b>Client</b>		InSite Wireless	<b>Designed by</b>		Tomas Martin Sosa

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	CAAA Front ft²	CAAA Side ft²	Weight K
Mount Pipe			0.000 0.000			1/2" Ice 4.356 1" Ice 4.796 2" Ice 5.686	4.251 4.951 6.400	0.08 0.12 0.22
APXV18-206516S-C-A20 W/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 3.882 1/2" Ice 4.356 1" Ice 4.796 2" Ice 5.686	3.428 4.251 4.951 6.400	0.04 0.08 0.12 0.22
APXV18-206516S-C-A20 W/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 3.882 1/2" Ice 4.356 1" Ice 4.796 2" Ice 5.686	3.428 4.251 4.951 6.400	0.04 0.08 0.12 0.22
APXVAARR24_43-U-NA20 W/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 20.482 1/2" Ice 21.233 1" Ice 21.994 2" Ice 23.449	11.026 12.552 14.103 16.457	0.16 0.30 0.44 0.78
APXVAARR24_43-U-NA20 W/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 20.482 1/2" Ice 21.233 1" Ice 21.994 2" Ice 23.449	11.026 12.552 14.103 16.457	0.16 0.30 0.44 0.78
APXVAARR24_43-U-NA20 W/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 20.482 1/2" Ice 21.233 1" Ice 21.994 2" Ice 23.449	11.026 12.552 14.103 16.457	0.16 0.30 0.44 0.78
4449 B71+B12	A	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 1.627 1/2" Ice 1.786 1" Ice 1.953 2" Ice 2.308	1.004 1.132 1.267 1.559	0.07 0.09 0.11 0.15
4449 B71+B12	B	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 1.627 1/2" Ice 1.786 1" Ice 1.953 2" Ice 2.308	1.004 1.132 1.267 1.559	0.07 0.09 0.11 0.15
4449 B71+B12	C	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 1.627 1/2" Ice 1.786 1" Ice 1.953 2" Ice 2.308	1.004 1.132 1.267 1.559	0.07 0.09 0.11 0.15
RRUS 11 B4	A	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259 2" Ice 3.715	1.182 1.330 1.485 1.826	0.05 0.07 0.10 0.15
RRUS 11 B4	B	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259 2" Ice 3.715	1.182 1.330 1.485 1.826	0.05 0.07 0.10 0.15
RRUS 11 B4	C	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259 2" Ice 3.715	1.182 1.330 1.485 1.826	0.05 0.07 0.10 0.15
6' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060	1.425 1.925 2.294 3.060	0.02 0.03 0.05 0.09
6' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.0000	126.000	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060	1.425 1.925 2.294 3.060	0.02 0.03 0.05 0.09
6' x 2" Mount Pipe	C	From Leg	4.000 0.000	0.0000	126.000	No Ice 1.425 1/2" Ice 1.925	1.425 1.925	0.02 0.03

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	Job	CT897 Ridgefield	Page	9 of 18
	Project	ETS Job No. 201466.14	Date	10:02:23 03/18/20
	Client	InSite Wireless	Designed by	Tomas Martin Sosa

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
			0.000			1" Ice	2.294	2.294	0.05
						2" Ice	3.060	3.060	0.09
***Verizon***									
Platform Mount [LP 1301-1]	C	None		0.0000	136.000	No Ice	51.700	51.700	2.26
						1/2" Ice	62.700	62.700	2.94
						1" Ice	73.700	73.700	3.61
						2" Ice	95.700	95.700	4.95
(3) JAHH-1D65B	A	From Leg	4.000	0.0000	136.000	No Ice	8.200	5.424	0.05
			0.000			1/2" Ice	8.661	5.882	0.10
			0.000			1" Ice	9.129	6.348	0.15
						2" Ice	10.086	7.301	0.29
(3) JAHH-1D65B	B	From Leg	4.000	0.0000	136.000	No Ice	8.200	5.424	0.05
			0.000			1/2" Ice	8.661	5.882	0.10
			0.000			1" Ice	9.129	6.348	0.15
						2" Ice	10.086	7.301	0.29
(3) JAHH-1D65B	C	From Leg	4.000	0.0000	136.000	No Ice	8.200	5.424	0.05
			0.000			1/2" Ice	8.661	5.882	0.10
			0.000			1" Ice	9.129	6.348	0.15
						2" Ice	10.086	7.301	0.29
B2/B66 RRH BR049	A	From Leg	4.000	0.0000	136.000	No Ice	1.875	1.250	0.08
			0.000			1/2" Ice	2.045	1.393	0.10
			0.000			1" Ice	2.223	1.543	0.12
						2" Ice	2.601	1.865	0.18
B2/B66 RRH BR049	B	From Leg	4.000	0.0000	136.000	No Ice	1.875	1.250	0.08
			0.000			1/2" Ice	2.045	1.393	0.10
			0.000			1" Ice	2.223	1.543	0.12
						2" Ice	2.601	1.865	0.18
B2/B66 RRH BR049	C	From Leg	4.000	0.0000	136.000	No Ice	1.875	1.250	0.08
			0.000			1/2" Ice	2.045	1.393	0.10
			0.000			1" Ice	2.223	1.543	0.12
						2" Ice	2.601	1.865	0.18
B5/B13 RRH BR04C	A	From Leg	4.000	0.0000	136.000	No Ice	1.875	1.013	0.07
			0.000			1/2" Ice	2.045	1.145	0.09
			0.000			1" Ice	2.223	1.284	0.11
						2" Ice	2.601	1.585	0.15
B5/B13 RRH BR04C	B	From Leg	4.000	0.0000	136.000	No Ice	1.875	1.013	0.07
			0.000			1/2" Ice	2.045	1.145	0.09
			0.000			1" Ice	2.223	1.284	0.11
						2" Ice	2.601	1.585	0.15
B5/B13 RRH BR04C	C	From Leg	4.000	0.0000	136.000	No Ice	1.875	1.013	0.07
			0.000			1/2" Ice	2.045	1.145	0.09
			0.000			1" Ice	2.223	1.284	0.11
						2" Ice	2.601	1.585	0.15
CBC78T-DS-43-2X	A	From Leg	4.000	0.0000	136.000	No Ice	0.368	0.512	0.02
			0.000			1/2" Ice	0.446	0.605	0.03
			0.000			1" Ice	0.531	0.705	0.04
						2" Ice	0.723	0.927	0.06
CBC78T-DS-43-2X	B	From Leg	4.000	0.0000	136.000	No Ice	0.368	0.512	0.02
			0.000			1/2" Ice	0.446	0.605	0.03
			0.000			1" Ice	0.531	0.705	0.04
						2" Ice	0.723	0.927	0.06
CBC78T-DS-43-2X	C	From Leg	4.000	0.0000	136.000	No Ice	0.368	0.512	0.02
			0.000			1/2" Ice	0.446	0.605	0.03
			0.000			1" Ice	0.531	0.705	0.04
						2" Ice	0.723	0.927	0.06
DB-C1-12C-24AB-OZ	C	From Leg	4.000	0.0000	136.000	No Ice	4.056	3.098	0.03
			0.000			1/2" Ice	4.316	3.335	0.07

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	10 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>	<i>C<sub>AA</sub> Front ft<sup>2</sup></i>	<i>C<sub>AA</sub> Side ft<sup>2</sup></i>	<i>Weight K</i>	
			0.000			1" Ice 2" Ice	4.582 5.138	3.580 4.092	0.11 0.20

## Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft²	Weight K	
VHLP3-11W-6GR	A	Paraboloid w/Shroud (HP)	From Leg	1.000 0.000 -0.500	0.0000		72.000	3.000	No Ice 1/2" Ice 1" Ice 2" Ice	7.069 7.467 7.865 8.661	0.07 0.11 0.14 0.22

## Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp



<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	11 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

<i>Comb. No.</i>	<i>Description</i>
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

## Maximum Member Forces

<i>Section No.</i>	<i>Elevation ft</i>	<i>Component Type</i>	<i>Condition</i>	<i>Gov. Load Comb.</i>	<i>Axial K</i>	<i>Major Axis Moment kip-ft</i>	<i>Minor Axis Moment kip-ft</i>
L1	149 - 116.67	Pole	Max Tension	27	0.00	-0.00	-0.00
			Max. Compression	26	-39.03	1.31	14.97
			Max. Mx	20	-13.50	390.01	-0.03
			Max. My	2	-13.50	-0.08	389.23
			Max. Vy	20	-21.84	390.01	-0.03
			Max. Vx	2	-21.80	-0.08	389.23
			Max. Torque	8			0.80
L2	116.67 - 89.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	33	-45.85	2.01	-258.80
			Max. Mx	20	-17.92	992.44	-0.41
			Max. My	2	-17.92	-0.42	990.58
			Max. Vy	20	-23.62	992.44	-0.41
			Max. Vx	14	23.58	0.85	-990.21
			Max. Torque	16			-0.77
L3	89.25 - 46.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	33	-296.28	3.25	576.55
			Max. Mx	20	-29.27	2052.97	0.07
			Max. My	2	-29.27	-0.96	2051.48
			Max. Vy	20	-27.11	2052.97	0.07
			Max. Vx	14	27.20	1.58	-2051.15
			Max. Torque	37			3.71
L4	46.25 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	33	-322.60	5.02	148.91
			Max. Mx	20	-49.42	3575.29	0.72
			Max. My	14	-49.42	2.50	-3578.26
			Max. Vy	20	-30.61	3575.29	0.72
			Max. Vx	14	30.70	2.50	-3578.26
			Max. Torque	37			4.26

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	12 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	33	322.60	0.00	-9.35
	Max. H <sub>x</sub>	21	37.08	30.58	0.01
	Max. H <sub>z</sub>	3	37.08	-0.01	30.61
	Max. M <sub>x</sub>	2	3575.08	-0.01	30.61
	Max. M <sub>z</sub>	8	3574.39	-30.58	0.04
	Max. Torsion	37	4.26	8.09	4.68
	Min. Vert	21	37.08	30.58	0.01
	Min. H <sub>x</sub>	9	37.08	-30.58	0.04
	Min. H <sub>z</sub>	15	37.08	0.01	-30.67
	Min. M <sub>x</sub>	14	-3578.26	0.01	-30.67
	Min. M <sub>z</sub>	20	-3575.29	30.58	0.01
	Min. Torsion	31	-4.25	-8.08	-4.69

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	41.20	-0.00	-0.00	-0.57	0.36	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	49.44	0.01	-30.61	-3575.08	-1.60	-1.19
0.9 Dead+1.0 Wind 0 deg - No Ice	37.08	0.01	-30.61	-3542.50	-1.70	-1.19
1.2 Dead+1.0 Wind 30 deg - No Ice	49.44	15.27	-26.54	-3098.94	-1786.34	-1.68
0.9 Dead+1.0 Wind 30 deg - No Ice	37.08	15.27	-26.54	-3070.59	-1770.18	-1.68
1.2 Dead+1.0 Wind 60 deg - No Ice	49.44	26.47	-15.37	-1793.63	-3094.79	-1.81
0.9 Dead+1.0 Wind 60 deg - No Ice	37.08	26.47	-15.37	-1777.16	-3066.74	-1.81
1.2 Dead+1.0 Wind 90 deg - No Ice	49.44	30.58	-0.04	-4.82	-3574.39	-1.46
0.9 Dead+1.0 Wind 90 deg - No Ice	37.08	30.58	-0.04	-4.61	-3542.08	-1.46
1.2 Dead+1.0 Wind 120 deg - No Ice	49.44	26.43	15.41	1793.06	-3091.42	-0.48
0.9 Dead+1.0 Wind 120 deg - No Ice	37.08	26.43	15.41	1776.97	-3063.39	-0.48
1.2 Dead+1.0 Wind 150 deg - No Ice	49.44	15.26	26.59	3100.23	-1783.88	0.43
0.9 Dead+1.0 Wind 150 deg - No Ice	37.08	15.26	26.59	3072.25	-1767.76	0.43
1.2 Dead+1.0 Wind 180 deg - No Ice	49.44	-0.01	30.67	3578.26	2.50	1.19
0.9 Dead+1.0 Wind 180 deg - No Ice	37.08	-0.01	30.67	3546.03	2.36	1.19
1.2 Dead+1.0 Wind 210 deg - No Ice	49.44	-15.28	26.60	3102.28	1788.33	1.63
0.9 Dead+1.0 Wind 210 deg - No Ice	37.08	-15.28	26.60	3074.28	1771.94	1.63
1.2 Dead+1.0 Wind 240 deg - No Ice	49.44	-26.45	15.43	1796.61	3094.37	1.67
0.9 Dead+1.0 Wind 240 deg - No Ice	37.08	-26.45	15.43	1780.49	3066.09	1.67

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b> CT897 Ridgefield	<b>Page</b> 13 of 18
	<b>Project</b> ETS Job No. 201466.14	<b>Date</b> 10:02:23 03/18/20
	<b>Client</b> InSite Wireless	<b>Designed by</b> Tomas Martin Sosa

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
No Ice						
1.2 Dead+1.0 Wind 270 deg - No Ice	49.44	-30.58	-0.01	-0.72	3575.29	1.46
0.9 Dead+1.0 Wind 270 deg - No Ice	37.08	-30.58	-0.01	-0.54	3542.75	1.46
1.2 Dead+1.0 Wind 300 deg - No Ice	49.44	-26.45	-15.35	-1790.09	3093.65	0.61
0.9 Dead+1.0 Wind 300 deg - No Ice	37.08	-26.45	-15.35	-1773.65	3065.38	0.61
1.2 Dead+1.0 Wind 330 deg - No Ice	49.44	-15.24	-26.52	-3096.90	1783.68	-0.39
0.9 Dead+1.0 Wind 330 deg - No Ice	37.08	-15.24	-26.52	-3068.57	1767.33	-0.39
1.2 Dead+1.0 Ice+1.0 Temp	322.60	0.00	0.00	-1329.30	4.61	-0.02
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	322.60	0.00	-9.34	-2507.66	4.18	-1.55
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	322.60	4.67	-8.09	-2350.31	-585.38	0.67
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	322.60	8.09	-4.68	-1919.82	-1017.56	2.69
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	322.60	9.34	-0.01	-1330.01	-1175.95	3.98
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	322.60	8.08	4.69	-738.35	-1017.02	4.25
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	322.60	4.67	8.10	-307.00	-585.13	3.34
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	322.60	-0.00	9.35	-148.91	5.02	1.52
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	322.60	-4.67	8.11	-306.58	595.07	-0.71
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	322.60	-8.08	4.69	-737.63	1026.66	-2.75
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	322.60	-9.34	-0.00	-1329.18	1185.17	-4.02
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	322.60	-8.09	-4.68	-1919.11	1026.36	-4.26
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	322.60	-4.66	-8.09	-2349.91	593.86	-3.36
Dead+Wind 0 deg - Service	41.20	0.00	-6.31	-733.71	-0.04	-0.25
Dead+Wind 30 deg - Service	41.20	3.15	-5.47	-636.00	-366.07	-0.35
Dead+Wind 60 deg - Service	41.20	5.46	-3.17	-368.30	-634.42	-0.37
Dead+Wind 90 deg - Service	41.20	6.30	-0.01	-1.44	-732.84	-0.30
Dead+Wind 120 deg - Service	41.20	5.45	3.18	367.29	-633.72	-0.10
Dead+Wind 150 deg - Service	41.20	3.15	5.48	635.37	-365.56	0.09
Dead+Wind 180 deg - Service	41.20	-0.00	6.32	733.47	0.80	0.25
Dead+Wind 210 deg - Service	41.20	-3.15	5.48	635.79	367.05	0.34
Dead+Wind 240 deg - Service	41.20	-5.45	3.18	368.02	634.90	0.35
Dead+Wind 270 deg - Service	41.20	-6.30	-0.00	-0.60	733.59	0.30
Dead+Wind 300 deg - Service	41.20	-5.45	-3.16	-367.57	634.75	0.13
Dead+Wind 330 deg - Service	41.20	-3.14	-5.47	-635.58	366.09	-0.08

## Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-41.20	0.00	0.00	41.20	0.00	0.000%
2	0.01	-49.44	-30.61	-0.01	49.44	30.61	0.004%

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	14 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
3	0.01	-37.08	-30.61	-0.01	37.08	30.61	0.003%
4	15.27	-49.44	-26.54	-15.27	49.44	26.54	0.000%
5	15.27	-37.08	-26.54	-15.27	37.08	26.54	0.000%
6	26.47	-49.44	-15.37	-26.47	49.44	15.37	0.000%
7	26.47	-37.08	-15.37	-26.47	37.08	15.37	0.000%
8	30.58	-49.44	-0.04	-30.58	49.44	0.04	0.004%
9	30.58	-37.08	-0.04	-30.58	37.08	0.04	0.003%
10	26.43	-49.44	15.41	-26.43	49.44	-15.41	0.000%
11	26.43	-37.08	15.41	-26.43	37.08	-15.41	0.000%
12	15.26	-49.44	26.59	-15.26	49.44	-26.59	0.000%
13	15.26	-37.08	26.59	-15.26	37.08	-26.59	0.000%
14	-0.01	-49.44	30.68	0.01	49.44	-30.67	0.004%
15	-0.01	-37.08	30.68	0.01	37.08	-30.67	0.003%
16	-15.28	-49.44	26.60	15.28	49.44	-26.60	0.000%
17	-15.28	-37.08	26.60	15.28	37.08	-26.60	0.000%
18	-26.45	-49.44	15.43	26.45	49.44	-15.43	0.000%
19	-26.45	-37.08	15.43	26.45	37.08	-15.43	0.000%
20	-30.58	-49.44	-0.01	30.58	49.44	0.01	0.004%
21	-30.58	-37.08	-0.01	30.58	37.08	0.01	0.003%
22	-26.45	-49.44	-15.35	26.45	49.44	15.35	0.000%
23	-26.45	-37.08	-15.35	26.45	37.08	15.35	0.000%
24	-15.24	-49.44	-26.52	15.24	49.44	26.52	0.000%
25	-15.24	-37.08	-26.52	15.24	37.08	26.52	0.000%
26	0.00	-322.60	0.00	-0.00	322.60	-0.00	0.000%
27	0.00	-322.60	-9.34	-0.00	322.60	9.34	0.001%
28	4.67	-322.60	-8.09	-4.67	322.60	8.09	0.001%
29	8.09	-322.60	-4.68	-8.09	322.60	4.68	0.000%
30	9.34	-322.60	-0.01	-9.34	322.60	0.01	0.000%
31	8.08	-322.60	4.69	-8.08	322.60	-4.69	0.000%
32	4.67	-322.60	8.10	-4.67	322.60	-8.10	0.000%
33	-0.00	-322.60	9.35	0.00	322.60	-9.35	0.000%
34	-4.67	-322.60	8.11	4.67	322.60	-8.11	0.000%
35	-8.09	-322.60	4.69	8.08	322.60	-4.69	0.000%
36	-9.34	-322.60	-0.00	9.34	322.60	0.00	0.000%
37	-8.09	-322.60	-4.68	8.09	322.60	4.68	0.000%
38	-4.66	-322.60	-8.09	4.66	322.60	8.09	0.001%
39	0.00	-41.20	-6.31	-0.00	41.20	6.31	0.003%
40	3.15	-41.20	-5.47	-3.15	41.20	5.47	0.003%
41	5.46	-41.20	-3.17	-5.46	41.20	3.17	0.003%
42	6.30	-41.20	-0.01	-6.30	41.20	0.01	0.003%
43	5.45	-41.20	3.18	-5.45	41.20	-3.18	0.003%
44	3.15	-41.20	5.48	-3.15	41.20	-5.48	0.003%
45	-0.00	-41.20	6.32	0.00	41.20	-6.32	0.003%
46	-3.15	-41.20	5.48	3.15	41.20	-5.48	0.003%
47	-5.45	-41.20	3.18	5.45	41.20	-3.18	0.003%
48	-6.30	-41.20	-0.00	6.30	41.20	0.00	0.003%
49	-5.45	-41.20	-3.16	5.45	41.20	3.16	0.003%
50	-3.14	-41.20	-5.47	3.14	41.20	5.47	0.003%

## Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	13	0.00005446	0.00010229
3	Yes	13	0.00003662	0.00008470

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	15 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

4	Yes	17	0.00000001	0.00005516
5	Yes	16	0.00000001	0.00011472
6	Yes	17	0.00000001	0.00005715
7	Yes	16	0.00000001	0.00011899
8	Yes	13	0.00005446	0.00011404
9	Yes	13	0.00003661	0.00009364
10	Yes	17	0.00000001	0.00005575
11	Yes	16	0.00000001	0.00011604
12	Yes	17	0.00000001	0.00005559
13	Yes	16	0.00000001	0.00011568
14	Yes	13	0.00005446	0.00010730
15	Yes	13	0.00003661	0.00008852
16	Yes	17	0.00000001	0.00005699
17	Yes	16	0.00000001	0.00011865
18	Yes	17	0.00000001	0.00005532
19	Yes	16	0.00000001	0.00011507
20	Yes	13	0.00005446	0.00010866
21	Yes	13	0.00003661	0.00008952
22	Yes	17	0.00000001	0.00005632
23	Yes	16	0.00000001	0.00011720
24	Yes	17	0.00000001	0.00005616
25	Yes	16	0.00000001	0.00011687
26	Yes	15	0.00009639	0.00004442
27	Yes	15	0.00009507	0.00008324
28	Yes	15	0.00009501	0.00013570
29	Yes	16	0.00000001	0.00007530
30	Yes	15	0.00009535	0.00012514
31	Yes	15	0.00009572	0.00006128
32	Yes	15	0.00000001	0.00002334
33	Yes	13	0.00000001	0.00002422
34	Yes	15	0.00000001	0.00002411
35	Yes	15	0.00009571	0.00006278
36	Yes	15	0.00009534	0.00012635
37	Yes	16	0.00000001	0.00007730
38	Yes	15	0.00009500	0.00014625
39	Yes	12	0.00000001	0.00005874
40	Yes	12	0.00000001	0.00006604
41	Yes	12	0.00000001	0.00007795
42	Yes	12	0.00000001	0.00005887
43	Yes	12	0.00000001	0.00006943
44	Yes	12	0.00000001	0.00006916
45	Yes	12	0.00000001	0.00005866
46	Yes	12	0.00000001	0.00007740
47	Yes	12	0.00000001	0.00006619
48	Yes	12	0.00000001	0.00005893
49	Yes	12	0.00000001	0.00007313
50	Yes	12	0.00000001	0.00007274

## Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	149 - 116.67	17.118	48	1.1226	0.0020
L2	121 - 89.25	10.853	48	0.9509	0.0009
L3	94.5 - 46.25	6.272	40	0.6738	0.0006
L4	52.67 - 0	1.836	40	0.3282	0.0003

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b> CT897 Ridgefield	<b>Page</b> 16 of 18
	<b>Project</b> ETS Job No. 201466.14	<b>Date</b> 10:02:23 03/18/20
	<b>Client</b> InSite Wireless	<b>Designed by</b> Tomas Martin Sosa

### Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
ft						
149.000	1/2-in x 3-ft Lightning Rod	48	17.118	1.1226	0.0021	28814
148.000	BA40-41	48	16.884	1.1177	0.0020	28814
146.000	Platform Mount [LP 1301-1]	48	16.415	1.1079	0.0019	28814
136.000	Platform Mount [LP 1301-1]	48	14.099	1.0557	0.0015	11082
129.000	(2) Miscellaneous [NA 509-3]	48	12.537	1.0123	0.0012	7203
126.000	T-Arm Mount [TA 601-3]	48	11.891	0.9910	0.0011	6263
72.000	4' x 3.5" Mount Pipe	40	3.478	0.4695	0.0004	6402
71.500	VHLP3-11W-6GR	40	3.427	0.4655	0.0004	6405
65.500	SD210R-SF2P90LDF	40	2.849	0.4194	0.0004	6448

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	149 - 116.67	83.444	20	5.4756	0.0131
L2	121 - 89.25	52.921	20	4.6404	0.0077
L3	94.5 - 46.25	30.597	16	3.2887	0.0026
L4	52.67 - 0	8.962	16	1.6018	0.0035

### Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
ft						
149.000	1/2-in x 3-ft Lightning Rod	20	83.444	5.4756	0.0131	6011
148.000	BA40-41	20	82.301	5.4519	0.0130	6011
146.000	Platform Mount [LP 1301-1]	20	80.017	5.4044	0.0127	6011
136.000	Platform Mount [LP 1301-1]	20	68.734	5.1510	0.0110	2311
129.000	(2) Miscellaneous [NA 509-3]	20	61.124	4.9398	0.0096	1500
126.000	T-Arm Mount [TA 601-3]	20	57.976	4.8360	0.0089	1304
72.000	4' x 3.5" Mount Pipe	16	16.971	2.2910	0.0025	1316
71.500	VHLP3-11W-6GR	16	16.721	2.2717	0.0025	1317
65.500	SD210R-SF2P90LDF	16	13.901	2.0469	0.0026	1325

### Compression Checks

### Pole Design Data

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b> CT897 Ridgefield	<b>Page</b> 17 of 18
	<b>Project</b> ETS Job No. 201466.14	<b>Date</b> 10:02:23 03/18/20
	<b>Client</b> InSite Wireless	<b>Designed by</b> Tomas Martin Sosa

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
L1	149 - 116.67 (1)	TP28.81x20.5x0.219	32.330	0.000	0.0	19.1001	-13.50	1117.36	0.012
L2	116.67 - 89.25 (2)	TP35.43x27.259x0.313	31.750	0.000	0.0	33.5451	-17.92	1962.39	0.009
L3	89.25 - 46.25 (3)	TP45.86x33.4529x0.438	48.250	0.000	0.0	56.4923	-291.42	3304.80	0.088
L4	46.25 - 0 (4)	TP56.88x43.3331x0.5	52.670	0.000	0.0	89.4751	-49.42	5234.29	0.009

### Pole Bending Design Data

Section No.	Elevation ft	Size	M <sub>ux</sub> kip-ft	φM <sub>ux</sub> kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M <sub>uy</sub> kip-ft	φM <sub>uy</sub> kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	149 - 116.67 (1)	TP28.81x20.5x0.219	390.01	740.59	0.527	0.00	740.59	0.000
L2	116.67 - 89.25 (2)	TP35.43x27.259x0.313	992.48	1672.50	0.593	0.00	1672.50	0.000
L3	89.25 - 46.25 (3)	TP45.86x33.4529x0.438	1695.95	3496.98	0.485	0.00	3496.98	0.000
L4	46.25 - 0 (4)	TP56.88x43.3331x0.5	3580.82	7357.50	0.487	0.00	7357.50	0.000

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V <sub>u</sub> K	φV <sub>n</sub> K	Ratio $\frac{V_u}{\phi V_n}$	Actual T <sub>u</sub> kip-ft	φT <sub>n</sub> kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	149 - 116.67 (1)	TP28.81x20.5x0.219	21.84	335.21	0.065	0.47	806.64	0.001
L2	116.67 - 89.25 (2)	TP35.43x27.259x0.313	23.63	588.72	0.040	0.67	1740.87	0.000
L3	89.25 - 46.25 (3)	TP45.86x33.4529x0.438	16.48	991.44	0.017	0.87	3528.21	0.000
L4	46.25 - 0 (4)	TP56.88x43.3331x0.5	30.71	1570.29	0.020	1.63	7753.26	0.000

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	Ratio $\frac{M_{uy}}{\phi M_{uy}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	149 - 116.67 (1)	0.012	0.527	0.000	0.065	0.001	0.543	1.050	4.8.2
L2	116.67 - 89.25 (2)	0.009	0.593	0.000	0.040	0.000	0.604	1.050	4.8.2
L3	89.25 - 46.25 (3)	0.088	0.485	0.000	0.017	0.000	0.573	1.050	4.8.2
L4	46.25 - 0 (4)	0.009	0.487	0.000	0.020	0.000	0.497	1.050	4.8.2

<b><i>tnxTower</i></b>  <b>Engineered Tower Solutions, PLLC</b> 3227 Wellington Court Raleigh, NC 27615 Phone: (919) 782-2710 FAX:	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	18 of 18
	<b>Project</b>	ETS Job No. 201466.14	<b>Date</b>	10:02:23 03/18/20
	<b>Client</b>	InSite Wireless	<b>Designed by</b>	Tomas Martin Sosa

Section No.	Elevation ft	Ratio $P_u$	Ratio $M_{ux}$	Ratio $M_{uy}$	Ratio $V_u$	Ratio $T_u$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$\phi P_n$	$\phi M_{nx}$	$\phi M_{ny}$	$\phi V_n$	$\phi T_n$			

## Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
L1	149 - 116.67	Pole	TP28.81x20.5x0.219	1	-13.50	1173.23	51.7	Pass
L2	116.67 - 89.25	Pole	TP35.43x27.259x0.313	2	-17.92	2060.51	57.5	Pass
L3	89.25 - 46.25	Pole	TP45.86x33.4529x0.438	3	-291.42	3470.04	54.6	Pass
L4	46.25 - 0	Pole	TP56.88x43.3331x0.5	4	-49.42	5496.00	47.3	Pass
Summary								
Pole (L2)							57.5	Pass
<b>RATING =</b>							<b>57.5</b>	<b>Pass</b>

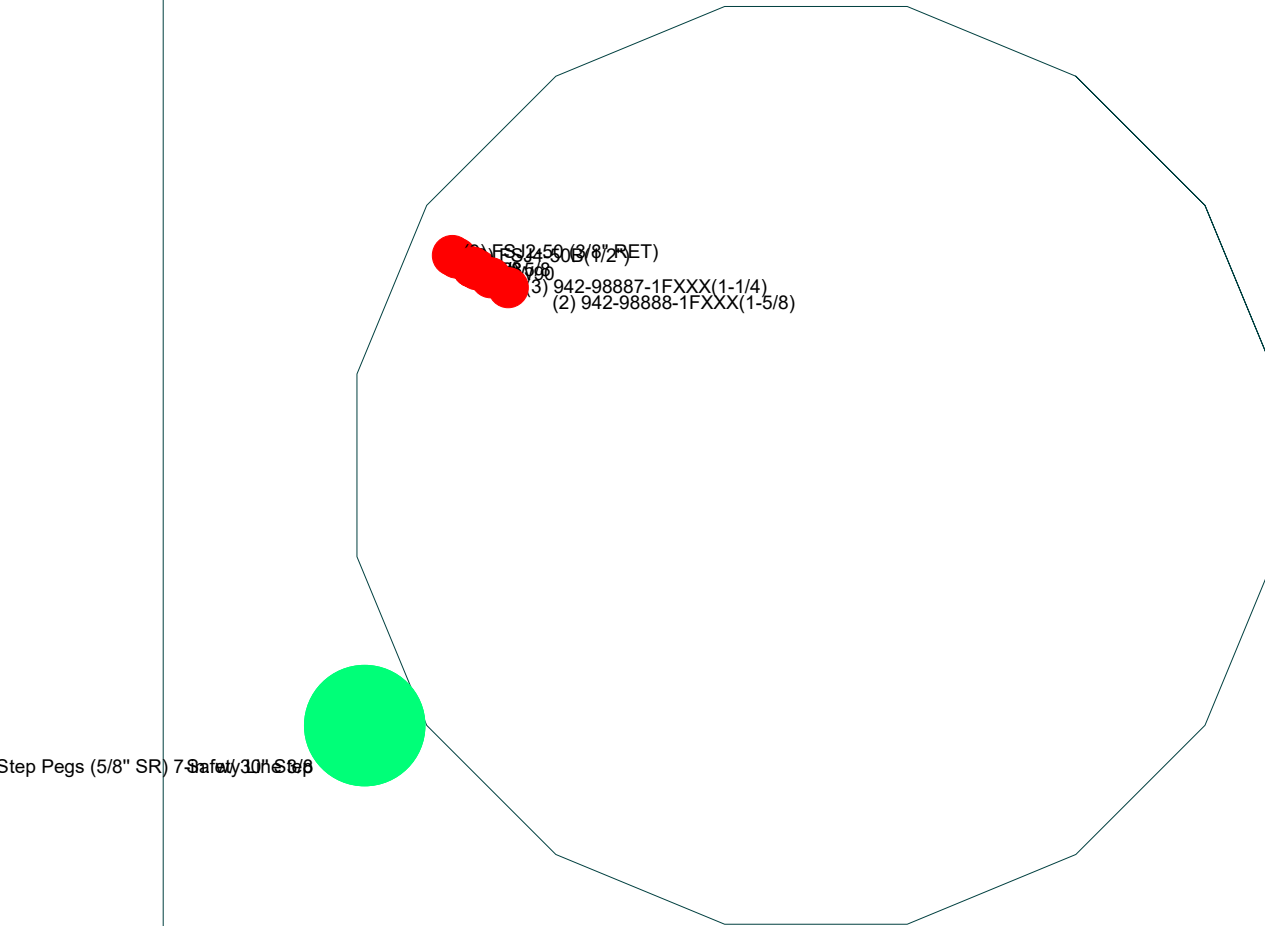


**APPENDIX B**  
**BASE LEVEL DRAWING**

Feed Line Plan  
46'3"

Round Flat App In Face App Out Face

Section @ 46'3"



Step Pegs (5/8" SR) 7-Safety Stop

Engineered Tower Solutions, PLLC

3227 Wellington Court  
Raleigh, NC 27615  
Phone: (919) 782-2710  
FAX:

Job: CT897 Ridgefield

Project: ETS Job No. 201466.14

Client: InSite Wireless Drawn by: Tomas Martin Sosa App'd:

Code: TIA-222-H Date: 03/18/20 Scale: NTS

Path: C:\Users\Tomas Sosa\Desktop\Towers\2020\1466\SA\Analysis\Tower\Ridgefield.dwg Dwg No. E-7

## **APPENDIX C**

### **ADDITIONAL CALCULATIONS**

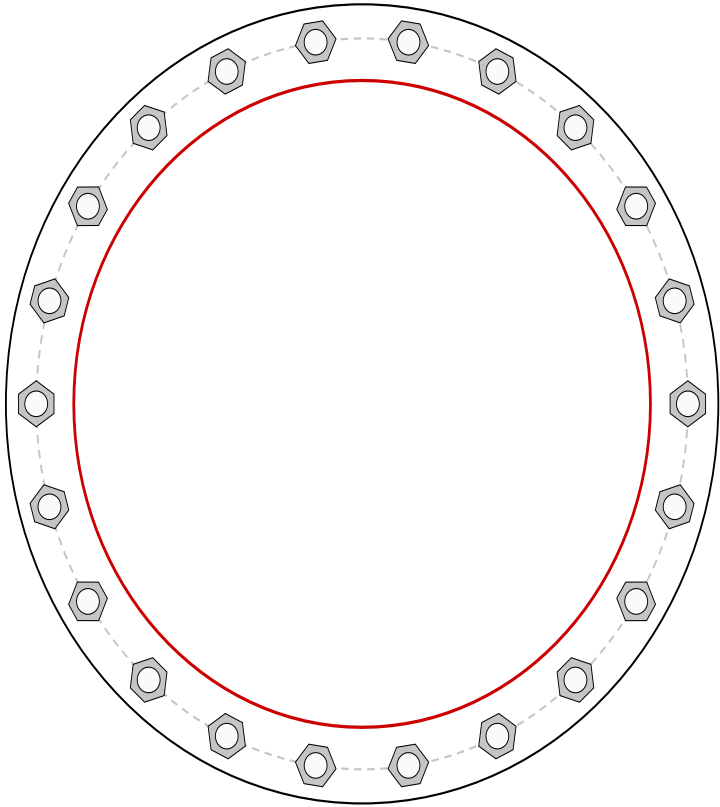
Monopole Base Plate Connection

Site Info	
Site #	CT897
Site Name	Ridgefield
Order #	

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
$l_{ar}$ (in)	0.5

Applied Loads	
Moment (kip-ft)	3580.82
Axial Force (kips)	49.42
Shear Force (kips)	30.71

\*TIA-222-H Section 15.5 Applied



Connection Properties		Analysis Results	
<b>Anchor Rod Data</b>		<b>Anchor Rod Summary</b> <i>(units of kips, kip-in)</i>	
(22) 2-1/4" $\varnothing$ bolts (A615-75 N; $F_y$ =75 ksi, $F_u$ =100 ksi) on 64.25" BC		$P_{u\_c}$ = 123.78	$\phi P_{n\_c}$ = 268.39 <b>Stress Rating</b>
<b>Base Plate Data</b>		$V_u$ = 1.4	$\phi V_n$ = 120.77 <b>43.9%</b>
70.25" OD x 3.5" Plate (A572-50; $F_y$ =50 ksi, $F_u$ =65 ksi)		$M_u$ = n/a	$\phi M_n$ = n/a <b>Pass</b>
<b>Stiffener Data</b>		<b>Base Plate Summary</b>	
N/A		Max Stress (ksi):	11.18 (Flexural)
<b>Pole Data</b>		Allowable Stress (ksi):	45
56.88" x 0.5" 18-sided pole (A572-65; $F_y$ =65 ksi, $F_u$ =80 ksi)		Stress Rating:	<b>23.7%</b> <b>Pass</b>

# Pier and Pad Foundation

Site # CT897  
 Site Name: Ridgefield  
 App. Number:

TIA-222 Revision: H  
 Tower Type: Monopole

Top & Bot. Pad Rein. Different?: ☐  
 Block Foundation?: ☐

Superstructure Analysis Reactions		
Compression, $P_{comp}$ :	49	kips
Base Shear, $Vu_{comp}$ :	31	kips
Moment, $M_u$ :	3581	ft-kips
Tower Height, $H$ :	149	ft
BP Dist. Above Fdn, $bp_{dist}$ :	2.75	in

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $dpier$ :	8	ft
Ext. Above Grade, $E$ :	0.5	ft
Pier Rebar Size, $Sc$ :	11	
Pier Rebar Quantity, $mc$ :	57	
Pier Tie/Spiral Size, $St$ :	4	
Pier Tie/Spiral Quantity, $mt$ :	8	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, $cc_{pier}$ :	6	in

Pad Properties		
Depth, $D$ :	6.5	ft
Pad Width, $W$ :	27.5	ft
Pad Thickness, $T$ :	2.75	ft
Pad Rebar Size (Bottom), $Sp$ :	9	
Pad Rebar Quantity (Bottom), $mp$ :	35	
Pad Clear Cover, $cc_{pad}$ :	3	in

Material Properties		
Rebar Grade, $F_y$ :	60	ksi
Concrete Compressive Strength, $F'_c$ :	3	ksi
Dry Concrete Density, $\delta_c$ :	150	pcf

Soil Properties		
Total Soil Unit Weight, $\gamma$ :	125	pcf
Ultimate Net Bearing, $Q_{net}$ :	16.000	ksf
Cohesion, $C_u$ :	0.000	ksf
Friction Angle, $\phi$ :	36	degrees
SPT Blow Count, $N_{blows}$ :	81	
Base Friction, $\mu$ :	0.5	
Neglected Depth, $N$ :	4.00	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, $gw$ :	N/A	ft

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	371.91	31.00	7.9%	Pass
Bearing Pressure (ksf)	12.61	1.91	14.4%	Pass
Overtuning (kip*ft)	8994.66	3805.10	42.3%	Pass
Pier Flexure (Comp.) (kip*ft)	14335.04	3712.75	24.7%	Pass
Pier Compression (kip)	23994.73	87.45	0.3%	Pass
Pad Flexure (kip*ft)	4261.99	1206.42	27.0%	Pass
Pad Shear - 1-way (kips)	767.49	179.93	22.3%	Pass
Pad Shear - 2-way (Comp) (ksi)	0.164	0.037	21.5%	Pass
Flexural 2-way (Comp) (kip*ft)	5002.65	2227.65	42.4%	Pass

\*Rating per TIA-222-H Section 15.5

Soil Rating*:	42.3%
Structural Rating*:	42.4%

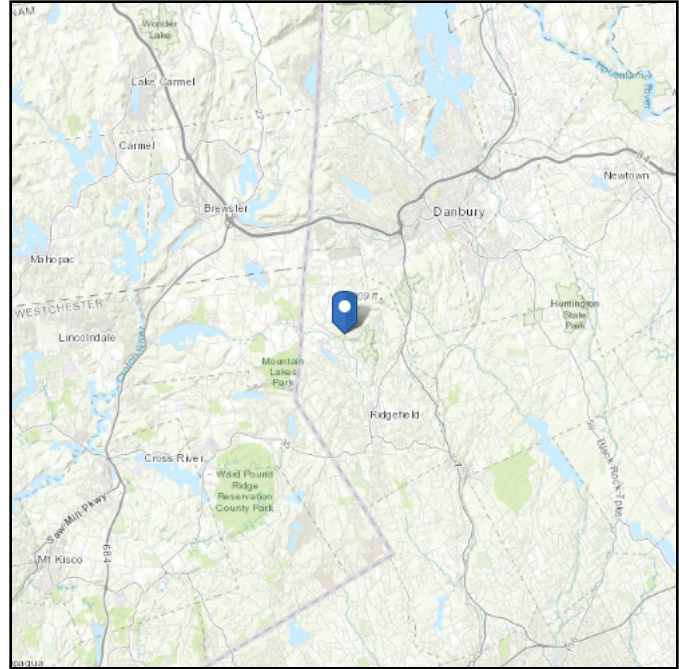
<--Toggle between Gross and Net

# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

**Standard:** ASCE/SEI 7-10  
**Risk Category:** III  
**Soil Class:** D - Stiff Soil

**Elevation:** 802.13 ft (NAVD 88)  
**Latitude:** 41.330308  
**Longitude:** -73.516819



## Wind

### Results:

Wind Speed:	124 Vmph	125 mph per Connecticut Design Criteria: Ridgefield
10-year MRI	76 Vmph	
25-year MRI	85 Vmph	
50-year MRI	90 Vmph	
100-year MRI	96 Vmph	

**Data Source:** ASCE/SEI 7-10, Fig. 26.5-1B and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

**Date Accessed:** Tue Jul 16 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (annual exceedance probability = 0.000588, MRI = 1,700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

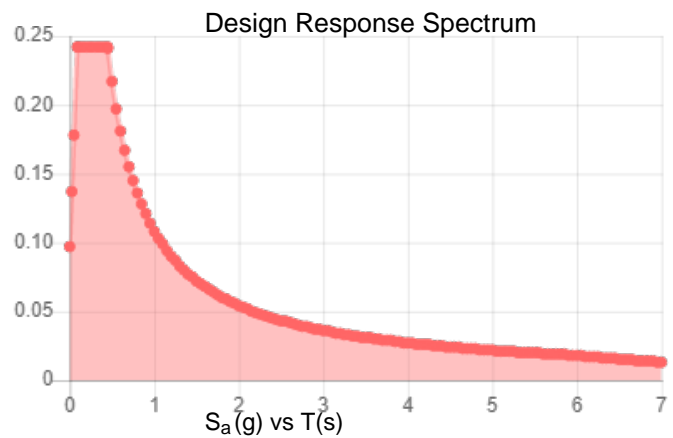
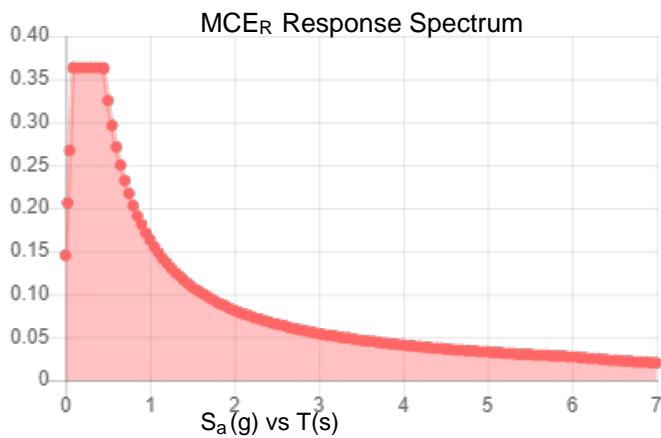
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

**Site Soil Class:** D - Stiff Soil

**Results:**

$S_S$ :	0.227	$S_{DS}$ :	0.242
$S_1$ :	0.068	$S_{D1}$ :	0.108
$F_a$ :	1.6	$T_L$ :	6
$F_v$ :	2.4	PGA :	0.126
$S_{MS}$ :	0.363	$PGA_M$ :	0.196
$S_{M1}$ :	0.163	$F_{PGA}$ :	1.547
		$I_e$ :	1.25

**Seismic Design Category** B



**Data Accessed:**

Tue Jul 16 2019

**Date Source:**

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

**Results:**

Ice Thickness: 0.75 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

**Data Source:** Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

**Date Accessed:** Tue Jul 16 2019

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

---

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.



# EXHIBIT 4

February 4, 2020



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

RE:     Site Number:             CT1855 (LTE 6C/7C)  
         FA Number:             10128094  
         PACE Number:          MRCTB045150  
         PT Number:             2051A0SRV3  
         Site Name:             RIDGEFIELD OLD STAGECOACH  
         Site Address:          320 Old Stagecoach Road  
                                     Ridgefield, CT 06877

To Whom It May Concern:

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

- (12) HPA-65R-BUU-H8 Antennas (92.4"x14.8"x7.4" – Wt. = 68 lbs. /each)
- (3) RRUS-11 RRH's (19.7"x17.0"x7.2" – Wt. = 51 lbs. /each) (Tower Mount)
- (3) RRUS-11 B12 RRH's (19.7"x17.0"x7.2" – Wt. = 51 lbs. /each) (Tower Mount)
- (3) B14 4478 RRH's (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each)
- (3) 4478 B5 RRH's (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each)
- (3) RRUS-32 B30 RRH's (27.2"x12.1"x7.0" – Wt. = 60 lbs. /each)
- (3) DBCT108F1V92-1 Combiners (10.7"x6.8"x7.2" – Wt. = 29 lbs. /each)
- (4) Squid Surge Arrestor (24.0"x9.7" Ø – Wt. = 33 lbs. /each)
- **(3) RRUS-E2 B29 RRH's (20.4"x18.5"x7.5" – Wt. = 53 lbs. /each)**
- **(3) B2/B66A 8843 RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each)**

*\*Proposed equipment shown in bold*

Mount fabrication drawings prepared by Commscope, P/N MTC3607, dated September 24, 2013 were used to perform this analysis. King Network Services conducted a survey climb and mapping of the existing AT&T antenna mount on January 2, 2017.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R13.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 120 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.0 in. An escalated ice thickness of 1.31 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 2; tower is located at the top or crest of an escarpment.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 3.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the existing monopole with ring mount. The connection is considered OK by visual inspection.

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

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
<b>Existing (LTE 4C/7C) Mount Rating</b>	28	LC4	98%	<b>PASS</b>

Reference Documents:

- Mount fabrication drawings prepared by Commscope P/N MTC3607, dated September 24, 2013.
- Mount mapping report prepared by ProVertic LLC dated February 8, 2017.

This determination was based on the following limitations and assumptions:

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

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

Respectfully Submitted,  
Hudson Design Group LLC



Michael Cabral  
Vice President



Daniel P. Hamm, PE  
Principal

**FIELD PHOTOS:**





**HUDSON**  
Design Group LLC

## Wind & Ice Calculations

Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: LBW Checked By: MSC



#### 2.6.5.2 Velocity Pressure Coeff:

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

$K_z =$  **1.101**
 $z =$  146 (ft)  
 $z_g =$  1200 (ft)  
 $\alpha =$  7.0

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

Table 2-4

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

#### 2.6.6.2 Topographic Factor:

Table 2-5

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

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

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

$$K_{zt} =$$
 **1.420409392**

$$K_h =$$
 2.017629

$$K_c =$$
 0.9 (from Table 2-4)

$$K_t =$$
 0.43 (from Table 2-5)

$$f =$$
 1.25 (from Table 2-5)

$$z =$$
 146

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

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

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

$$K_e =$$
 0.97 (from 2.6.8)

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

$$\text{Category} =$$
 **2**

#### 2.6.10 Design Ice Thickness

Max Ice Thickness =

Importance Factor =

$$t_i =$$
 1.00 in

$$I =$$
 1.0 (from Table 2-3)

$$K_{iz} =$$
 **1.16** (from Sec. 2.6.10)

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

$$t_{iz} =$$
 **1.31** in



Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: LBW 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

$h =$  151

$G_h =$  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

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

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

$q_z =$  53.19

$q_z (ice) =$  9.23

$q_z (30) =$  3.32

$K_z =$  1.101 (from 2.6.5.2)

$K_{zt} =$  1.4 (from 2.6.6.2.1)

$K_s =$  1.0 (from 2.6.7)

$K_e =$  0.97 (from 2.6.8)

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

$V_{max} =$  120 mph (Ultimate Wind Speed)

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

$V_{30} =$  30 mph

Table 2-2

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

Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: LBW Checked By: MSC



**Determine Ca:**

**Table 2-9**

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

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

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

Ice Thickness =

1.31 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)
HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	6.24	1.37	690	145	43
RRUS-11 RRH	19.7	17.0	7.2	2.33	1.16	1.20	148	34	9
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	1.16	1.20	148	34	9
B14 4478 RRH	18.1	13.4	8.3	1.68	1.35	1.20	108	26	7
B14 4478 RRH (Side)	18.1	8.3	13.4	1.04	2.18	1.20	67	17	4
4478 B5 RRH	18.1	13.4	8.3	1.68	1.35	1.20	108	26	7
4478 B5 RRH (Side)	18.1	8.3	13.4	1.04	2.18	1.20	67	17	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	2.25	1.20	146	34	9
RRUS-32 B30 RRH (Shielded)	27.2	0.0	7.0	0.00	0.00	1.20	0	6	0
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.10	1.20	167	37	10
RRUS-E2 B29 RRH (Shielded)	20.4	3.7	7.5	0.52	5.51	1.33	37	12	2
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.20	87	21	5
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	0.00	1.20	0	4	0
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	1.57	1.20	32	10	2
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	60	15	4
2" Pipe	2.4	12.0		0.20	0.20	1.20	13	6	1
2-1/2" Pipe	2.9	12.0		0.24	0.24	1.20	15	6	1
3" Pipe	3.5	12.0		0.29	0.29	1.20	19	7	1
2x2 Angle	2.0	12.0		0.17	0.17	2.00	18	9	1
3x3 Angle	3.0	12.0		0.25	0.25	2.00	27	11	2
3x2 Channel	3.0	12.0		0.25	0.25	2.00	27	11	2
6x1/2 Plate	6.0	12.0		0.50	0.50	2.00	53	16	3

Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: LBW Checked By: MSC



# WIND LOADS

Angle = 30 (deg)

Ice Thickness = 1.31 in.

Equivalent Angle = 210 (deg)

## WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	690	400	618
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	127
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	127
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	97
B14 4478 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	54	108	67
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	97
4478 B5 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	54	108	67
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	146	89	132
RRUS-32 B30 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	78	89	81
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	167	68	143
RRUS-E2 B29 RRH (Shielded)	20.4	9.3	7.5	1.31	1.06	2.21	2.72	1.20	1.21	84	68	80
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	87	72	83
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	44	72	51
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	32	34	33

## WIND LOADS WITH ICE:

HPA-65R-BUU-H8 Antenna	95.0	17.4	10.0	11.50	6.61	5.45	9.48	1.33	1.48	141	91	129
RRUS-11 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	30
RRUS-11 B12 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	30
B14 4478 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	24
B14 4478 RRH (Side)	20.7	8.0	16.0	1.15	2.31	2.59	1.29	1.20	1.20	13	26	16
4478 B5 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	24
4478 B5 RRH (Side)	20.7	8.0	16.0	1.15	2.31	2.59	1.29	1.20	1.20	13	26	16
RRUS-32 B30 RRH	29.8	14.7	9.6	3.05	1.99	2.03	3.10	1.20	1.23	34	23	31
RRUS-32 B30 RRH (Shielded)	29.8	7.4	9.6	1.52	1.99	4.05	3.10	1.27	1.23	18	23	19
RRUS-E2 B29 RRH	23.0	21.1	10.1	3.38	1.62	1.09	2.27	1.20	1.20	37	18	33
RRUS-E2 B29 RRH (Shielded)	23.0	10.6	10.1	1.69	1.62	2.18	2.27	1.20	1.20	19	18	19
B2/B66A 8843 RRH	17.5	15.8	13.5	1.93	1.65	1.11	1.30	1.20	1.20	21	18	21
B2/B66A 8843 RRH (Shielded)	17.5	7.9	13.5	0.96	1.65	2.21	1.30	1.20	1.20	11	18	13
DBCT108F1V92-1 Combiner	13.3	9.4	9.8	0.87	0.91	1.41	1.36	1.20	1.20	10	10	10

## WIND LOADS AT 30 MPH:

HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	43	25	39
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	8
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	8
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	6
B14 4478 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	3	7	4
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	6
4478 B5 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	3	7	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	9	6	8
RRUS-32 B30 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	5	6	5
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	10	4	9
RRUS-E2 B29 RRH (Shielded)	20.4	9.3	7.5	1.31	1.06	2.21	2.72	1.20	1.21	5	4	5
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	3	4	3
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	2	2	2

Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: LBW Checked By: MSC



# WIND LOADS

Angle = 60 (deg)

Ice Thickness = 1.31 in.

Equivalent Angle = 240 (deg)

## WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	690	400	472
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	85
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	85
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	77
B14 4478 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	81	108	101
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	77
4478 B5 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	81	108	101
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	146	89	103
RRUS-32 B30 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	111	89	94
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	167	68	93
RRUS-E2 B29 RRH (Shielded)	20.4	13.9	7.5	1.97	1.06	1.47	2.72	1.20	1.21	125	68	83
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	87	72	76
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	65	72	70
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	32	34	34

## WIND LOADS WITH ICE:

HPA-65R-BUU-H8 Antenna	95.0	17.4	10.0	11.50	6.61	5.45	9.48	1.33	1.48	141	91	103
RRUS-11 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	21
RRUS-11 B12 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	21
B14 4478 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	19
B14 4478 RRH (Side)	20.7	12.0	16.0	1.73	2.31	1.72	1.29	1.20	1.20	19	26	24
4478 B5 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	19
4478 B5 RRH (Side)	20.7	12.0	16.0	1.73	2.31	1.72	1.29	1.20	1.20	19	26	24
RRUS-32 B30 RRH	29.8	14.7	9.6	3.05	1.99	2.03	3.10	1.20	1.23	34	23	25
RRUS-32 B30 RRH (Shielded)	29.8	11.0	9.6	2.29	1.99	2.70	3.10	1.21	1.23	26	23	23
RRUS-E2 B29 RRH	23.0	21.1	10.1	3.38	1.62	1.09	2.27	1.20	1.20	37	18	23
RRUS-E2 B29 RRH (Shielded)	23.0	15.8	10.1	2.53	1.62	1.45	2.27	1.20	1.20	28	18	20
B2/B66A 8843 RRH	17.5	15.8	13.5	1.93	1.65	1.11	1.30	1.20	1.20	21	18	19
B2/B66A 8843 RRH (Shielded)	17.5	11.9	13.5	1.44	1.65	1.48	1.30	1.20	1.20	16	18	18
DBCT108F1V92-1 Combiner	13.3	9.4	9.8	0.87	0.91	1.41	1.36	1.20	1.20	10	10	10

## WIND LOADS AT 30 MPH:

HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	43	25	30
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	5
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	5
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	5
B14 4478 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	5	7	6
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	5
4478 B5 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	5	7	6
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	9	6	6
RRUS-32 B30 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	7	6	6
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	10	4	6
RRUS-E2 B29 RRH (Shielded)	20.4	13.9	7.5	1.97	1.06	1.47	2.72	1.20	1.21	8	4	5
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	4	4	4
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	2	2	2

Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: L8W Checked By: MSC



WIND LOADS

Angle = 90 (deg)

Ice Thickness = 1.31 in.

Equivalent Angle = 270 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	690	400	400
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	63
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	63
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	67
B14 4478 RRH (Side)	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	67	108	108
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	67
4478 B5 RRH (Side)	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	67	108	108
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	146	89	89
RRUS-32 B30 RRH (Shielded)	27.2	0.0	7.0	0.00	1.32	0.00	3.89	1.20	1.26	0	89	89
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	167	68	68
RRUS-E2 B29 RRH (Shielded)	20.4	3.7	7.5	0.52	1.06	5.51	2.72	1.33	1.21	37	68	68
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	87	72	72
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	1.13	0.00	1.37	1.20	1.20	0	72	72
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	32	34	34

WIND LOADS WITH ICE:

HPA-65R-BUU-H8 Antenna	95.0	17.4	10.0	11.50	6.61	5.45	9.48	1.33	1.48	141	91	91
RRUS-11 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	17
RRUS-11 B12 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	17
B14 4478 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	17
B14 4478 RRH (Side)	20.7	10.9	16.0	1.57	2.31	1.90	1.29	1.20	1.20	17	26	26
4478 B5 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	17
4478 B5 RRH (Side)	20.7	10.9	16.0	1.57	2.31	1.90	1.29	1.20	1.20	17	26	26
RRUS-32 B30 RRH	29.8	14.7	9.6	3.05	1.99	2.03	3.10	1.20	1.23	34	23	23
RRUS-32 B30 RRH (Shielded)	29.8	2.6	9.6	0.54	1.99	11.37	3.10	1.55	1.23	8	23	23
RRUS-E2 B29 RRH	23.0	21.1	10.1	3.38	1.62	1.09	2.27	1.20	1.20	37	18	18
RRUS-E2 B29 RRH (Shielded)	23.0	6.3	10.1	1.01	1.62	3.64	2.27	1.25	1.20	12	18	18
B2/B66A 8843 RRH	17.5	15.8	13.5	1.93	1.65	1.11	1.30	1.20	1.20	21	18	18
B2/B66A 8843 RRH (Shielded)	17.5	2.6	13.5	0.32	1.65	6.68	1.30	1.39	1.20	4	18	18
DBCT108F1V92-1 Combiner	13.3	9.4	9.8	0.87	0.91	1.41	1.36	1.20	1.20	10	10	10

WIND LOADS AT 30 MPH:

HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	43	25	25
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	4
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	4
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	4
B14 4478 RRH (Side)	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	4	7	7
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	4
4478 B5 RRH (Side)	18.1	8.3	13.4	1.04	1.68	2.18	1.35	1.20	1.20	4	7	7
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	9	6	6
RRUS-32 B30 RRH (Shielded)	27.2	0.0	7.0	0.00	1.32	0.00	3.89	1.20	1.26	0	6	6
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	10	4	4
RRUS-E2 B29 RRH (Shielded)	20.4	3.7	7.5	0.52	1.06	5.51	2.72	1.33	1.21	2	4	4
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	1.13	0.00	1.37	1.20	1.20	0	4	4
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	2	2	2

Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: L&W Checked By: MSC



# WIND LOADS

Angle = 120 (deg) Ice Thickness = 1.31 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)
HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	690	400	472
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	85
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	85
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	77
B14 4478 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	81	108	101
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	77
4478 B5 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	81	108	101
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	146	89	103
RRUS-32 B30 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	111	89	94
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	167	68	93
RRUS-E2 B29 RRH (Shielded)	20.4	13.9	7.5	1.97	1.06	1.47	2.72	1.20	1.21	125	68	83
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	87	72	76
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	65	72	70
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	32	34	34

## WIND LOADS WITH ICE:

HPA-65R-BUU-H8 Antenna	95.0	17.4	10.0	11.50	6.61	5.45	9.48	1.33	1.48	141	91	103
RRUS-11 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	21
RRUS-11 B12 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	21
B14 4478 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	19
B14 4478 RRH (Side)	20.7	12.0	16.0	1.73	2.31	1.72	1.29	1.20	1.20	19	26	24
4478 B5 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	19
4478 B5 RRH (Side)	20.7	12.0	16.0	1.73	2.31	1.72	1.29	1.20	1.20	19	26	24
RRUS-32 B30 RRH	29.8	14.7	9.6	3.05	1.99	2.03	3.10	1.20	1.23	34	23	25
RRUS-32 B30 RRH (Shielded)	29.8	11.0	9.6	2.29	1.99	2.70	3.10	1.21	1.23	26	23	23
RRUS-E2 B29 RRH	23.0	21.1	10.1	3.38	1.62	1.09	2.27	1.20	1.20	37	18	23
RRUS-E2 B29 RRH (Shielded)	23.0	15.8	10.1	2.53	1.62	1.45	2.27	1.20	1.20	28	18	20
B2/B66A 8843 RRH	17.5	15.8	13.5	1.93	1.65	1.11	1.30	1.20	1.20	21	18	19
B2/B66A 8843 RRH (Shielded)	17.5	11.9	13.5	1.44	1.65	1.48	1.30	1.20	1.20	16	18	18
DBCT108F1V92-1 Combiner	13.3	9.4	9.8	0.87	0.91	1.41	1.36	1.20	1.20	10	10	10

## WIND LOADS AT 30 MPH:

HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	43	25	30
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	5
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	5
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	5
B14 4478 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	5	7	6
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	5
4478 B5 RRH (Side)	18.1	10.1	13.4	1.26	1.68	1.80	1.35	1.20	1.20	5	7	6
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	9	6	6
RRUS-32 B30 RRH (Shielded)	27.2	9.1	7.0	1.71	1.32	3.00	3.89	1.22	1.26	7	6	6
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	10	4	6
RRUS-E2 B29 RRH (Shielded)	20.4	13.9	7.5	1.97	1.06	1.47	2.72	1.20	1.21	8	4	5
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	4	4	4
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	2	2	2

Date: 2/4/2020  
 Project Name: RIDGEFIELD OLD STAGECOACH  
 Project No.: CT1855  
 Designed By: LBW Checked By: MSC



**WIND LOADS**

Angle = 150 (deg)

Ice Thickness = 1.31 in.

Equivalent Angle = 330 (deg)

**WIND LOADS WITH NO ICE:**

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	690	400	618
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	127
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	148	63	127
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	97
B14 4478 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	54	108	67
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	108	67	97
4478 B5 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	54	108	67
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	146	89	132
RRUS-32 B30 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	78	89	81
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	167	68	143
RRUS-E2 B29 RRH (Shielded)	20.4	9.3	7.5	1.31	1.06	2.21	2.72	1.20	1.21	84	68	80
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	87	72	83
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	44	72	51
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	32	34	33

**WIND LOADS WITH ICE:**

HPA-65R-BUU-H8 Antenna	95.0	17.4	10.0	11.50	6.61	5.45	9.48	1.33	1.48	141	91	129
RRUS-11 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	30
RRUS-11 B12 RRH	22.3	19.6	9.8	3.04	1.52	1.14	2.27	1.20	1.20	34	17	30
B14 4478 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	24
B14 4478 RRH (Side)	20.7	8.0	16.0	1.15	2.31	2.59	1.29	1.20	1.20	13	26	16
4478 B5 RRH	20.7	16.0	10.9	2.31	1.57	1.29	1.90	1.20	1.20	26	17	24
4478 B5 RRH (Side)	20.7	8.0	16.0	1.15	2.31	2.59	1.29	1.20	1.20	13	26	16
RRUS-32 B30 RRH	29.8	14.7	9.6	3.05	1.99	2.03	3.10	1.20	1.23	34	23	31
RRUS-32 B30 RRH (Shielded)	29.8	7.4	9.6	1.52	1.99	4.05	3.10	1.27	1.23	18	23	19
RRUS-E2 B29 RRH	23.0	21.1	10.1	3.38	1.62	1.09	2.27	1.20	1.20	37	18	33
RRUS-E2 B29 RRH (Shielded)	23.0	10.6	10.1	1.69	1.62	2.18	2.27	1.20	1.20	19	18	19
B2/B66A 8843 RRH	17.5	15.8	13.5	1.93	1.65	1.11	1.30	1.20	1.20	21	18	21
B2/B66A 8843 RRH (Shielded)	17.5	7.9	13.5	0.96	1.65	2.21	1.30	1.20	1.20	11	18	13
DBCT108F1V92-1 Combiner	13.3	9.4	9.8	0.87	0.91	1.41	1.36	1.20	1.20	10	10	10

**WIND LOADS AT 30 MPH:**

HPA-65R-BUU-H8 Antenna	92.4	14.8	7.4	9.50	4.75	6.24	12.49	1.37	1.58	43	25	39
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	8
RRUS-11 B12 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	9	4	8
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	6
B14 4478 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	3	7	4
4478 B5 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	7	4	6
4478 B5 RRH (Side)	18.1	6.7	13.4	0.84	1.68	2.70	1.35	1.21	1.20	3	7	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	9	6	8
RRUS-32 B30 RRH (Shielded)	27.2	6.1	7.0	1.14	1.32	4.50	3.89	1.29	1.26	5	6	5
RRUS-E2 B29 RRH	20.4	18.5	7.5	2.62	1.06	1.10	2.72	1.20	1.21	10	4	9
RRUS-E2 B29 RRH (Shielded)	20.4	9.3	7.5	1.31	1.06	2.21	2.72	1.20	1.21	5	4	5
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	3	4	3
DBCT108F1V92-1 Combiner	10.7	6.8	7.2	0.51	0.54	1.57	1.49	1.20	1.20	2	2	2



Date: 2/4/2020

Project Name: RIDGEFIELD OLD STAGECOACH

Project No.: CT1855

Designed By: LBW      Checked By: MSC



**HUDSON**  
Design Group LLC

### ICE WEIGHT CALCULATIONS

Thickness of ice: 1.31 in.  
Density of ice: 56 pcf

#### HPA-65R-BUU-H8 Antenna

Weight of ice based on total radial SF area:

Height (in): 92.4  
Width (in): 14.8  
Depth (in): 7.4  
Total weight of ice on object: 220 lbs  
Weight of object: 68.0 lbs

Combined weight of ice and object: 288 lbs

#### RRUS-11 RRH

Weight of ice based on total radial SF area:

Height (in): 19.7  
Width (in): 17.0  
Depth (in): 7.2  
Total weight of ice on object: 52 lbs  
Weight of object: 51.0 lbs

Combined weight of ice and object: 103 lbs

#### RRUS-11 B12 RRH

Weight of ice based on total radial SF area:

Height (in): 19.7  
Width (in): 17.0  
Depth (in): 7.2  
Total weight of ice on object: 52 lbs  
Weight of object: 51.0 lbs

Combined weight of ice and object: 103 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: 41 lbs  
Weight of object: 60.0 lbs

Combined weight of ice and object: 101 lbs

#### 4478 B5 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: 41 lbs  
Weight of object: 60.0 lbs

Combined weight of ice and object: 101 lbs

#### RRUS-32 B30 RRH

Weight of ice based on total radial SF area:

Height (in): 27.2  
Width (in): 12.1  
Depth (in): 7.0  
Total weight of ice on object: 55 lbs  
Weight of object: 60.0 lbs

Combined weight of ice and object: 115 lbs

#### RRUS-E2 B29 RRH

Weight of ice based on total radial SF area:

Height (in): 20.4  
Width (in): 18.5  
Depth (in): 7.5  
Total weight of ice on object: 58 lbs  
Weight of object: 53.0 lbs

Combined weight of ice and object: 111 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: 37 lbs  
Weight of object: 72.0 lbs

Combined weight of ice and object: 109 lbs

Date: 2/4/2020

Project Name: RIDGEFIELD OLD STAGECOACH

Project No.: CT1855

Designed By: LBW Checked By: MSC



**HUDSON**  
Design Group LLC

#### DBCT108F1V92-1 Combiner

Weight of ice based on total radial SF area:

Height (in):	10.7
Width (in):	6.8
Depth (in):	7.2
Total weight of ice on object:	16 lbs
Weight of object:	29.0 lbs
Combined weight of ice and object:	45 lbs

#### 2" pipe

Per foot weight of ice:

diameter (in):	2.38
Per foot weight of ice on object:	6 plf

#### 2-1/2" pipe

Per foot weight of ice:

diameter (in):	2.88
Per foot weight of ice on object:	7 plf

#### 3" Pipe

Per foot weight of ice:

diameter (in):	3.5
Per foot weight of ice on object:	8 plf

#### PL 6x1/2

Weight of ice based on total radial SF area:

Height (in):	6
Width (in):	0.5
Per foot weight of ice on object:	12 plf

#### 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:	35 lbs
Weight of object:	33 lbs
Combined weight of ice and object:	68 lbs

#### L 2x2 Angles

Weight of ice based on total radial SF area:

Height (in):	2
Width (in):	2
Per foot weight of ice on object:	7 plf

#### 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:	9 plf

#### C 3x2

Weight of ice based on total radial SF area:

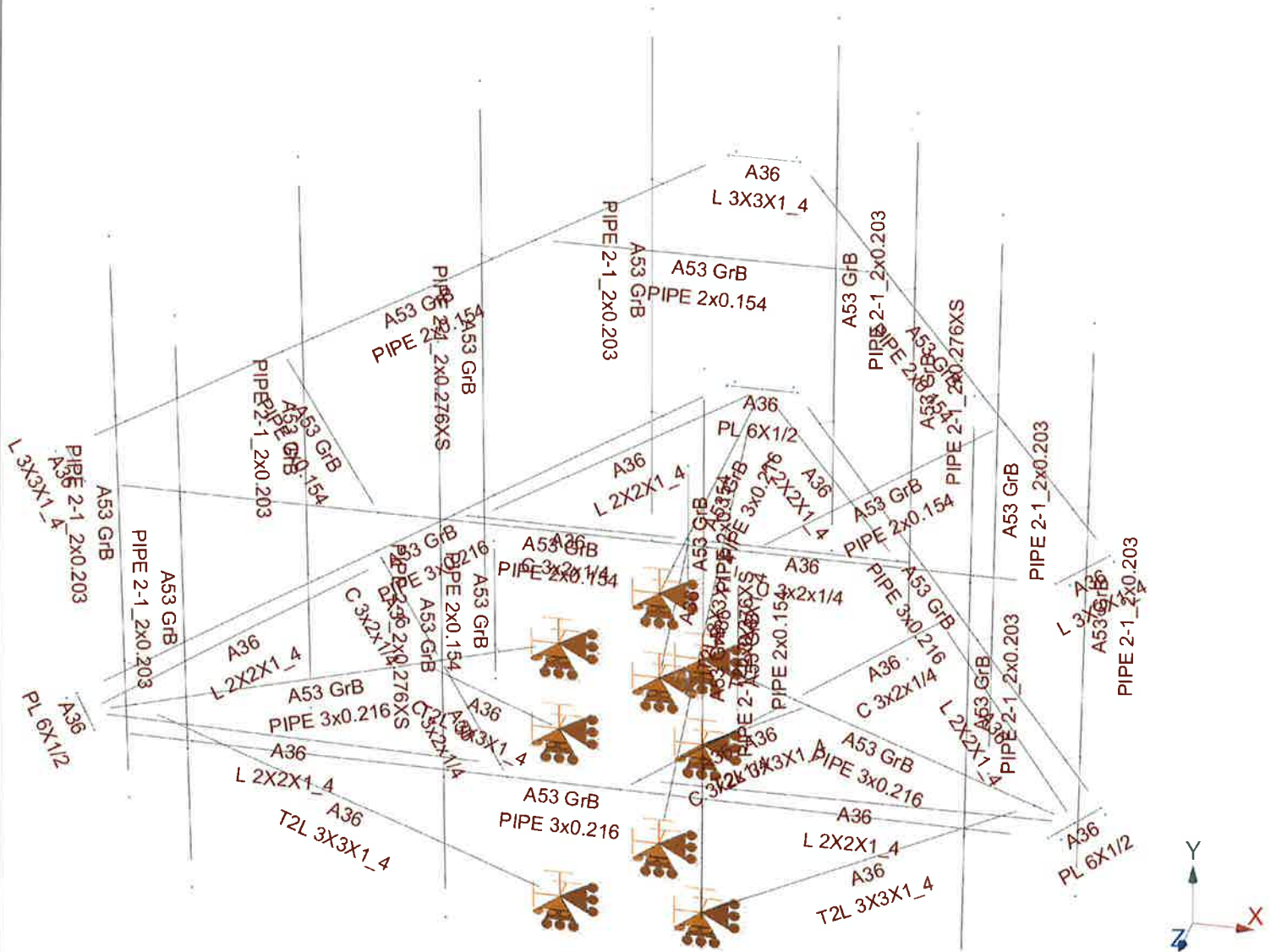
Height (in):	3
Width (in):	2
Per foot weight of ice on object:	8 plf



**HUDSON**  
Design Group LLC

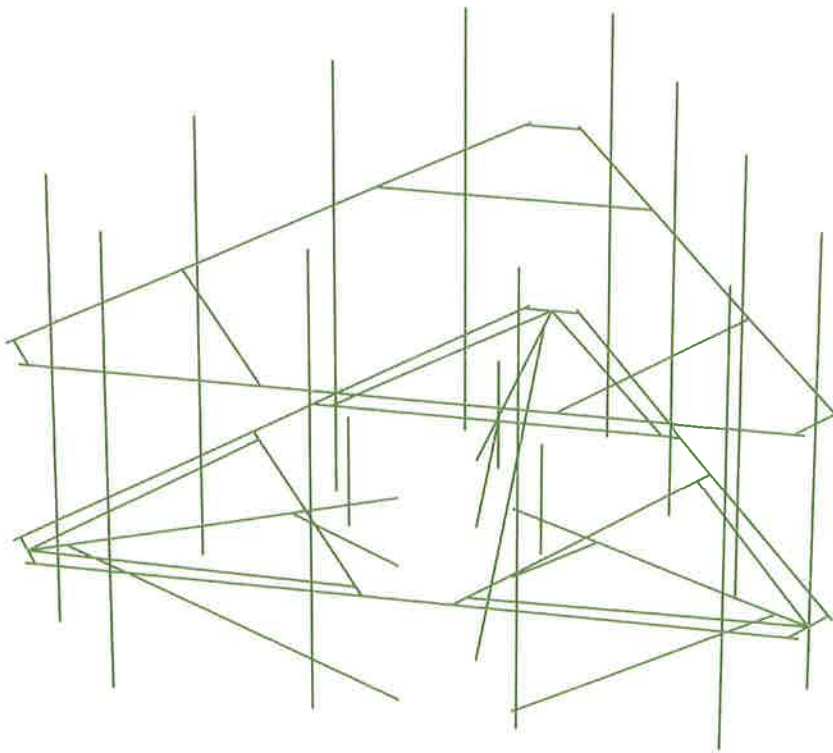
**Mount Calculations  
(Existing Conditions)**

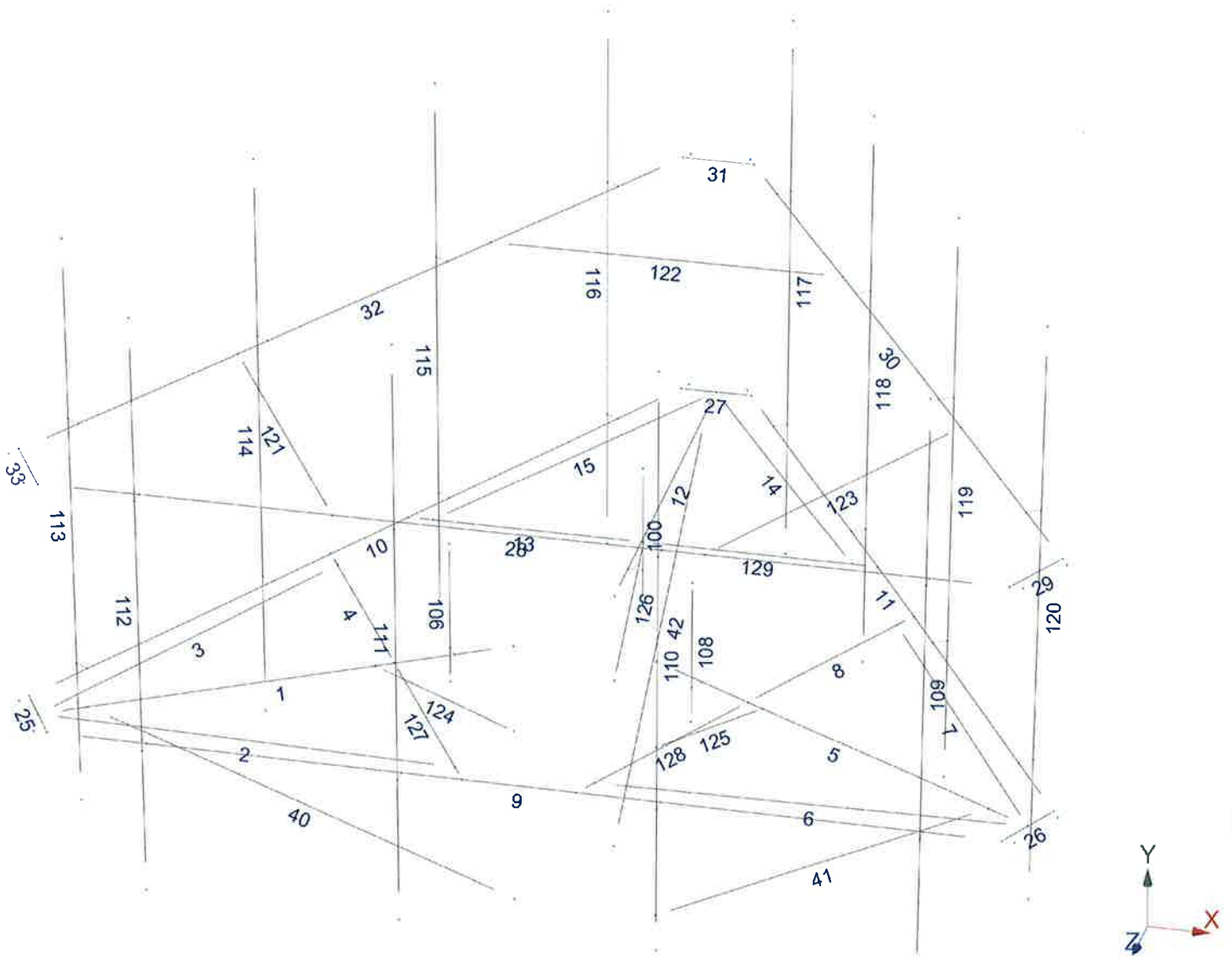




Design status

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







Current Date: 2/4/2020 11:12 AM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1855\LTE 6C-7C\CT1855 (LTE 6C-7C).retx

## Load data

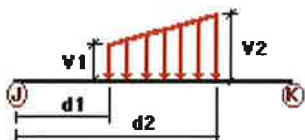
### GLOSSARY

Comb : Indicates if load condition is a load combination

### Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
W0	Wind Load 0/60/120 deg	No	WIND
W30	Wind Load 30/90/150 deg	No	WIND
Di	Ice Load	No	LL
Wi0	Ice Wind Load 0/60/120 deg	No	WIND
Wi30	Ice Wind Load 30/90/150 deg	No	WIND
WL0	WL 30 mph 0/60/120 deg	No	WIND
WL30	WL 30 mph 30/90/150 deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
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]	%
DL	2	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	3	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	4	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	6	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	7	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	8	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	13	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	14	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	15	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	127	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	128	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
	129	Y	-0.01	-0.01	0.00	Yes	100.00	Yes
W0	1	z	-0.019	0.00	0.00	No	0.00	No
	4	z	-0.027	0.00	0.00	No	0.00	No

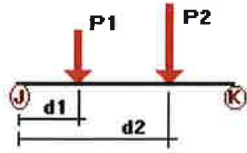
	5	z	-0.019	0.00	0.00	No	0.00	No
	8	z	-0.027	0.00	0.00	No	0.00	No
	9	z	-0.017	0.00	0.00	No	0.00	No
	10	z	-0.017	0.00	0.00	No	0.00	No
	11	z	-0.017	0.00	0.00	No	0.00	No
	13	z	-0.027	0.00	0.00	No	0.00	No
	25	z	-0.053	0.00	0.00	No	0.00	No
	26	z	-0.053	0.00	0.00	No	0.00	No
	27	z	-0.053	0.00	0.00	No	0.00	No
	28	z	-0.013	0.00	0.00	No	0.00	No
	29	z	-0.027	0.00	0.00	No	0.00	No
	30	z	-0.013	0.00	0.00	No	0.00	No
	31	z	-0.027	0.00	0.00	No	0.00	No
	32	z	-0.013	0.00	0.00	No	0.00	No
	33	z	-0.027	0.00	0.00	No	0.00	No
	40	z	-0.027	0.00	0.00	No	0.00	No
	41	z	-0.027	0.00	0.00	No	0.00	No
	42	z	-0.027	0.00	0.00	No	0.00	No
	100	z	-0.013	0.00	0.00	No	0.00	No
	106	z	-0.013	0.00	0.00	No	0.00	No
	108	z	-0.013	0.00	0.00	No	0.00	No
	113	z	-0.015	0.00	0.00	No	0.00	No
	114	z	-0.015	0.00	0.00	No	0.00	No
	115	z	-0.015	0.00	0.00	No	0.00	No
	116	z	-0.015	0.00	0.00	No	0.00	No
	117	z	-0.015	0.00	0.00	No	0.00	No
	118	z	-0.015	0.00	0.00	No	0.00	No
	119	z	-0.015	0.00	0.00	No	0.00	No
	120	z	-0.015	0.00	0.00	No	0.00	No
	121	z	-0.013	0.00	0.00	No	0.00	No
	122	z	-0.013	0.00	0.00	No	0.00	No
	123	z	-0.013	0.00	0.00	No	0.00	No
	124	z	-0.025	0.00	0.00	No	0.00	No
	125	z	-0.025	0.00	0.00	No	0.00	No
	126	z	-0.025	0.00	0.00	No	0.00	No
	127	z	-0.027	0.00	0.00	No	0.00	No
	128	z	-0.027	0.00	0.00	No	0.00	No
	129	z	-0.027	0.00	0.00	No	0.00	No
W30	1	x	-0.019	0.00	0.00	No	0.00	No
	4	x	-0.027	0.00	0.00	No	0.00	No
	5	x	-0.019	0.00	0.00	No	0.00	No
	8	x	-0.027	0.00	0.00	No	0.00	No
	9	x	-0.017	0.00	0.00	No	0.00	No
	10	x	-0.017	0.00	0.00	No	0.00	No
	11	x	-0.017	0.00	0.00	No	0.00	No
	12	x	-0.019	0.00	0.00	No	0.00	No
	13	x	-0.027	0.00	0.00	No	0.00	No
	25	x	-0.053	0.00	0.00	No	0.00	No
	26	x	-0.053	0.00	0.00	No	0.00	No
	27	x	-0.053	0.00	0.00	No	0.00	No
	28	x	-0.013	0.00	0.00	No	0.00	No
	29	x	-0.027	0.00	0.00	No	0.00	No
	30	x	-0.013	0.00	0.00	No	0.00	No
	31	x	-0.027	0.00	0.00	No	0.00	No
	32	x	-0.013	0.00	0.00	No	0.00	No
	33	x	-0.027	0.00	0.00	No	0.00	No
	40	x	-0.027	0.00	0.00	No	0.00	No
	41	x	-0.027	0.00	0.00	No	0.00	No
	42	x	-0.027	0.00	0.00	No	0.00	No
	100	x	-0.013	0.00	0.00	No	0.00	No

Di

106	x	-0.013	0.00	0.00	No	0.00	No
108	x	-0.013	0.00	0.00	No	0.00	No
109	x	-0.015	0.00	0.00	No	0.00	No
110	x	-0.015	0.00	0.00	No	0.00	No
111	x	-0.015	0.00	0.00	No	0.00	No
112	x	-0.015	0.00	0.00	No	0.00	No
121	x	-0.013	0.00	0.00	No	0.00	No
122	x	-0.013	0.00	0.00	No	0.00	No
123	x	-0.013	0.00	0.00	No	0.00	No
124	x	-0.025	0.00	0.00	No	0.00	No
125	x	-0.025	0.00	0.00	No	0.00	No
126	x	-0.025	0.00	0.00	No	0.00	No
127	x	-0.027	0.00	0.00	No	0.00	No
128	x	-0.027	0.00	0.00	No	0.00	No
129	x	-0.027	0.00	0.00	No	0.00	No
1	y	-0.008	0.00	0.00	No	0.00	No
2	y	-0.007	0.00	0.00	No	0.00	No
3	y	-0.007	0.00	0.00	No	0.00	No
4	y	-0.008	0.00	0.00	No	0.00	No
5	y	-0.008	0.00	0.00	No	0.00	No
6	y	-0.007	0.00	0.00	No	0.00	No
7	y	-0.007	0.00	0.00	No	0.00	No
8	y	-0.008	0.00	0.00	No	0.00	No
9	y	-0.007	0.00	0.00	No	0.00	No
10	y	-0.007	0.00	0.00	No	0.00	No
11	y	-0.007	0.00	0.00	No	0.00	No
12	y	-0.008	0.00	0.00	No	0.00	No
13	y	-0.008	0.00	0.00	No	0.00	No
14	y	-0.007	0.00	0.00	No	0.00	No
15	y	-0.007	0.00	0.00	No	0.00	No
25	y	-0.012	0.00	0.00	No	0.00	No
26	y	-0.012	0.00	0.00	No	0.00	No
27	y	-0.012	0.00	0.00	No	0.00	No
28	y	-0.006	0.00	0.00	No	0.00	No
29	y	-0.009	0.00	0.00	No	0.00	No
30	y	-0.006	0.00	0.00	No	0.00	No
31	y	-0.009	0.00	0.00	No	0.00	No
32	y	-0.006	0.00	0.00	No	0.00	No
33	y	-0.009	0.00	0.00	No	0.00	No
40	y	-0.009	0.00	0.00	No	0.00	No
41	y	-0.009	0.00	0.00	No	0.00	No
42	y	-0.009	0.00	0.00	No	0.00	No
100	y	-0.006	0.00	0.00	No	0.00	No
106	y	-0.006	0.00	0.00	No	0.00	No
108	y	-0.006	0.00	0.00	No	0.00	No
109	y	-0.007	0.00	0.00	No	0.00	No
110	y	-0.007	0.00	0.00	No	0.00	No
111	y	-0.007	0.00	0.00	No	0.00	No
112	y	-0.007	0.00	0.00	No	0.00	No
113	y	-0.007	0.00	0.00	No	0.00	No
114	y	-0.007	0.00	0.00	No	0.00	No
115	y	-0.007	0.00	0.00	No	0.00	No
116	y	-0.007	0.00	0.00	No	0.00	No
117	y	-0.007	0.00	0.00	No	0.00	No
118	y	-0.007	0.00	0.00	No	0.00	No
119	y	-0.007	0.00	0.00	No	0.00	No
120	y	-0.007	0.00	0.00	No	0.00	No
121	y	-0.006	0.00	0.00	No	0.00	No
122	y	-0.006	0.00	0.00	No	0.00	No
123	y	-0.006	0.00	0.00	No	0.00	No

124	y	-0.009	0.00	0.00	No	0.00	No
125	y	-0.009	0.00	0.00	No	0.00	No
126	y	-0.009	0.00	0.00	No	0.00	No
127	y	-0.008	0.00	0.00	No	0.00	No
128	y	-0.008	0.00	0.00	No	0.00	No
129	y	-0.008	0.00	0.00	No	0.00	No

### Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	100	y	-0.033	0.50	No
	106	y	-0.033	0.50	No
	108	y	-0.066	0.50	No
	109	y	-0.034	0.50	No
		y	-0.034	7.50	No
	110	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.053	1.50	No
	111	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.06	1.50	No
		y	-0.12	4.00	No
		y	-0.029	6.00	No
	112	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.072	1.50	No
	113	y	-0.034	0.50	No
		y	-0.034	7.50	No
	114	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.053	1.50	No
	115	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.06	1.50	No
		y	-0.12	4.00	No
		y	-0.029	6.00	No
	116	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.072	1.50	No
	117	y	-0.034	0.50	No
		y	-0.034	7.50	No
	118	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.053	1.50	No
	119	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.06	1.50	No
		y	-0.12	4.00	No
		y	-0.029	6.00	No

W0	120	y	-0.034	0.50	No
		y	-0.034	7.50	No
		y	-0.072	1.50	No
	100	z	-0.06	0.50	No
	106	z	-0.06	0.50	No
	108	z	-0.06	0.50	No
	109	z	-0.346	0.50	No
		z	-0.346	7.50	No
	110	z	-0.346	0.50	No
		z	-0.346	7.50	No
		z	-0.037	1.50	No
	111	z	-0.346	0.50	No
		z	-0.346	7.50	No
		z	-0.133	4.00	No
		z	-0.032	6.00	No
	112	z	-0.346	0.50	No
		z	-0.346	7.50	No
	113	z	-0.237	0.50	No
		z	-0.237	7.50	No
	114	z	-0.237	0.50	No
		z	-0.237	7.50	No
		z	-0.083	1.50	No
	115	z	-0.237	0.50	No
		z	-0.237	7.50	No
		z	-0.094	1.50	No
		z	-0.101	4.00	No
		z	-0.034	6.00	No
	116	z	-0.237	0.50	No
		z	-0.237	7.50	No
		z	-0.07	1.50	No
	117	z	-0.237	0.50	No
		z	-0.237	7.50	No
	118	z	-0.237	0.50	No
		z	-0.237	7.50	No
		z	-0.083	1.50	No
	119	z	-0.237	0.50	No
		z	-0.237	7.50	No
		z	-0.094	1.50	No
		z	-0.101	4.00	No
		z	-0.034	6.00	No
W30	120	z	-0.237	0.50	No
		z	-0.237	7.50	No
		z	-0.07	1.50	No
	100	x	-0.057	0.50	No
	106	x	-0.057	0.50	No
	108	x	-0.057	0.50	No
	109	x	-0.20	0.50	No
		x	-0.20	7.50	No
	110	x	-0.20	0.50	No
		x	-0.20	7.50	No
		x	-0.068	1.50	No
	111	x	-0.20	0.50	No
		x	-0.20	7.50	No
		x	-0.089	1.50	No
		x	-0.108	4.00	No
		x	-0.034	6.00	No
	112	x	-0.20	0.50	No
		x	-0.20	7.50	No
		x	-0.072	1.50	No
	113	x	-0.309	0.50	No

Di

	x	-0.309	7.50	No
114	x	-0.309	0.50	No
	x	-0.309	7.50	No
	x	-0.08	1.50	No
115	x	-0.309	0.50	No
	x	-0.309	7.50	No
	x	-0.081	1.50	No
	x	-0.067	4.00	No
	x	-0.033	6.00	No
116	x	-0.309	0.50	No
	x	-0.309	7.50	No
	x	-0.051	1.50	No
117	x	-0.309	0.50	No
	x	-0.309	7.50	No
118	x	-0.309	0.50	No
	x	-0.309	7.50	No
	x	-0.08	1.50	No
119	x	-0.309	0.50	No
	x	-0.309	7.50	No
	x	-0.081	1.50	No
	x	-0.067	4.00	No
	x	-0.033	6.00	No
120	x	-0.309	0.50	No
	x	-0.309	7.50	No
	x	-0.051	1.50	No
100	y	-0.035	0.50	No
106	y	-0.035	0.50	No
108	y	-0.07	0.50	No
109	y	-0.11	0.50	No
	y	-0.11	7.50	No
110	y	-0.11	0.50	No
	y	-0.11	7.50	No
	y	-0.058	1.50	No
111	y	-0.11	0.50	No
	y	-0.11	7.50	No
	y	-0.055	1.50	No
	y	-0.082	4.00	No
	y	-0.016	6.00	No
112	y	-0.11	0.50	No
	y	-0.11	7.50	No
	y	-0.037	1.50	No
113	y	-0.11	0.50	No
	y	-0.11	7.50	No
114	y	-0.11	0.50	No
	y	-0.11	7.50	No
	y	-0.058	1.50	No
115	y	-0.11	0.50	No
	y	-0.11	7.50	No
	y	-0.055	1.50	No
	y	-0.082	4.00	No
	y	-0.016	6.00	No
116	y	-0.11	0.50	No
	y	-0.11	7.50	No
	y	-0.037	1.50	No
117	y	-0.11	0.50	No
	y	-0.11	7.50	No
118	y	-0.11	0.50	No
	y	-0.11	7.50	No
	y	-0.058	1.50	No
119	y	-0.11	0.50	No

Wi0		y	-0.11	7.50	No
		y	-0.055	1.50	No
		y	-0.082	4.00	No
		y	-0.016	6.00	No
	120	y	-0.11	0.50	No
		y	-0.11	7.50	No
		y	-0.037	1.50	No
	100	z	-0.015	0.50	No
	106	z	-0.015	0.50	No
	108	z	-0.015	0.50	No
	109	z	-0.073	0.50	No
		z	-0.073	7.50	No
	110	z	-0.073	0.50	No
		z	-0.073	7.50	No
		z	-0.012	1.50	No
	111	z	-0.073	0.50	No
		z	-0.073	7.50	No
		z	-0.006	1.50	No
		z	-0.035	4.00	No
		z	-0.01	6.00	No
	112	z	-0.073	0.50	No
		z	-0.073	7.50	No
		z	-0.004	1.50	No
	113	z	-0.052	0.50	No
		z	-0.052	7.50	No
	114	z	-0.052	0.50	No
		z	-0.052	7.50	No
		z	-0.02	1.50	No
	115	z	-0.052	0.50	No
		z	-0.052	7.50	No
		z	-0.023	4.00	No
		z	-0.024	4.00	No
		z	-0.01	6.00	No
	116	z	-0.052	0.50	No
		z	-0.052	7.50	No
		z	-0.018	1.50	No
	117	z	-0.052	0.50	No
		z	-0.052	7.50	No
	118	z	-0.052	0.50	No
		z	-0.052	7.50	No
		z	-0.02	1.50	No
	119	z	-0.052	0.50	No
		z	-0.052	7.50	No
		z	-0.023	4.00	No
		z	-0.024	4.00	No
		z	-0.01	6.00	No
	120	z	-0.052	0.50	No
		z	-0.052	7.50	No
		z	-0.018	1.50	No
Wi30	100	x	-0.014	0.50	No
	106	x	-0.014	0.50	No
	108	x	-0.014	0.50	No
	109	x	-0.046	0.50	No
		x	-0.046	7.50	No
	110	x	-0.046	0.50	No
		x	-0.046	7.50	No
		x	-0.018	1.50	No
	111	x	-0.046	0.50	No
		x	-0.046	7.50	No
		x	-0.023	1.50	No
		x	-0.023	1.50	No

		x	-0.026	4.00	No
		x	-0.01	6.00	No
	112	x	-0.046	0.50	No
		x	-0.046	7.50	No
		x	-0.018	1.50	No
	113	x	-0.065	0.50	No
		x	-0.065	7.50	No
	114	x	-0.065	0.50	No
		x	-0.065	7.50	No
		x	-0.019	1.50	No
	115	x	-0.065	0.50	No
		x	-0.065	7.50	No
		x	-0.019	1.50	No
		x	-0.016	4.00	No
		x	-0.01	6.00	No
	116	x	-0.065	0.50	No
		x	-0.065	7.50	No
		x	-0.013	1.50	No
	117	x	-0.065	0.50	No
		x	-0.065	7.50	No
	118	x	-0.065	0.50	No
		x	-0.065	7.50	No
		x	-0.019	1.50	No
	119	x	-0.065	0.50	No
		x	-0.065	7.50	No
		x	-0.019	1.50	No
		x	-0.016	4.00	No
		x	-0.01	6.00	No
	120	x	-0.065	0.50	No
		x	-0.065	7.50	No
		x	-0.013	1.50	No
WLO	100	z	-0.004	0.50	No
	106	z	-0.004	0.50	No
	108	z	-0.004	0.50	No
	109	z	-0.022	0.50	No
		z	-0.022	7.50	No
	110	z	-0.022	0.50	No
		z	-0.022	7.50	No
		z	-0.002	4.00	No
	111	z	-0.022	0.50	No
		z	-0.022	7.50	No
		z	-0.008	4.00	No
		z	-0.002	6.00	No
	112	z	-0.022	0.50	No
		z	-0.022	7.50	No
	113	z	-0.015	0.50	No
		z	-0.015	7.50	No
	114	z	-0.015	0.50	No
		z	-0.015	7.50	No
		z	-0.005	1.50	No
	115	z	-0.015	0.50	No
		z	-0.015	7.50	No
		z	-0.006	1.50	No
		z	-0.006	4.00	No
		z	-0.002	6.00	No
	116	z	-0.015	0.50	No
		z	-0.015	7.50	No
		z	-0.004	1.50	No
	117	z	-0.015	0.50	No
		z	-0.015	7.50	No



WL30	118	z	-0.015	0.50	No
		z	-0.015	7.50	No
		z	-0.005	1.50	No
	119	z	-0.015	0.50	No
		z	-0.015	7.50	No
		z	-0.006	1.50	No
		z	-0.006	4.00	No
		z	-0.002	6.00	No
	120	z	-0.015	0.50	No
		z	-0.015	7.50	No
		z	-0.004	1.50	No
	100	x	-0.004	0.50	No
	106	x	-0.004	0.50	No
	108	x	-0.004	0.50	No
	109	x	-0.013	0.50	No
		x	-0.013	7.50	No
	110	x	-0.013	0.50	No
		x	-0.013	7.50	No
		x	-0.004	1.50	No
	111	x	-0.013	0.50	No
		x	-0.013	7.50	No
		x	-0.006	1.50	No
		x	-0.007	4.00	No
		x	-0.002	6.50	No
	112	x	-0.013	0.50	No
		x	-0.013	7.50	No
		x	-0.004	1.50	No
	113	x	-0.02	0.50	No
		x	-0.02	7.50	No
	114	x	-0.02	0.50	No
		x	-0.02	7.50	No
		x	-0.005	1.50	No
	115	x	-0.02	0.50	No
		x	-0.02	7.50	No
		x	-0.005	1.50	No
		x	-0.004	4.00	No
		x	-0.002	6.50	No
	116	x	-0.02	0.50	No
		x	-0.02	7.50	No
		x	-0.003	1.50	No
	117	x	-0.02	0.50	No
		x	-0.02	7.50	No
	118	x	-0.02	0.50	No
		x	-0.02	7.50	No
		x	-0.005	1.50	No
	119	x	-0.02	0.50	No
		x	-0.02	7.50	No
		x	-0.005	1.50	No
		x	-0.004	4.00	No
		x	-0.002	6.50	No
	120	x	-0.02	0.50	No
		x	-0.02	7.50	No
		x	-0.003	1.50	No
LL1	9	y	-0.25	6.25	No
LL2	9	y	-0.25	0.00	No
LLa1	109	y	-0.25	4.00	No
LLa2	110	y	-0.25	4.00	No
LLa3	111	y	-0.25	4.00	No
LLa4	112	y	-0.25	4.00	No

## Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
W0	Wind Load 0/60/120 deg	No	0.00	0.00	0.00
W30	Wind Load 30/90/150 deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
Wi0	Ice Wind Load 0/60/120 deg	No	0.00	0.00	0.00
Wi30	Ice Wind Load 30/90/150 deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0/60/120 deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30/90/150 deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00

## Earthquake (Dynamic analysis only)

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

Current Date: 2/4/2020 11:13 AM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1855\LTE 6C-7C\CT1855 (LTE 6C-7C).retx

## Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2DL+W0  
 LC2=1.2DL+W30  
 LC3=1.2DL-W0  
 LC4=1.2DL-W30  
 LC5=0.9DL+W0  
 LC6=0.9DL+W30  
 LC7=0.9DL-W0  
 LC8=0.9DL-W30  
 LC9=1.2DL+Di+W0  
 LC10=1.2DL+Di+W30  
 LC11=1.2DL+Di-W0  
 LC12=1.2DL+Di-W30  
 LC13=1.2DL  
 LC15=1.2DL+1.5LL1  
 LC16=1.2DL+1.5LL2  
 LC17=1.2DL+WL0+1.5LLa1  
 LC18=1.2DL+WL30+1.5LLa1  
 LC19=1.2DL-WL0+1.5LLa1  
 LC20=1.2DL-WL30+1.5LLa1  
 LC21=1.2DL+WL0+1.5LLa2  
 LC22=1.2DL+WL30+1.5LLa2  
 LC23=1.2DL-WL0+1.5LLa2  
 LC24=1.2DL-WL30+1.5LLa2  
 LC25=1.2DL+WL0+1.5LLa3  
 LC26=1.2DL+WL30+1.5LLa3  
 LC27=1.2DL-WL0+1.5LLa3  
 LC28=1.2DL-WL30+1.5LLa3  
 LC29=1.2DL+WL0+1.5LLa4  
 LC30=1.2DL+WL30+1.5LLa4  
 LC31=1.2DL-WL0+1.5LLa4  
 LC32=1.2DL-WL30+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
<b>C 3x2x1/4</b>		4	LC4 at 0.00%	0.65	OK	Eq. H1-1b
		8	LC2 at 0.00%	0.70	OK	Eq. H1-1b
		13	LC4 at 0.00%	0.61	OK	Eq. H1-1b
		127	LC1 at 100.00%	0.77	OK	Eq. H1-1b
		128	LC1 at 0.00%	0.71	OK	Eq. H1-1b
		129	LC2 at 0.00%	0.55	OK	Eq. H1-1b
<b>L 2X2X1_4</b>		2	LC3 at 0.00%	0.43	OK	Eq. H2-1
		3	LC2 at 0.00%	0.52	OK	Eq. H2-1
		6	LC3 at 0.00%	0.42	OK	Eq. H2-1
		7	LC4 at 0.00%	0.52	OK	Eq. H2-1
		14	LC1 at 100.00%	0.53	OK	Eq. H2-1
		15	LC1 at 100.00%	0.53	OK	Eq. H2-1
<b>L 3X3X1_4</b>		29	LC3 at 0.00%	0.26	OK	Eq. H2-1
		31	LC4 at 0.00%	0.23	OK	Eq. H2-1
		33	LC2 at 0.00%	0.20	OK	Eq. H2-1

<b>PIPE 2-1_2x0.203</b>	<b>109</b>	LC4 at 72.92%	0.54	OK	Eq. H1-1b
	<b>112</b>	LC2 at 72.92%	0.55	OK	Eq. H1-1b
	<b>113</b>	LC2 at 72.92%	0.62	OK	Eq. H1-1b
	<b>114</b>	LC3 at 72.92%	0.62	OK	Eq. H1-1b
	<b>116</b>	LC1 at 72.92%	<b>0.70</b>	<b>OK</b>	Eq. H1-1b
	<b>117</b>	LC1 at 72.92%	0.68	OK	Eq. H1-1b
	<b>119</b>	LC3 at 72.92%	0.66	OK	Eq. H1-1b
	<b>120</b>	LC4 at 72.92%	0.66	OK	Eq. H1-1b
<b>PIPE 2-1_2x0.276XS</b>	<b>110</b>	LC4 at 72.92%	0.64	OK	Eq. H1-1b
	<b>111</b>	LC2 at 72.92%	0.63	OK	Eq. H1-1b
	<b>115</b>	LC1 at 72.92%	0.63	OK	Eq. H1-1b
	<b>118</b>	LC1 at 72.92%	<b>0.67</b>	<b>OK</b>	Eq. H1-1b
<b>PIPE 2x0.154</b>	<b>28</b>	LC4 at 38.19%	<b>0.98</b>	<b>OK</b>	Eq. H1-1b
	<b>30</b>	LC1 at 61.81%	0.95	OK	Eq. H1-1b
	<b>32</b>	LC1 at 88.19%	0.92	OK	Eq. H1-1b
	<b>100</b>	LC3 at 71.88%	0.08	OK	Eq. H1-1b
	<b>106</b>	LC1 at 71.88%	0.08	OK	Eq. H1-1b
	<b>108</b>	LC1 at 71.88%	0.06	OK	Eq. H1-1b
	<b>121</b>	LC3 at 0.00%	0.70	OK	Eq. H1-1b
	<b>122</b>	LC4 at 100.00%	0.79	OK	Eq. H1-1b
	<b>123</b>	LC3 at 100.00%	0.74	OK	Eq. H1-1b
<b>PIPE 3x0.216</b>	<b>1</b>	LC3 at 100.00%	0.53	OK	Eq. H1-1b
	<b>5</b>	LC3 at 100.00%	0.54	OK	Eq. H1-1b
	<b>9</b>	LC4 at 38.19%	0.31	OK	Eq. H1-1b
	<b>10</b>	LC4 at 56.25%	0.32	OK	Eq. H3-6
	<b>11</b>	LC4 at 88.89%	0.30	OK	Eq. H1-1b
	<b>12</b>	LC2 at 0.00%	<b>0.56</b>	<b>OK</b>	Eq. H1-1b
<b>PL 6X1/2</b>	<b>25</b>	LC2 at 50.00%	0.38	OK	Eq. H1-1b
	<b>26</b>	LC4 at 50.00%	0.39	OK	Eq. H1-1b
	<b>27</b>	LC1 at 50.00%	<b>0.43</b>	<b>OK</b>	Eq. H1-1b
<b>T2L 3X3X1_4</b>	<b>40</b>	LC2 at 100.00%	0.42	OK	Eq. H2-1
	<b>41</b>	LC4 at 100.00%	<b>0.43</b>	<b>OK</b>	Eq. H2-1
	<b>42</b>	LC1 at 100.00%	0.41	OK	Eq. H2-1
	<b>124</b>	LC3 at 100.00%	0.31	OK	Eq. H2-1
	<b>125</b>	LC3 at 100.00%	0.33	OK	Eq. H2-1
	<b>126</b>	LC4 at 100.00%	0.35	OK	Eq. H2-1

Current Date: 2/4/2020 9:31 AM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1855\LTE 6C-7C\CT1855 (LTE 6C-7C).retx

## Geometry data

### GLOSSARY

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

### Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
2	-0.7548	0.00	4.1065	0
3	-6.1128	0.00	4.1065	0
4	-6.2795	0.00	4.1065	0
5	-6.3628	0.00	3.6735	0
6	-6.6128	0.00	3.2405	0
7	-3.7671	0.00	-1.1111	0
8	-3.9338	0.00	-1.3997	0
9	-0.9215	0.00	3.8178	0
10	-6.6962	0.00	3.3848	0
11	-3.2085	0.00	-2.656	0
12	-2.8752	0.00	-2.656	0
13	-0.5295	0.00	-7.2962	0
14	-0.4462	0.00	-7.4405	0
17	0.6958	0.00	4.1065	0
18	6.0538	0.00	4.1065	0
19	6.2205	0.00	4.1065	0
20	6.3038	0.00	3.6735	0
21	6.5538	0.00	3.2405	0
22	3.7081	0.00	-1.1111	0
23	3.8748	0.00	-1.3997	0
24	0.8625	0.00	3.8178	0

25	6.6372	0.00	3.3848	0
26	3.1495	0.00	-2.656	0
27	2.8162	0.00	-2.656	0
28	0.4705	0.00	-7.2962	0
29	0.3872	0.00	-7.4405	0
32	-0.0295	0.00	-7.2962	0
51	1.1438	6.00	-6.5301	0
52	2.7896	6.00	-3.6794	0
53	6.0813	6.00	2.0219	0
60	2.7896	-2.00	-3.6794	0
63	1.1438	-2.00	-6.5301	0
67	6.0813	-2.00	2.0219	0
69	0.9132	0.00	0.5613	0
70	-0.0295	0.00	-1.0715	0
71	-0.9722	0.00	0.5613	0
72	-6.2795	3.50	4.1065	0
73	6.2205	3.50	4.1065	0
74	6.0538	3.50	4.1065	0
75	6.5538	3.50	3.2405	0
76	0.3872	3.50	-7.4405	0
77	6.6372	3.50	3.3848	0
78	0.4705	3.50	-7.2962	0
79	-0.5295	3.50	-7.2962	0
80	-6.6962	3.50	3.3848	0
81	-0.4462	3.50	-7.4405	0
82	-6.6128	3.50	3.2405	0
83	-6.1128	3.50	4.1065	0
85	4.4355	6.00	-0.8288	0
86	4.4355	-2.00	-0.8288	0
99	0.9132	-3.75	0.5613	0
100	-0.0295	-3.75	-1.0715	0
101	-0.9722	-3.75	0.5613	0
102	-2.3442	0.00	1.3535	0
103	2.2853	0.00	1.3535	0
104	-0.0295	0.00	-2.656	0
274	-6.286	6.00	2.2744	0
275	-6.286	-2.00	2.2744	0
280	-4.6402	6.00	-0.5763	0
281	-4.6402	-2.00	-0.5763	0
286	-2.9943	6.00	-3.4269	0
287	-2.9943	-2.00	-3.4269	0
292	-1.3485	6.00	-6.2776	0
293	-1.3485	-2.00	-6.2776	0
298	5.0538	6.00	4.3065	0
299	5.0538	-2.00	4.3065	0
304	1.7622	6.00	4.3065	0
305	1.7622	-2.00	4.3065	0
310	-1.5295	6.00	4.3065	0
311	-1.5295	-2.00	4.3065	0
316	-4.8212	6.00	4.3065	0
317	-4.8212	-2.00	4.3065	0
324	0.1705	1.50	-1.8638	0
325	0.1705	-0.50	-1.8638	0
336	-1.7582	1.50	0.7841	0
337	-1.7582	-0.50	0.7841	0
340	1.4993	1.50	1.1305	0
341	1.4993	-0.50	1.1305	0
342	-0.0295	0.00	-6.656	0
343	5.7494	0.00	3.3535	0
344	-5.8083	0.00	3.3535	0

345	2.3038	3.50	4.1065	0
346	-2.3628	3.50	4.1065	0
347	-2.4045	3.50	-4.0486	0
348	-4.7378	3.50	-0.0071	0
349	4.6788	3.50	-0.0071	0
350	2.3455	3.50	-4.0486	0
351	0.9132	-1.25	0.5613	0
352	-0.0295	-1.25	-1.0715	0
353	-0.9722	-1.25	0.5613	0
354	-0.0295	0.00	-2.906	0
355	2.5018	0.00	1.4785	0
356	-2.5608	0.00	1.4785	0

## Restraints

Node	TX	TY	TZ	RX	RY	RZ
69	1	1	1	1	1	1
70	1	1	1	1	1	1
71	1	1	1	1	1	1
99	1	1	1	1	1	1
100	1	1	1	1	1	1
101	1	1	1	1	1	1
351	1	1	1	1	1	1
352	1	1	1	1	1	1
353	1	1	1	1	1	1

## Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	5	71		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
2	5	9		L 2X2X1_4	A36	0.00	0.00	0.00
3	5	7		L 2X2X1_4	A36	0.00	0.00	0.00
4	8	102		C 3x2x1/4	A36	0.00	0.00	0.00
5	20	69		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
6	20	24		L 2X2X1_4	A36	0.00	0.00	0.00
7	20	22		L 2X2X1_4	A36	0.00	0.00	0.00
8	23	103		C 3x2x1/4	A36	0.00	0.00	0.00
9	4	19		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
10	10	14		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
11	29	25		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
12	70	32		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
13	11	104		C 3x2x1/4	A36	0.00	0.00	0.00
14	27	32		L 2X2X1_4	A36	0.00	0.00	0.00
15	12	32		L 2X2X1_4	A36	0.00	0.00	0.00
25	6	3		PL 6X1/2	A36	0.00	0.00	0.00
26	18	21		PL 6X1/2	A36	0.00	0.00	0.00
27	28	13		PL 6X1/2	A36	0.00	0.00	0.00
28	72	73		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
29	74	75		L 3X3X1_4	A36	0.00	0.00	0.00
30	76	77		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

31	78	79	L 3X3X1_4	A36	0.00	0.00	0.00
32	80	81	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
33	82	83	L 3X3X1_4	A36	0.00	0.00	0.00
40	101	344	T2L 3X3X1_4	A36	0.00	0.00	0.00
41	99	343	T2L 3X3X1_4	A36	0.00	0.00	0.00
42	100	342	T2L 3X3X1_4	A36	0.00	0.00	0.00
100	324	325	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
106	336	337	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
108	340	341	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
109	298	299	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
110	304	305	PIPE 2-1_2x0.276XS	A53 GrB	0.00	0.00	0.00
111	310	311	PIPE 2-1_2x0.276XS	A53 GrB	0.00	0.00	0.00
112	316	317	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
113	274	275	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
114	280	281	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
115	286	287	PIPE 2-1_2x0.276XS	A53 GrB	0.00	0.00	0.00
116	292	293	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
117	51	63	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
118	52	60	PIPE 2-1_2x0.276XS	A53 GrB	0.00	0.00	0.00
119	85	86	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
120	53	67	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
121	346	348	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
122	347	350	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
123	349	345	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
124	356	353	T2L 3X3X1_4	A36	0.00	0.00	0.00
125	355	351	T2L 3X3X1_4	A36	0.00	0.00	0.00
126	354	352	T2L 3X3X1_4	A36	0.00	0.00	0.00
127	102	2	C 3x2x1/4	A36	0.00	0.00	0.00
128	17	103	C 3x2x1/4	A36	0.00	0.00	0.00
129	26	104	C 3x2x1/4	A36	0.00	0.00	0.00

#### Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
2	270.00	0	0.00	0.00	0.00
7	270.00	0	0.00	0.00	0.00
8	180.00	0	0.00	0.00	0.00
13	180.00	0	0.00	0.00	0.00
14	270.00	0	0.00	0.00	0.00
29	180.00	0	0.00	0.00	0.00
31	180.00	0	0.00	0.00	0.00
33	180.00	0	0.00	0.00	0.00
100	0.00	2	0.50	0.00	0.866
106	0.00	2	0.50	0.00	-0.866
108	0.00	2	1.00	0.00	0.00
109	0.00	2	1.00	0.00	0.00
110	0.00	2	1.00	0.00	0.00
111	0.00	2	1.00	0.00	0.00
112	0.00	2	1.00	0.00	0.00
113	0.00	2	1.00	0.00	0.00
114	0.00	2	1.00	0.00	0.00
115	0.00	2	1.00	0.00	0.00
116	0.00	2	1.00	0.00	0.00
117	0.00	2	1.00	0.00	0.00
118	0.00	2	1.00	0.00	0.00



119	0.00	2	1.00	0.00	0.00
120	0.00	2	1.00	0.00	0.00

### Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
40	0.00	0.00	0.00	0.00	-1.00	0.00
41	0.00	0.00	0.00	0.00	-1.00	0.00
42	0.00	0.00	0.00	0.00	-1.00	0.00
121	0.00	2.00	0.00	0.00	2.00	0.00
122	0.00	2.00	0.00	0.00	2.00	0.00
123	0.00	2.00	0.00	0.00	2.00	0.00
124	0.00	-1.00	0.00	0.00	0.00	0.00
125	0.00	-1.00	0.00	0.00	0.00	0.00
126	0.00	-1.00	0.00	0.00	0.00	0.00

# EXHIBIT 5



# Radio Frequency Emissions Analysis Report

Site Name: **CT1855**

320 Old Stagecoach Road  
Ridgefield, Connecticut 06877

**March 19, 2020**

**Centerline Communications Project Number: 950012-334**

Site Compliance Summary	
Compliance Status:	<b>Compliant</b>
Site total MPE% of FCC general population allowable limit:	<b>16.96%</b>



March 19, 2020

AT&T Mobility – New England  
Attn: John Benedetto, RF Manager  
550 Cochituate Road  
Suite 550 – 13&14  
Framingham, MA 01701

### Emissions Analysis for Site: **CT1855**

Centerline Communications, LLC (“Centerline”) was directed to analyze the proposed AT&T facility to be located on a **monopole at 320 Old Stagecoach Road, Ridgefield Connecticut 06877** for the purpose of determining whether the emissions from the proposed facility are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The number of  $\mu\text{W}/\text{cm}^2$  calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

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

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limits for the 700MHz, 850MHz, 1900 MHz (PCS), 2300MHz (WCS) and 5 GHz (B46) bands is  $1000 \mu\text{W}/\text{cm}^2$ .



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

Additional details can be found in FCC OET 65.



## CALCULATIONS

Calculations were performed for the proposed facility using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing focused omnidirectional antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. This is a very conservative estimate since the gain reduction in actual applications is typically greater than 10 dB in the direction of ground immediately surrounding the facility. Real world emissions values from this facility are expected to be lower than values listed in this report at ground level. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Antenna	Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
ATT A1	UMTS	850	1	40
ATT A2	LTE	700	2	40
ATT A2	LTE	2100	4	40
ATT A3	LTE	700	2	40
ATT A3	LTE	850	2	40
ATT A3	LTE	2300	4	25
ATT A3	LTE	850	2	40
ATT A4	LTE	700	2	40
ATT A4	LTE	1900	2	40
ATT A4	LTE	1900	2	40
ATT B1	UMTS	850	1	40
ATT B2	LTE	700	2	40
ATT B2	LTE	2100	4	40
ATT B3	LTE	700	2	40
ATT B3	LTE	850	2	40
ATT B3	LTE	2300	4	25
ATT B3	LTE	850	2	40
ATT B4	LTE	700	2	40
ATT B4	LTE	1900	2	40
ATT B4	LTE	1900	2	40

ATT C1	UMTS	850	1	40
ATT C2	LTE	700	2	40
ATT C2	LTE	2100	4	40
ATT C3	LTE	700	2	40
ATT C3	LTE	850	2	40
ATT C3	LTE	2300	4	25
ATT C3	LTE	850	2	40
ATT C4	LTE	700	2	40
ATT C4	LTE	1900	2	40
ATT C4	LTE	1900	2	40

*Table 1: Channel Data Table*



The following antennas listed in *Table 2* were used in the modeling for transmission in the 700MHz, 850MHz, 1900 MHz (PCS), 2100 MHz (AWS), 2300MHz (WCS) and 5 GHz (Band 46) frequency bands. This is based on information from the carrier with regard to anticipated antenna selection. Maximum gain values for all antennas are listed in the AT&T Antenna Inventory & Power Levels table (Table 3) below in the Results section. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	CCI HPA-65R-BUU-H8	146
A	2	CCI HPA-65R-BUU-H8	146
A	3	CCI HPA-65R-BUU-H8	146
A	4	CCI HPA-65R-BUU-H8	146
B	5	CCI HPA-65R-BUU-H8	146
B	6	CCI HPA-65R-BUU-H8	146
B	7	CCI HPA-65R-BUU-H8	146
B	8	CCI HPA-65R-BUU-H8	146
C	9	CCI HPA-65R-BUU-H8	146
C	10	CCI HPA-65R-BUU-H8	146
C	11	CCI HPA-65R-BUU-H8	146
C	12	CCI HPA-65R-BUU-H8	146

*Table 2: Antenna Data*

All calculations were done with respect to uncontrolled / general population threshold limits.





## RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Antenna Height (ft)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
ATT A1	CCI HPA-65R-BUU-H8	850	14.05	146	1	40	1016.39	0.3023%
ATT A2	CCI HPA-65R-BUU-H8	700	13.15	146	2	40	1652.30	0.5967%
ATT A2	CCI HPA-65R-BUU-H8	2100	15.25	146	4	40	5359.45	0.9039%
ATT A3	CCI HPA-65R-BUU-H8	700	13.15	146	2	40	1652.30	0.5967%
ATT A3	CCI HPA-65R-BUU-H8	850	14.05	146	2	40	2032.78	0.6047%
ATT A3	CCI HPA-65R-BUU-H8	2300	15.55	146	4	25	3589.22	0.6054%
ATT A3	CCI HPA-65R-BUU-H8	850	14.05	146	2	40	2032.78	0.6047%
ATT A4	CCI HPA-65R-BUU-H8	700	13.15	146	2	40	1652.30	0.5967%
ATT A4	CCI HPA-65R-BUU-H8	1900	14.95	146	2	40	2500.86	0.4218%
ATT A4	CCI HPA-65R-BUU-H8	1900	14.95	146	2	40	2500.86	0.4218%
ATT B1	CCI HPA-65R-BUU-H8	850	14.05	146	1	40	1016.39	0.3023%
ATT B2	CCI HPA-65R-BUU-H8	700	13.15	146	2	40	1652.30	0.5967%
ATT B2	CCI HPA-65R-BUU-H8	2100	15.25	146	4	40	5359.45	0.9039%
ATT B3	CCI HPA-65R-BUU-H8	700	13.15	146	2	40	1652.30	0.5967%
ATT B3	CCI HPA-65R-BUU-H8	850	14.05	146	2	40	2032.78	0.6047%
ATT B3	CCI HPA-65R-BUU-H8	2300	15.55	146	4	25	3589.22	0.6054%
ATT B3	CCI HPA-65R-BUU-H8	850	14.05	146	2	40	2032.78	0.6047%
ATT B4	CCI HPA-65R-BUU-H8	700	13.15	146	2	40	1652.30	0.5967%
ATT B4	CCI HPA-65R-BUU-H8	1900	14.95	146	2	40	2500.86	0.4218%
ATT B4	CCI HPA-65R-BUU-H8	1900	14.95	146	2	40	2500.86	0.4218%
ATT C1	CCI HPA-65R-BUU-H8	850	14.05	146	1	40	1016.39	0.3023%
ATT C2	CCI HPA-65R-BUU-H8	700	13.15	146	2	40	1652.30	0.5967%

ATT C2	CCI HPA-65R-BUU-H8	2100	13.15	146	4	40	5359.45	0.9039%
ATT C3	CCI HPA-65R-BUU-H8	700	14.05	146	2	40	1652.30	0.5967%
ATT C3	CCI HPA-65R-BUU-H8	850	15.55	146	2	40	2032.78	0.6047%
ATT C3	CCI HPA-65R-BUU-H8	2300	14.05	146	4	25	3589.22	0.6054%
ATT C3	CCI HPA-65R-BUU-H8	850	13.15	146	2	40	2032.78	0.6047%
ATT C4	CCI HPA-65R-BUU-H8	700	14.95	146	2	40	1652.30	0.5967%
ATT C4	CCI HPA-65R-BUU-H8	1900	14.95	146	2	40	2500.86	0.4218%
ATT C4	CCI HPA-65R-BUU-H8	1900	13.15	146	2	40	2500.86	0.4218%
All Sectors Composite MPE%								<b>16.96 %</b>



FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). Since this proposed facility is utilizing an omnidirectional antenna there is only one sector for this site (Sector A).

AT&T _ Frequency Band / Technology	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu$ W/cm <sup>2</sup> )	Frequency (MHz)	Allowable MPE ( $\mu$ W/cm <sup>2</sup> )	Calculated % MPE
AT&T 850 MHz	1	40	146	1.7142	850 MHz	1000	0.3023%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 2100 MHz	4	40	146	9.0392	2100 MHz	1000	0.9039%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 850 MHz	2	40	146	3.4285	850 MHz	1000	0.6047%
AT&T 2300 MHz	4	25	146	6.0536	2300 MHz	1000	0.6054%
AT&T 850 MHz	2	40	146	3.4285	850 MHz	1000	0.6047%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 1900 MHz	2	40	146	4.2179	1900 MHz	1000	0.4218%
AT&T 1900 MHz	2	40	146	4.2179	1900 MHz	1000	0.4218%
AT&T 850 MHz	1	40	146	1.7142	850 MHz	1000	0.3023%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 2100 MHz	4	40	146	9.0392	2100 MHz	1000	0.9039%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 850 MHz	2	40	146	3.4285	850 MHz	1000	0.6047%
AT&T 2300 MHz	4	25	146	6.0536	2300 MHz	1000	0.6054%
AT&T 850 MHz	2	40	146	3.4285	850 MHz	1000	0.6047%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 1900 MHz	2	40	146	4.2179	1900 MHz	1000	0.4218%
AT&T 1900 MHz	2	40	146	4.2179	1900 MHz	1000	0.4218%
AT&T 850 MHz	1	40	146	1.7142	850 MHz	1000	0.3023%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 2100 MHz	4	40	146	9.0392	2100 MHz	1000	0.9039%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 850 MHz	2	40	146	3.4285	850 MHz	1000	0.6047%
AT&T 2300 MHz	4	25	146	6.0536	2300 MHz	1000	0.6054%
AT&T 850 MHz	2	40	146	3.4285	850 MHz	1000	0.6047%
AT&T 700 MHz	2	40	146	2.7868	700 MHz	1000	0.5967%
AT&T 1900 MHz	2	40	146	4.2179	1900 MHz	1000	0.4218%
AT&T 1900 MHz	2	40	146	4.2179	1900 MHz	1000	0.4218%
All Sectors						<b>Total:</b>	<b>16.96%</b>

Table 6: AT&T Maximum Sector MPE Power Values



## Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
All Sectors:	16.96%
AT&T Maximum Site Total:	16.96%
Site Total:	<b>16.96%</b>
Site Compliance Status:	<b>Compliant</b>

The anticipated composite MPE value for this site assuming all carriers present is **16.96%** of the allowable FCC established general population limit sampled at the ground level.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

A handwritten signature in black ink that reads 'Michelle L. Stone'.

Michelle L. Stone  
RF Compliance Consultant  
**Centerline Communications, LLC**

750 West Center St. Suite 301  
West Bridgewater, MA 02379

# EXHIBIT 6

320 OLD STAGECOACH RD

AP-2015-0047

Map:	D08
Lot	0124
Project #	JS-2015-0136
Est. Cost	\$175,000.00



**TOWN OF RIDGEFIELD**  
Connecticut

**Certificate of Occupancy**

**Owner:**

INSITE TOWERS LLC  
1199 N. FAIRFAX ST, Su700  
ALEXANDRA, VA 22314

**Contractor:**

HPC WIRELESS SERVICES LLC  
22 SHELTER ROCK LN. BLDG C  
DANBURY, CT 06810

This is to certify that the new construction and proposed use of premises described below have been duly inspected and approved for occupancy as stated herein.

To the best of my knowledge the new construction and proposed use comply with the provisions of all laws and ordinances of the State of Connecticut and the Town of Ridgefield enforced by the Building Inspector.

It is specifically understood that this certificate becomes null and void when secured through fraud or by reason of latent violation not ascertainable at the time of inspections or when changes in use, construction, or building service equipment that is controlled by the Building Code, are made without Inspector's approval.

The following permits associated with this building permit are:

Sub Permit #	Date Issued
EP-2015-0200	6/12/2015

**DESCRIPTION OF WORK:**

Code Version:

Use Group:

Construction Type:

Installation of a telecommunications facility consisting of a 150 ft monopole and 4650 sq equipment compound along with utilities.

**THIS CERTIFICATE OF OCCUPANCY MAY BE REVOKED BY THE TOWN OF RIDGEFIELD  
UPON VIOLATION OF ANY OF ITS RULES AND REGULATIONS**

Signature:

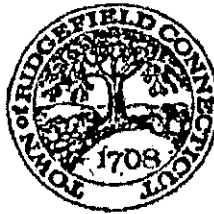
Name:

William Reynolds

**CO Issue Date: 9/9/2015**

**MICRO-FILM  
COPY**

Map:	D08
Lot	0124
Project #	JS-2015-0207
Est. Cost	\$70,000.00



**TOWN OF RIDGEFIELD**  
Connecticut

## Certificate of Occupancy

**Owner:**

INSITE TOWERS DEV., LLC  
1199 N. FAIRFAX #700  
ALEXANDRIA, VA 22314

**Contractor:**

SITE AQUISITIONS INC.  
27 Northwestern Dr.  
Salem, NH 03079

This is to certify that the new construction and proposed use of premises described below have been duly inspected and approved for occupancy as stated herein.

To the best of my knowledge the new construction and proposed use comply with the provisions of all laws and ordinances of the State of Connecticut and the Town of Ridgefield enforced by the Building Inspector.

It is specifically understood that this certificate becomes null and void when secured through fraud or by reason of latent violation not ascertainable at the time of inspections or when changes in use, construction, or building service equipment that is controlled by the Building Code, are made without Inspector's approval.

The following permits associated with this building permit are:

Sub Permit #	Date Issued
EP-2015-0199	6/12/2015

**DESCRIPTION OF WORK:** Code Version: Use Group: Construction Type:

1. Attach antennas and associated equipment on a 150 feet tower (centerline will be at 146 feet).
2. Install an 11 feet 5 inch by 16 feet equipment shelter and generator pad (11 feet 5 inches by 24 feet footprint) within the fenced tower compound.

**THIS CERTIFICATE OF OCCUPANCY MAY BE REVOKED BY THE TOWN OF RIDGEFIELD  
UPON VIOLATION OF ANY OF ITS RULES AND REGULATIONS**

Signature: 

Name:

William Keynolds

**CO Issue Date: 9/9/2015**

**MICRO-FILM  
COPY**

# EXHIBIT 7



**UPS CampusShip: View/Print Label**

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**  
**Customers with a Daily Pickup**  
 Your driver will pickup your shipment(s) as usual.

**Customers without a Daily Pickup**

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.


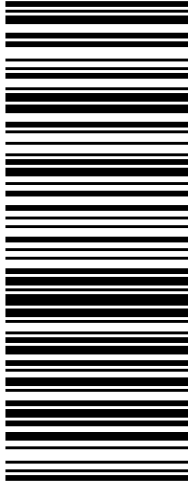

Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.  
 Hand the package to any UPS driver in your area.

UPS Access Point™  
 CVS STORE # 972  
 555 WASHINGTON ST  
 SOUTH EASTON ,MA 02375

UPS Access Point™  
 CVS STORE # 7232  
 689 DEPOT ST  
 NORTH EASTON ,MA 02356

UPS Access Point™  
 TOWN LINE GENERAL STORE  
 450 E CENTER ST  
 WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p><b>1 LBS</b></p> <p><b>1 OF 1</b></p> <p>JENNIFER ILIADES        978-944-1804        CENTERLINE COMMUNICATIONS        750 W CENTER ST        WEST BRIDGEWATER, MA 02379</p> <p><b>SHIP TO:</b>        RUDY MARCONI, FIRST SELECTMAN        TOWN OF RIDGEFIELD        400 MAIN STREET        RIDGEFIELD CT 06877-4610</p>	<p><b>CT 068 0-02</b></p> 	<p><b>UPS GROUND</b></p> <p>TRACKING #: 1Z 9Y4 503 03 2039 4355</p>		<p>BILLING: P/P</p> <p>Reference # 1: CT1855 - CSC to First Selectman</p> <p>CS 22.0.11. WNTNVS0 83.0A.12/2019</p> 
---	---	---	---	--

## Jennifer Iliades

---

**From:** UPS Quantum View <pkginfo@ups.com>  
**Sent:** Friday, April 3, 2020 12:47 PM  
**To:** Jennifer Iliades  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030320394355



### Your package has been delivered.

**Delivery Date:** Friday, 04/03/2020  
**Delivery Time:** 12:40 PM

At the request of CENTERLINE SITE ACQUISITION this notice alerts you that the status of the shipment listed below has changed.

## Shipment Detail

<b>Tracking Number:</b>	<b><u>1Z9Y45030320394355</u></b>
<b>Ship To:</b>	Rudy Marconi, First Selectman Town of Ridgefield 400 MAIN ST RIDGEFIELD, CT 06877 US
<b>UPS Service:</b>	UPS GROUND
<b>Number of Packages:</b>	1
<b>Weight:</b>	0.2 LBS
<b>Delivery Location:</b>	RECEIVER ASANI
<b>Reference Number 1:</b>	CT1855 - CSC to First Selectman



[Download the UPS mobile app](#)

© 2020 United Parcel Service of America, Inc. UPS, the UPS brandmark, and the color brown are trademarks of United Parcel Service of America, Inc. All rights reserved.

All trademarks, trade names, or service marks that appear in connection with UPS's services are the property of their respective owners.

Please do not reply directly to this email. UPS will not receive any reply message.

**[Review the UPS Privacy Notice](#)**

**[For Questions, Visit Our Help and Support Center](#)**

**UPS CampusShip: View/Print Label**

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**  
**Customers with a Daily Pickup**  
Your driver will pickup your shipment(s) as usual.

**Customers without a Daily Pickup**

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.

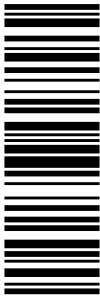
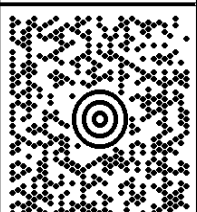


Hand the package to any UPS driver in your area.

UPS Access Point™  
CVS STORE # 972  
555 WASHINGTON ST  
SOUTH EASTON ,MA 02375

UPS Access Point™  
CVS STORE # 7232  
689 DEPOT ST  
NORTH EASTON ,MA 02356

UPS Access Point™  
TOWN LINE GENERAL STORE  
450 E CENTER ST  
WEST BRIDGEWATER ,MA 02379

FOLD HERE

<b>1 LBS</b> <b>1 OF 1</b> JENNIFER ILIADES 978-944-1804 CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER, MA 02379 <b>SHIP TO:</b> RICHARD BALDELLI, DIRECTOR, ZEO RIDGEFIELD PLANNING & ZONING 400 MAIN STREET RIDGEFIELD CT 06877-4610	<b>CT 068 0-02</b>  	<b>UPS GROUND</b> TRACKING #: 1Z 9Y4 503 03 3306 8960 	<b>BILLING: P/P</b> Reference # 1: CT1855 - CSC to P&Z CS 22.0.11. WNTNVS0 83.0A.12/2019 
--	--	---	---

## Jennifer Iliades

---

**From:** UPS Quantum View <pkginfo@ups.com>  
**Sent:** Friday, April 3, 2020 12:47 PM  
**To:** Jennifer Iliades  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030333068960



### Your package has been delivered.

**Delivery Date:** Friday, 04/03/2020  
**Delivery Time:** 12:40 PM

At the request of CENTERLINE SITE ACQUISITION this notice alerts you that the status of the shipment listed below has changed.

## Shipment Detail

<b>Tracking Number:</b>	<a href="#"><u>1Z9Y45030333068960</u></a>
<b>Ship To:</b>	Richard Baldelli, Director, ZEO Ridgefield Planning & Zoning 400 MAIN ST RIDGEFIELD, CT 06877 US
<b>UPS Service:</b>	UPS GROUND
<b>Number of Packages:</b>	1
<b>Weight:</b>	0.2 LBS
<b>Delivery Location:</b>	RECEIVER ASANI
<b>Reference Number 1:</b>	CT1855 - CSC to P&Z



[Download the UPS mobile app](#)

© 2020 United Parcel Service of America, Inc. UPS, the UPS brandmark, and the color brown are trademarks of United Parcel Service of America, Inc. All rights reserved.

All trademarks, trade names, or service marks that appear in connection with UPS's services are the property of their respective owners.

Please do not reply directly to this email. UPS will not receive any reply message.

**[Review the UPS Privacy Notice](#)**

**[For Questions, Visit Our Help and Support Center](#)**

**UPS CampusShip: View/Print Label**

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**  
**Customers with a Daily Pickup**  
 Your driver will pickup your shipment(s) as usual.

**Customers without a Daily Pickup**

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.

Hand the package to any UPS driver in your area.

UPS Access Point™  
 CVS STORE # 972  
 555 WASHINGTON ST  
 SOUTH EASTON ,MA 02375

UPS Access Point™  
 CVS STORE # 7232  
 689 DEPOT ST  
 NORTH EASTON ,MA 02356

UPS Access Point™  
 TOWN LINE GENERAL STORE  
 450 E CENTER ST  
 WEST BRIDGEWATER ,MA 02379

FOLD HERE

<div> <div>1 LBS</div> <div>1 OF 1</div> </div> <div>           JENNIFER ILIADES            978-944-1804            CENTERLINE COMMUNICATIONS            750 W CENTER ST            WEST BRIDGEWATER, MA 02379         </div> <div> <b>SHIP TO:</b>            TIMOTHY PETERSON, INSITE WIRELESS            732-616-1962            INSITE TOWER DEVELOPMENT, LLC            SUITE 700            1199 N. FAIRFAX STREET  <b>ALEXANDRIA VA 22314-1437</b> </div>	<div>  </div> <div> <b>VA 222 9-30</b>   </div>	<div> <b>UPS 2ND DAY AIR</b>  <b>2</b> </div> <div>           TRACKING #: 1Z 9Y4 503 02 2273 6573         </div>		<div>           BILLING: P/P         </div> <div>  </div> <div>           Reference # 1: CT1855 - CSC to InSite  <small>CS 22.0.11. WNTNVS0 83.0A.12/2019</small> </div>
--	---	--	--	---

# Proof of Delivery

Dear Customer,

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

**Tracking Number**

1Z9Y45030222736573

**Weight**

0.20 LBS

**Service**

UPS 2nd Day Air®

**Shipped / Billed On**

04/01/2020

**Delivered On**

04/06/2020 11:11 A.M.

**Delivered To**

1199 N FAIRFAX ST  
700  
ALEXANDRIA, VA, 22314, US

**Received By**

WHITE

**Left At**

Office

**Reference Number(s)**

CT1855 - CSC TO INSITE

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

Sincerely,

UPS

Tracking results provided by UPS: 04/06/2020 12:53 P.M. EST