



QC Development

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Storrs, CT 06268

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Mark.Roberts@QCDevelopment.net

August 30, 2016

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

Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T)
150 North Main Street, Branford, CT 06405 – AT&T #CT2220
N 41-17-18.90
W 72-48-49.90

Dear Ms. Bachman:

AT&T currently maintains twelve (12) antennas at the 112-foot level of the existing 157-foot Monopole at 150 North Main Street, Branford, CT. The structure is owned by Crown Castle and the property is owned by Premier Realty Holdings LLC. AT&T now intends to remove two (2) Kathrein and one (1) KMW antenna and replace them with three (3) Andrew SBNHH-1D65A antennas. These antennas would be installed at the 112-foot level of the tower. AT&T also intends to remove and replace three (3) Ericsson RRUS-11 radio heads and install three (3) Ericsson RRUS-32 B2 radio heads.

This facility was approved by the Connecticut Siting Council, Petition No. 887 on March 12, 2009. There were no conditions that could feasibly be violated by this modification, including the stealth design, total facility height or mounting restrictions. This modification therefore complies with the aforementioned approval.

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

owner.

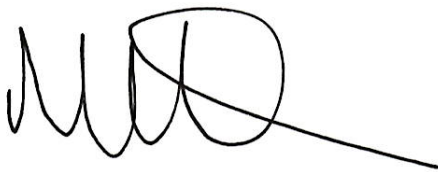
The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Please feel free to call me at (860) 670-9068 with any questions regarding this matter. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'MR', with a long horizontal line extending to the right.

Mark Roberts
QC Development
Consultant for AT&T

Attachments

cc: James B. Cosgrove - as elected official (via e-mail)
Premier Realty Holdings LLC - as property owner
Crown Castle - as structure owner (via e-mail)

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz ^{**})	Limit S (mW/cm ²)	%MPE
Other Carriers*							4.73%
AT&T GSM	1	500	112	0.0160	880	0.5867	0.27%
AT&T GSM	2	500	112	0.0320	1900	1.0000	0.32%
AT&T UMTS	8	296	112	0.0787	880	0.5867	1.34%
AT&T UMTS	1	500	112	0.0166	1900	1.0000	0.17%
AT&T LTE	1	500	112	0.0160	700	0.4667	0.34%
AT&T LTE	8	427	112	0.1093	1900	1.0000	1.09%
Site Total							8.10%

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

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

Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz ^{**})	Limit S (mW/cm ²)	%MPE
Other Carriers*							4.73%
AT&T GSM	2	500	112	0.0320	1900	1.0000	0.32%
AT&T UMTS	8	296	112	0.0787	880	0.5867	1.34%
AT&T UMTS	1	500	112	0.0166	1900	1.0000	0.17%
AT&T LTE	1	500	112	0.0160	700	0.4667	0.34%
AT&T LTE	8	427	112	0.1093	1900	1.0000	1.09%
AT&T LTE	1	500	112	0.0160	2300	1.0000	0.16%
Site Total							8.16%

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

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

Note: Proposed Loading may also include corrections to certain Existing Loading values

PROJECT INFORMATION

SCOPE OF WORK: TELECOMMUNICATIONS FACILITY UPGRADE (LTE BWE 2017 UPGRADE):

SITE ADDRESS: 150 NORTH MAIN STREET
BRANFORD, CT 06405

LATITUDE: 41.288603° N, 41° 17' 18.97" N

LONGITUDE: 72.813860° W, 72° 48' 49.90" W

TYPE OF SITE: MONOPOLE / INDOOR EQUIPMENT

TOWER HEIGHT: 147' ±

RAD CENTER: 112' ±

JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT2220

SITE NAME: BRANFORD CENTRAL

PROJECT: LTE BWE 2017 UPGRADE

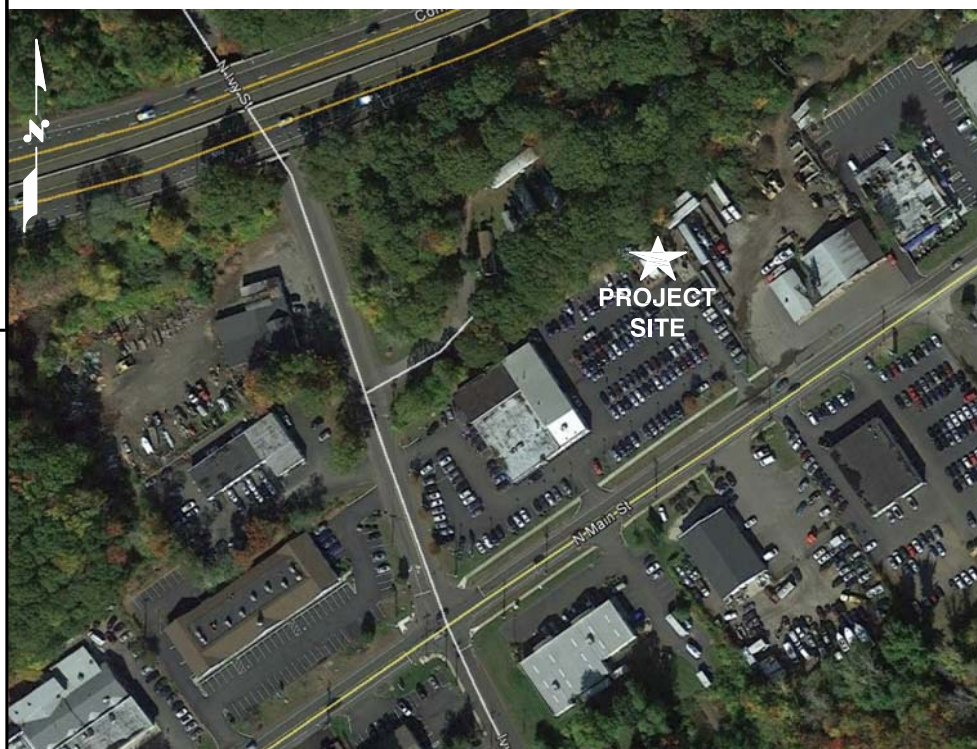
DRAWING INDEX

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

VICINITY MAP

DIRECTIONS TO SITE:

START OUT GOING NORTHEAST ON ENTERPRISE DR TOWARD CAPITOL BLVD. 0.4 MI TURN LEFT ONTO CAPITOL BLVD. 0.3 MI TURN LEFT ONTO WEST ST. 0.3 MI MERGE ONTO I-91 S VIA THE RAMP ON THE LEFT TOWARD NEW HAVEN. 29.0 MI MERGE ONTO I-95 N/GOVERNOR JOHN DAVIS LODGE TURNPIKE VIA THE EXIT ON THE LEFT TOWARD NEW LONDON. 5.6 MI TAKE THE CEDAR ST EXIT, EXIT 54, TOWARD BRANFORD. 0.1 MI TURN RIGHT ONTO CEDAR ST/CT-740. 0.2 MI TAKE THE 1ST LEFT ONTO N MAIN ST/US-1. 0.2 MI 150 N MAIN ST IS ON THE LEFT.



GENERAL NOTES

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

CCI SITE NUMBER: 876321
CCI SITE NAME: BRANDFORD BANM TOWER

72 HOURS



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



UNDERGROUND SERVICE ALERT

1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

27 NORTHWESTERN DR.
SALEM, NH 03079

SITE NUMBER: CT2220
SITE NAME: BRANFORD CENTRAL
CCI SITE NUMBER: 876321
150 NORTH MAIN STREET
BRANFORD, CT 06405
NEW HAVEN COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	07/14/16	ISSUED FOR CONSTRUCTION	SG	AT	DPH
A	06/17/16	ISSUED FOR REVIEW	EB	AT	DPH

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

AT&T

TITLE SHEET
(LTE BWE)

SITE NUMBER	DRAWING NUMBER	REV
2220.00	T-1	1

GROUNDING NOTES

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

GENERAL NOTES

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

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
 BUILDING CODE: 2003 IBC WITH 2005 CT SUPPLEMENT, + 2009 & 2013 CT AMENDMENTS
 ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
 LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

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

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

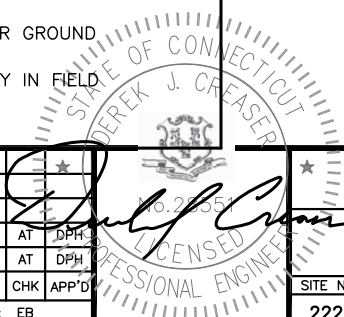
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

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

EQUIPMENT AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

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

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



Hudson Design Group LLC
 1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 3090
 N. ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

SAI
 27 NORTHWESTERN DR.
 SALEM, NH 03079

SITE NUMBER: CT2220
SITE NAME: BRANFORD CENTRAL
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 NEW HAVEN COUNTY

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

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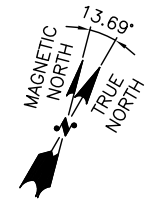
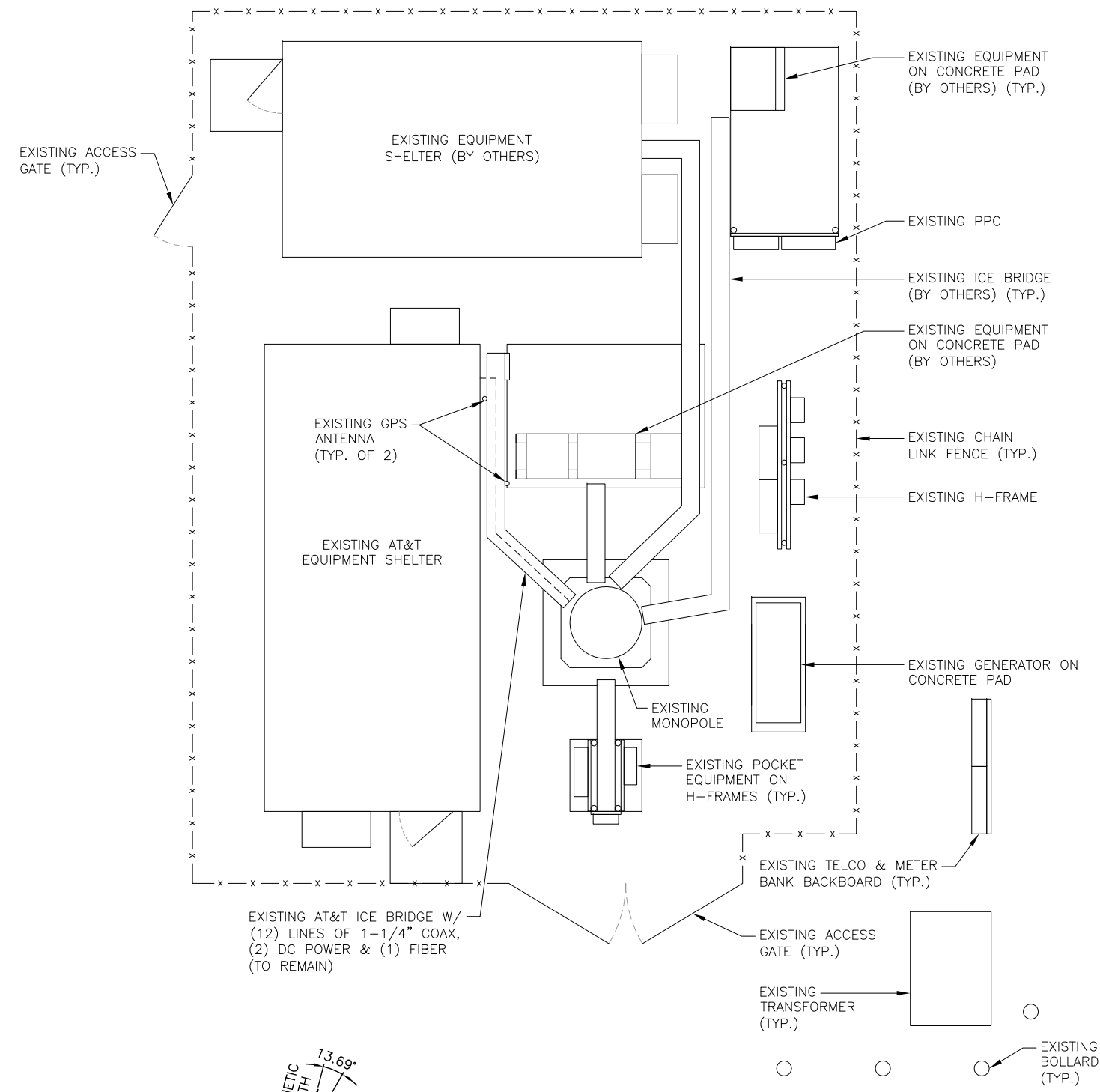
AT&T
GENERAL NOTES (LTE BWE)

SITE NUMBER	DRAWING NUMBER	REV
2220.00	GN-1	1

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC.
 DATED: JUNE 23, 2016

NOTE:
 ALL ANTENNAS AND LINES TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY CROWN CASTLE AND FINAL AT&T RF DATA SHEET.

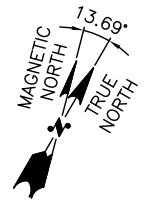
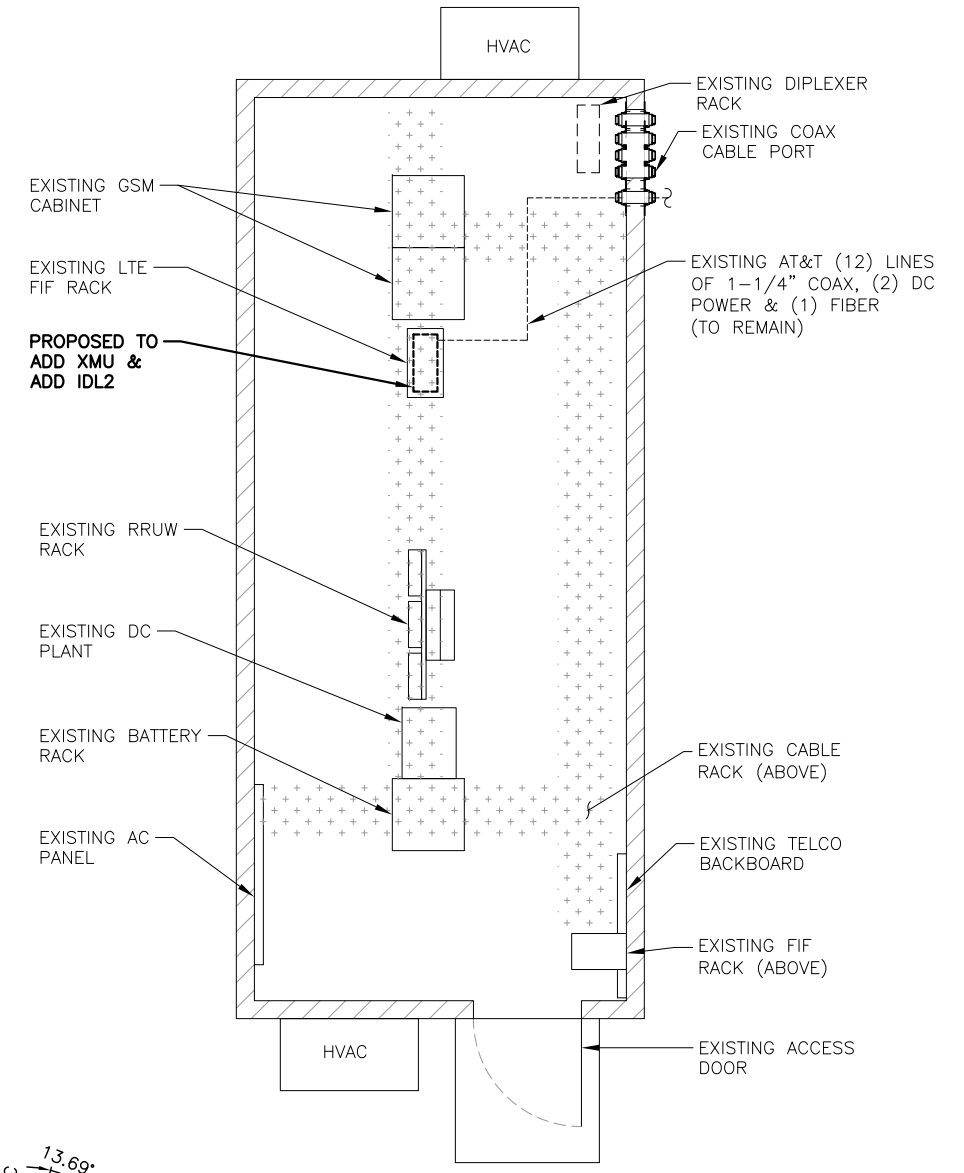
NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA CONFIGURATION.



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

1 A-1

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



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

2 A-1

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

Hudson Design Group LLC

1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 3090
 N. ANDOVER, MA 01845

TEL: (978) 557-5553
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SAI

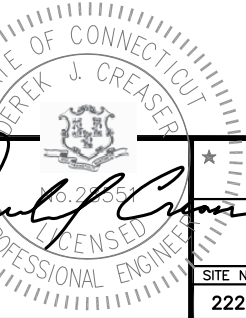
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at&t

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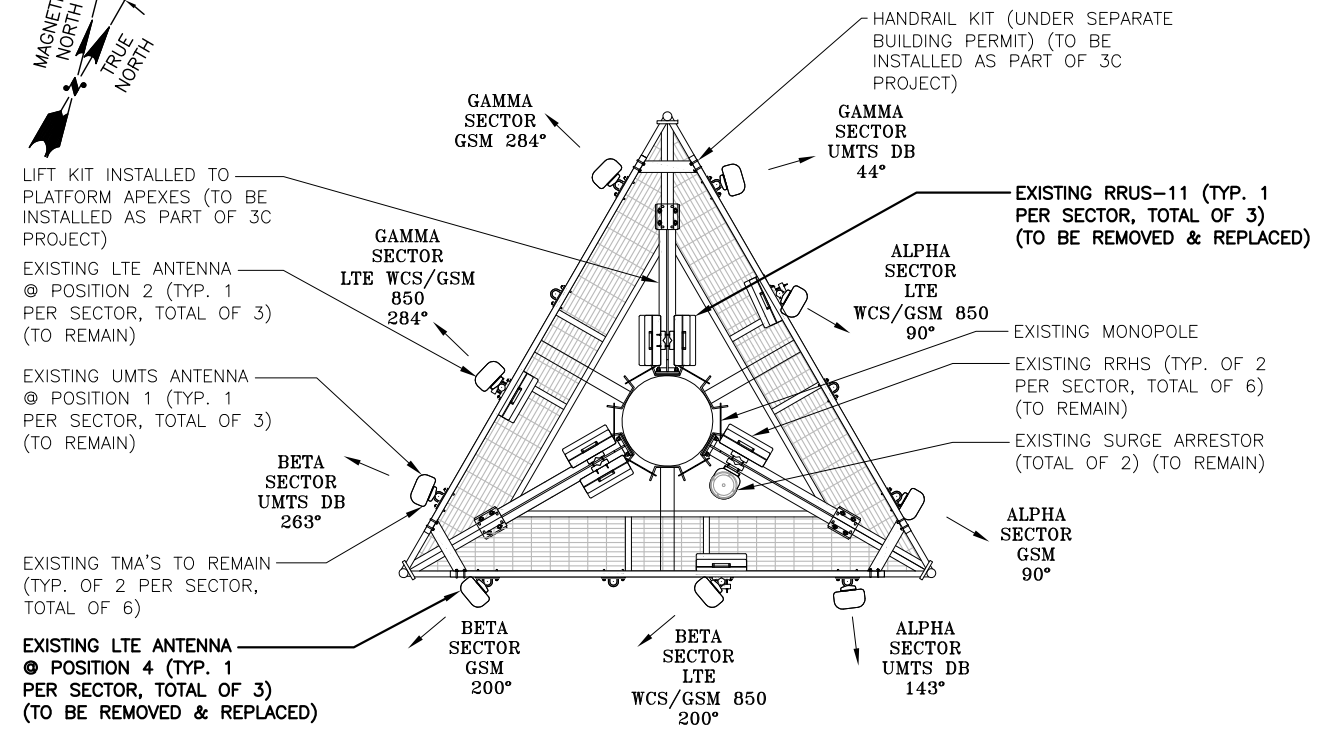
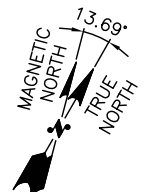
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AT&T

COMPOUND & EQUIPMENT PLANS (LTE BWE)

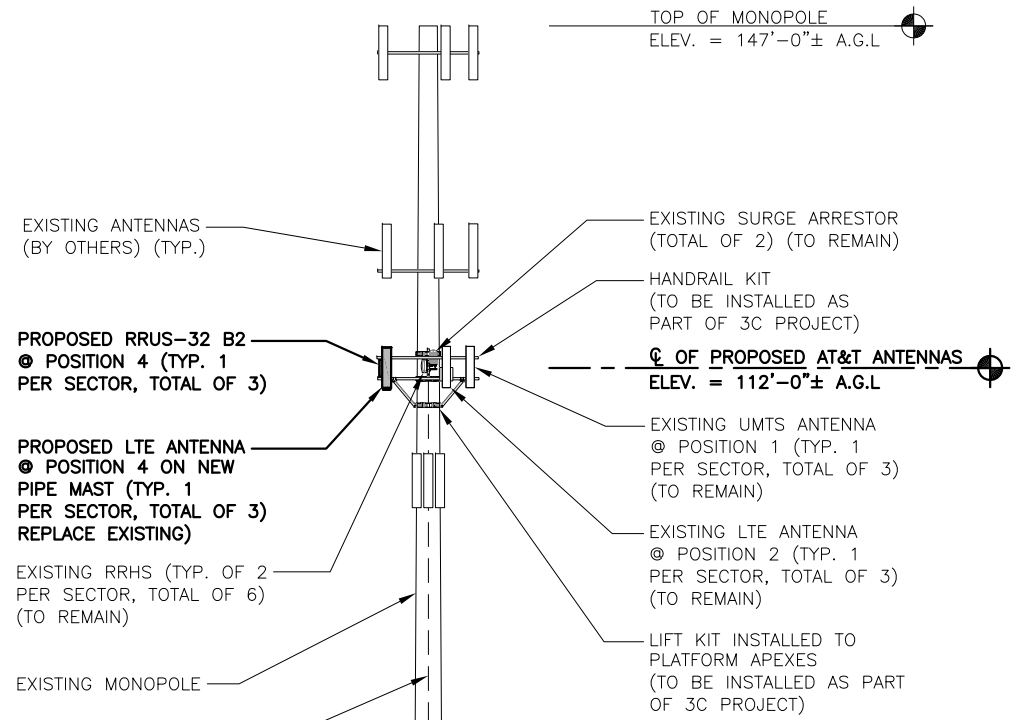
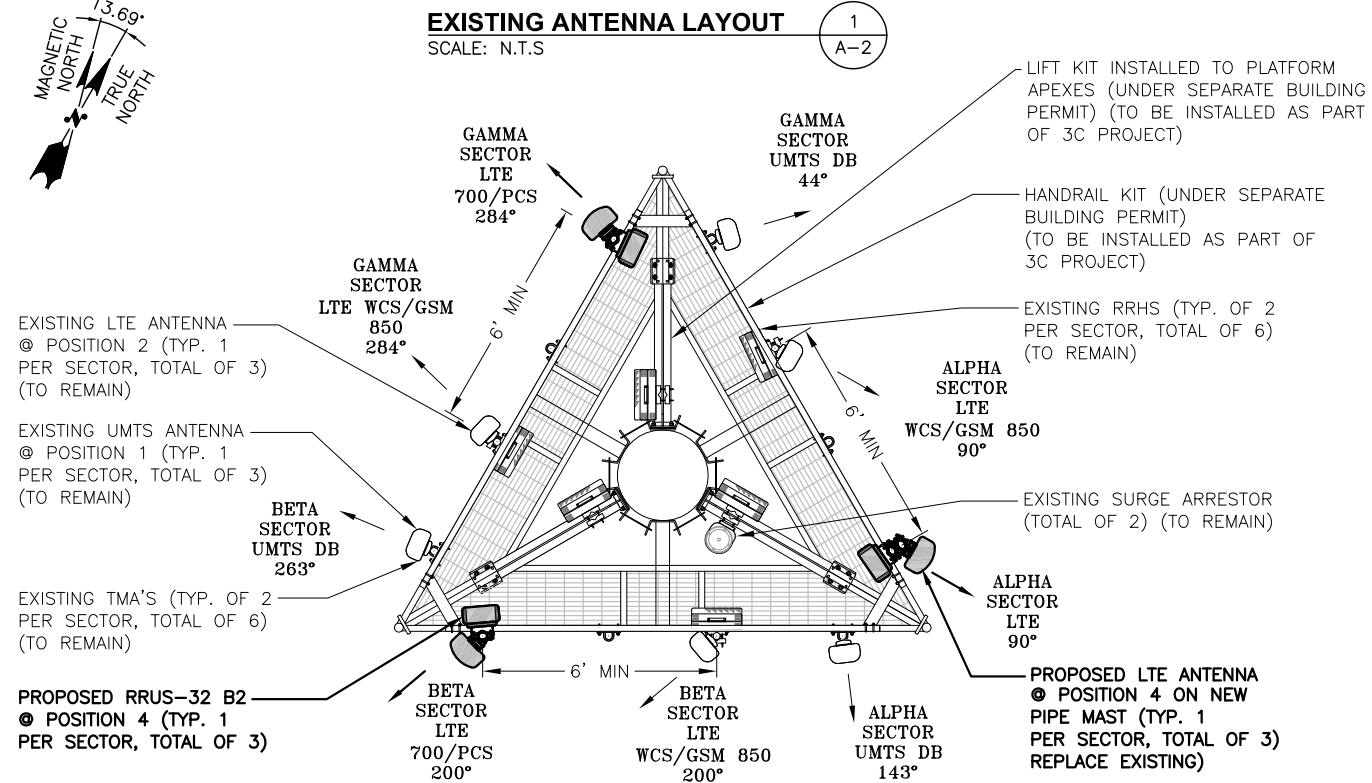
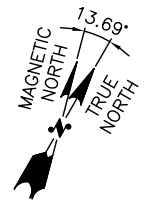
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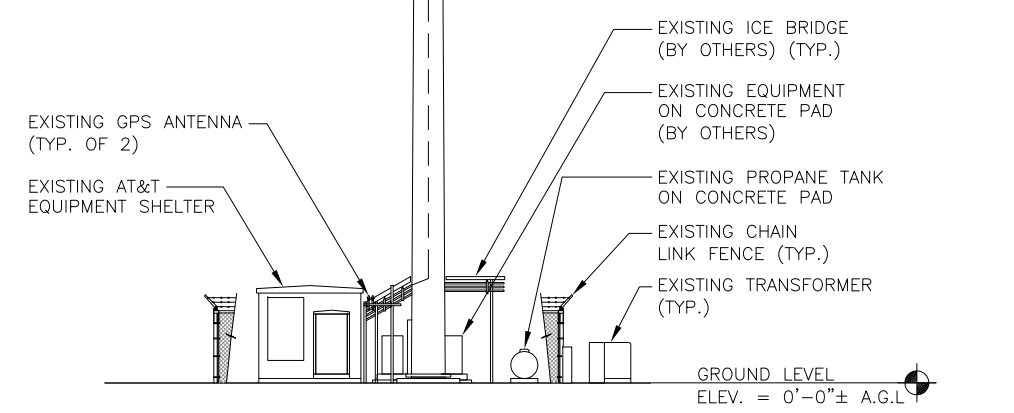
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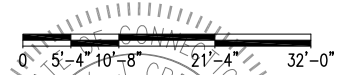
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AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DATED: JUNE 23, 2016



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



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



Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
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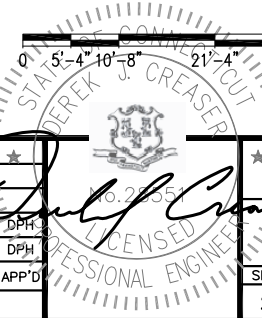
SAI
27 NORTHWESTERN DR.
SALEM, NH 03079

SITE NUMBER: CT2220
SITE NAME: BRANFORD CENTRAL
CCI SITE NUMBER: 876321
150 NORTH MAIN STREET
BRANFORD, CT 06405
NEW HAVEN COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	07/14/16	ISSUED FOR CONSTRUCTION	SG	AT	DPH
A	06/17/16	ISSUED FOR REVIEW	EB	AT	DPH

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



AT&T

ANTENNA LAYOUTS & ELEVATION (LTE BWE)

SITE NUMBER	DRAWING NUMBER	REV
2220.00	A-2	1

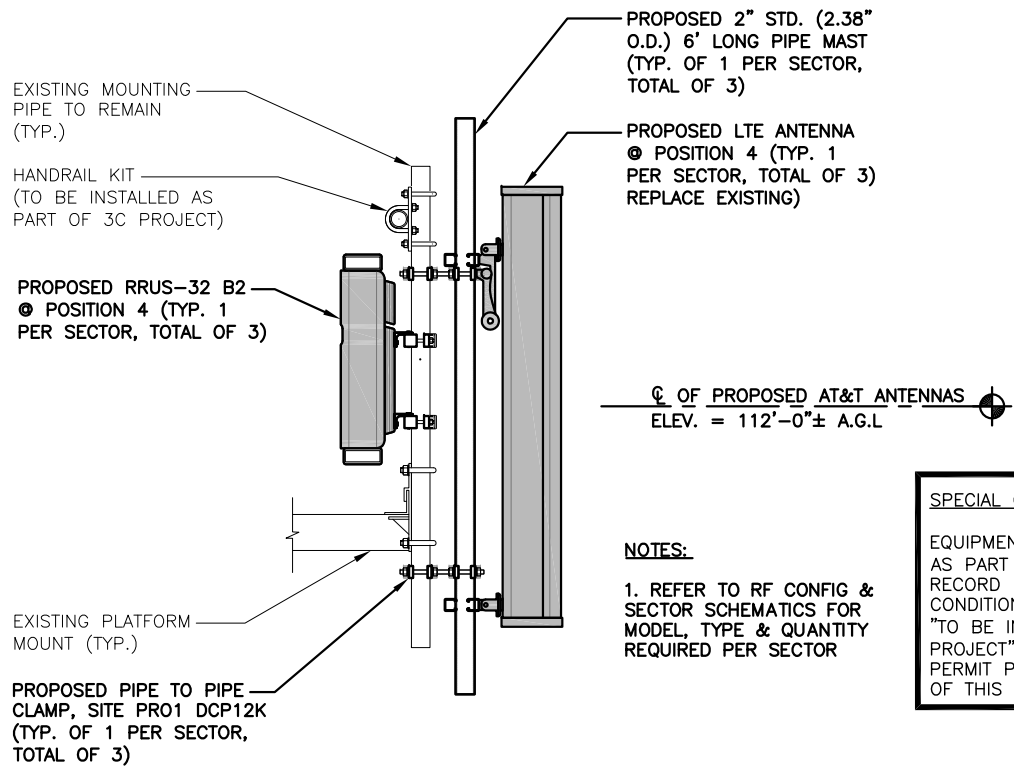
EXISTING ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	POWERWAVE	7770	55X11X5
	ANDREW KATHREIN	SBNHH-1D65A 80010764	55X11.9X7.1 55.2X11.8X6
BETA:	POWERWAVE	7770	55X11X5
	ANDREW KATHREIN	SBNHH-1D65A 80010764	55X11.9X7.1 55.2X11.8X6
GAMMA:	POWERWAVE	7770	55X11X5
	ANDREW KMW	SBNHH-1D65A AM-X-CD-14-65-00T-RET	55X11.9X7.1 48X11.8X5.9

EXISTING ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	POWERWAVE	7770	55X11X5
	ANDREW	SBNHH-1D65A SBNHH-1D65A	55X11.9X7.1 55X11.9X7.1
BETA:	POWERWAVE	7770	55X11X5
	ANDREW	SBNHH-1D65A SBNHH-1D65A	55X11.9X7.1 55X11.9X7.1
GAMMA:	POWERWAVE	7770	55X11X5
	ANDREW	SBNHH-1D65A SBNHH-1D65A	55X11.9X7.1 55X11.9X7.1

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DATED: JUNE 23, 2016

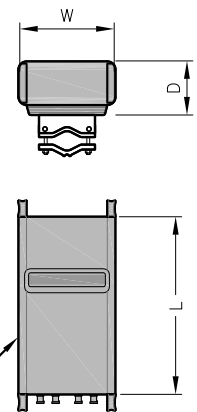
NOTE:
ALL ANTENNAS AND LINES TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY CROWN CASTLE AND FINAL AT&T RF DATA SHEET.

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



RRU CHART				
QUANTITY	MODEL	L	W	D
3 (E)	RRUS-11	19.7"	17.0"	7.2"
-	RRUS-12	20.4"	18.5"	7.5"
3 (E) & 3 (P)	RRUS-32	27.2"	12.1"	7.0"
-	RRUS-E2	20.4"	18.5"	7.5"
-	LTE-A2	16.4"	15.2"	3.4"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS



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

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NOTES:
1. REFER TO RF CONFIG & SECTOR SCHEMATICS FOR MODEL, TYPE & QUANTITY REQUIRED PER SECTOR

PROPOSED LTE ANTENNA & RRU MOUNTING DETAIL
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"
1
A-3

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

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NEW HAVEN COUNTY

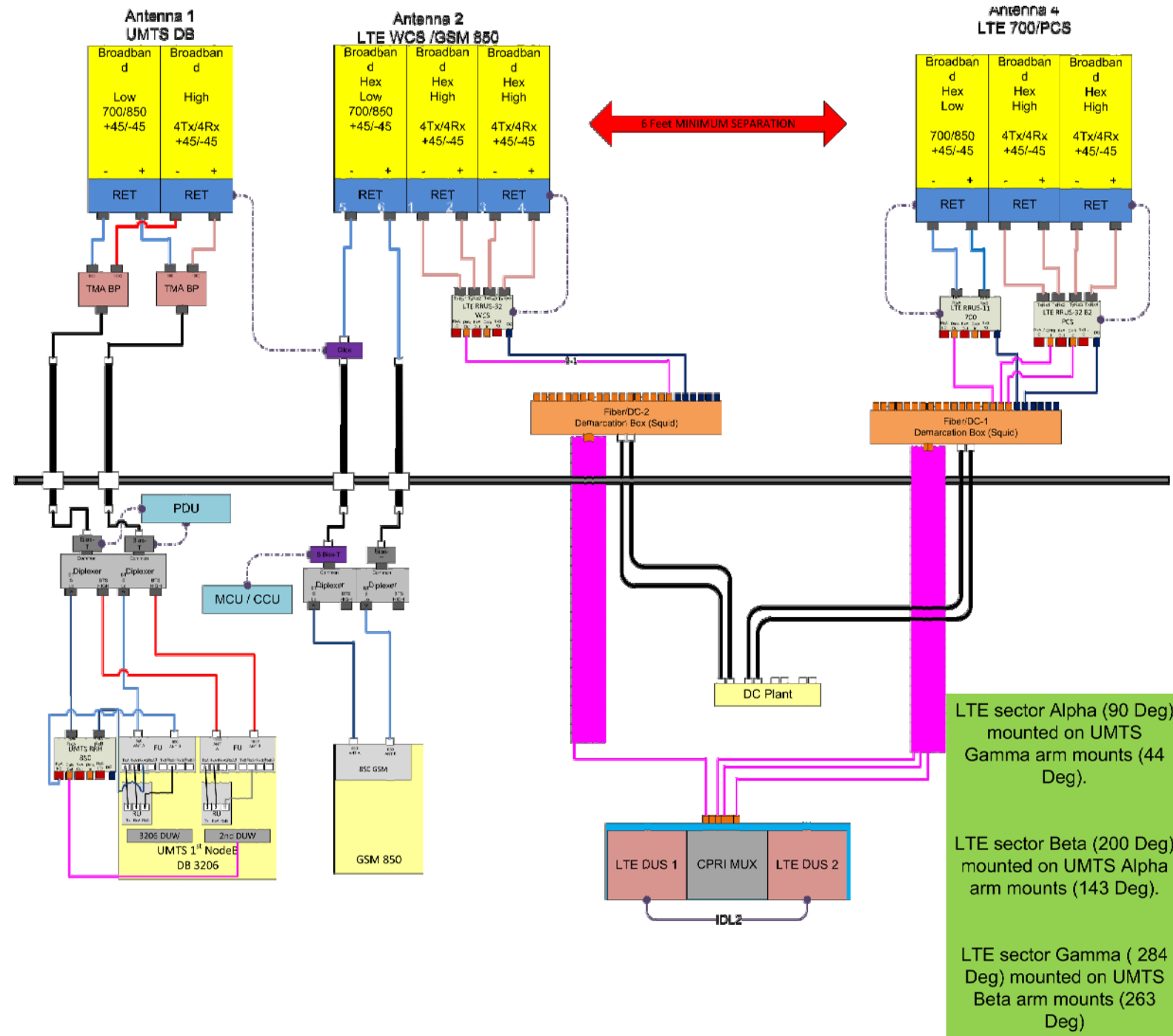
at&t
500 ENTERPRISE DRIVE, SUITE 3A
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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: EB



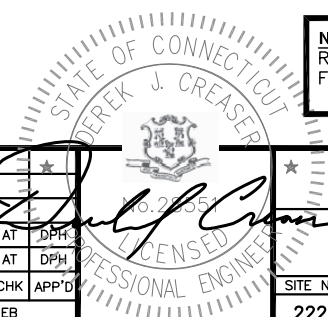
AT&T
DETAILS (LTE BWE)
SITE NUMBER: 2220.00
DRAWING NUMBER: A-3
REV: 1



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.



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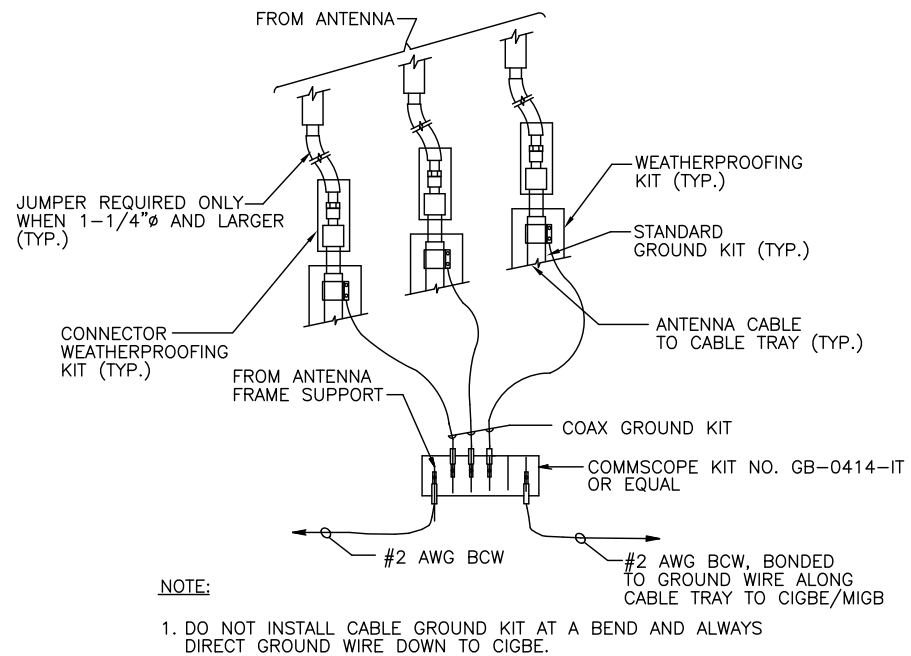
SITE NUMBER: CT2220
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 CCI SITE NUMBER: 876321
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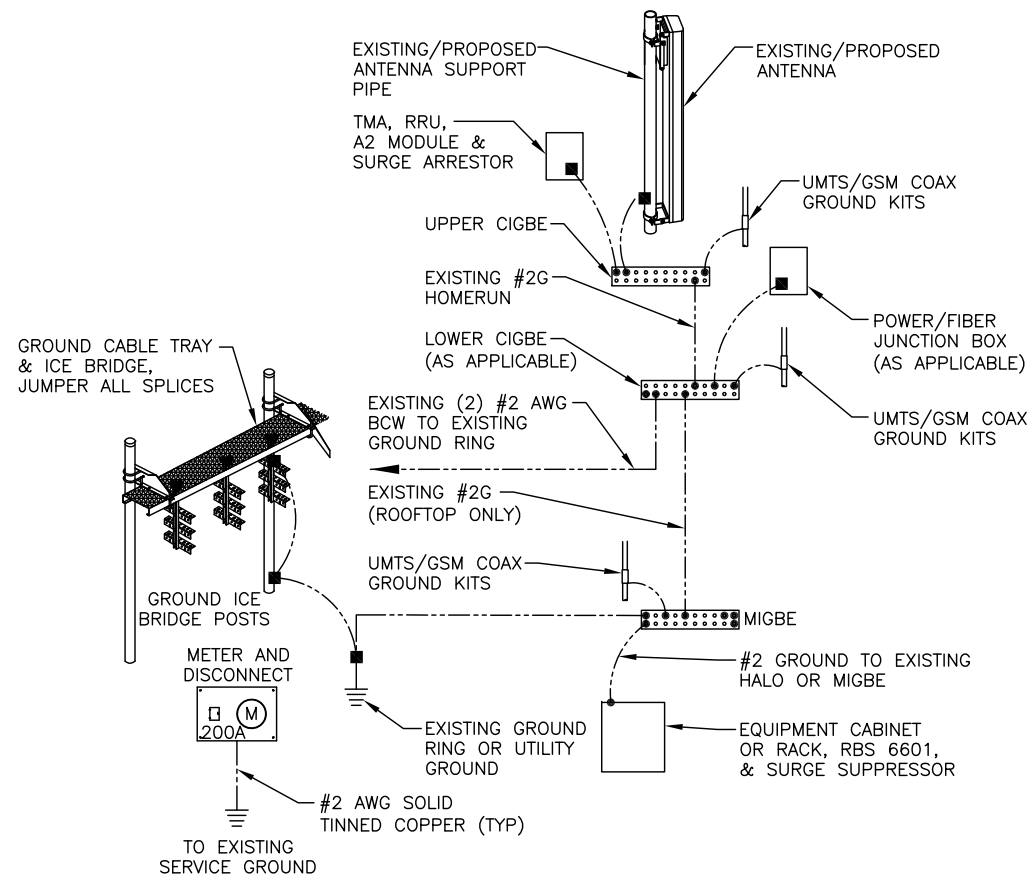
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SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: EB		

AT&T
 RF PLUMBING DIAGRAM
 (LTE BWE)

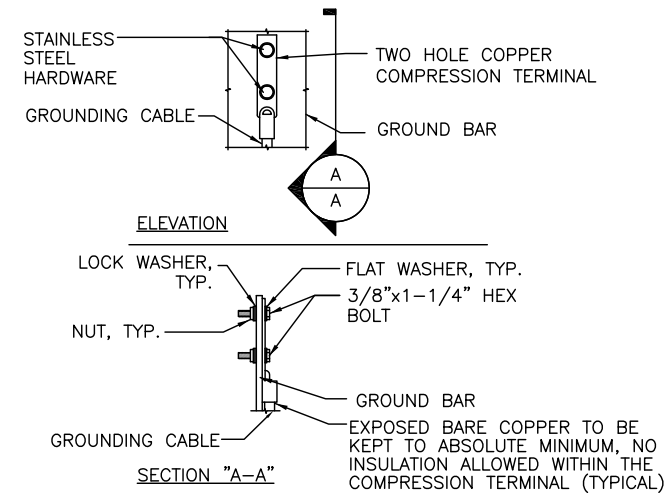
SITE NUMBER	DRAWING NUMBER	REV
2220.00	RF-1	1



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



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



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

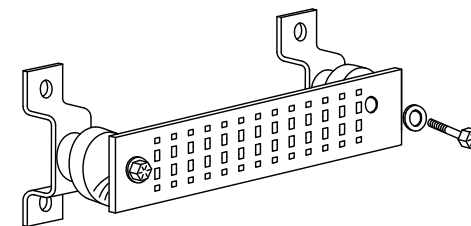
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

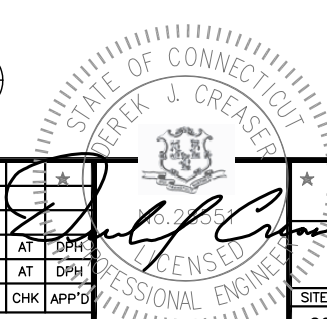
- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

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



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



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

AT&T		
GROUNDING DETAILS (LTE BWE)		
SITE NUMBER	DRAWING NUMBER	REV
2220.00	G-1	1



Date: **June 17, 2016**

James Ravencraft
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277

Paul J Ford and Company
250 E. Broad Street, Suite 600
Columbus, OH 43215
614-221-6679
jjohnson@pjfweb.com

Subject: Structural Analysis Report

Carrier Designation: *AT&T Mobility Co-Locate*
Carrier Site Number: CTL02220
Carrier Site Name: Branford Central

Crown Castle Designation:
Crown Castle BU Number: 876321
Crown Castle Site Name: BRANFORD BANM TOWER
Crown Castle JDE Job Number: 383193
Crown Castle Work Order Number: 1254094
Crown Castle Application Number: 351129 Rev. 2

Engineering Firm Designation: **Paul J Ford and Company Project Number:** 37516-0242.005.7805

Site Data: **150 North Main Street, BRANFORD, New Haven County, CT**
Latitude 41° 17' 19", Longitude -72° 48' 49.9"
147 Foot - Monopole Tower

Dear James Ravencraft,

Paul J Ford and Company is pleased to submit this "Structural Analysis Report" to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 914736, in accordance with application 351129, revision 2.

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:

LC5: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing loading, respectively.

The structural analysis was performed for this tower in accordance with the requirements of the 2005 Connecticut Building Code and the TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 80 mph with no ice, 37.6 mph with 0.75 inch ice thickness and 50 mph under service loads.

We at *Paul J Ford and Company* appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

Joshua Johnson, EI
Structural Designer



6.17.16

Date: **June 17, 2016**

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3530 Toringdon Way, Suite 300
Charlotte, NC 28277

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Carrier Designation: **AT&T Mobility Co-Locate**
Carrier Site Number: CTL02220
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1) INTRODUCTION

This tower is a 147-ft Monopole tower designed by SUMMIT in March of 1999. The tower was originally designed for a wind speed of 90 mph per TIA/EIA-222-F.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of the 2005 Connecticut Building Code and the TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 80 mph with no ice, 37.6 mph with 0.75 inch ice thickness and 50 mph under service loads.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
110.0	112.0	6	andrew	SBNHH-1D65A w/ Mount Pipe	1 2	3/8 3/4	-
		3	ericsson	WCS RRUS-32-B30			
		1	raycap	DC6-48-60-18-8F			
	110.0	3	ericsson	RRUS 32 B2			
		1	tower mounts	MT-195-14 (Hand Rail)			
		1	tower mounts	PRK-1245L (Kickers)			

Table 2 - Existing Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
147.0	149.0	1	andrew	VHLP2-18	6 3	1/2 1-1/4	1
		2	dragonwave	A-ANT-23G-2-C			
	147.0	3	alcatel lucent	TD-RRH8x20-25			
		1	powerwave	P40-16-XLPP-RR-A w/ Mount Pipe			
		9	rfs celwave	ACU-A20-N			
		2	rfs celwave	APXVSP18-C-A20 w/ Mount Pipe			
		3	rfs celwave	APXVTM14-C-120 w/ Mount Pipe			
1	tower mounts	Platform Mount [LP 1201-1]					
145.0	146.0	3	alcatel lucent	800 EXTERNAL NOTCH FILTER	-	-	1
		3	alcatel lucent	TME-800MHZ RRH			
	145.0	1	tower mounts	Side Arm Mount [SO 102-3]			
	143.0	3	alcatel lucent	TME-1900MHZ RRH (65 MHz)			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note				
119.0	121.0	3	andrew	LNX-6515DS-VTM w/ Mount Pipe	12	1-1/4 1-5/8	1				
		3	ericsson	RRUS 11 B12							
		3	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe							
		3	ericsson	ERICSSON AIR 21 B4A B2P w/ Mount Pipe							
		3	ericsson	KRY 112 144/1							
	119.0	1	tower mounts	T-Arm Mount [TA 601-3]							
110.0	113.0	1	ericsson	RRUS 11	2 1	5/8 3/8	2				
		1	kmw	AM-X-CD-14-65-00T-RET w/ Mount Pipe							
	112.0	3	powerwave	7770.00 w/ Mount Pipe							
		2	kathrein	800 10764 w/ Mount Pipe							
		3	powerwave	7020.00							
		1	ericsson	RRUS 11							
		6	powerwave	LGP2140X							
		3	powerwave	7020.00							
		3	powerwave	7770.00 w/ Mount Pipe							
	110.0	110.0	1	raycap				DC6-48-60-18-8F	1 2 12 1	3/8 3/4 1-1/4 2" Conduit	1
			6	powerwave				LGP2140X			
3			ericsson	RRUS 11							
1			tower mounts	Platform Mount [LP 1201-1]							
100.0	100.0	3	rfs celwave	APXV18-206517S-C w/ Mount Pipe	6	1-5/8	1				
		1	tower mounts	Pipe Mount [PM 601-3]							
53.0	54.0	1	gps	GPS_A	1	1/2	1				
	53.0	1	tower mounts	Side Arm Mount [SO 701-1]							
49.0	50.0	1	lucent	KS24019-L112A	1	1/2	1				
	49.0	1	tower mounts	Side Arm Mount [SO 701-1]							

- Notes:
 1) Existing Equipment
 2) Equipment To Be Removed

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
-	-	-	-	-	-	-

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Dr. Clarence Welti, P.E., P.C., 10/08/96	2135657	CCISITES
4-POST-MODIFICATION INSPECTION	PJF, 41709-0058, 06/15/09	2448190	CCISITES
4-POST-MODIFICATION INSPECTION	TEP, 128359, 03/06/13	3890848	CCISITES
4-POST-MODIFICATION INSPECTION	SGS, 130357, 12/9/13	4699667	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Summit/PJF, 29299-111, 03/15/99	1613620	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Summit/PJF, 29299-111, 03/15/99	1614568	CCISITES

3.1) Analysis Method

tnxTower (version 7.0.5.1), 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 in accordance with the manufacturer's specifications.
- 2) The tower and structures have been maintained in accordance with the manufacturer's specification.
- 3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 4) For existing modifications: monopole was modified in conformance with the referenced modification drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Paul J Ford and Company should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	147 - 99.5	Pole	TP30.313x22x0.25	1	-11.23	1135.99	64.1	Pass
L2	99.5 - 69.5	Pole	TP35.0626x29.1567x0.3125	2	-16.84	1817.84	90.0	Pass
L3	69.5 - 59	Pole	TP36.9x35.0626x0.4301	3	-18.05	2267.58	78.9	Pass
L4	59 - 58	Pole	TP36.45x35.2086x0.375	4	-19.91	2264.58	86.4	Pass
L5	58 - 50.5	Pole	TP37.7624x36.45x0.4271	5	-21.63	2494.38	85.9	Pass
L6	50.5 - 50	Pole	TP37.8499x37.7624x0.5405	6	-21.77	2941.54	73.7	Pass
L7	50 - 29.25	Pole	TP41.481x37.8499x0.479	7	-25.74	2851.53	88.4	Pass
L8	29.25 - 24	Pole	TP41.6499x39.6043x0.5047	8	-29.67	3263.40	86.2	Pass
L9	24 - 0	Pole	TP45.85x41.6499x0.5901	9	-37.58	3978.72	84.2	Pass
							Summary	
						Pole (L2)	90.0	Pass
						RATING =	90.0	Pass

Table 6 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	80.2	Pass
1	Base Plate	0	65.3	Pass
1	Base Foundation Steel	0	91.0	Pass
1	Base Foundation Soil Interaction	0	82.0	Pass

Structure Rating (max from all components) =	91.0%
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Notes:

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

4.1) Recommendations

The monopole and its foundation have sufficient capacity to carry the existing and proposed loads. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Tower Input Data

There is a pole section.
 This tower is designed using the TIA/EIA-222-F standard.
 The following design criteria apply:

- 1) Tower is located in New Haven County, Connecticut.
- 2) Basic wind speed of 80 mph.
- 3) Nominal ice thickness of 0.7500 in.
- 4) Ice thickness is considered to increase with height.
- 5) Ice density of 56.00 pcf.
- 6) A wind speed of 38 mph is used in combination with ice.
- 7) Temperature drop of 50 °F.
- 8) Deflections calculated using a wind speed of 50 mph.
- 9) A non-linear (P-delta) analysis was used.
- 10) Pressures are calculated at each section.
- 11) Stress ratio used in pole design is 1.333.
- 12) 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	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-G Bracing Resist. Exemption Use TIA-222-G Tension Splice Exemption <div style="text-align: center; background-color: #e0e0e0; padding: 2px;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets
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Tapered Pole Section Geometry

Section	Elevation <small>ft</small>	Section Length <small>ft</small>	Splice Length <small>ft</small>	Number of Sides	Top Diameter <small>in</small>	Bottom Diameter <small>in</small>	Wall Thickness <small>in</small>	Bend Radius <small>in</small>	Pole Grade
L1	147.0000-99.5000	47.5000	3.75	12	22.0000	30.3130	0.2500	1.0000	A607-60 (60 ksi)
L2	99.5000-69.5000	33.7500	0.00	12	29.1567	35.0626	0.3125	1.2500	A607-65 (65 ksi)
L3	69.5000-59.0000	10.5000	4.75	12	35.0626	36.9000	0.4301	1.7205	Reinf 57.44 ksi (57 ksi)
L4	59.0000-58.0000	5.7500	0.00	12	35.2086	36.4500	0.3750	1.5000	A607-65 (65 ksi)
L5	58.0000-50.5000	7.5000	0.00	12	36.4500	37.7624	0.4271	1.7084	Reinf 60.74 ksi (61 ksi)
L6	50.5000-50.0000	0.5000	0.00	12	37.7624	37.8499	0.5405	2.1620	Reinf 56.64 ksi (57 ksi)
L7	50.0000-	20.7500	5.25	12	37.8499	41.4810	0.4790	1.9160	Reinf 57.67 ksi

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
L8	29.2500 29.2500- 24.0000	10.5000	0.00	12	39.6043	41.6499	0.5047	2.0188	(58 ksi) Reinf 61.02 ksi (61 ksi)
L9	24.0000- 0.0000	24.0000		12	41.6499	45.8500	0.5900	2.3602	Reinf 57.85 ksi (58 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L1	22.7761 31.3823	17.5087 24.2007	1057.2060 2791.7645	7.7865 10.7626	11.3960 15.7021	92.7699 177.7952	2142.1860 5656.8718	8.6173 11.9109	5.2260 7.4539	20.904 29.816
L2	30.8646 36.2995	29.0245 34.9673	3082.2498 5389.6479	10.3262 12.4405	15.1032 18.1624	204.0796 296.7470	6245.4738 10920.887	14.2850 17.2098	6.9765 8.5593	22.325 27.39
L3	36.2995 38.2017	47.9655 50.5103	7343.1536 8575.0066	12.3984 13.0562	18.1624 19.1142	404.3045 448.6197	14879.220 17375.288	23.6072 24.8596	8.2441 8.7365	19.167 20.312
L4	37.5123 37.7358	42.0615 43.5606	6514.2838 7235.8925	12.4704 12.9148	18.2380 18.8811	357.1812 383.2347	13199.705 14661.880	20.7014 21.4392	8.4309 8.7636	22.482 23.37
L5	37.7358 39.0945	49.5409 51.3459	8205.5446 9135.4801	12.8962 13.3660	18.8811 19.5609	434.5904 467.0267	16626.658 18510.959	24.3825 25.2709	8.6240 8.9757	20.192 21.015
L6	39.0945 39.1851	64.7814 64.9337	11456.031 11537.012	13.3255 13.3568	19.5609 19.6063	585.6586 588.4350	23213.024 23377.115	31.8834 31.9584	8.6718 8.6952	16.044 16.087
L7	39.1851 42.9443	57.6390 63.2394	10274.728 13570.120	13.3788 14.6787	19.6063 21.4872	524.0533 631.5456	20819.384 27496.743	28.3682 31.1245	8.8601 9.8332	18.497 20.529
L8	42.0603 43.1191	63.5434 66.8677	12399.405 14449.062	13.9977 14.7300	20.5150 21.5746	604.4058 669.7248	25124.557 29277.718	31.2741 32.9103	9.2613 9.8095	18.35 19.436
L9	43.1191 47.4674	78.0120 85.9921	16787.322 22483.962	14.6994 16.2031	21.5746 23.7503	778.1049 946.6812	34015.667 45558.603	38.3952 42.3227	9.5808 10.7065	16.237 18.145

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C _A A _A ft ² /ft	Weight plf
760002253(1/2")	C	No	CaAa (Out Of Face)	147.0000 - 0.0000	4	No Ice	0.0510	0.10
						1/2" Ice	0.1510	0.72
						1" Ice	0.2510	1.95
						2" Ice	0.4510	6.24
						4" Ice	0.8510	22.14
760002253(1/2")	C	No	CaAa (Out Of Face)	147.0000 - 0.0000	2	No Ice	0.0000	0.10
						1/2" Ice	0.0000	0.72
						1" Ice	0.0000	1.95
						2" Ice	0.0000	6.24
						4" Ice	0.0000	22.14
HB114-1-0813U4- M5J(1-1/4")	C	No	Inside Pole	147.0000 - 0.0000	3	No Ice	0.0000	1.20
						1/2" Ice	0.0000	1.20
						1" Ice	0.0000	1.20
						2" Ice	0.0000	1.20
						4" Ice	0.0000	1.20
**** LDF7-50A(1-5/8")	C	No	Inside Pole	119.0000 - 0.0000	12	No Ice	0.0000	0.82

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C _A A _A ft ² /ft	Weight plf
						1/2" Ice	0.0000	0.82
						1" Ice	0.0000	0.82
						2" Ice	0.0000	0.82
						4" Ice	0.0000	0.82
HB114-1-0813U4-M5J(1-1/4")	C	No	CaAa (Out Of Face)	100.0000 - 0.0000	1	No Ice	0.0000	1.20
						1/2" Ice	0.0000	2.45
						1" Ice	0.0000	4.30
						2" Ice	0.0000	9.85
						4" Ice	0.0000	28.27
HB114-1-0813U4-M5J(1-1/4")	C	No	CaAa (Out Of Face)	119.0000 - 100.0000	1	No Ice	0.1540	1.20
						1/2" Ice	0.2540	2.45
						1" Ice	0.3540	4.30
						2" Ice	0.5540	9.85
						4" Ice	0.9540	28.27

LDF6-50A(1-1/4")	C	No	Inside Pole	110.0000 - 0.0000	12	No Ice	0.0000	0.66
						1/2" Ice	0.0000	0.66
						1" Ice	0.0000	0.66
						2" Ice	0.0000	0.66
						4" Ice	0.0000	0.66
FB-L98B-034-XXX(3/8")	C	No	Inside Pole	110.0000 - 0.0000	1	No Ice	0.0000	0.06
						1/2" Ice	0.0000	0.06
						1" Ice	0.0000	0.06
						2" Ice	0.0000	0.06
						4" Ice	0.0000	0.06
FB-L98B-034-XXX(3/8")	C	No	Inside Pole	110.0000 - 0.0000	1	No Ice	0.0000	0.06
						1/2" Ice	0.0000	0.06
						1" Ice	0.0000	0.06
						2" Ice	0.0000	0.06
						4" Ice	0.0000	0.06
WR-VG86ST-BRD(3/4")	C	No	Inside Pole	110.0000 - 0.0000	2	No Ice	0.0000	0.58
						1/2" Ice	0.0000	0.58
						1" Ice	0.0000	0.58
						2" Ice	0.0000	0.58
						4" Ice	0.0000	0.58
WR-VG86ST-BRD(3/4")	C	No	Inside Pole	110.0000 - 0.0000	2	No Ice	0.0000	0.58
						1/2" Ice	0.0000	0.58
						1" Ice	0.0000	0.58
						2" Ice	0.0000	0.58
						4" Ice	0.0000	0.58
2" (Nominal) Conduit	C	No	Inside Pole	110.0000 - 0.0000	1	No Ice	0.0000	0.72
						1/2" Ice	0.0000	0.72
						1" Ice	0.0000	0.72
						2" Ice	0.0000	0.72
						4" Ice	0.0000	0.72

CR 50 1873(1-5/8")	C	No	CaAa (Out Of Face)	100.0000 - 0.0000	5	No Ice	0.0000	0.83
						1/2" Ice	0.0000	2.34
						1" Ice	0.0000	4.47
						2" Ice	0.0000	10.55
						4" Ice	0.0000	30.05
CR 50 1873(1-5/8")	C	No	CaAa (Out Of Face)	100.0000 - 0.0000	1	No Ice	0.1980	0.83
						1/2" Ice	0.2980	2.34
						1" Ice	0.3980	4.47
						2" Ice	0.5980	10.55
						4" Ice	0.9980	30.05

LDF4-50A(1/2")	C	No	Inside Pole	53.0000 - 0.0000	1	No Ice	0.0000	0.15
						1/2" Ice	0.0000	0.15
						1" Ice	0.0000	0.15
						2" Ice	0.0000	0.15
						4" Ice	0.0000	0.15

LDF4-50A(1/2")	C	No	CaAa (Out Of Face)	49.0000 - 0.0000	1	No Ice	0.0000	0.15
						1/2" Ice	0.0000	0.84
						1" Ice	0.0000	2.14
						2" Ice	0.0000	6.58
						4" Ice	0.0000	22.78

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C _A A _A ft ² /ft	Weight plf
Aero MP3-04	C	No	CaAa (Out Of Face)	35.5000 - 0.0000	2	No Ice	0.2690	0.00
						1/2" Ice	0.3801	0.00
						1" Ice	0.4913	0.00
						2" Ice	0.7135	0.00
						4" Ice	1.1579	0.00
Aero MP3-04	C	No	CaAa (Out Of Face)	52.0000 - 35.5000	1	No Ice	0.2690	0.00
						1/2" Ice	0.3801	0.00
						1" Ice	0.4913	0.00
						2" Ice	0.7135	0.00
						4" Ice	1.1579	0.00
Aero MP3-04	C	No	CaAa (Out Of Face)	71.0000 - 61.0000	1	No Ice	0.2690	0.00
						1/2" Ice	0.3801	0.00
						1" Ice	0.4913	0.00
						2" Ice	0.7135	0.00
						4" Ice	1.1579	0.00
Aero MP3-03	C	No	CaAa (Out Of Face)	59.0000 - 49.0000	1	No Ice	0.2625	0.00
						1/2" Ice	0.3736	0.00
						1" Ice	0.4847	0.00
						2" Ice	0.7069	0.00
						4" Ice	1.1514	0.00

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L1	147.0000-99.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	12.715	0.53
L2	99.5000-69.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	12.464	0.94
L3	69.5000-59.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	6.508	0.33
L4	59.0000-58.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.664	0.03
L5	58.0000-50.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	5.387	0.24
L6	50.5000-50.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.467	0.02
L7	50.0000-29.2500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	15.868	0.66
L8	29.2500-24.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.935	0.17
L9	24.0000-0.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	22.561	0.76

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L1	147.0000-99.5000	A	0.878	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	49.490	1.04
L2	99.5000-69.5000	A	0.839	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	39.087	1.86
L3	69.5000-59.0000	A	0.812	0.000	0.000	0.000	0.000	0.00

Tower Section n	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L4	59.0000-58.0000	B	0.803	0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	16.572	0.62
		A		0.000	0.000	0.000	0.000	0.00
L5	58.0000-50.5000	B	0.796	0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	1.657	0.06
		A		0.000	0.000	0.000	0.000	0.00
L6	50.5000-50.0000	B	0.789	0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	12.950	0.44
		A		0.000	0.000	0.000	0.000	0.00
L7	50.0000-29.2500	B	0.766	0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	1.036	0.03
		A		0.000	0.000	0.000	0.000	0.00
L8	29.2500-24.0000	B	0.750	0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	36.536	1.22
		A		0.000	0.000	0.000	0.000	0.00
L9	24.0000-0.0000	B	0.750	0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	10.746	0.31
		A		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	48.562	1.39

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
L1	147.0000-99.5000	-0.3166	0.1828	-0.8867	0.5119
L2	99.5000-69.5000	-0.4690	0.2708	-1.1033	0.6370
L3	69.5000-59.0000	-0.6661	0.3846	-1.3032	0.7524
L4	59.0000-58.0000	-0.7079	0.4087	-1.3524	0.7808
L5	58.0000-50.5000	-0.7580	0.4376	-1.4017	0.8093
L6	50.5000-50.0000	-0.9355	0.5401	-1.5843	0.9147
L7	50.0000-29.2500	-0.8089	0.4670	-1.4584	0.8420
L8	29.2500-24.0000	-0.9584	0.5533	-1.6270	0.9393
L9	24.0000-0.0000	-0.9708	0.5605	-1.6539	0.9549

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K	
APXVSP18-C-A20 w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	147.0000	No Ice	8.4975	6.9458	0.08
						1/2" Ice	9.1490	8.1266	0.15
						Ice	9.7672	9.0212	0.23
						1" Ice	11.0311	10.8440	0.41
						2" Ice	13.6786	14.8507	0.91
APXVSP18-C-A20 w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	147.0000	No Ice	8.4975	6.9458	0.08
						1/2" Ice	9.1490	8.1266	0.15
						Ice	9.7672	9.0212	0.23
						1" Ice	11.0311	10.8440	0.41
						2" Ice	13.6786	14.8507	0.91
APXVTM14-C-120 w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	147.0000	No Ice	7.1342	4.9591	0.08
						1/2" Ice	7.6618	5.7544	0.13
						Ice	8.1830	6.4723	0.19
						1" Ice	9.2563	8.0099	0.34
						2" Ice	11.5262	11.4120	0.75
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	147.0000	No Ice	7.1342	4.9591	0.08
						1/2" Ice	7.6618	5.7544	0.13
						Ice	8.1830	6.4723	0.19

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight
			Horz	Lateral	Vert					
			ft	ft	ft	°	ft	ft ²	ft ²	K
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	147.0000		1" Ice	9.2563	8.0099	0.34
							2" Ice	11.5262	11.4120	0.75
							4" Ice			
							No Ice	7.1342	4.9591	0.08
							1/2" Ice	7.6618	5.7544	0.13
							1" Ice	8.1830	6.4723	0.19
							2" Ice	9.2563	8.0099	0.34
TD-RRH8x20-25	A	From Leg	4.0000 0.00 0.00	0.00	147.0000		4" Ice	11.5262	11.4120	0.75
							No Ice	4.7198	1.7027	0.07
							1/2" Ice	5.0138	1.9196	0.10
							Ice	5.3165	2.1453	0.13
							1" Ice	5.9478	2.6224	0.20
							2" Ice	7.3141	3.6805	0.40
							4" Ice			
TD-RRH8x20-25	B	From Leg	4.0000 0.00 0.00	0.00	147.0000		No Ice	4.7198	1.7027	0.07
							1/2" Ice	5.0138	1.9196	0.10
							Ice	5.3165	2.1453	0.13
							1" Ice	5.9478	2.6224	0.20
							2" Ice	7.3141	3.6805	0.40
							4" Ice			
							No Ice	4.7198	1.7027	0.07
TD-RRH8x20-25	C	From Leg	4.0000 0.00 0.00	0.00	147.0000		1/2" Ice	5.0138	1.9196	0.10
							Ice	5.3165	2.1453	0.13
							1" Ice	5.9478	2.6224	0.20
							2" Ice	7.3141	3.6805	0.40
							4" Ice			
							No Ice	4.7198	1.7027	0.07
							1/2" Ice	5.0138	1.9196	0.10
(3) ACU-A20-N	A	From Leg	4.0000 0.00 0.00	0.00	147.0000		Ice	5.3165	2.1453	0.13
							1" Ice	5.9478	2.6224	0.20
							2" Ice	7.3141	3.6805	0.40
							4" Ice			
							No Ice	0.0778	0.1361	0.00
							1/2" Ice	0.1210	0.1890	0.00
							Ice	0.1728	0.2506	0.00
(3) ACU-A20-N	B	From Leg	4.0000 0.00 0.00	0.00	147.0000		1" Ice	0.3025	0.3997	0.01
							2" Ice	0.6654	0.8015	0.04
							4" Ice			
							No Ice	0.0778	0.1361	0.00
							1/2" Ice	0.1210	0.1890	0.00
							Ice	0.1728	0.2506	0.00
							1" Ice	0.3025	0.3997	0.01
(3) ACU-A20-N	C	From Leg	4.0000 0.00 0.00	0.00	147.0000		2" Ice	0.6654	0.8015	0.04
							4" Ice			
							No Ice	0.0778	0.1361	0.00
							1/2" Ice	0.1210	0.1890	0.00
							Ice	0.1728	0.2506	0.00
							1" Ice	0.3025	0.3997	0.01
							2" Ice	0.6654	0.8015	0.04
P40-16-XLPP-RR-A w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	147.0000		4" Ice			
							No Ice	9.3725	4.8250	0.07
							1/2" Ice	9.9120	5.5706	0.14
							Ice	10.4497	6.2654	0.21
							1" Ice	11.5558	7.8034	0.37
							2" Ice	13.8921	11.1071	0.82
							4" Ice			
(2) 6' x 2" Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	147.0000		No Ice	1.4250	1.4250	0.02
							1/2" Ice	1.9250	1.9250	0.03
							Ice	2.2939	2.2939	0.05
							1" Ice	3.0596	3.0596	0.09
							2" Ice	4.7022	4.7022	0.23
							4" Ice			
							No Ice	1.4250	1.4250	0.02
(2) 6' x 2" Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	147.0000		1/2" Ice	1.9250	1.9250	0.03
							Ice	2.2939	2.2939	0.05
							1" Ice	3.0596	3.0596	0.09
							2" Ice	4.7022	4.7022	0.23
							4" Ice			
							No Ice	1.4250	1.4250	0.02
							1/2" Ice	1.9250	1.9250	0.03
(2) 6' x 2" Mount Pipe	C	From Leg	4.0000 0.00	0.00	147.0000		No Ice	1.4250	1.4250	0.02
							1/2" Ice	1.9250	1.9250	0.03
							Ice	2.2939	2.2939	0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K	
			0.00			Ice	2.2939	2.2939	0.05
						1" Ice	3.0596	3.0596	0.09
						2" Ice	4.7022	4.7022	0.23
						4" Ice			
Platform Mount [LP 1201-1]	B	None		0.00	147.0000	No Ice	23.1000	23.1000	2.10
						1/2"	26.8000	26.8000	2.50
						Ice	30.5000	30.5000	2.90
						1" Ice	37.9000	37.9000	3.70
						2" Ice	52.7000	52.7000	5.30
						4" Ice			

TME-1900MHz RRH (65 MHz)	A	From Leg	1.0000 0.00 -2.00	0.00	145.0000	No Ice	2.6979	2.7708	0.06
						1/2"	2.9362	3.0111	0.08
						Ice	3.1832	3.2600	0.11
						1" Ice	3.7030	3.7837	0.18
						2" Ice	4.8463	4.9348	0.35
						4" Ice			
TME-1900MHz RRH (65 MHz)	B	From Leg	1.0000 0.00 -2.00	0.00	145.0000	No Ice	2.6979	2.7708	0.06
						1/2"	2.9362	3.0111	0.08
						Ice	3.1832	3.2600	0.11
						1" Ice	3.7030	3.7837	0.18
						2" Ice	4.8463	4.9348	0.35
						4" Ice			
TME-1900MHz RRH (65 MHz)	C	From Leg	1.0000 0.00 -2.00	0.00	145.0000	No Ice	2.6979	2.7708	0.06
						1/2"	2.9362	3.0111	0.08
						Ice	3.1832	3.2600	0.11
						1" Ice	3.7030	3.7837	0.18
						2" Ice	4.8463	4.9348	0.35
						4" Ice			
800 EXTERNAL NOTCH FILTER	A	From Leg	1.0000 0.00 1.00	0.00	145.0000	No Ice	0.7701	0.3747	0.01
						1/2"	0.8898	0.4647	0.02
						Ice	1.0181	0.5634	0.02
						1" Ice	1.3007	0.7868	0.04
						2" Ice	1.9696	1.3372	0.11
						4" Ice			
TME-800MHZ RRH	A	From Leg	1.0000 0.00 1.00	0.00	145.0000	No Ice	2.4899	2.0685	0.05
						1/2"	2.7061	2.2705	0.07
						Ice	2.9310	2.4812	0.10
						1" Ice	3.4068	2.9284	0.16
						2" Ice	4.4620	3.9265	0.32
						4" Ice			
800 EXTERNAL NOTCH FILTER	B	From Leg	1.0000 0.00 1.00	0.00	145.0000	No Ice	0.7701	0.3747	0.01
						1/2"	0.8898	0.4647	0.02
						Ice	1.0181	0.5634	0.02
						1" Ice	1.3007	0.7868	0.04
						2" Ice	1.9696	1.3372	0.11
						4" Ice			
TME-800MHZ RRH	B	From Leg	1.0000 0.00 1.00	0.00	145.0000	No Ice	2.4899	2.0685	0.05
						1/2"	2.7061	2.2705	0.07
						Ice	2.9310	2.4812	0.10
						1" Ice	3.4068	2.9284	0.16
						2" Ice	4.4620	3.9265	0.32
						4" Ice			
800 EXTERNAL NOTCH FILTER	C	From Leg	1.0000 0.00 1.00	0.00	145.0000	No Ice	0.7701	0.3747	0.01
						1/2"	0.8898	0.4647	0.02
						Ice	1.0181	0.5634	0.02
						1" Ice	1.3007	0.7868	0.04
						2" Ice	1.9696	1.3372	0.11
						4" Ice			
TME-800MHZ RRH	C	From Leg	1.0000 0.00 1.00	0.00	145.0000	No Ice	2.4899	2.0685	0.05
						1/2"	2.7061	2.2705	0.07
						Ice	2.9310	2.4812	0.10
						1" Ice	3.4068	2.9284	0.16
						2" Ice	4.4620	3.9265	0.32
						4" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
Side Arm Mount [SO 102-3]	B	None		0.00	145.0000	No Ice 3.0000 1/2" 3.4800 Ice 3.9600 1" Ice 4.9200 2" Ice 6.8400 4" Ice	3.0000 3.4800 3.9600 4.9200 6.8400	0.08 0.11 0.14 0.20 0.32
**** ****								
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 6.8253 1/2" 7.3471 Ice 7.8631 1" Ice 8.9261 2" Ice 11.1755 4" Ice	5.6424 6.4800 7.2567 8.8640 12.2932	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 6.8253 1/2" 7.3471 Ice 7.8631 1" Ice 8.9261 2" Ice 11.1755 4" Ice	5.6424 6.4800 7.2567 8.8640 12.2932	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 6.8253 1/2" 7.3471 Ice 7.8631 1" Ice 8.9261 2" Ice 11.1755 4" Ice	5.6424 6.4800 7.2567 8.8640 12.2932	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 6.8155 1/2" 7.3373 Ice 7.8532 1" Ice 8.9160 2" Ice 11.1650 4" Ice	5.6334 6.4717 7.2478 8.8537 12.2804	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 6.8155 1/2" 7.3373 Ice 7.8532 1" Ice 8.9160 2" Ice 11.1650 4" Ice	5.6334 6.4717 7.2478 8.8537 12.2804	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 6.8155 1/2" 7.3373 Ice 7.8532 1" Ice 8.9160 2" Ice 11.1650 4" Ice	5.6334 6.4717 7.2478 8.8537 12.2804	0.11 0.17 0.23 0.38 0.81
KRY 112 144/1	A	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 0.4083 1/2" 0.4969 Ice 0.5941 1" Ice 0.8145 2" Ice 1.3590 4" Ice	0.2042 0.2733 0.3511 0.5326 0.9992	0.01 0.01 0.02 0.03 0.08
KRY 112 144/1	B	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 0.4083 1/2" 0.4969 Ice 0.5941 1" Ice 0.8145 2" Ice 1.3590 4" Ice	0.2042 0.2733 0.3511 0.5326 0.9992	0.01 0.01 0.02 0.03 0.08
KRY 112 144/1	C	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 0.4083 1/2" 0.4969 Ice 0.5941 1" Ice 0.8145 2" Ice 1.3590 4" Ice	0.2042 0.2733 0.3511 0.5326 0.9992	0.01 0.01 0.02 0.03 0.08
LNx-6515DS-VTM w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	119.0000	No Ice 11.6382 1/2" 12.3560 Ice 13.0830	9.8359 11.3566 12.9014	0.08 0.17 0.27

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight
			Horz	Lateral	Vert					
			ft	ft	ft	°	ft	ft ²	ft ²	K
LNX-6515DS-VTM w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	119.0000		1" Ice	14.5347	15.2444	0.50
							2" Ice	17.7991	20.1092	1.15
							4" Ice			
							No Ice	11.6382	9.8359	0.08
							1/2" Ice	12.3560	11.3566	0.17
							Ice	13.0830	12.9014	0.27
LNX-6515DS-VTM w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	119.0000		1" Ice	14.5347	15.2444	0.50
							2" Ice	17.7991	20.1092	1.15
							4" Ice			
							No Ice	11.6382	9.8359	0.08
							1/2" Ice	12.3560	11.3566	0.17
							Ice	13.0830	12.9014	0.27
RRUS 11 B12	A	From Leg	4.0000 0.00 2.00	0.00	119.0000		1" Ice	4.3340	2.1302	0.15
							2" Ice	5.5006	3.0377	0.31
							4" Ice			
							No Ice	3.3056	1.3611	0.05
							1/2" Ice	3.5497	1.5404	0.07
							Ice	3.8025	1.7284	0.10
RRUS 11 B12	B	From Leg	4.0000 0.00 2.00	0.00	119.0000		1" Ice	4.3340	2.1302	0.15
							2" Ice	5.5006	3.0377	0.31
							4" Ice			
							No Ice	3.3056	1.3611	0.05
							1/2" Ice	3.5497	1.5404	0.07
							Ice	3.8025	1.7284	0.10
RRUS 11 B12	C	From Leg	4.0000 0.00 2.00	0.00	119.0000		1" Ice	4.3340	2.1302	0.15
							2" Ice	5.5006	3.0377	0.31
							4" Ice			
							No Ice	3.3056	1.3611	0.05
							1/2" Ice	3.5497	1.5404	0.07
							Ice	3.8025	1.7284	0.10
T-Arm Mount [TA 601-3]	B	None		0.00	119.0000		1" Ice	25.9000	25.9000	1.52
							2" Ice	40.9000	40.9000	2.32
							4" Ice			
							No Ice	10.9000	10.9000	0.73
							1/2" Ice	14.6500	14.6500	0.93
							Ice	18.4000	18.4000	1.13
**** 7770.00 w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	110.0000		1" Ice	8.2568	7.6716	0.36
							2" Ice	10.4762	11.0613	0.76
							4" Ice			
							No Ice	6.2208	4.8204	0.09
							1/2" Ice	6.7144	5.5082	0.14
							Ice	7.2182	6.2127	0.21
7770.00 w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	110.0000		1" Ice	8.2568	7.6716	0.36
							2" Ice	10.4762	11.0613	0.76
							4" Ice			
							No Ice	6.2208	4.8204	0.09
							1/2" Ice	6.7144	5.5082	0.14
							Ice	7.2182	6.2127	0.21
7770.00 w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	110.0000		1" Ice	8.2568	7.6716	0.36
							2" Ice	10.4762	11.0613	0.76
							4" Ice			
							No Ice	6.2208	4.8204	0.09
							1/2" Ice	6.7144	5.5082	0.14
							Ice	7.2182	6.2127	0.21
7020.00	A	From Leg	4.0000 0.00 2.00	0.00	110.0000		1" Ice	0.3801	0.5559	0.02
							2" Ice	0.7793	1.0459	0.07
							4" Ice			
							No Ice	0.1191	0.2042	0.00
							1/2" Ice	0.1714	0.2791	0.01
							Ice	0.2323	0.3627	0.01
7020.00	B	From Leg	4.0000	0.00	110.0000		No Ice	0.1191	0.2042	0.00

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C _{AA} _{Front}	C _{AA} _{Side}	Weight K	
			Horz ft	Lateral ft			ft ²	ft ²		
				0.00			1/2"	0.1714	0.2791	0.01
				2.00			Ice	0.2323	0.3627	0.01
							1" Ice	0.3801	0.5559	0.02
							2" Ice	0.7793	1.0459	0.07
							4" Ice			
7020.00	C	From Leg	4.0000	0.00	0.00	110.0000	No Ice	0.1191	0.2042	0.00
			0.00				1/2"	0.1714	0.2791	0.01
			2.00				Ice	0.2323	0.3627	0.01
							1" Ice	0.3801	0.5559	0.02
							2" Ice	0.7793	1.0459	0.07
							4" Ice			
RRUS 11	A	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.2560	1.3790	0.05
			0.00				1/2"	3.4982	1.5577	0.07
			0.00				Ice	3.7490	1.7450	0.10
							1" Ice	4.2766	2.1455	0.15
							2" Ice	5.4355	3.0504	0.31
							4" Ice			
RRUS 11	B	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.2560	1.3790	0.05
			0.00				1/2"	3.4982	1.5577	0.07
			0.00				Ice	3.7490	1.7450	0.10
							1" Ice	4.2766	2.1455	0.15
							2" Ice	5.4355	3.0504	0.31
							4" Ice			
RRUS 11	C	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.2560	1.3790	0.05
			0.00				1/2"	3.4982	1.5577	0.07
			0.00				Ice	3.7490	1.7450	0.10
							1" Ice	4.2766	2.1455	0.15
							2" Ice	5.4355	3.0504	0.31
							4" Ice			
(2) LGP2140X	A	From Leg	4.0000	0.00	0.00	110.0000	No Ice	1.2600	0.3780	0.01
			0.00				1/2"	1.4160	0.4932	0.02
			0.00				Ice	1.5806	0.6170	0.03
							1" Ice	1.9358	0.8905	0.05
							2" Ice	2.7499	1.5412	0.13
							4" Ice			
(2) LGP2140X	B	From Leg	4.0000	0.00	0.00	110.0000	No Ice	1.2600	0.3780	0.01
			0.00				1/2"	1.4160	0.4932	0.02
			0.00				Ice	1.5806	0.6170	0.03
							1" Ice	1.9358	0.8905	0.05
							2" Ice	2.7499	1.5412	0.13
							4" Ice			
(2) LGP2140X	C	From Leg	4.0000	0.00	0.00	110.0000	No Ice	1.2600	0.3780	0.01
			0.00				1/2"	1.4160	0.4932	0.02
			0.00				Ice	1.5806	0.6170	0.03
							1" Ice	1.9358	0.8905	0.05
							2" Ice	2.7499	1.5412	0.13
							4" Ice			
DC6-48-60-18-8F	A	From Leg	4.0000	0.00	0.00	110.0000	No Ice	1.4667	1.4667	0.02
			0.00				1/2"	1.6667	1.6667	0.04
			2.00				Ice	1.8778	1.8778	0.06
							1" Ice	2.3333	2.3333	0.11
							2" Ice	3.3778	3.3778	0.24
							4" Ice			
(2) SBNHH-1D65A w/ Mount Pipe	A	From Leg	4.0000	0.00	0.00	110.0000	No Ice	6.2483	5.0515	0.06
			0.00				1/2"	6.7093	5.7157	0.11
			2.00				Ice	7.1792	6.4259	0.17
							1" Ice	8.1474	7.9337	0.31
							2" Ice	10.2006	11.2125	0.70
							4" Ice			
(2) SBNHH-1D65A w/ Mount Pipe	B	From Leg	4.0000	0.00	0.00	110.0000	No Ice	6.2483	5.0515	0.06
			0.00				1/2"	6.7093	5.7157	0.11
			2.00				Ice	7.1792	6.4259	0.17
							1" Ice	8.1474	7.9337	0.31
							2" Ice	10.2006	11.2125	0.70
							4" Ice			

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Lateral						Vert
			ft	ft	°	ft	ft ²	ft ²	K	
(2) SBNHH-1D65A w/ Mount Pipe	C	From Leg	4.0000	0.00	0.00	110.0000	No Ice	6.2483	5.0515	0.06
			0.00				1/2"	6.7093	5.7157	0.11
			2.00				Ice	7.1792	6.4259	0.17
							1" Ice	8.1474	7.9337	0.31
							2" Ice	10.2006	11.2125	0.70
RRUS 32 B2	A	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.1866	1.8511	0.05
			0.00				1/2"	3.4453	2.0771	0.07
			0.00				Ice	3.7126	2.3117	0.10
							1" Ice	4.2733	2.8069	0.16
							2" Ice	5.4983	3.9010	0.32
RRUS 32 B2	B	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.1866	1.8511	0.05
			0.00				1/2"	3.4453	2.0771	0.07
			0.00				Ice	3.7126	2.3117	0.10
							1" Ice	4.2733	2.8069	0.16
							2" Ice	5.4983	3.9010	0.32
RRUS 32 B2	C	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.1866	1.8511	0.05
			0.00				1/2"	3.4453	2.0771	0.07
			0.00				Ice	3.7126	2.3117	0.10
							1" Ice	4.2733	2.8069	0.16
							2" Ice	5.4983	3.9010	0.32
WCS RRUS-32-B30	A	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.8662	2.7616	0.08
			0.00				1/2"	4.1506	3.0213	0.10
			2.00				Ice	4.4435	3.2896	0.14
							1" Ice	5.0554	3.8522	0.21
							2" Ice	6.3828	5.0811	0.41
WCS RRUS-32-B30	B	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.8662	2.7616	0.08
			0.00				1/2"	4.1506	3.0213	0.10
			2.00				Ice	4.4435	3.2896	0.14
							1" Ice	5.0554	3.8522	0.21
							2" Ice	6.3828	5.0811	0.41
WCS RRUS-32-B30	C	From Leg	4.0000	0.00	0.00	110.0000	No Ice	3.8662	2.7616	0.08
			0.00				1/2"	4.1506	3.0213	0.10
			2.00				Ice	4.4435	3.2896	0.14
							1" Ice	5.0554	3.8522	0.21
							2" Ice	6.3828	5.0811	0.41
DC6-48-60-18-8F	A	From Leg	4.0000	0.00	0.00	110.0000	No Ice	1.4667	1.4667	0.02
			0.00				1/2"	1.6667	1.6667	0.04
			2.00				Ice	1.8778	1.8778	0.06
							1" Ice	2.3333	2.3333	0.11
							2" Ice	3.3778	3.3778	0.24
Platform Mount [LP 1201-1]	B	None			0.00	110.0000	No Ice	23.1000	23.1000	2.10
							1/2"	26.8000	26.8000	2.50
							Ice	30.5000	30.5000	2.90
							1" Ice	37.9000	37.9000	3.70
							2" Ice	52.7000	52.7000	5.30
MT-195-14 (Hand Rail)	B	None			0.00	110.0000	No Ice	11.8400	11.8400	0.28
							1/2"	16.9600	16.9600	0.30
							Ice	22.0800	22.0800	0.32
							1" Ice	32.3200	32.3200	0.36
							2" Ice	52.8000	52.8000	0.44
PRK-1245L (Kickers)	B	None			0.00	110.0000	No Ice	6.0000	6.0000	0.26
							1/2"	8.5000	8.5000	0.34
							Ice	11.0000	11.0000	0.42
							1" Ice	16.0000	16.0000	0.59
							2" Ice	26.0000	26.0000	0.93

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight
			Horz	Lateral	Vert					
						4" Ice				
**** APXV18-206517S-C w/ Mount Pipe	A	From Leg	1.0000	0.00	100.0000	No Ice	5.4042	4.7000	0.05	
			0.00			1/2"	5.9597	5.8600	0.10	
			0.00			Ice	6.4808	6.7338	0.15	
						1" Ice	7.5467	8.5150	0.28	
						2" Ice	9.9193	12.2774	0.68	
APXV18-206517S-C w/ Mount Pipe	B	From Leg	1.0000	0.00	100.0000	No Ice	5.4042	4.7000	0.05	
			0.00			1/2"	5.9597	5.8600	0.10	
			0.00			Ice	6.4808	6.7338	0.15	
						1" Ice	7.5467	8.5150	0.28	
						2" Ice	9.9193	12.2774	0.68	
APXV18-206517S-C w/ Mount Pipe	C	From Leg	1.0000	0.00	100.0000	No Ice	5.4042	4.7000	0.05	
			0.00			1/2"	5.9597	5.8600	0.10	
			0.00			Ice	6.4808	6.7338	0.15	
						1" Ice	7.5467	8.5150	0.28	
						2" Ice	9.9193	12.2774	0.68	
Pipe Mount [PM 601-3]	C	None		0.00	100.0000	No Ice	4.3900	4.3900	0.20	
						1/2"	5.4800	5.4800	0.24	
						Ice	6.5700	6.5700	0.28	
						1" Ice	8.7500	8.7500	0.36	
						2" Ice	13.1100	13.1100	0.53	
**** GPS_A	B	From Leg	2.0000	0.00	53.0000	No Ice	0.2975	0.2975	0.00	
			0.00			1/2"	0.3739	0.3739	0.00	
			1.00			Ice	0.4589	0.4589	0.01	
						1" Ice	0.6549	0.6549	0.02	
						2" Ice	1.1506	1.1506	0.08	
Side Arm Mount [SO 701-1]	B	None		0.00	53.0000	No Ice	0.8500	1.6700	0.07	
						1/2"	1.1400	2.3400	0.08	
						Ice	1.4300	3.0100	0.09	
						1" Ice	2.0100	4.3500	0.12	
						2" Ice	3.1700	7.0300	0.18	
**** KS24019-L112A	C	From Leg	2.0000	0.00	49.0000	No Ice	0.1556	0.1556	0.01	
			0.00			1/2"	0.2247	0.2247	0.01	
			1.00			Ice	0.3025	0.3025	0.01	
						1" Ice	0.4840	0.4840	0.02	
						2" Ice	0.9506	0.9506	0.06	
Side Arm Mount [SO 701-1]	C	None		0.00	49.0000	No Ice	0.8500	1.6700	0.07	
						1/2"	1.1400	2.3400	0.08	
						Ice	1.4300	3.0100	0.09	
						1" Ice	2.0100	4.3500	0.12	
						2" Ice	3.1700	7.0300	0.18	

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				ft	°	°	ft	ft	ft ²	K	
A-ANT-23G-2-C	A	Paraboloid w/o Radome	From Leg	4.0000 0.00 2.00	0.00		147.0000	2.1750	No Ice 1/2" Ice 1" Ice	3.7200 4.0100 4.3000	0.01 0.02 0.03

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 ft ²	Weight K	
A-ANT-23G-2-C	B	Paraboloid w/o Radome	From Leg	4.0000	0.00		147.0000	2.1750	2" Ice	4.8800	0.04
				0.00					4" Ice	6.0400	0.07
				2.00					No Ice	3.7200	0.01
									1/2" Ice	4.0100	0.02
									1" Ice	4.3000	0.03
VHLP2-18	B	Paraboloid w/o Radome	From Leg	4.0000	60.00		147.0000	2.1750	2" Ice	4.8800	0.04
				0.00					4" Ice	6.0400	0.07
				2.00					No Ice	3.7200	0.03
									1/2" Ice	4.0100	0.05
									1" Ice	4.3000	0.07
				2" Ice	4.8800	0.11					
				4" Ice	6.0400	0.20					

Tower Pressures - No Ice

$G_H = 1.690$

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 147.0000-99.5000	122.3179	1.454	23.78	103.536	A	0.000	103.536	103.536	100.00	0.000	0.000
					B	0.000	103.536	100.00	0.000	0.000	
					C	0.000	103.536	100.00	0.000	12.715	
L2 99.5000-69.5000	84.0954	1.306	21.40	81.094	A	0.000	81.094	81.094	100.00	0.000	0.000
					B	0.000	81.094	100.00	0.000	0.000	
					C	0.000	81.094	100.00	0.000	12.464	
L3 69.5000-59.0000	64.2053	1.209	19.82	31.484	A	0.000	31.484	31.484	100.00	0.000	0.000
					B	0.000	31.484	100.00	0.000	0.000	
					C	0.000	31.484	100.00	0.000	6.508	
L4 59.0000-58.0000	58.4995	1.178	19.30	3.029	A	0.000	3.029	3.029	100.00	0.000	0.000
					B	0.000	3.029	100.00	0.000	0.000	
					C	0.000	3.029	100.00	0.000	0.664	
L5 58.0000-50.5000	54.2279	1.152	18.88	23.191	A	0.000	23.191	23.191	100.00	0.000	0.000
					B	0.000	23.191	100.00	0.000	0.000	
					C	0.000	23.191	100.00	0.000	5.387	
L6 50.5000-50.0000	50.2499	1.128	18.48	1.575	A	0.000	1.575	1.575	100.00	0.000	0.000
					B	0.000	1.575	100.00	0.000	0.000	
					C	0.000	1.575	100.00	0.000	0.467	
L7 50.0000-29.2500	39.4667	1.052	17.24	68.588	A	0.000	68.588	68.588	100.00	0.000	0.000
					B	0.000	68.588	100.00	0.000	0.000	
					C	0.000	68.588	100.00	0.000	15.868	
L8 29.2500-24.0000	26.6141	1	16.38	17.998	A	0.000	17.998	17.998	100.00	0.000	0.000
					B	0.000	17.998	100.00	0.000	0.000	
					C	0.000	17.998	100.00	0.000	4.935	
L9 24.0000-0.0000	11.8080	1	16.38	87.500	A	0.000	87.500	87.500	100.00	0.000	0.000
					B	0.000	87.500	100.00	0.000	0.000	
					C	0.000	87.500	100.00	0.000	22.561	

Tower Pressure - With Ice

$G_H = 1.690$

Section Elevation ft	z ft	K _Z	q _z psf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 147.0000-99.5000	122.3179	1.454	5.25	0.8777	110.484	A	0.000	110.484	110.484	100.00	0.000	0.000
						B	0.000	110.484	100.00	0.000	0.000	
						C	0.000	110.484	100.00	0.000	49.490	
L2 99.5000-69.5000	84.0954	1.306	4.73	0.8391	85.483	A	0.000	85.483	85.483	100.00	0.000	0.000
						B	0.000	85.483	100.00	0.000	0.000	
						C	0.000	85.483	100.00	0.000	39.087	

Section Elevation ft	z ft	K _Z	q _z psf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L3 69.5000-59.0000	64.2053	1.209	4.38	0.8124	32.905	A	0.000	32.905	32.905	100.00	0.000	0.000
						B	0.000	32.905		100.00	0.000	0.000
						C	0.000	32.905		100.00	0.000	16.572
L4 59.0000-58.0000	58.4995	1.178	4.26	0.8033	3.164	A	0.000	3.164	3.164	100.00	0.000	0.000
						B	0.000	3.164		100.00	0.000	0.000
						C	0.000	3.164		100.00	0.000	1.657
L5 58.0000-50.5000	54.2279	1.152	4.17	0.7961	24.186	A	0.000	24.186	24.186	100.00	0.000	0.000
						B	0.000	24.186		100.00	0.000	0.000
						C	0.000	24.186		100.00	0.000	12.950
L6 50.5000-50.0000	50.2499	1.128	4.08	0.7888	1.641	A	0.000	1.641	1.641	100.00	0.000	0.000
						B	0.000	1.641		100.00	0.000	0.000
						C	0.000	1.641		100.00	0.000	1.036
L7 50.0000-29.2500	39.4667	1.052	3.81	0.7663	71.238	A	0.000	71.238	71.238	100.00	0.000	0.000
						B	0.000	71.238		100.00	0.000	0.000
						C	0.000	71.238		100.00	0.000	36.536
L8 29.2500-24.0000	26.6141	1	3.62	0.7500	18.669	A	0.000	18.669	18.669	100.00	0.000	0.000
						B	0.000	18.669		100.00	0.000	0.000
						C	0.000	18.669		100.00	0.000	10.746
L9 24.0000-0.0000	11.8080	1	3.62	0.7500	90.500	A	0.000	90.500	90.500	100.00	0.000	0.000
						B	0.000	90.500		100.00	0.000	0.000
						C	0.000	90.500		100.00	0.000	48.562

Tower Pressure - Service

$G_H = 1.690$

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 147.0000-99.5000	122.3179	1.454	9.29	103.536	A	0.000	103.536	103.536	100.00	0.000	0.000
					B	0.000	103.536		100.00	0.000	0.000
					C	0.000	103.536		100.00	0.000	12.715
L2 99.5000-69.5000	84.0954	1.306	8.36	81.094	A	0.000	81.094	81.094	100.00	0.000	0.000
					B	0.000	81.094		100.00	0.000	0.000
					C	0.000	81.094		100.00	0.000	12.464
L3 69.5000-59.0000	64.2053	1.209	7.74	31.484	A	0.000	31.484	31.484	100.00	0.000	0.000
					B	0.000	31.484		100.00	0.000	0.000
					C	0.000	31.484		100.00	0.000	6.508
L4 59.0000-58.0000	58.4995	1.178	7.54	3.029	A	0.000	3.029	3.029	100.00	0.000	0.000
					B	0.000	3.029		100.00	0.000	0.000
					C	0.000	3.029		100.00	0.000	0.664
L5 58.0000-50.5000	54.2279	1.152	7.38	23.191	A	0.000	23.191	23.191	100.00	0.000	0.000
					B	0.000	23.191		100.00	0.000	0.000
					C	0.000	23.191		100.00	0.000	5.387
L6 50.5000-50.0000	50.2499	1.128	7.22	1.575	A	0.000	1.575	1.575	100.00	0.000	0.000
					B	0.000	1.575		100.00	0.000	0.000
					C	0.000	1.575		100.00	0.000	0.467
L7 50.0000-29.2500	39.4667	1.052	6.74	68.588	A	0.000	68.588	68.588	100.00	0.000	0.000
					B	0.000	68.588		100.00	0.000	0.000
					C	0.000	68.588		100.00	0.000	15.868
L8 29.2500-24.0000	26.6141	1	6.40	17.998	A	0.000	17.998	17.998	100.00	0.000	0.000
					B	0.000	17.998		100.00	0.000	0.000
					C	0.000	17.998		100.00	0.000	4.935
L9 24.0000-0.0000	11.8080	1	6.40	87.500	A	0.000	87.500	87.500	100.00	0.000	0.000
					B	0.000	87.500		100.00	0.000	0.000
					C	0.000	87.500		100.00	0.000	22.561

Load Combinations

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

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	147 - 99.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-20.53	0.03	0.20
			Max. Mx	11	-11.26	418.93	3.66
			Max. My	2	-11.22	7.24	428.50
			Max. Vy	11	-18.43	418.93	3.66
			Max. Vx	2	-18.63	7.24	428.50
			Max. Torque	12			-2.30
L2	99.5 - 69.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-28.42	1.41	-0.60
			Max. Mx	11	-16.86	1128.17	6.14
			Max. My	2	-16.84	12.90	1144.25
			Max. Vy	11	-22.99	1128.17	6.14
			Max. Vx	2	-23.19	12.90	1144.25
			Max. Torque	12			-2.27
L3	69.5 - 59	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-29.92	1.66	-0.75
			Max. Mx	11	-18.07	1262.27	6.56
			Max. My	2	-18.05	13.86	1279.43
			Max. Vy	11	-23.66	1262.27	6.56
			Max. Vx	2	-23.87	13.86	1279.43
			Max. Torque	12			-2.13
L4	59 - 58	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-32.30	1.92	-0.89
			Max. Mx	11	-19.93	1400.51	6.97

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L5	58 - 50.5	Pole	Max. My	2	-19.91	14.83	1418.75
			Max. Vy	11	-24.41	1400.51	6.97
			Max. Vx	2	-24.61	14.83	1418.75
			Max. Torque	12			-2.06
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-34.41	2.23	-1.10
			Max. Mx	11	-21.64	1586.91	7.50
			Max. My	2	-21.63	16.08	1606.57
			Max. Vy	11	-25.33	1586.91	7.50
			Max. Vx	2	-25.53	16.08	1606.57
L6	50.5 - 50	Pole	Max. Torque	12			-2.05
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-34.56	2.25	-1.12
			Max. Mx	11	-21.78	1599.59	7.53
			Max. My	2	-21.77	16.17	1619.34
			Max. Vy	11	-25.39	1599.59	7.53
			Max. Vx	2	-25.59	16.17	1619.34
			Max. Torque	12			-1.99
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-39.32	3.02	-1.56
L7	50 - 29.25	Pole	Max. Mx	11	-25.75	2006.94	8.60
			Max. My	2	-25.74	18.78	2029.53
			Max. Vy	11	-27.13	2006.94	8.60
			Max. Vx	2	-27.33	18.78	2029.53
			Max. Torque	12			-1.98
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-44.00	3.54	-1.86
			Max. Mx	11	-29.67	2298.36	9.33
			Max. My	2	-29.67	20.53	2322.87
			Max. Vy	11	-28.34	2298.36	9.33
L8	29.25 - 24	Pole	Max. Vx	2	-28.54	20.53	2322.87
			Max. Torque	12			-1.80
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-53.09	4.79	-2.58
			Max. Mx	11	-37.58	3009.90	10.93
			Max. My	2	-37.58	24.49	3038.69
			Max. Vy	11	-30.98	3009.90	10.93
			Max. Vx	2	-31.17	24.49	3038.69
			Max. Torque	12			-1.75
			L9	24 - 0	Pole	Max. Torque	12
Max Tension	1	0.00				0.00	0.00
Max. Compression	14	-53.09				4.79	-2.58
Max. Mx	11	-37.58				3009.90	10.93
Max. My	2	-37.58				24.49	3038.69
Max. Vy	11	-30.98				3009.90	10.93
Max. Vx	2	-31.17				24.49	3038.69
Max. Torque	12						-1.75

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	14	53.09	-0.00	0.00
	Max. H _x	11	37.60	30.96	0.07
	Max. H _z	2	37.60	0.15	31.15
	Max. M _x	2	3038.69	0.15	31.15
	Max. M _z	5	2996.89	-30.89	0.05
	Max. Torsion	8	0.65	0.03	-31.09
	Min. Vert	2	37.60	0.15	31.15
	Min. H _x	5	37.60	-30.89	0.05
	Min. H _z	8	37.60	0.03	-31.09
	Min. M _x	8	-3029.47	0.03	-31.09
	Min. M _z	11	-3009.90	30.96	0.07
	Min. Torsion	12	-1.49	26.83	15.70

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overtuning Moment, M _x kip-ft	Overtuning Moment, M _z kip-ft	Torque kip-ft
Dead Only	37.60	-0.00	0.00	0.40	0.79	0.00

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead+Wind 0 deg - No Ice	37.60	-0.15	-31.15	-3038.69	24.49	0.69
Dead+Wind 30 deg - No Ice	37.60	15.46	-26.93	-2622.99	-1499.66	0.41
Dead+Wind 60 deg - No Ice	37.60	26.78	-15.70	-1537.75	-2599.16	0.65
Dead+Wind 90 deg - No Ice	37.60	30.89	-0.05	-6.82	-2996.89	-0.09
Dead+Wind 120 deg - No Ice	37.60	26.77	15.66	1532.84	-2597.85	-0.21
Dead+Wind 150 deg - No Ice	37.60	15.41	26.94	2626.03	-1492.27	-0.35
Dead+Wind 180 deg - No Ice	37.60	-0.03	31.09	3029.47	5.12	-0.65
Dead+Wind 210 deg - No Ice	37.60	-15.45	26.93	2624.08	1500.79	-0.53
Dead+Wind 240 deg - No Ice	37.60	-26.92	15.57	1519.33	2623.45	-0.05
Dead+Wind 270 deg - No Ice	37.60	-30.96	-0.07	-10.93	3009.90	0.47
Dead+Wind 300 deg - No Ice	37.60	-26.83	-15.70	-1538.08	2609.99	1.49
Dead+Wind 330 deg - No Ice	37.60	-15.55	-26.94	-2625.80	1515.69	1.11
Dead+Ice+Temp	53.09	0.00	-0.00	2.58	4.79	-0.00
Dead+Wind 0 deg+Ice+Temp	53.09	-0.04	-8.86	-878.70	11.13	-0.08
Dead+Wind 30 deg+Ice+Temp	53.09	4.40	-7.65	-758.34	-430.72	-0.05
Dead+Wind 60 deg+Ice+Temp	53.09	7.62	-4.46	-442.78	-749.96	0.16
Dead+Wind 90 deg+Ice+Temp	53.09	8.79	-0.01	0.82	-865.64	0.12
Dead+Wind 120 deg+Ice+Temp	53.09	7.61	4.45	446.67	-749.63	0.19
Dead+Wind 150 deg+Ice+Temp	53.09	4.38	7.66	764.29	-428.81	0.21
Dead+Wind 180 deg+Ice+Temp	53.09	-0.01	8.84	881.47	6.11	0.10
Dead+Wind 210 deg+Ice+Temp	53.09	-4.40	7.66	763.79	440.59	0.03
Dead+Wind 240 deg+Ice+Temp	53.09	-7.65	4.43	443.18	765.83	-0.00
Dead+Wind 270 deg+Ice+Temp	53.09	-8.81	-0.02	-0.25	878.59	-0.03
Dead+Wind 300 deg+Ice+Temp	53.09	-7.63	-4.46	-442.87	762.35	0.12
Dead+Wind 330 deg+Ice+Temp	53.09	-4.42	-7.66	-759.07	444.45	-0.02
Dead+Wind 0 deg - Service	37.60	-0.06	-12.17	-1188.05	10.07	0.28
Dead+Wind 30 deg - Service	37.60	6.04	-10.52	-1025.43	-585.93	0.17
Dead+Wind 60 deg - Service	37.60	10.46	-6.13	-601.07	-1015.86	0.26
Dead+Wind 90 deg - Service	37.60	12.07	-0.02	-2.42	-1171.40	-0.04
Dead+Wind 120 deg - Service	37.60	10.46	6.12	599.64	-1015.35	-0.10
Dead+Wind 150 deg - Service	37.60	6.02	10.52	1027.11	-583.04	-0.14
Dead+Wind 180 deg - Service	37.60	-0.01	12.14	1184.92	2.49	-0.26
Dead+Wind 210 deg - Service	37.60	-6.04	10.52	1026.35	587.35	-0.20
Dead+Wind 240 deg - Service	37.60	-10.52	6.08	594.36	1026.36	-0.02
Dead+Wind 270 deg - Service	37.60	-12.09	-0.03	-4.03	1177.48	0.18
Dead+Wind 300 deg - Service	37.60	-10.48	-6.13	-601.21	1021.09	0.58
Dead+Wind 330 deg - Service	37.60	-6.07	-10.52	-1026.54	593.18	0.44

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	-37.60	0.00	0.00	37.60	-0.00	0.000%
2	-0.15	-37.60	-31.16	0.15	37.60	31.15	0.005%
3	15.46	-37.60	-26.93	-15.46	37.60	26.93	0.000%
4	26.78	-37.60	-15.70	-26.78	37.60	15.70	0.000%

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
5	30.89	-37.60	-0.05	-30.89	37.60	0.05	0.005%
6	26.77	-37.60	15.66	-26.77	37.60	-15.66	0.000%
7	15.41	-37.60	26.94	-15.41	37.60	-26.94	0.000%
8	-0.03	-37.60	31.09	0.03	37.60	-31.09	0.005%
9	-15.45	-37.60	26.93	15.45	37.60	-26.93	0.000%
10	-26.92	-37.60	15.57	26.92	37.60	-15.57	0.000%
11	-30.96	-37.60	-0.07	30.96	37.60	0.07	0.005%
12	-26.83	-37.60	-15.70	26.83	37.60	15.70	0.000%
13	-15.55	-37.60	-26.94	15.55	37.60	26.94	0.000%
14	0.00	-53.09	0.00	-0.00	53.09	0.00	0.001%
15	-0.04	-53.09	-8.86	0.04	53.09	8.86	0.000%
16	4.40	-53.09	-7.65	-4.40	53.09	7.65	0.000%
17	7.62	-53.09	-4.46	-7.62	53.09	4.46	0.000%
18	8.79	-53.09	-0.01	-8.79	53.09	0.01	0.000%
19	7.61	-53.09	4.45	-7.61	53.09	-4.45	0.000%
20	4.38	-53.09	7.66	-4.38	53.09	-7.66	0.000%
21	-0.01	-53.09	8.84	0.01	53.09	-8.84	0.000%
22	-4.40	-53.09	7.66	4.40	53.09	-7.66	0.000%
23	-7.65	-53.09	4.43	7.65	53.09	-4.43	0.000%
24	-8.81	-53.09	-0.02	8.81	53.09	0.02	0.000%
25	-7.63	-53.09	-4.46	7.63	53.09	4.46	0.000%
26	-4.42	-53.09	-7.66	4.42	53.09	7.66	0.000%
27	-0.06	-37.60	-12.17	0.06	37.60	12.17	0.003%
28	6.04	-37.60	-10.52	-6.04	37.60	10.52	0.001%
29	10.46	-37.60	-6.13	-10.46	37.60	6.13	0.001%
30	12.07	-37.60	-0.02	-12.07	37.60	0.02	0.003%
31	10.46	-37.60	6.12	-10.46	37.60	-6.12	0.001%
32	6.02	-37.60	10.52	-6.02	37.60	-10.52	0.001%
33	-0.01	-37.60	12.15	0.01	37.60	-12.14	0.003%
34	-6.04	-37.60	10.52	6.04	37.60	-10.52	0.001%
35	-10.52	-37.60	6.08	10.52	37.60	-6.08	0.001%
36	-12.09	-37.60	-0.03	12.09	37.60	0.03	0.003%
37	-10.48	-37.60	-6.13	10.48	37.60	6.13	0.001%
38	-6.07	-37.60	-10.52	6.07	37.60	10.52	0.001%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	13	0.00006597	0.00009939
3	Yes	17	0.00000001	0.00006837
4	Yes	17	0.00000001	0.00006782
5	Yes	13	0.00006609	0.00009593
6	Yes	17	0.00000001	0.00006754
7	Yes	17	0.00000001	0.00006829
8	Yes	13	0.00006600	0.00012956
9	Yes	17	0.00000001	0.00006659
10	Yes	17	0.00000001	0.00006868
11	Yes	13	0.00006605	0.00013078
12	Yes	17	0.00000001	0.00007156
13	Yes	17	0.00000001	0.00006664
14	Yes	6	0.00000001	0.00002676
15	Yes	15	0.00000001	0.00013769
16	Yes	16	0.00000001	0.00006151
17	Yes	16	0.00000001	0.00006164
18	Yes	15	0.00000001	0.00013516
19	Yes	16	0.00000001	0.00006180
20	Yes	16	0.00000001	0.00006168
21	Yes	15	0.00000001	0.00013776
22	Yes	16	0.00000001	0.00006223
23	Yes	16	0.00000001	0.00006261
24	Yes	15	0.00000001	0.00013700
25	Yes	16	0.00000001	0.00006254
26	Yes	16	0.00000001	0.00006227
27	Yes	13	0.00000001	0.00004852
28	Yes	14	0.00000001	0.00010265

29	Yes	14	0.00000001	0.00009780
30	Yes	13	0.00000001	0.00004425
31	Yes	14	0.00000001	0.00009749
32	Yes	14	0.00000001	0.00010307
33	Yes	13	0.00000001	0.00004944
34	Yes	14	0.00000001	0.00009588
35	Yes	14	0.00000001	0.00010144
36	Yes	13	0.00000001	0.00004704
37	Yes	14	0.00000001	0.00011173
38	Yes	14	0.00000001	0.00009422

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147 - 99.5	36.80	27	2.16	0.01
L2	103.25 - 69.5	18.27	27	1.76	0.00
L3	69.5 - 59	7.88	27	1.11	0.00
L4	63.75 - 58	6.61	27	1.00	0.00
L5	58 - 50.5	5.43	27	0.94	0.00
L6	50.5 - 50	4.08	27	0.79	0.00
L7	50 - 29.25	4.00	27	0.78	0.00
L8	34.5 - 24	1.90	27	0.51	0.00
L9	24 - 0	0.92	27	0.37	0.00

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.0000	A-ANT-23G-2-C	27	36.80	2.16	0.01	30990
147.0000	APXVSP18-C-A20 w/ Mount Pipe	27	36.80	2.16	0.01	30990
145.0000	TME-1900MHz RRH (65 MHz)	27	35.91	2.15	0.01	30990
119.0000	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	27	24.53	1.96	0.01	5532
110.0000	7770.00 w/ Mount Pipe	27	20.87	1.86	0.00	4186
100.0000	APXV18-206517S-C w/ Mount Pipe	27	17.07	1.71	0.00	3387
53.0000	GPS_A	27	4.51	0.84	0.00	2997
49.0000	KS24019-L112A	27	3.83	0.77	0.00	2974

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147 - 99.5	93.96	2	5.51	0.03
L2	103.25 - 69.5	46.67	2	4.51	0.01
L3	69.5 - 59	20.14	2	2.83	0.00
L4	63.75 - 58	16.89	2	2.57	0.00
L5	58 - 50.5	13.89	2	2.39	0.00
L6	50.5 - 50	10.43	2	2.02	0.00
L7	50 - 29.25	10.22	2	2.00	0.00
L8	34.5 - 24	4.86	2	1.30	0.00
L9	24 - 0	2.34	2	0.94	0.00

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.0000	A-ANT-23G-2-C	2	93.96	5.51	0.03	12326

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
147.0000	APXVSP18-C-A20 w/ Mount Pipe	2	93.96	5.51	0.03	12326
145.0000	TME-1900MHz RRH (65 MHz)	2	91.67	5.48	0.03	12326
119.0000	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	2	62.65	5.01	0.01	2197
110.0000	7770.00 w/ Mount Pipe	2	53.30	4.75	0.01	1661
100.0000	APXV18-206517S-C w/ Mount Pipe	2	43.61	4.37	0.01	1341
53.0000	GPS_A	2	11.52	2.14	0.00	1176
49.0000	KS24019-L112A	2	9.80	1.96	0.00	1166

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P/P _a
L1	147 - 99.5 (1)	TP30.313x22x0.25	47.5000	0.0000	0.0	36.00	23.6724	-11.23	852.21	0.013
L2	99.5 - 69.5 (2)	TP35.0626x29.1567x0.3125	33.7500	0.0000	0.0	39.00	34.9673	-16.84	1363.72	0.012
L3	69.5 - 59 (3)	TP36.9x35.0626x0.4301	10.5000	0.0000	0.0	34.46	49.3591	-18.05	1701.11	0.011
L4	59 - 58 (4)	TP36.45x35.2086x0.375	5.7500	0.0000	0.0	39.00	43.5606	-19.91	1698.86	0.012
L5	58 - 50.5 (5)	TP37.7624x36.45x0.4271	7.5000	0.0000	0.0	36.44	51.3459	-21.63	1871.25	0.012
L6	50.5 - 50 (6)	TP37.8499x37.7624x0.5405	0.5000	0.0000	0.0	33.98	64.9337	-21.77	2206.71	0.010
L7	50 - 29.25 (7)	TP41.481x37.8499x0.479	20.7500	0.0000	0.0	34.60	61.8224	-25.74	2139.18	0.012
L8	29.25 - 24 (8)	TP41.6499x39.6043x0.5047	10.5000	0.0000	0.0	36.61	66.8677	-29.67	2448.16	0.012
L9	24 - 0 (9)	TP45.85x41.6499x0.5901	24.0000	0.0000	0.0	34.71	85.9921	-37.58	2984.79	0.013

Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M _x kip-ft	Actual f _{bx} ksi	Allow. F _{bx} ksi	Ratio f _{bx} /F _{bx}	Actual M _y kip-ft	Actual f _{by} ksi	Allow. F _{by} ksi	Ratio f _{by} /F _{by}
L1	147 - 99.5 (1)	TP30.313x22x0.25	428.56	30.24	36.00	0.840	0.00	0.00	36.00	0.000
L2	99.5 - 69.5 (2)	TP35.0626x29.1567x0.3125	1144.3	46.27	39.00	1.187	0.00	0.00	39.00	0.000
L3	69.5 - 59 (3)	TP36.9x35.0626x0.4301	1279.5	35.85	34.46	1.040	0.00	0.00	34.46	0.000
L4	59 - 58 (4)	TP36.45x35.2086x0.375	1418.8	44.43	39.00	1.139	0.00	0.00	39.00	0.000
L5	58 - 50.5 (5)	TP37.7624x36.45x0.4271	1606.6	41.28	36.44	1.133	0.00	0.00	36.44	0.000
L6	50.5 - 50 (6)	TP37.8499x37.7624x0.5405	1619.4	33.02	33.98	0.972	0.00	0.00	33.98	0.000
L7	50 - 29.25 (7)	TP41.481x37.8499x0.479	2029.6	40.36	34.60	1.167	0.00	0.00	34.60	0.000
L8	29.25 - 24 (8)	TP41.6499x39.6043x0.5047	2322.9	41.62	36.61	1.137	0.00	0.00	36.61	0.000
L9	24 - 0 (9)	TP45.85x41.6499x0.5901	3038.7	38.52	34.71	1.110	0.00	0.00	34.71	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V K	Actual f _v ksi	Allow. F _v ksi	Ratio f _v /F _v	Actual T kip-ft	Actual f _{vt} ksi	Allow. F _{vt} ksi	Ratio f _{vt} /F _{vt}
L1	147 - 99.5 (1)	TP30.313x22x0.25	18.64	0.79	24.00	0.067	1.46	0.05	24.00	0.002

Section No.	Elevation ft	Size	Actual V K	Actual f_v ksi	Allow. F_v ksi	Ratio $\frac{f_v}{F_v}$	Actual T kip-ft	Actual f_{vt} ksi	Allow. F_{vt} ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
L2	99.5 - 69.5 (2)	TP35.0626x29.1567x0.3125	23.19	0.66	26.00	0.052	1.31	0.02	26.00	0.001
L3	69.5 - 59 (3)	TP36.9x35.0626x0.4301	23.87	0.48	22.98	0.043	1.27	0.02	22.98	0.001
L4	59 - 58 (4)	TP36.45x35.2086x0.375	24.61	0.56	26.00	0.044	1.22	0.02	26.00	0.001
L5	58 - 50.5 (5)	TP37.7624x36.45x0.4271	25.53	0.50	24.30	0.042	1.20	0.01	24.30	0.001
L6	50.5 - 50 (6)	TP37.8499x37.7624x0.5405	25.59	0.39	22.66	0.035	1.19	0.01	22.66	0.001
L7	50 - 29.25 (7)	TP41.481x37.8499x0.479	27.33	0.44	23.07	0.039	1.05	0.01	23.07	0.000
L8	29.25 - 24 (8)	TP41.6499x39.6043x0.5047	28.54	0.43	24.41	0.036	0.95	0.01	24.41	0.000
L9	24 - 0 (9)	TP45.85x41.6499x0.5901	31.17	0.36	23.14	0.032	0.70	0.00	23.14	0.000

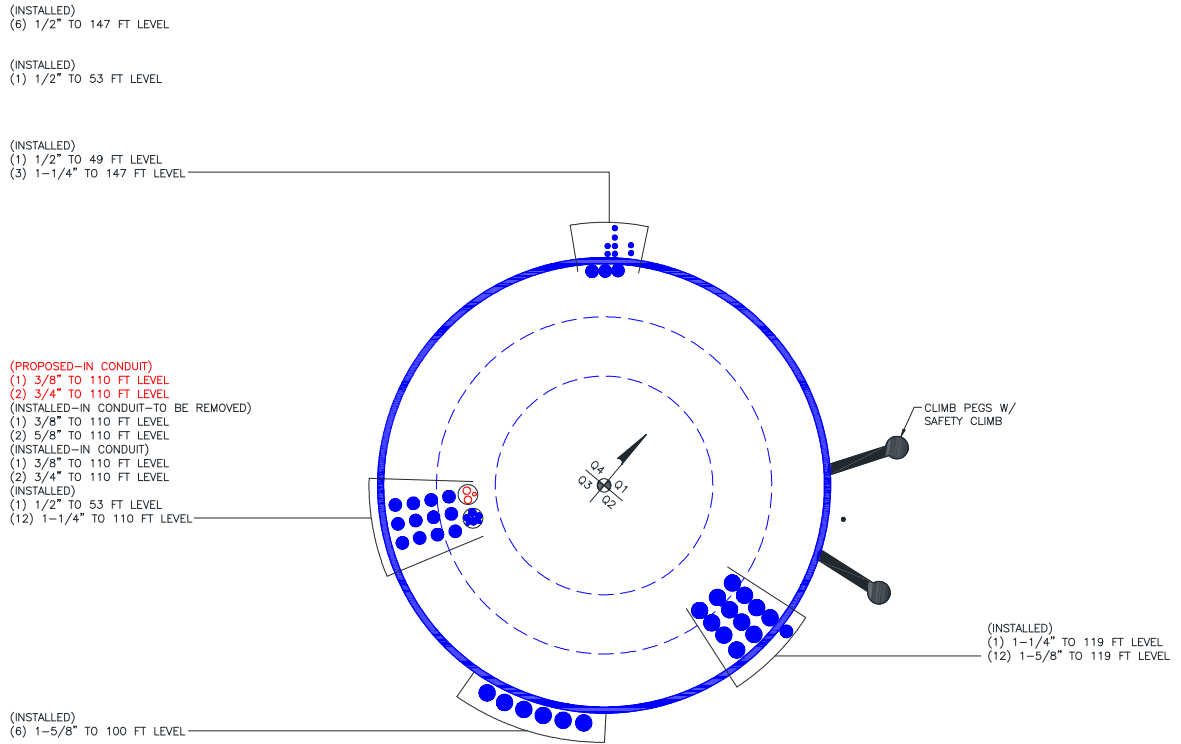
Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	147 - 99.5 (1)	0.013	0.840	0.000	0.067	0.002	0.854	1.333	H1-3+VT ✓
L2	99.5 - 69.5 (2)	0.012	1.187	0.000	0.052	0.001	1.200	1.333	H1-3+VT ✓
L3	69.5 - 59 (3)	0.011	1.040	0.000	0.043	0.001	1.051	1.333	H1-3+VT ✓
L4	59 - 58 (4)	0.012	1.139	0.000	0.044	0.001	1.151	1.333	H1-3+VT ✓
L5	58 - 50.5 (5)	0.012	1.133	0.000	0.042	0.001	1.145	1.333	H1-3+VT ✓
L6	50.5 - 50 (6)	0.010	0.972	0.000	0.035	0.001	0.982	1.333	H1-3+VT ✓
L7	50 - 29.25 (7)	0.012	1.167	0.000	0.039	0.000	1.179	1.333	H1-3+VT ✓
L8	29.25 - 24 (8)	0.012	1.137	0.000	0.036	0.000	1.149	1.333	H1-3+VT ✓
L9	24 - 0 (9)	0.013	1.110	0.000	0.032	0.000	1.123	1.333	H1-3+VT ✓

Section Capacity Table

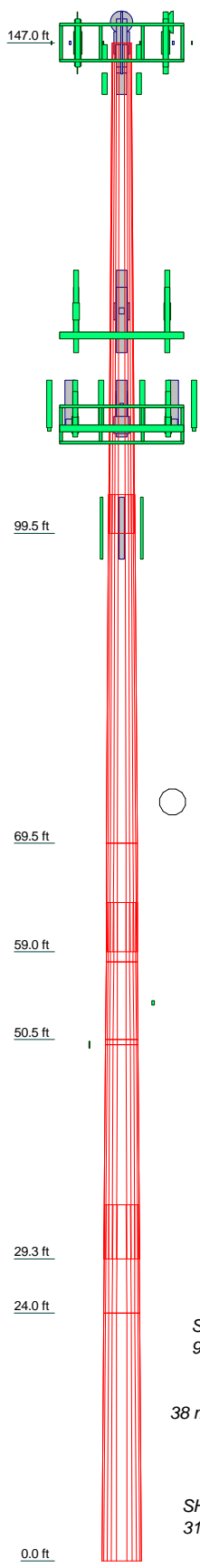
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF* P_{allow} K	% Capacity	Pass Fail	
L1	147 - 99.5	Pole	TP30.313x22x0.25	1	-11.23	1135.99	64.1	Pass	
L2	99.5 - 69.5	Pole	TP35.0626x29.1567x0.3125	2	-16.84	1817.84	90.0	Pass	
L3	69.5 - 59	Pole	TP36.9x35.0626x0.4301	3	-18.05	2267.58	78.9	Pass	
L4	59 - 58	Pole	TP36.45x35.2086x0.375	4	-19.91	2264.58	86.4	Pass	
L5	58 - 50.5	Pole	TP37.7624x36.45x0.4271	5	-21.63	2494.38	85.9	Pass	
L6	50.5 - 50	Pole	TP37.8499x37.7624x0.5405	6	-21.77	2941.54	73.7	Pass	
L7	50 - 29.25	Pole	TP41.481x37.8499x0.479	7	-25.74	2851.53	88.4	Pass	
L8	29.25 - 24	Pole	TP41.6499x39.6043x0.5047	8	-29.67	3263.40	86.2	Pass	
L9	24 - 0	Pole	TP45.85x41.6499x0.5901	9	-37.58	3978.72	84.2	Pass	
							Summary		
							Pole (L2)	90.0	Pass
							RATING =	90.0	Pass

APPENDIX B BASE LEVEL DRAWING



APPENDIX C
ADDITIONAL CALCULATIONS

Section	1	2	3	4	5	6	7	8	9
Length (ft)	47.5000	33.7500	5.7500	5.7500	5.7500	20.7500	10.5000	24.0000	
Number of Sides	12	12	12	12	12	12	12	12	12
Thickness (in)	0.2500	0.3125	0.4301	0.4790	0.5047	0.5405	0.5900	0.5900	0.5900
Socket Length (ft)	3.7500		4.7500			5.2500			
Top Dia (in)	22.0000	29.1567	35.0626	37.7626	37.8499	39.6043	41.6499	41.6499	41.6499
Bot Dia (in)	30.3130	35.0626	36.9000	37.8499	37.8499	37.8499	37.8499	37.8499	37.8499
Grade	A607-60	A607-65	A607-65	A607-65	A607-65	A607-65	A607-65	A607-65	A607-65
Weight (K)	3.4	3.7	1.8	0.8	1.3	4.3	2.3	6.7	24.3



DESIGNED APPURTENANCE LOADING

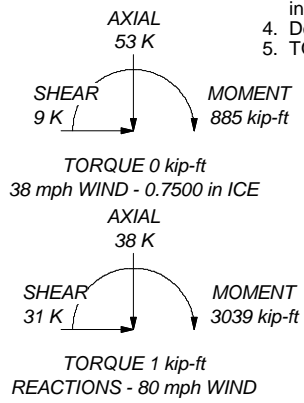
TYPE	ELEVATION	TYPE	ELEVATION
APXVSP18-C-A20 w/ Mount Pipe	147	RRUS 11 B12	119
APXVSP18-C-A20 w/ Mount Pipe	147	T-Arm Mount [TA 601-3]	119
APXVTM14-C-120 w/ Mount Pipe	147	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	119
APXVTM14-C-120 w/ Mount Pipe	147	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	119
APXVTM14-C-120 w/ Mount Pipe	147	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	119
TD-RRH8x20-25	147	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	119
TD-RRH8x20-25	147	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	119
TD-RRH8x20-25	147	7020.00	110
(3) ACU-A20-N	147	7020.00	110
(3) ACU-A20-N	147	7020.00	110
(3) ACU-A20-N	147	RRUS 11	110
P40-16-XLPP-RR-A w/ Mount Pipe	147	RRUS 11	110
(2) 6' x 2" Mount Pipe	147	RRUS 11	110
(2) 6' x 2" Mount Pipe	147	(2) LGP2140X	110
(2) 6' x 2" Mount Pipe	147	(2) LGP2140X	110
Platform Mount [LP 1201-1]	147	(2) LGP2140X	110
A-ANT-23G-2-C	147	DC6-48-60-18-8F	110
A-ANT-23G-2-C	147	(2) SBNHH-1D65A w/ Mount Pipe	110
VHLP2-18	147	(2) SBNHH-1D65A w/ Mount Pipe	110
800 EXTERNAL NOTCH FILTER	145	(2) SBNHH-1D65A w/ Mount Pipe	110
TME-800MHZ RRH	145	RRUS 32 B2	110
800 EXTERNAL NOTCH FILTER	145	RRUS 32 B2	110
TME-800MHZ RRH	145	RRUS 32 B2	110
800 EXTERNAL NOTCH FILTER	145	WCS RRUS-32-B30	110
TME-800MHZ RRH	145	WCS RRUS-32-B30	110
Side Arm Mount [SO 102-3]	145	WCS RRUS-32-B30	110
TME-1900MHz RRH (65 MHz)	145	DC6-48-60-18-8F	110
TME-1900MHz RRH (65 MHz)	145	Platform Mount [LP 1201-1]	110
TME-1900MHz RRH (65 MHz)	145	MT-195-14 (Hand Rail)	110
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	119	PRK-1245L (Kickers)	110
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	119	7770.00 w/ Mount Pipe	110
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	119	7770.00 w/ Mount Pipe	110
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	119	7770.00 w/ Mount Pipe	110
KRY 112 144/1	119	Pipe Mount [PM 601-3]	100
KRY 112 144/1	119	APXV18-206517S-C w/ Mount Pipe	100
KRY 112 144/1	119	APXV18-206517S-C w/ Mount Pipe	100
LNX-6515DS-VTM w/ Mount Pipe	119	APXV18-206517S-C w/ Mount Pipe	100
LNX-6515DS-VTM w/ Mount Pipe	119	GPS_A	53
LNX-6515DS-VTM w/ Mount Pipe	119	Side Arm Mount [SO 701-1]	53
RRUS 11 B12	119	Side Arm Mount [SO 701-1]	49
RRUS 11 B12	119	KS24019-L112A	49

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-60	60 ksi	75 ksi	Reinf 56.64 ksi	57 ksi	71 ksi
A607-65	65 ksi	80 ksi	Reinf 57.67 ksi	58 ksi	73 ksi
Reinf 57.44 ksi	57 ksi	72 ksi	Reinf 61.02 ksi	61 ksi	77 ksi
Reinf 60.74 ksi	61 ksi	76 ksi	Reinf 57.85 ksi	58 ksi	73 ksi

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 90%



Paul J. Ford and Company
 250 East Broad St., Suite 600
 Columbus, Ohio
 Phone: 614.221.6679
 FAX:

Job: **147' MP; Branford Banm Tower; Branford, CT**
 Project: **PJF# 37516-0242.004.7805 (BU# 876321)**
 Client: CCI
 Code: TIA/EIA-222-F
 Path:
 Drawn by: jjohnson
 Date: 06/16/16
 App'd:
 Scale: NTS
 Dwg No. E-1

G:\TOWER\37516-0242-004-7805-01\BRANFORD BANM TOWER\37516-0242-004-7805_SA_12540\37516-0242-004-7805.dwg

v4.4 - Effective 7-12-13

Asymmetric Anchor Rod Analysis

Moment =	3039	k-ft	TIA Ref.	F	Location =	Base Plate
Axial =	38.0	kips	ASIF =	1.3333	η =	N/A for BP, Rev. G Sect. 4.9.9
Shear =	31.0	kips	Max Ratio =	105.0%	Threads =	N/A for FP, Rev. G
Anchor Qty =	19					

**** For Post Installed Anchors: Check anchors for embedment, epoxy/grout bond, and capacity based on proof load. ****

Item	Nominal Anchor Dia, in	Spec	Fy, ksi	Fu, ksi	Location, degrees	Anchor Circle, in	Area Override, in ²	Area, in ²	Max Net Compression, kips	Max Net Tension, kips	Load for Capacity Calc, kips	Capacity Override, kips	Capacity, kips	Capacity Ratio
1	2.250	#18J A615 Gr 75	75	100	25.8	54.00	0.00	3.98	143.78	139.52	139.52	0.00	195.00	71.5%
2	2.250	#18J A615 Gr 75	75	100	38.4	54.00	0.00	3.98	145.23	140.96	140.96	0.00	195.00	72.3%
3	2.250	#18J A615 Gr 75	75	100	51.0	54.00	0.00	3.98	147.83	143.57	143.57	0.00	195.00	73.6%
4	2.250	#18J A615 Gr 75	75	100	63.6	54.00	0.00	3.98	150.96	146.70	146.70	0.00	195.00	75.2%
5	2.250	#18J A615 Gr 75	75	100	115.8	54.00	0.00	3.98	155.93	151.66	151.66	0.00	195.00	77.8%
6	2.250	#18J A615 Gr 75	75	100	128.4	54.00	0.00	3.98	153.55	149.28	149.28	0.00	195.00	76.6%
7	2.250	#18J A615 Gr 75	75	100	141.0	54.00	0.00	3.98	150.04	145.77	145.77	0.00	195.00	74.8%
8	2.250	#18J A615 Gr 75	75	100	153.6	54.00	0.00	3.98	145.96	141.69	141.69	0.00	195.00	72.7%
9	2.250	#18J A615 Gr 75	75	100	205.8	54.00	0.00	3.98	138.71	134.44	134.44	0.00	195.00	68.9%
10	2.250	#18J A615 Gr 75	75	100	218.4	54.00	0.00	3.98	141.50	137.23	137.23	0.00	195.00	70.4%
11	2.250	#18J A615 Gr 75	75	100	231.0	54.00	0.00	3.98	145.61	141.35	141.35	0.00	195.00	72.5%
12	2.250	#18J A615 Gr 75	75	100	243.6	54.00	0.00	3.98	150.29	146.02	146.02	0.00	195.00	74.9%
13	2.250	#18J A615 Gr 75	75	100	295.8	54.00	0.00	3.98	160.72	156.45	156.45	0.00	195.00	80.2%
14	2.250	#18J A615 Gr 75	75	100	308.4	54.00	0.00	3.98	159.28	155.01	155.01	0.00	195.00	79.5%
15	2.250	#18J A615 Gr 75	75	100	321.0	54.00	0.00	3.98	156.50	152.24	152.24	0.00	195.00	78.1%
16	2.250	#18J A615 Gr 75	75	100	333.6	54.00	0.00	3.98	152.91	148.64	148.64	0.00	195.00	76.2%
17	1.750	A193 Gr B7	105	125	20.7	61.88	0.00	2.41	99.03	96.45	96.45	0.00	132.29	72.9%
18	1.750	A193 Gr B7	105	125	148.7	61.88	0.00	2.41	102.31	99.73	99.73	0.00	132.29	75.4%
19	1.750	A193 Gr B7	105	125	225.7	61.88	0.00	2.41	99.48	96.90	96.90	0.00	132.29	73.2%

70.90

Square, Stiffened / Unstiffened Base Plate, Any Rod Material - Rev. F / G

- Assumptions: 1) Rod groups at corners. Total # rods divisible by 4. Maximum total # of rods = 48 (12 per Corner).
 2) Rod Spacing = Straight Center-to-Center distance between any (2) adjacent rods (same corner)
 3) Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data		
BU#:		
Site Name:		
App #:		
Anchor Rod Data		
Qty:	16	
Diam:	2.25	in
Rod Material:	A615-J	
Yield, Fy:	75	ksi
Strength, Fu:	100	ksi
Bolt Circle:	54	in
Anchor Spacing:	6	in

Plate Data		
W=Side:	54	in
Thick:	3.5	in
Grade:	50	ksi
Clip Distance:	6	in

Stiffener Data (Welding at both sides)		
Configuration:	Unstiffened	
Weld Type:		**
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		<-- Disregard
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	45.85	in
Thick:	0.4375	in
Grade:	65	ksi
# of Sides:	12	"0" IF Round

Stress Increase Factor		
ASD ASIF:	1.333	

Base Reactions		
TIA Revision:	F	
Unfactored Moment, M:	2854	ft-kips
Unfactored Axial, P:	34.1	kips
Unfactored Shear, V:	27.8	kips

Reactions have been adjusted to account for additional anchor rods.

Anchor Rod Results

TIA F --> Maximum Rod Tension: 156.4 Kips
 Allowable Tension: 195.0 Kips
 Anchor Rod Stress Ratio: 80.2% **Pass**

Base Plate Results

Base Plate Stress: 32.6 ksi
 Allowable PL Bending Stress: 50.0 ksi
 Base Plate Stress Ratio: 65.3% **Pass**

Flexural Check

PL Ref. Data	
Yield Line (in):	30.52
Max PL Length:	30.52

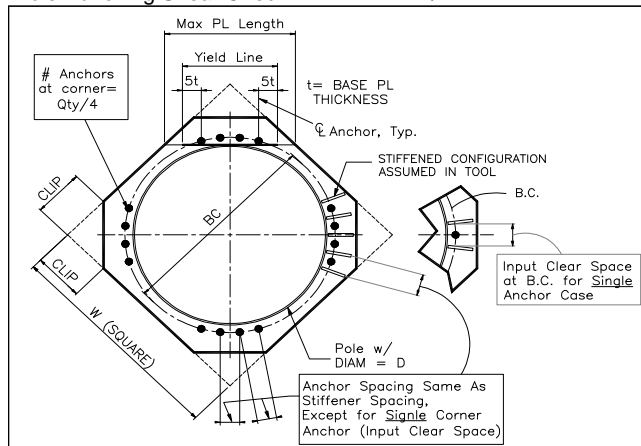
N/A - Unstiffened

Stiffener Results

Horizontal Weld: N/A
 Vertical Weld: N/A
 Plate Flex+Shear, $f_b/F_b + (f_v/F_v)^2$: N/A
 Plate Tension+Shear, $f_t/F_t + (f_v/F_v)^2$: N/A
 Plate Comp. (AISC Bracket): N/A

Pole Results

Pole Punching Shear Check: N/A



** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

Foundation Loads:

Pole weight or tower leg compression = **38** (kips)
 Horizontal load at top of pier = **31** (kips)
 Overturning moment at top of pier = **3039** (ft-kips)

Design criteria:

Safety factor against overturning = **1.5**

Soil Properties:

Soil density = **125** (pcf)
 Allowable soil bearing = **4** (ksf)
 Depth to water table = **4.5** (ft)

Dimensions:

Pier shape (round or square) **S** ("R" or "S")
 Pier width = **7** (ft)
 Pier height above grade = **0.5** (ft)
 depth to bottom of footing = **11** (ft)
 Footing thickness = **3** (ft)
 Footing width = **20.5** (ft)
 Footing length = **20.5** (ft)

Concrete:

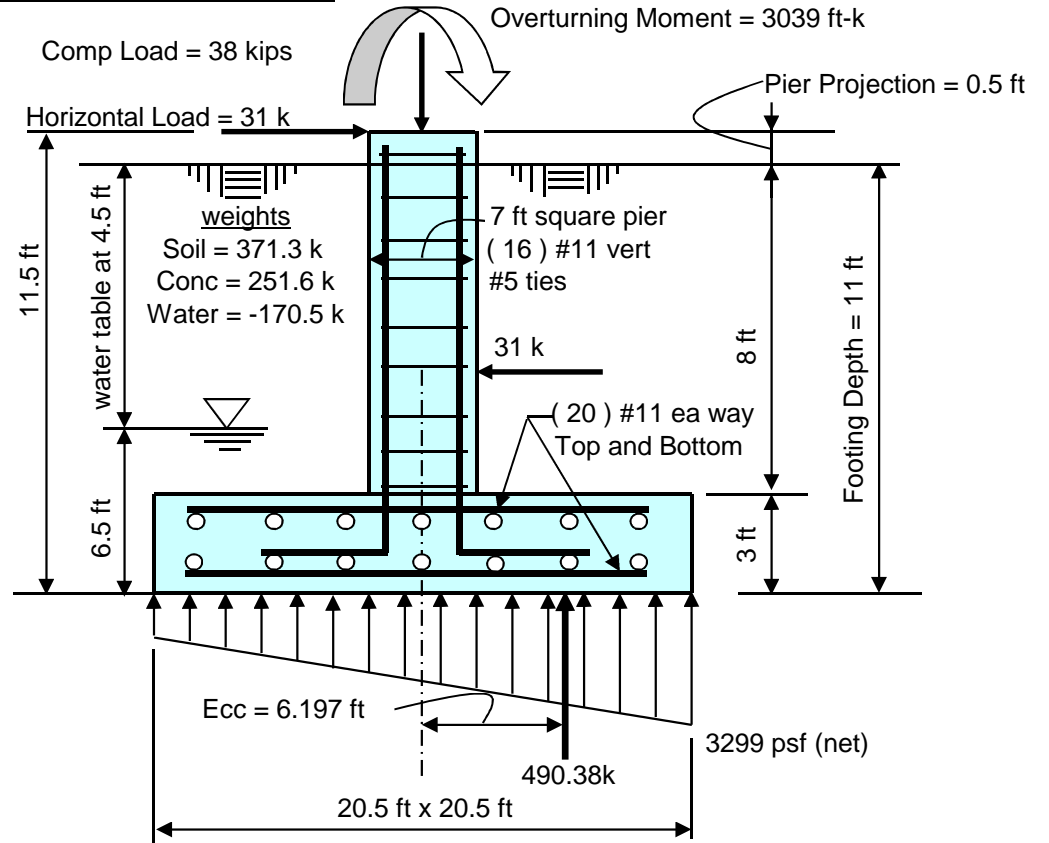
Concrete strength = **3** (ksi)
 Rebar strength = **60** (ksi)
 ultimate load factor = **1.3**

Reinforcing Steel:

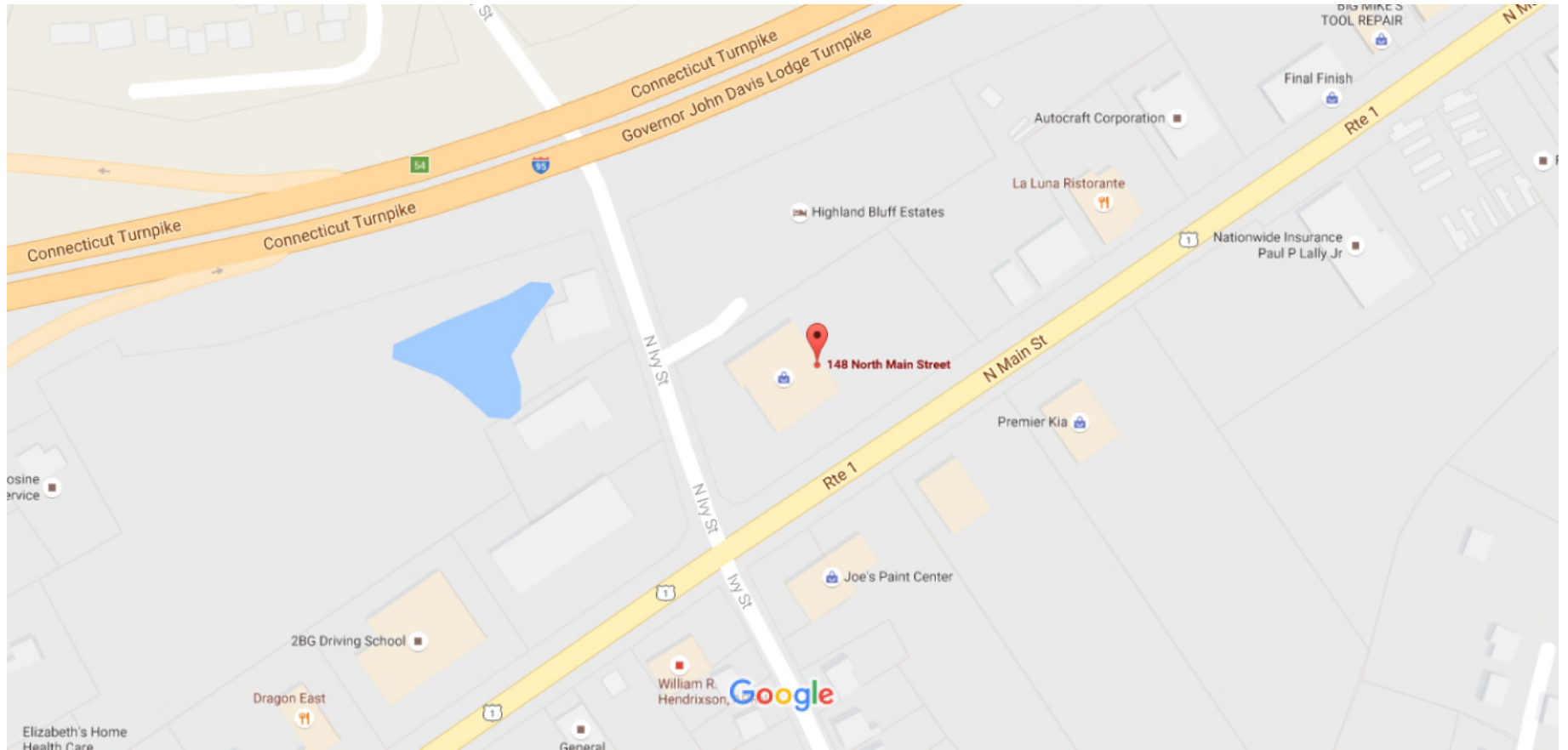
Pad
 minimum cover over rebar = **3** inches
 size of pad rebar = **#11** bar
 quantity of pad rebar = **20** (ea direction)

Reinforcing Steel:

Pier
 size of vert rebar in pier = **#11** bar
 vertical rebar quantity = **16**
 size of pier ties = **#5** bar
 minimum cover over rebar = **3** inches
 Total volume of concrete = **62.1** cu yd



Summary of analysis results	
Maximum Net Soil Bearing = 3.299 ksf Allowable Net Soil Bearing = 4 ksf Soil Bearing Stress Ratio = 0.82 Okay	Ult Bending Shear Capacity = 110 psi Ult Bending Shear Stress = 45 psi Bending Shear Stress Ratio = 0.41 Okay
Ftg Overturning Resistance = 5026 ft-kips Overturning Moment = 3039 ft-kips Required Overturning Safety Factor = 1.5 Overturning Safety Factor = 1.654 Ratio = 0.91 Okay	Pad Bending Moment Capacity = 4134 ft-k Pad Bending Moment = 1313 ft-k Bending Moment Stress Ratio = 0.32 OK



148-160 NO MAIN ST

Location 148-160 NO MAIN ST

Mblu D06/E06 001/ 001.1/ /

Acct# 005520

Owner PREMIER REALTY HOLDINGS
LLC

Assessment \$1,023,900

Appraisal \$1,462,800

PID 726

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$329,700	\$1,133,100	\$1,462,800
Assessment			
Valuation Year	Improvements	Land	Total
2016	\$230,700	\$793,200	\$1,023,900

Owner of Record

Owner PREMIER REALTY HOLDINGS LLC
Co-Owner
Address 150 NORTH MAIN ST
BRANFORD, CT 06405

Sale Price \$0
Certificate
Book & Page 0877/0469
Sale Date 07/06/2004
Instrument 3

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
PREMIER REALTY HOLDINGS LLC			0877/0469	3	07/06/2004
PREMIER REALTY HOLDINGS LLC	\$875,000		0877/0467	8	07/06/2004
MACULAITIS IRENE			0602/0843		02/26/1996
MACULAITIS ALEXANDER EST + IRENE			0238/0562		

Building Information

Building 1 : Section 1

Year Built: 1965
Living Area: 13144
Replacement Cost: \$720,946
Building Percent 35
Good:
Replacement Cost
Less Depreciation: \$252,300

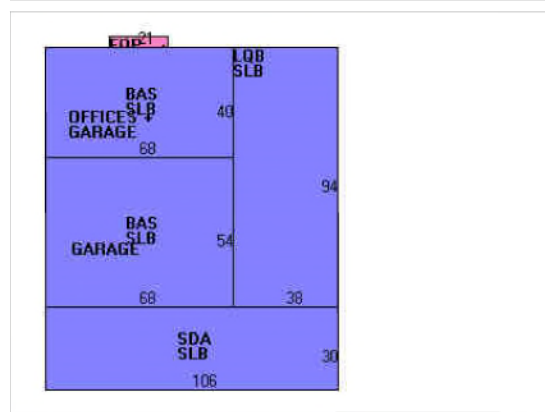
Building Photo

Building Attributes	
Field	Description
STYLE	Car Dealrshp
MODEL	Ind/Comm
Grade	C
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	Drivit
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall
Interior Floor 1	Concr-Finished
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	AUTO S S&S MDL96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	3310
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & MIN WL
Rooms/Prtns	AVERAGE
Wall Height	15
% Comn Wall	0



(<http://images.vgsi.com/photos/BranfordCTPhotos/\00\01\20\95.jpg>)

Building Layout



Building Sub-Areas (sq ft)		Legend	
Code	Description	Gross Area	Living Area
BAS	First Floor	6392	6392
LQB	Low Qual Bas	3572	3572
SDA	Store Display Area	3180	3180
FOP	Porch, Open	84	0
SLB	Slab	13144	0
		26372	13144

Building 1 : Section 1

Year Built: 1965
Living Area: 0
Replacement Cost: \$720,946
Building Percent Good: 35
Replacement Cost Less Depreciation: \$252,300

Building Attributes	
Field	Description
Style	Outbuildings
Model	
Grade:	

Building Photo

Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Cottage Cmplx	
Cottage Adj	



(<http://images.vgsi.com/photos/BranfordCTPhotos/\00\02\25\27.jpg>)

Building Layout

Building Layout

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

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
MEZ1	MEZZANINE-UNF	1960 S.F.	\$6,900	1
A/C	AIR CONDITION	5984 S.F.	\$4,600	1

Land

Land Use

Use Code 3310
Description AUTO S S&S MDL96
Zone IG-1
Neighborhood 500
Alt Land Appr Category No

Land Line Valuation

Size (Acres) 2.05
Frontage
Depth
Assessed Value \$793,200
Appraised Value \$1,133,100

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	PAVING-ASPHALT			43000 S.F.	\$42,600	1
LT1	LIGHTS-IN W/PL			16 UNITS	\$7,300	1

SHD6	SHED COM MAS			312 S.F.	\$6,200	1
FN6	W/O TOP RL-4'			170 L.F.	\$800	1
LT2	W/DOUBLE LIGHT			4 UNITS	\$2,900	1
PAV2	PAVING-CONC			130 S.F.	\$400	1
LT3	W/TRIPLE LIGHT			2 UNITS	\$2,000	1
SHD5	SHED COM WOOD			240 S.F.	\$3,700	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$329,700	\$1,133,100	\$1,462,800
2014	\$329,700	\$1,133,100	\$1,462,800
2013	\$352,300	\$1,133,100	\$1,485,400

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$230,700	\$793,200	\$1,023,900
2014	\$230,700	\$793,200	\$1,023,900
2013	\$246,600	\$793,200	\$1,039,800

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DIV. SITE ACQUISITION, LLC
 27 NORTHWESTERN DRIVE
 SALEM, NH 03079

BANK OF AMERICA

54-49
114

54613

Pay: *****Six hundred twenty-five dollars and no cents

DATE: August 10, 2016
 CHECK NO.: 54613
 AMOUNT: \$*****625.00

PAY
TO THE
ORDER
OF

Connecticut Siting Council
 10 Franklin Sq
 New Britain, CT 06051

Ann J. Mills



⑈054613⑈ ⑆011400495⑆ 000089877441⑈

CONN03 Connecticut Siting Council			SAI DIV. SITE ACQUISITION, LLC		54613	
DATE	INVOICE NO.	DESCRIPTION	INVOICE AMOUNT	DEDUCTION	BALANCE	
8-10-16	CR081016A	CT2220-CSC Filing Fe	625.00		625.00	
CHECK DATE	8-10-16	CHECK NUMBER	54613	TOTALS	625.00	625.00