QC Development
PO Box 916
Storrs, CT 06268
860-670-9068
Mark.Roberts@QCDevelopment.net

August 12, 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) – CT2055
376 Butlertown Road, Montville, CT 06370
N 41-25-17.78
W 72-12-45.37

Dear Ms. Bachman:

AT&T currently maintains six (6) antennas at the 161-foot level of the existing 195-foot Guyed Tower at 376 Butlertown Road, Montville, CT. The tower is owned by Wireless Solutions LLC and the property is owned by Antonio Iaconiello. AT&T now intends to remove three (3) of its existing antennas and install six (6) new CCI antennas, three (3) Andrew antennas and eighteen (18) Ericsson Radio Heads on new sector mounts. This modification was previously filed with the Council and acknowledged on January 27, 2014 but was never installed.

This facility was approved by the Montville Planning and Zoning Commission on March 28, 2000. There were no conditions that could feasibly be violated by this modification, including 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 Ronald McDaniel, First Selectman for the Town of Montville, as well as the tower and property owners.

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,

Mark Roberts
QC Development
Consultant for AT&T

Attachments

cc: The Honorable Ronald McDaniel - as elected official
Wireless Solutions LLC - as tower owner (via e-mail)
Antonio J. Iaconiello – as property owner

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							0.18%
AT&T GSM	2	500	161	0.0150	880	0.5867	0.26%
AT&T UMTS	1	500	161	0.0075	1900	1.0000	0.07%
AT&T LTE	1	500	161	0.0075	700	0.4667	0.16%
AT&T LTE	1	500	161	0.0075	1900	1.0000	0.07%
AT&T LTE	1	500	161	0.0075	2300	1.0000	0.07%
Site Total							0.82%

*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
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*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:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS		
SITE ADDRESS:	376 BUTLERTOWN ROAD MONTVILLE, CT 06370		
PROPERTY OWNER:	IACONIELLO ANTONIO J. 536 ROUTE 161 OAKDALE, CT 06370		
TOWER OWNER:	NEW CINGULAR WIRELESS, PCS, LLC. DBA AT&T MOBILITY 550 COCHITUATE ROAD FRAMINGHAM, MA 01701 (508) 820-9696	APPLICANT:	NEW CINGULAR WIRELESS, PCS, LLC. DBA AT&T MOBILITY 550 COCHITUATE ROAD FRAMINGHAM, MA 01701 (508) 820-9696
ZONING CLASSIFICATION:	LI		
LATITUDE:	41.4216 N	41° 25' 17.75" N	
LONGITUDE:	-72.2126 W	-72° 12' 45.35" W	
JURISDICTION:	TOWN OF MONTVILLE		
CURRENT USE:	TELECOMMUNICATIONS FACILITY		
PROPOSED USE:	TELECOMMUNICATIONS FACILITY		
NOC#	866-915-5600		

SITE NUMBER: CT2055
SITE NAME: MONTVILLE-BUTLERTOWN ROAD

DRAWING INDEX

VICINITY MAP

DIRECTIONS TO SITE:
START OUT GOING WEST ON COCHITUATE RD/RT-30 W TOWARD BURR ST. CONTINUE TO FOLLOW RT-30 W. 2.1 MI. STAY STRAIGHT TO GO ONTO RT-9 W/WORCESTER RD. 2.4 MI. MERGE ONTO I-90 W/MASSACHUSETTS TURNPIKE/MASS PIKE TOWARD SPRINGFIELD/WORCESTER (PORTIONS TOLL). 22.0 MI. TAKE THE I-395 S/I-290 E EXIT, EXIT 10, TOWARD US-20/WORCESTER/WORCESTER AIRPORT. 1.1 MI. MERGE ONTO I-395 S TOWARD NORWICH CT (CROSSING INTO CONNECTICUT). 64.2 MI. TAKE THE CT-85 EXIT, EXIT 77, TOWARD WATERFORD/CHESTERFIELD. 0.2 MI. TURN RIGHT ONTO HARTFORD TURNPIKE/CT-85/HARTFORD RD. CONTINUE TO FOLLOW CT-85. 2.9 MI. TURN LEFT ONTO SACHATELLO INDUSTRIAL DR. 0.3 MI. TURN RIGHT ONTO BUTLERTOWN RD.0.03 MI. 376 BUTLERTOWN RD 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 REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL
BEFORE YOU DIG
CALL TOLL FREE 800-922-4455

UNDERGROUND SERVICE ALERT

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS
Daniel P. Hamm
No. 24178
LICENSED PROFESSIONAL ENGINEER

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

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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

AT&T

TITLE SHEET
(LTE)

JOB NUMBER	DRAWING NUMBER	REV
2055.01	T-1	2

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 THE BRIDGE AND THE TOWER 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 AWS COPPER

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 UMTS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY 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 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, NINTH EDITION;

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

ANTENNA TOWER 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	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED		

Hudson Design Groupe 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: CT2055
SITE NAME: MONTVILLE-BUTLERTOWN ROAD
376 BUTLERTOWN ROAD
MONTVILLE, CT 06370
NEW LONDON COUNTY

at&t
550 COCHITUATE RD.
FRAMINGHAM, MA, 01701

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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

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

AT&T

GENERAL NOTES (LTE)

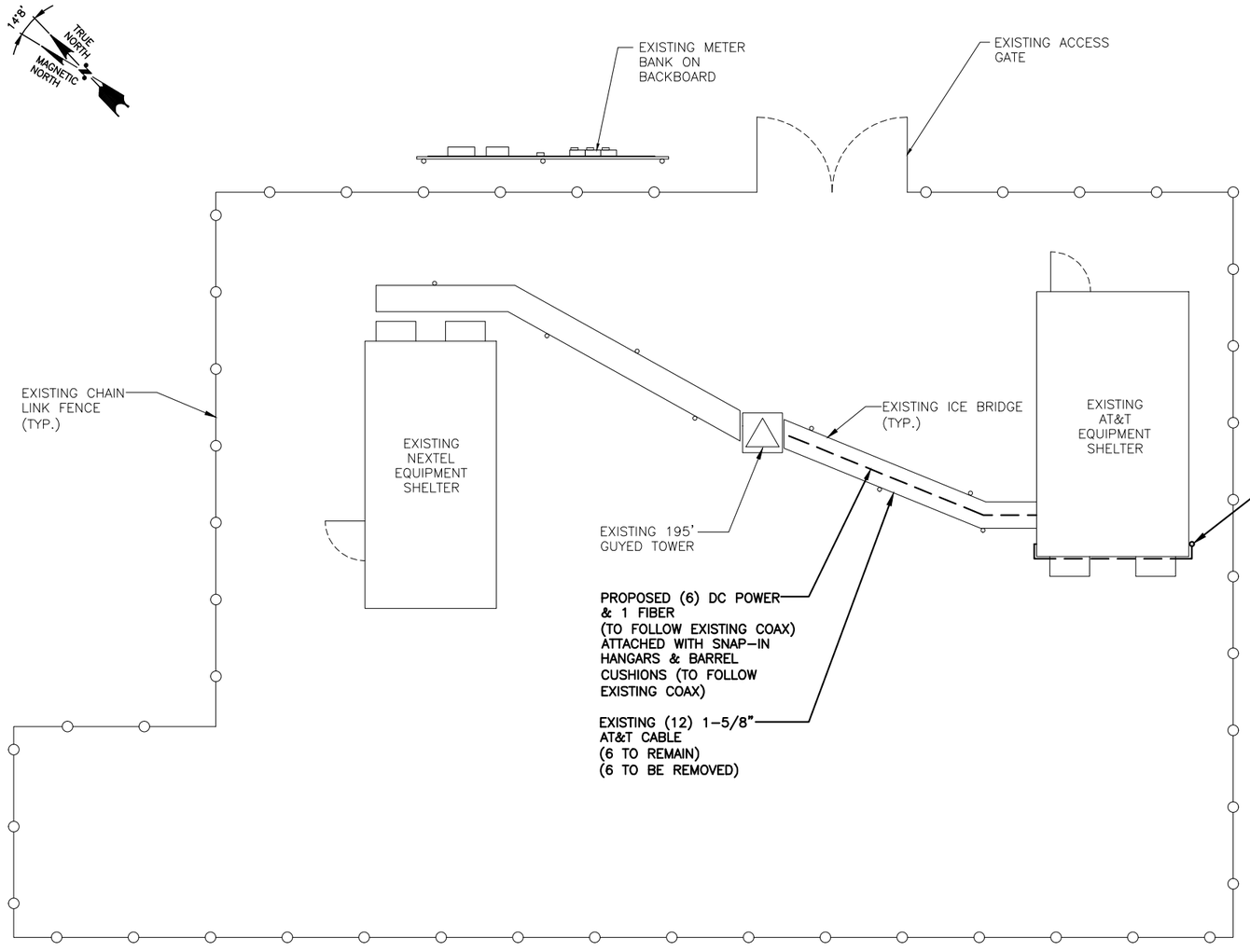
JOB NUMBER	DRAWING NUMBER	REV
2055.01	GN–1	2

NOTE:

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

NOTE:

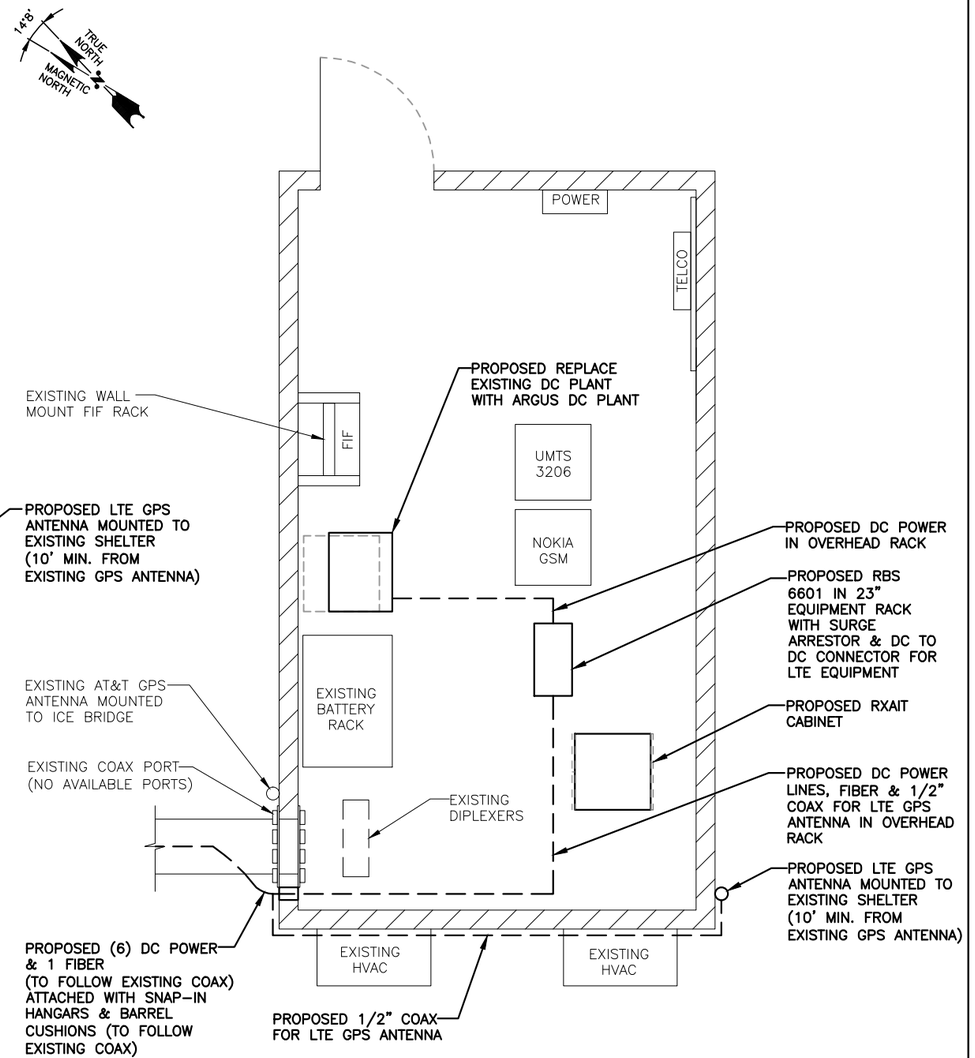
REFER TO STRUCTURAL ANALYSIS BY: GPD GROUP
DATED: DECEMBER 10, 2013,
FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



COMPOUND PLAN

SCALE: 3/16"=1'-0"

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



EQUIPMENT PLAN

SCALE: 1/2"=1'-0"

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

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

Daniel P. Hamm

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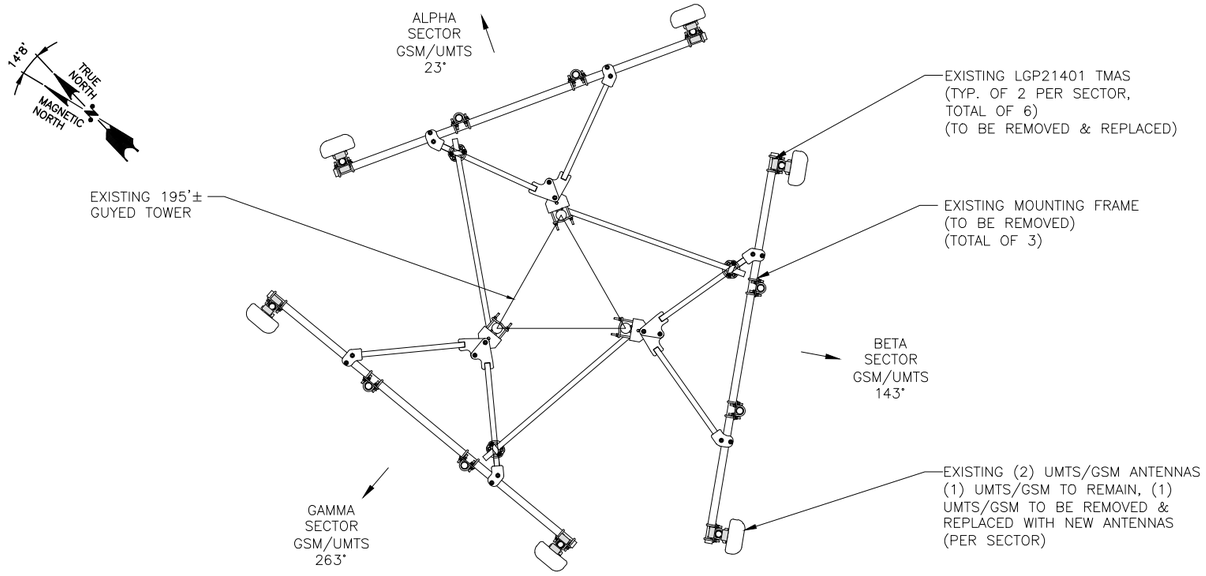
AT&T

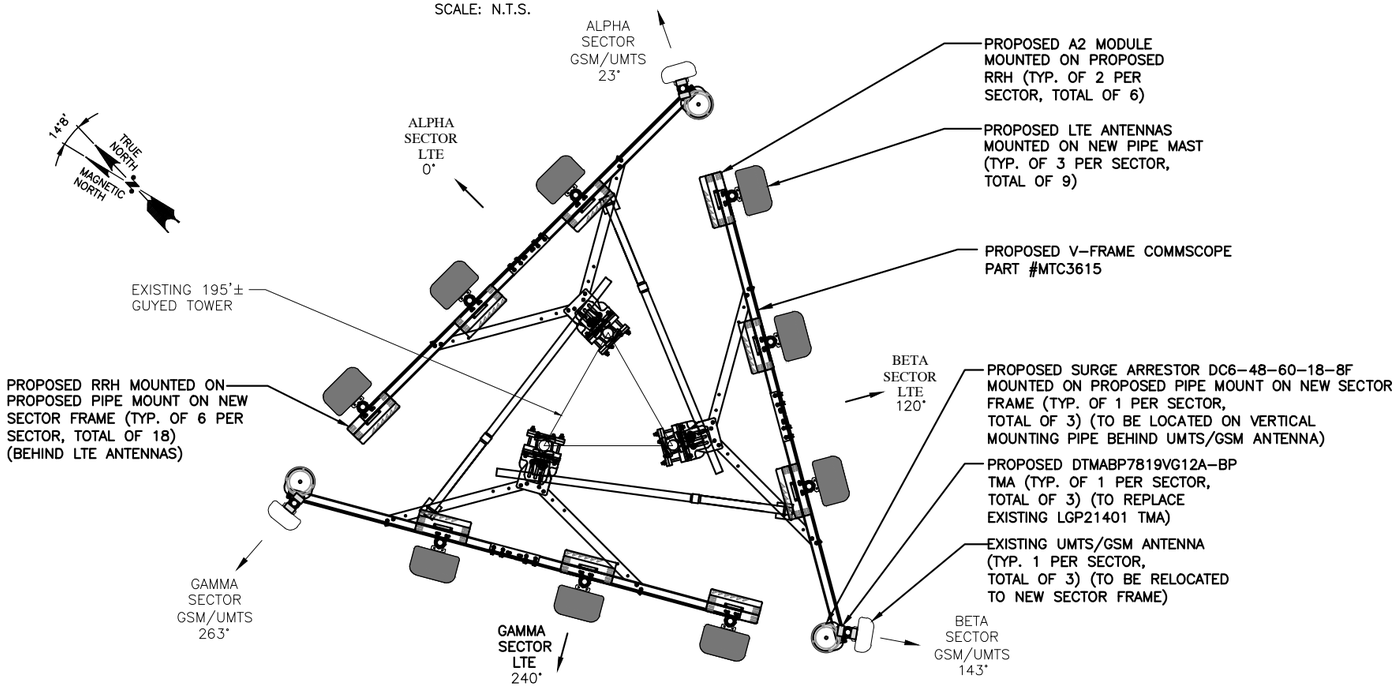
COMPOUND & EQUIPMENT PLAN (LTE)

JOB NUMBER	DRAWING NUMBER	REV
2055.01	A-1	2



EXISTING ANTENNA LAYOUT

SCALE: N.T.S.



PROPOSED ANTENNA LAYOUT

SCALE: N.T.S.

NOTE:

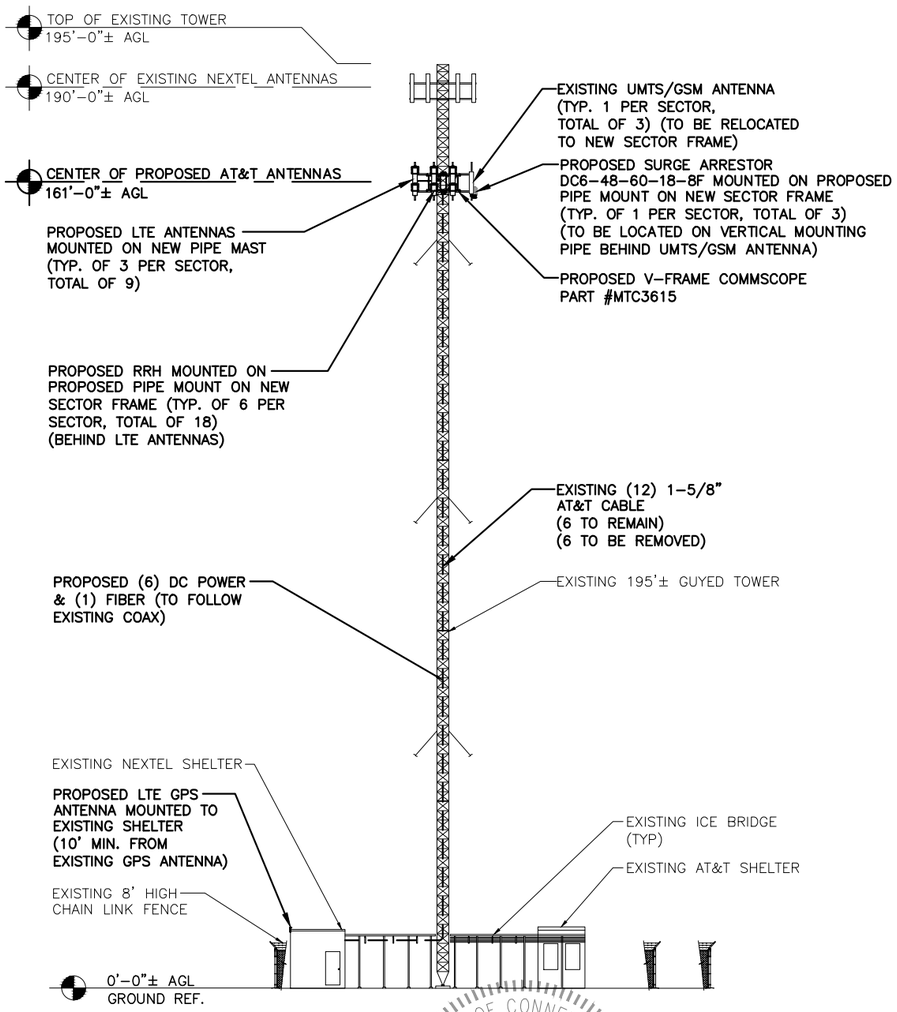
CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF SURGE ARRESTOR & RRH'S AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEGS.

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: GPD GROUP DATED: DECEMBER 10, 2013, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE: *

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



NORTHEAST ELEVATION

SCALE: 1/16"=1'-0"

0 8'-0" 16'-0" 32'-0" 48'-0"

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

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AT&T

ANTENNA LAYOUT AND ELEVATION (LTE)

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NOTE:

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DATED: DECEMBER 10, 2013,
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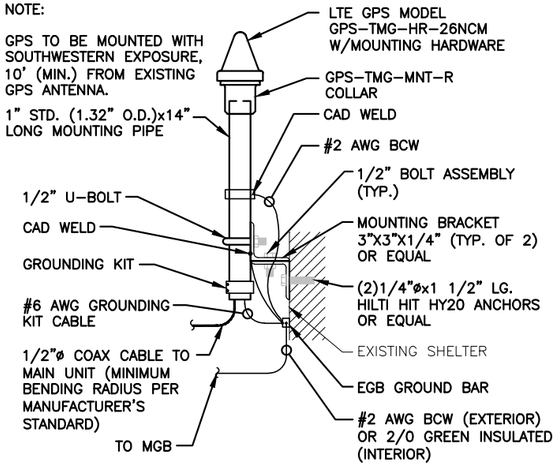
NOTE:

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

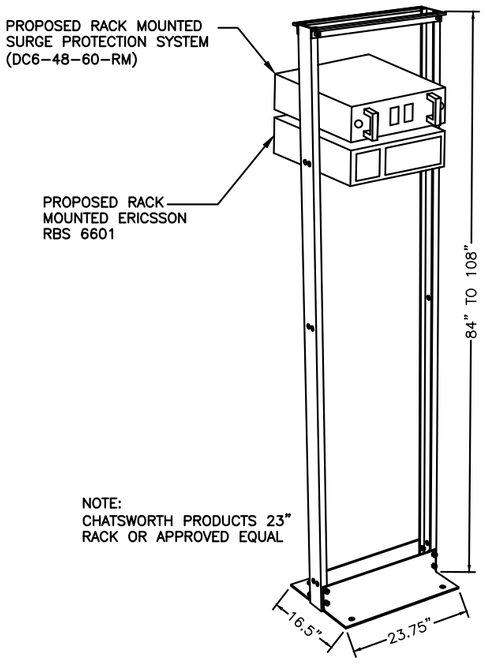
NOTE:

GPS TO BE MOUNTED WITH SOUTHWESTERN EXPOSURE, 10' (MIN.) FROM EXISTING GPS ANTENNA.



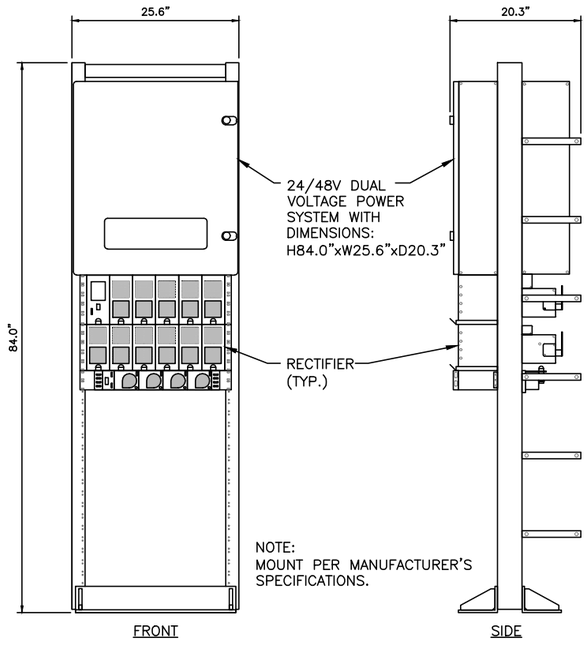
GPS MOUNTING DETAIL

SCALE: N.T.S.



EQUIPMENT RACK DETAIL

SCALE: N.T.S.



24/48 V ARGUS POWER PLANT

SCALE: N.T.S.

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: CT2055
SITE NAME: MONTVILLE-BUTLERTOWN ROAD
376 BUTLERTOWN ROAD
MONTVILLE, CT 06370
NEW LONDON COUNTY

at&t
550 COCHITUATE RD.
FRAMINGHAM, MA, 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	01/21/14	ISSUED FOR CONSTRUCTION	SB	AT	DPH
1	01/06/14	ISSUED FOR CONSTRUCTION	SG	AT	DPH
A	12/10/13	ISSUED FOR REVIEW	SG	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

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

Daniel P. Hamm

AT&T

DETAILS (LTE)

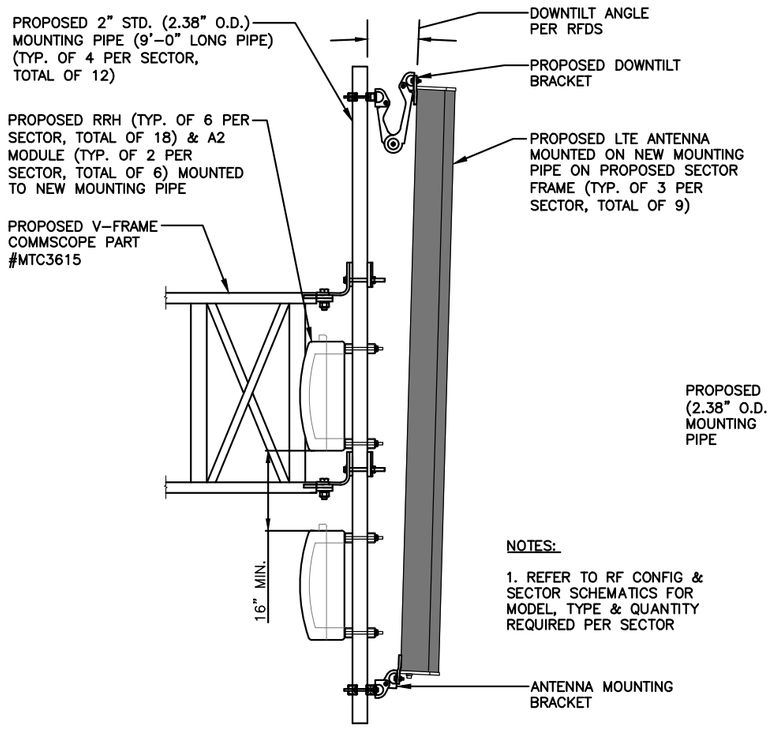
JOB NUMBER	DRAWING NUMBER	REV
2055.01	A-3	2

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: GPD GROUP DATED: DECEMBER 10, 2013, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:

CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF SURGE ARRESTOR & RRH'S AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEGS.

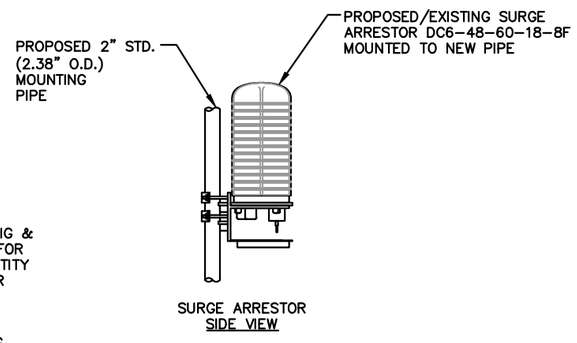


NOTES:

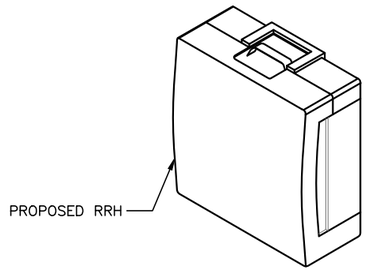
1. REFER TO RF CONFIG & SECTOR SCHEMATICS FOR MODEL, TYPE & QUANTITY REQUIRED PER SECTOR

PROPOSED LTE ANTENNA, RRH, & SURGE ARRESTOR MOUNTING DETAIL

SCALE: N.T.S.



SURGE ARRESTOR
SIDE VIEW



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

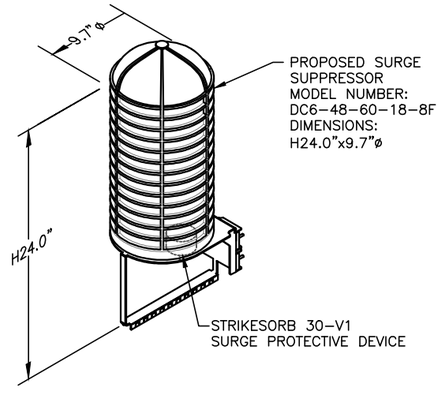
ERICSSON RRH TYPE ASSIGNMENT PER BAND	
BAND	RRH TYPE/MODEL
700 BC	RRUS-11
700 DE	RRUS-E2
850	RRUS-11
PCS	RRUS-12+A2
AWS	IA BUILT IN
WCS	RRUS-32

NOTE:

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

RRH DETAIL

SCALE: N.T.S.



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S.

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

Daniel P. Hamm

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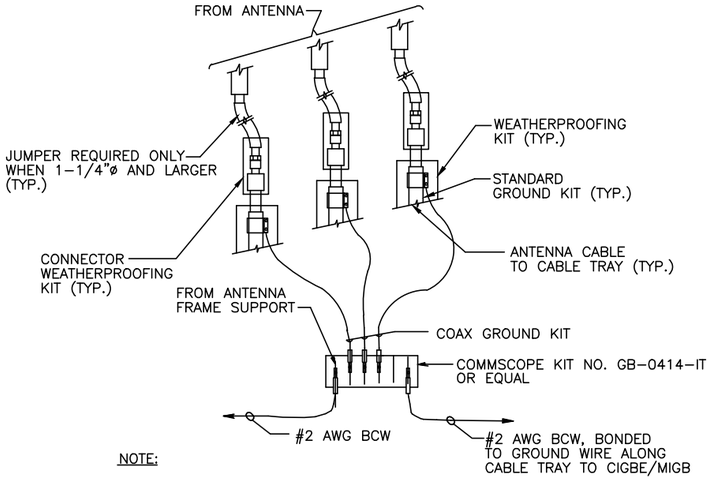
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

AT&T

ANTENNA & RRH MOUNTING DETAILS (LTE)

JOB NUMBER	DRAWING NUMBER	REV
2055.01	S-1	2

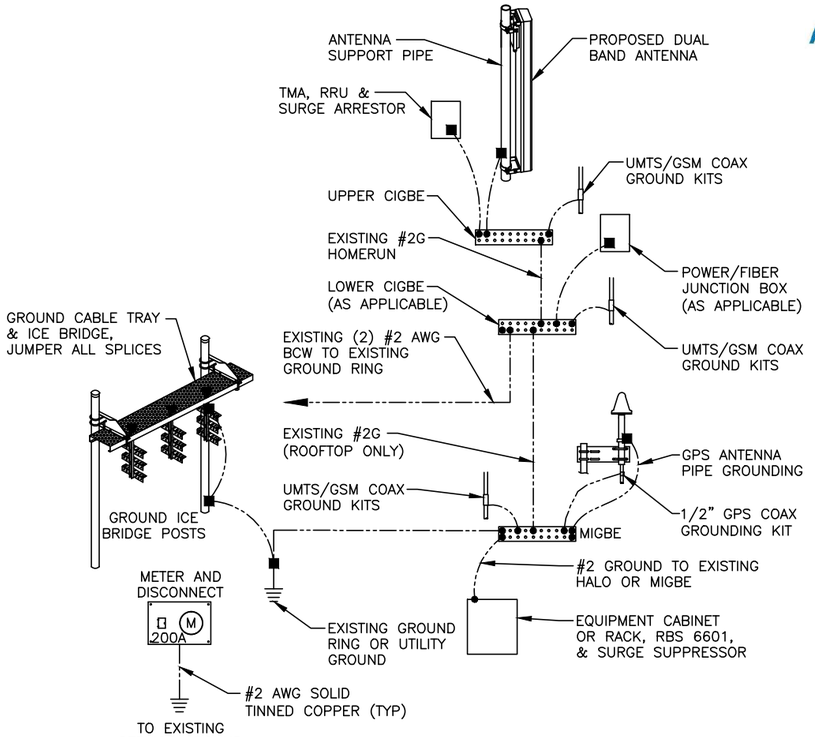


NOTE:

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

GROUND WIRE TO GROUND BAR CONNECTION DETAIL

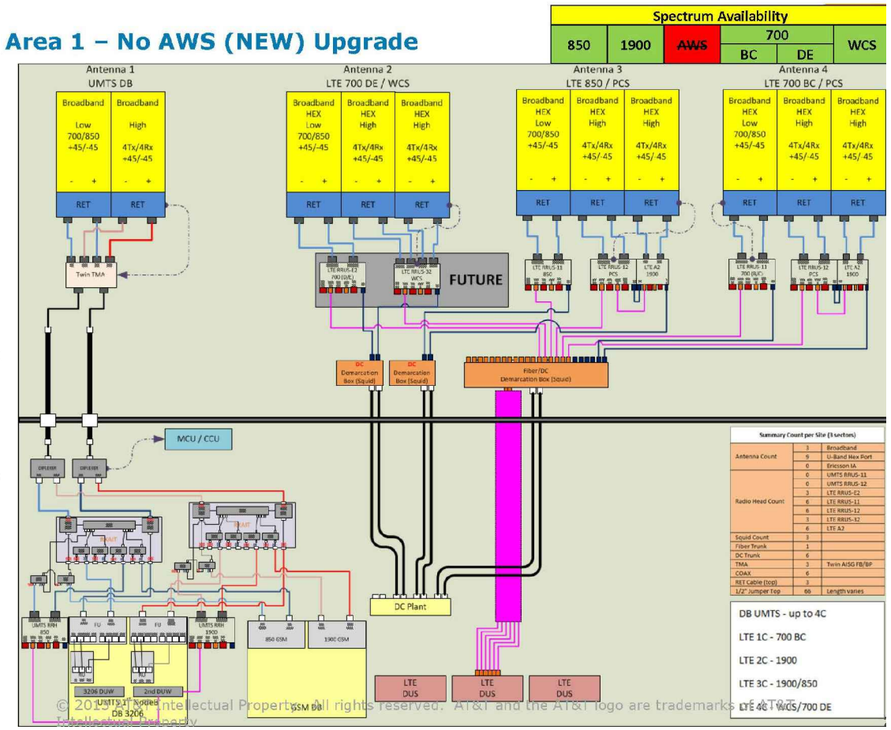
1 — N.T.S.

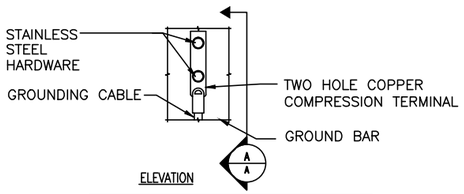


GROUNDING RISER DIAGRAM

2 — N.T.S.

Area 1 – No AWS (NEW) Upgrade





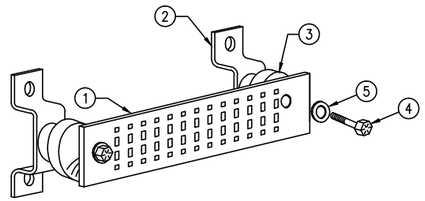
NOTE:

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

TYPICAL GROUND BAR CONNECTION DETAIL

4 — N.T.S.

WIRELESS SOLUTIONS INC.			
NO.	REQ.	PART NO.	DESCRIPTION
1	1	HLGB-0420-IS	SOLID GND. BAR (20"x4"x1/4")
2	2	———	WALL MTG. BRKT.
3	2	———	INSULATORS
4	4	———	5/8"-11x1" H.H.C.S.
5	4	———	5/8 LOCKWASHER



GROUND BAR - DETAIL

5 — N.T.S.

PLUMBING DIAGRAM

3 — N.T.S.

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

SECTION "P" – SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
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)

Hudson Design Groupe LLC
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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

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

AT&T

PLUMBING DIAGRAM & GROUNDING DETAILS (LTE)

JOB NUMBER	DRAWING NUMBER	REV
2055.01	G-1	2

SAI Communications
27 Northwestern Drive
Salem, NH 03079
(603) 560-7049

Kevin Clements
520 South Main Street, Suite 2531
Akron, OH 44311
(678) 781-5061
kclements@gpdgroup.com

GPD# 2013723.13.65066.01
December 10, 2013

RIGOROUS STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**65066**
	Site FA:	**10035374**
	Client #:	**CT2055**
	Site Name:	**MONTVILLE BUTLER TOWN RD**
	AT&T Project:	**MOD: LTE Add9/23/2013**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F, 2006 IBC, ASCE7-05 & 2005 CTBC** **95-mph (fastest-mile) with 0" ice** **38-mph (fastest-mile) with 0.75" ice**
SITE DATA:		**376 Butlertown Road, Montville, CT 06353, New London County** **Latitude 41° 25' 17.771" N, Longitude 72° 12' 45.396" W** **Market: New England** **195' Rohn Guyed**

Mr. Edward Onessimo,

GPD is pleased to submit this Rigorous Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	86.8%	Pass
Foundation Ratio with Proposed Equipment:	49.2%	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and SAI Communications. If you have any questions or need further assistance on this or any other projects please do not hesitate to call.

Respectfully submitted,

John N. Kabak, P.E.
Connecticut #: 28336

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility to SAI Communications. This report was commissioned by Mr. Edward Onessimo of SAI Communications.

The proposed coax shall be placed on Face B next to the existing coax to 161' in a three on four configuration in order for the analysis results to be valid.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Leg	86.8%	Pass
Diagonal	73.8%	Pass
Top Girt	20.9%	Pass
Bottom Girt	68.4%	Pass
Guy Wires	80.4%	Pass
Top Guy Pull-Off	42.0%	Pass
Torque Arm Top	57.8%	Pass
Bolt Checks	73.8%	Pass
Guy Anchor Foundation	31.5%	Pass
Tower Base Foundation	49.2%	Pass

ANALYSIS METHOD

tnxTower (Version 6.1.3.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being completed without the benefit of a detailed site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
SOW Summary Form	AT&T Internal Loading Document, dated 12/03/2013	SAI
Construction Drawings	Hudson Design Group Job #: 2055.01, dated 10/17/2013	SAI
Tower Design	Rohn File #: 42591AE001, dated 04/26/2000	SAI
Foundation Design	Rohn Drawing #: A000847-1, dated 04/26/2000	Siterra
Geotechnical Report	Dr. Clarence Welti Geotechnical Engineering, dated 03/10/2009	Siterra
Previous Structural Analysis	GPD Project #: 2008147.27, dated 03/18/2009	Siterra

ASSUMPTIONS

This rigorous structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/available and to have been properly installed.
10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
11. All existing loading was obtained from site photos, the provided SOW Summary Form, previous structural analysis, and Construction drawings and is assumed to be accurate.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Group should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD GROUP has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD GROUP in connection with this Rigorous Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD GROUP does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD GROUP provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the specified code recommended amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD GROUP, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD GROUP makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD GROUP will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD GROUP pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	MONTVILLE BUTLER TOWN RD
Site Number	65066
FA Number	10035374
Date of Analysis	December 10, 2013
Company Performing Analysis	GPD

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	G	
Tower Height (top of steel AGL)	195'	
Tower Manufacturer	Rohn	
Tower Model	80	
Tower Design	Rohn File #: 42591AE001	4/26/2000
Foundation Design	Rohn Drawing #: A000847-1	04/26/2000
Geotech Report	Dr. Clarence Welti Geotechnical Engineering	03/10/2009
Tower Mapping	n/a	
Previous Structural Analysis	GPD Project #: 2008147.27	03/18/2009
Foundation Mapping	n/a	

Design Parameters	
Design Code Used	TIA/EIA-222-F, 2006 IBC
	ASCE7-05 & 2005 CTBC
Location of Tower (County, State)	New London, CT
Basic Wind Speed (mph)	95 (fastest-mile)
Ice Thickness (in)	0.75
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	86.8%
Guy Wires (%)	80.4%
Foundation (%)	49.2%
Foundation Adequate?	Yes

Steel Yield Strength (ksi)

Legs	50
Diagonals	36
Bolts	A325X
Guy Wires	EHS

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg
Unknown	194							3	Unknown	10' Boom Gate				
Nextel	183	183	12	Panel	Decibel	DB844H90		3	Unknown	12' Boom Gate	12	Unknown	1-5/8"	Face "A"
AT&T Mobility	161	161	6	Panel	Powerwave	7770.00	23/143/263	3	Unknown	12' Boom Gate	12	Unknown	1-5/8"	Face "B"
AT&T Mobility	161	161	6	TMA	Powerwave	LGP21401				on same mount				
AT&T Mobility	161	161	6	Diplexer	Powerwave	LGP21901				on same mount				

Note: (3) 7770.00 Antennas, (6) LGP 21401 TMA's, (6) LGP21901 diplexers, (6) 1-5/8" coax, and (3) 12' Boom Gates at 161' shall be removed prior to the installation of the proposed loading. The remaining equipment shall be reused.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg
AT&T Mobility	161	161	3	Panel	CCI	HPA-65R-BUU-H8	143	3	SitePro	MTC3615 AD Sector Mount	6	Power cable	15.4 mm	Face "B"
AT&T Mobility	161	161	3	Panel	CCI	HPA-65R-BUU-H6	263			on same mount	1	Fiber cable	10 mm	Face "B"
AT&T Mobility	161	161	3	Panel	Andrew	SBNHH-1D65A	23			on same mount				
AT&T Mobility	161	161	3	TMA	CCI	DTMABP7819VG12A-BP				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	RRUS-11				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	RRUS-12				on same mount				
AT&T Mobility	161	161	3	RRU	Ericsson	RRUS-E2				on same mount				
AT&T Mobility	161	161	3	RRU	Ericsson	RRUS-32				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	A2 Module				on same mount				
AT&T Mobility	161	161	3	Surge	Raycap	DC6-48-60-18-8F				on same mount				

Note: The proposed loading shall be in addition to the remaining loading at the same elevation. The proposed coax shall be placed on Face B next to the existing coax to 161' in a three on four configuration in order for the analysis results to be valid.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg

APPENDIX B

tnxTower Output File

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 195.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 3.42 ft at the top and tapered at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in New London County, Connecticut.
Basic wind speed of 95 mph.
Nominal ice thickness of 0.7500 in.
Ice density of 56 pcf.
A wind speed of 38 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
Pressures are calculated at each section.
Safety factor used in guy design is 2.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
Climbing Pegs	A	Yes	Ar (CfAe)	195.00 - 5.00	0.0000	0.5	1	1	0.2500	0.1500		0.00
Safety Line 3/8	A	Yes	Ar (CfAe)	195.00 - 5.00	0.0000	0.5	1	1	0.3750	0.3750		0.00
LDF7-50A (1-5/8 FOAM)	A	Yes	Ar (CfAe)	183.00 - 8.00	0.0000	0	12	12	0.5000	1.9800		0.00
LDF7-50A (1-5/8 FOAM)	B	Yes	Ar (CfAe)	161.00 - 8.00	0.0000	0	6	6	0.5000	1.9800		0.00
15.4mm DC Power	B	Yes	Ar (CfAe)	161.00 - 8.00	0.0000	0.28	6	3	0.6060	0.6060		0.00
10mm Fiber Cable	B	Yes	Ar (CfAe)	161.00 - 8.00	0.0000	0.31	1	1	0.3940	0.3940		0.00

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
MTS Vancomm 11'	A	From Leg	2.00	0.0000	194.00	No Ice	10.88	8.98	0.1
Stand-Off Sector Frame			0.00			1/2" Ice	15.34	12.84	0.3
			0.00			1" Ice	19.80	16.70	0.4
MTS Vancomm 11'	B	From Leg	2.00	0.0000	194.00	No Ice	10.88	8.98	0.1
Stand-Off Sector Frame			0.00			1/2" Ice	15.34	12.84	0.3
			0.00			1" Ice	19.80	16.70	0.4
MTS Vancomm 11'	C	From Leg	2.00	0.0000	194.00	No Ice	10.88	8.98	0.1
Stand-Off Sector Frame			0.00			1/2" Ice	15.34	12.84	0.3
			0.00			1" Ice	19.80	16.70	0.4
Rohn 12' Boom Gate	A	From Leg	2.00	0.0000	183.00	No Ice	15.35	14.00	0.6

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2" Ice	21.29	20.81	0.7
			0.00			1" Ice	27.23	27.62	0.9
Rohn 12' Boom Gate	B	From Leg	2.00	0.0000	183.00	No Ice	15.35	14.00	0.6
			0.00			1/2" Ice	21.29	20.81	0.7
			0.00			1" Ice	27.23	27.62	0.9
Rohn 12' Boom Gate	C	From Leg	2.00	0.0000	183.00	No Ice	15.35	14.00	0.6
			0.00			1/2" Ice	21.29	20.81	0.7
			0.00			1" Ice	27.23	27.62	0.9
(4) DB844H90 w/ Mount Pipe	A	From Leg	4.00	0.0000	183.00	No Ice	3.30	4.92	0.0
			0.00			1/2" Ice	3.69	5.60	0.1
			0.00			1" Ice	4.12	6.28	0.1
(4) DB844H90 w/ Mount Pipe	B	From Leg	4.00	0.0000	183.00	No Ice	3.30	4.92	0.0
			0.00			1/2" Ice	3.69	5.60	0.1
			0.00			1" Ice	4.12	6.28	0.1
(4) DB844H90 w/ Mount Pipe	C	From Leg	4.00	0.0000	183.00	No Ice	3.30	4.92	0.0
			0.00			1/2" Ice	3.69	5.60	0.1
			0.00			1" Ice	4.12	6.28	0.1
Commscope MTC3615 Sector Mount	A	From Leg	2.00	0.0000	161.00	No Ice	18.81	10.62	0.5
			0.00			1/2" Ice	24.75	15.16	0.7
			0.00			1" Ice	30.69	19.70	0.9
Commscope MTC3615 Sector Mount	B	From Leg	2.00	0.0000	161.00	No Ice	18.81	10.62	0.5
			0.00			1/2" Ice	24.75	15.16	0.7
			0.00			1" Ice	30.69	19.70	0.9
Commscope MTC3615 Sector Mount	C	From Leg	2.00	0.0000	161.00	No Ice	18.81	10.62	0.5
			0.00			1/2" Ice	24.75	15.16	0.7
			0.00			1" Ice	30.69	19.70	0.9
7770.00 w/Mount Pipe	A	From Leg	4.00	0.0000	161.00	No Ice	5.88	4.10	0.1
			0.00			1/2" Ice	6.31	4.73	0.1
			0.00			1" Ice	6.75	5.37	0.2
7770.00 w/Mount Pipe	B	From Leg	4.00	0.0000	161.00	No Ice	5.88	4.10	0.1
			0.00			1/2" Ice	6.31	4.73	0.1
			0.00			1" Ice	6.75	5.37	0.2
7770.00 w/Mount Pipe	C	From Leg	4.00	0.0000	161.00	No Ice	5.88	4.10	0.1
			0.00			1/2" Ice	6.31	4.73	0.1
			0.00			1" Ice	6.75	5.37	0.2
(3) HPA-65R-BUU-H8 w/ Mount Pipe	B	From Leg	4.00	0.0000	161.00	No Ice	13.81	9.79	0.1
			0.00			1/2" Ice	14.54	11.21	0.2
			0.00			1" Ice	15.27	12.48	0.3
(3) HPA-65R-BUU-H6 w/ Mount Pipe	C	From Leg	4.00	0.0000	161.00	No Ice	10.60	8.11	0.1
			0.00			1/2" Ice	11.27	9.30	0.2
			0.00			1" Ice	11.91	10.21	0.2
(3) SBNHH-1D65A w/ Mount Pipe	A	From Leg	4.00	0.0000	161.00	No Ice	6.57	5.19	0.1
			0.00			1/2" Ice	7.09	5.96	0.1
			0.00			1" Ice	7.59	6.70	0.2
DTMABP7819VG12A	A	From Leg	4.00	0.0000	161.00	No Ice	1.17	0.44	0.0
			0.00			1/2" Ice	1.32	0.56	0.0
			0.00			1" Ice	1.48	0.69	0.0
DTMABP7819VG12A	B	From Leg	4.00	0.0000	161.00	No Ice	1.17	0.44	0.0
			0.00			1/2" Ice	1.32	0.56	0.0
			0.00			1" Ice	1.48	0.69	0.0
DTMABP7819VG12A	C	From Leg	4.00	0.0000	161.00	No Ice	1.17	0.44	0.0
			0.00			1/2" Ice	1.32	0.56	0.0
			0.00			1" Ice	1.48	0.69	0.0
(2) RRUS 11	A	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00			1/2" Ice	3.17	1.35	0.1
			0.00			1" Ice	3.41	1.52	0.1
(2) RRUS 11	B	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00				1/2" Ice	3.17	1.35	0.1
			0.00				1" Ice	3.41	1.52	0.1
(2) RRUS 11	C	From Leg	1.00		0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00				1/2" Ice	3.17	1.35	0.1
			0.00				1" Ice	3.41	1.52	0.1
(2) RRUS 12	A	From Leg	1.00		0.0000	161.00	No Ice	3.67	1.48	0.0
			0.00				1/2" Ice	3.92	1.67	0.1
			0.00				1" Ice	4.19	1.86	0.1
(2) RRUS 12	B	From Leg	1.00		0.0000	161.00	No Ice	3.67	1.48	0.0
			0.00				1/2" Ice	3.92	1.67	0.1
			0.00				1" Ice	4.19	1.86	0.1
(2) RRUS 12	C	From Leg	1.00		0.0000	161.00	No Ice	3.67	1.48	0.0
			0.00				1/2" Ice	3.92	1.67	0.1
			0.00				1" Ice	4.19	1.86	0.1
RRUS E2	A	From Leg	1.00		0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00				1/2" Ice	3.17	1.35	0.1
			0.00				1" Ice	3.41	1.52	0.1
RRUS E2	B	From Leg	1.00		0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00				1/2" Ice	3.17	1.35	0.1
			0.00				1" Ice	3.41	1.52	0.1
RRUS E2	C	From Leg	1.00		0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00				1/2" Ice	3.17	1.35	0.1
			0.00				1" Ice	3.41	1.52	0.1
RRUS-32	A	From Leg	1.00		0.0000	161.00	No Ice	3.87	2.76	0.1
			0.00				1/2" Ice	4.15	3.02	0.1
			0.00				1" Ice	4.44	3.29	0.1
RRUS-32	B	From Leg	1.00		0.0000	161.00	No Ice	3.87	2.76	0.1
			0.00				1/2" Ice	4.15	3.02	0.1
			0.00				1" Ice	4.44	3.29	0.1
RRUS-32	C	From Leg	1.00		0.0000	161.00	No Ice	3.87	2.76	0.1
			0.00				1/2" Ice	4.15	3.02	0.1
			0.00				1" Ice	4.44	3.29	0.1
(2) A2 Module	A	From Leg	1.00		0.0000	161.00	No Ice	1.87	0.42	0.0
			0.00				1/2" Ice	2.05	0.53	0.0
			0.00				1" Ice	2.24	0.65	0.0
(2) A2 Module	B	From Leg	1.00		0.0000	161.00	No Ice	1.87	0.42	0.0
			0.00				1/2" Ice	2.05	0.53	0.0
			0.00				1" Ice	2.24	0.65	0.0
(2) A2 Module	C	From Leg	1.00		0.0000	161.00	No Ice	1.87	0.42	0.0
			0.00				1/2" Ice	2.05	0.53	0.0
			0.00				1" Ice	2.24	0.65	0.0
DC6-48-60-18-8F Surge Suppression Unit	A	From Leg	1.00		0.0000	161.00	No Ice	1.47	1.47	0.0
			0.00				1/2" Ice	1.67	1.67	0.0
			0.00				1" Ice	1.88	1.88	0.1
DC6-48-60-18-8F Surge Suppression Unit	B	From Leg	1.00		0.0000	161.00	No Ice	1.47	1.47	0.0
			0.00				1/2" Ice	1.67	1.67	0.0
			0.00				1" Ice	1.88	1.88	0.1
DC6-48-60-18-8F Surge Suppression Unit	C	From Leg	1.00		0.0000	161.00	No Ice	1.47	1.47	0.0
			0.00				1/2" Ice	1.67	1.67	0.0
			0.00				1" Ice	1.88	1.88	0.1

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
194.00	MTS Vancomm 11' Stand-Off Sector Frame	37	2.524	0.0037	0.0188	Inf
183.00	Rohn 12' Boom Gate	37	2.525	0.0024	0.0182	880188
177.52	Guy	37	2.525	0.0075	0.0182	454617
161.00	Commscope MTC3615 Sector Mount	37	2.493	0.0512	0.0196	12727
117.52	Guy	37	1.565	0.0875	0.0449	17929
55.11	Guy	27	0.729	0.0563	0.1085	49614

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	195	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	5.8	5.9	0.983 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	0.2	4.9	0.033 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	2.4	4.9	0.485 ✔	1.333	Member Bearing
T2	175	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	4.3	5.9	0.723 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.2	4.9	0.247 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.6	4.9	0.130 ✔	1.333	Member Bearing
T3	155	Leg	A325X	0.7500	4	2.3	19.4	0.121 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	4.1	5.9	0.695 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.3	4.9	0.260 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.8	4.9	0.168 ✔	1.333	Member Bearing
T4	135	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	4.2	4.9	0.871 ✔	1.333	Member Bearing
		Top Girt	A325X	0.5000	1	1.0	4.9	0.215 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	1.6	4.9	0.323 ✔	1.333	Member Bearing
T5	115	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	3.1	5.9	0.530 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.4	4.9	0.278 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.8	4.9	0.168 ✔	1.333	Member Bearing
T6	95	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.0	5.9	0.343 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	0.9	4.9	0.179 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.6	4.9	0.114 ✔	1.333	Member Bearing
T7	75	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	1.7	4.9	0.341 ✔	1.333	Member Bearing
		Top Girt	A325X	0.5000	1	0.8	4.9	0.158 ✔	1.333	Member Bearing

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T8	55	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.4	5.9	0.401 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.0	4.9	0.211 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.9	4.9	0.187 ✔	1.333	Member Bearing
T9	35	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	1.6	5.9	0.274 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	0.7	4.9	0.149 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.5	4.9	0.105 ✔	1.333	Member Bearing
T10	15	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.4	4.9	0.486 ✔	1.333	Member Bearing
		Top Girt	A325X	0.5000	1	0.7	4.9	0.151 ✔	1.333	Member Bearing
T11	4.8177	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.8	4.9	0.585 ✔	1.333	Member Bearing

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T1	195 - 175	Leg	ROHN 2.5 EH	2	-38.6	81.1	47.7	Pass
T2	175 - 155	Leg	ROHN 2.5 EH	59	-69.2	79.7	86.8	Pass
T3	155 - 135	Leg	ROHN 3 EH	116	-64.1	108.4	59.1	Pass
T4	135 - 115	Leg	ROHN 3 EH	173	-72.0	107.5	67.0	Pass
T5	115 - 95	Leg	ROHN 3 EH	230	-72.1	107.1	67.3	Pass
T6	95 - 75	Leg	ROHN 3 EH	287	-51.3	97.3	52.7	Pass
T7	75 - 55	Leg	ROHN 3 EH	320	-65.5	106.2	61.6	Pass
T8	55 - 35	Leg	ROHN 3 EH	377	-65.5	107.8	60.8	Pass
T9	35 - 15	Leg	ROHN 3 EH	435	-58.6	97.3	60.2	Pass
T10	15 - 4.8177	Leg	ROHN 3 EH	468	-57.9	97.9	59.1	Pass
T11	4.8177 - 0	Leg	ROHN 3 EH	488	-61.3	106.6	57.5	Pass
T1	195 - 175	Diagonal	Rohn Tube 1.5	11	-5.8	13.3	43.5 73.8 (b)	Pass
T2	175 - 155	Diagonal	Rohn Tube 1.5	110	-4.3	13.3	32.0 54.3 (b)	Pass
T3	155 - 135	Diagonal	Rohn Tube 1.5	125	-4.1	13.4	30.6 52.1 (b)	Pass
T4	135 - 115	Diagonal	Rohn Tube 1.5	186	-4.6	13.4	34.6 65.4 (b)	Pass
T5	115 - 95	Diagonal	Rohn Tube 1.5	285	-3.1	13.4	23.3 39.7 (b)	Pass
T6	95 - 75	Diagonal	Rohn Tube 1.5	318	-2.0	9.9	20.5 25.7 (b)	Pass
T7	75 - 55	Diagonal	Rohn Tube 1.5	333	-1.7	13.4	12.7 25.5 (b)	Pass
T8	55 - 35	Diagonal	Rohn Tube 1.5	428	-2.4	13.4	17.6 30.0 (b)	Pass
T9	35 - 15	Diagonal	Rohn Tube 1.5	463	-1.6	9.9	16.4 20.6 (b)	Pass
T10	15 - 4.8177	Diagonal	Rohn Tube 1.5	486	-1.8	9.9	18.1 36.4 (b)	Pass
T11	4.8177 - 0	Diagonal	Rohn Tube 1.5	491	-2.8	14.1	19.7	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P_{allow} K	% Capacity	Pass Fail
T1	195 - 175	Top Girt	Rohn Tube 1.5	4	-0.2	11.2	43.9 (b) 1.4	Pass
T2	175 - 155	Top Girt	Rohn Tube 1.5	63	1.2	15.5	2.5 (b) 7.8	Pass
T3	155 - 135	Top Girt	Rohn Tube 1.5	120	1.3	15.5	18.6 (b) 8.2	Pass
T4	135 - 115	Top Girt	Rohn Tube 1.5	177	1.0	15.5	19.5 (b) 6.8	Pass
T5	115 - 95	Top Girt	Rohn Tube 1.5	233	1.4	15.5	16.2 (b) 8.7	Pass
T6	95 - 75	Top Girt	Rohn Tube 1.5	291	0.9	15.5	20.9 (b) 5.6	Pass
T7	75 - 55	Top Girt	Rohn Tube 1.5	323	0.8	15.5	13.4 (b) 5.0	Pass
T8	55 - 35	Top Girt	Rohn Tube 1.5	380	1.0	15.5	11.8 (b) 6.6	Pass
T9	35 - 15	Top Girt	Rohn Tube 1.5	436	0.7	15.5	15.8 (b) 4.7	Pass
T10	15 - 4.8177	Top Girt	Rohn Tube 1.5	471	0.7	15.5	11.2 (b) 4.7	Pass
T1	195 - 175	Bottom Girt	Rohn Tube 1.5	9	2.4	15.5	11.3 (b) 15.2	Pass
T2	175 - 155	Bottom Girt	Rohn Tube 1.5	66	0.6	15.5	36.4 (b) 4.1	Pass
T3	155 - 135	Bottom Girt	Rohn Tube 1.5	123	0.8	15.5	9.8 (b) 5.3	Pass
T4	135 - 115	Bottom Girt	Rohn Tube 1.5	180	1.6	15.5	12.6 (b) 10.1	Pass
T5	115 - 95	Bottom Girt	Rohn Tube 1.5	237	0.8	15.5	24.2 (b) 5.3	Pass
T6	95 - 75	Bottom Girt	Rohn Tube 1.5	292	0.6	15.5	12.6 (b) 3.6	Pass
T8	55 - 35	Bottom Girt	Rohn Tube 1.5	383	0.9	15.5	8.6 (b) 5.9	Pass
T9	35 - 15	Bottom Girt	Rohn Tube 1.5	441	0.5	15.5	14.0 (b) 3.3	Pass
T10	15 - 4.8177	Bottom Girt	Rohn Tube 1.5	474	10.6	15.5	7.9 (b) 68.4	Pass
T1	195 - 175	Guy A@177.523	7/8	511	26.7	39.9	67.0	Pass
T4	135 - 115	Guy A@117.523	5/8	526	16.9	21.2	79.5	Pass
T7	75 - 55	Guy A@55.1146	1/2	531	10.4	13.4	77.4	Pass
T1	195 - 175	Guy B@177.523	7/8	506	26.8	39.9	67.2	Pass
T4	135 - 115	Guy B@117.523	5/8	522	17.0	21.2	80.3	Pass
T7	75 - 55	Guy B@55.1146	1/2	530	10.4	13.4	77.3	Pass
T1	195 - 175	Guy C@177.523	7/8	500	26.8	39.9	67.2	Pass
T4	135 - 115	Guy C@117.523	5/8	514	17.1	21.2	80.4	Pass
T7	75 - 55	Guy C@55.1146	1/2	529	10.4	13.4	77.3	Pass
T1	195 - 175	Top Guy Pull-Off@177.523	1 1/4	505	-6.9	16.4	42.0	Pass
T4	135 - 115	Top Guy Pull-Off@117.523	1 1/4	520	-5.7	17.0	33.6	Pass
T7	75 - 55	Top Guy Pull-Off@55.1146	1 1/4	327	4.6	49.1	9.4	Pass
T1	195 - 175	Torque Arm Top@177.523	MC18x42.7	508	-6.1	180.1	57.8	Pass
T4	135 - 115	Torque Arm Top@117.523	C15x33.9	516	-5.7	144.0	50.9	Pass

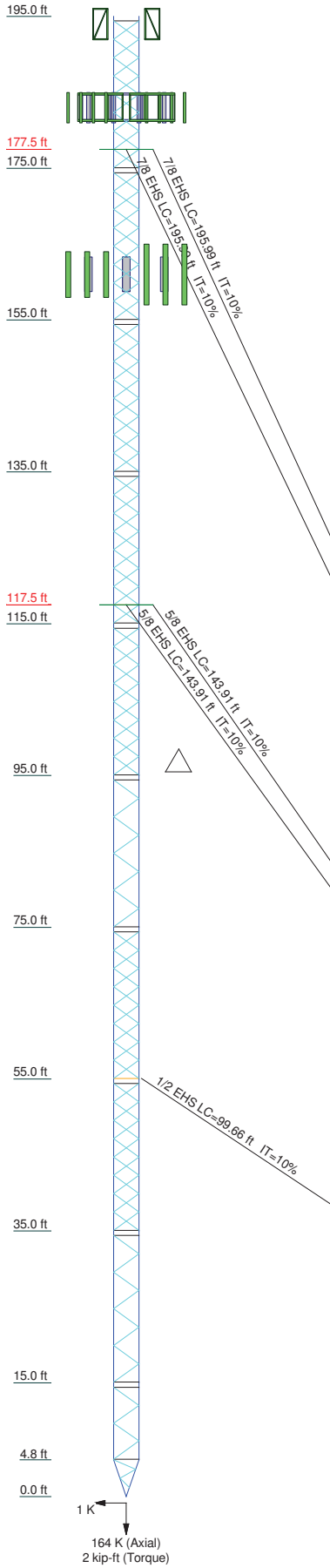
Summary ELC: Existing + Proposed + Future

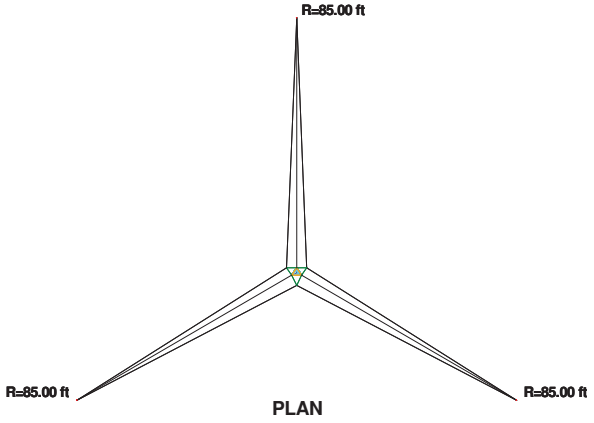
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
						Leg (T2)	86.8	Pass
						Diagonal (T1)	73.8	Pass
						Top Girt (T5)	20.9	Pass
						Bottom Girt (T10)	68.4	Pass
						Guy A (T4)	79.5	Pass
						Guy B (T4)	80.3	Pass
						Guy C (T4)	80.4	Pass
						Top Guy Pull-Off (T1)	42.0	Pass
						Torque Arm Top (T1)	57.8	Pass
						Bolt Checks	73.8	Pass
						Rating =	86.8	Pass

APPENDIX C

Tower Elevation Drawings

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11
Legs	ROHN 2.5 EH					ROHN 3 EH					
Leg Grade	A572-50										
Diagonals	Rohn Tube 1.5										
Diagonal Grade	A36										
Top Girts	Rohn Tube 1.5										N.A.
Bottom Girts	Rohn Tube 1.5						N.A.	Rohn Tube 1.5			N.A.
Top Guy Pull-Offs	N.A.			SR 1 1/4		N.A.	SR 1 1/4	N.A.			
Face Width (ft)	3.416				72 @ 2.40885						
# Panels @ (ft)	1.8	0.9	1.0	1.8	1.0	0.8	1.0	1.0	0.8	0.4	0.2
Weight (K)	10.9									4 @ 2.36328	A





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
MTS Vancomm 11' Stand-Off Sector Frame	194	DTMABP7819VG12A	161
MTS Vancomm 11' Stand-Off Sector Frame	194	(2) RRUS 11	161
MTS Vancomm 11' Stand-Off Sector Frame	194	(2) RRUS 11	161
Rohn 12' Boom Gate	183	(2) RRUS 11	161
Rohn 12' Boom Gate	183	(2) RRUS 12	161
Rohn 12' Boom Gate	183	(2) RRUS 12	161
(4) DB844H90 w/ Mount Pipe	183	(2) RRUS 12	161
(4) DB844H90 w/ Mount Pipe	183	RRUS E2	161
(4) DB844H90 w/ Mount Pipe	183	RRUS E2	161
Commscope MTC3615 Sector Mount	161	RRUS E2	161
Commscope MTC3615 Sector Mount	161	RRUS-32	161
Commscope MTC3615 Sector Mount	161	RRUS-32	161
7770.00 w/Mount Pipe	161	RRUS-32	161
7770.00 w/Mount Pipe	161	(2) A2 Module	161
7770.00 w/Mount Pipe	161	(2) A2 Module	161
(3) HPA-65R-BUU-H8 w/ Mount Pipe	161	(2) A2 Module	161
(3) HPA-65R-BUU-H6 w/ Mount Pipe	161	DC6-48-60-18-8F Surge Suppression Unit	161
(3) SBNHH-1D65A w/ Mount Pipe	161	DC6-48-60-18-8F Surge Suppression Unit	161
DTMABP7819VG12A	161	DC6-48-60-18-8F Surge Suppression Unit	161
DTMABP7819VG12A	161		

SYMBOL LIST

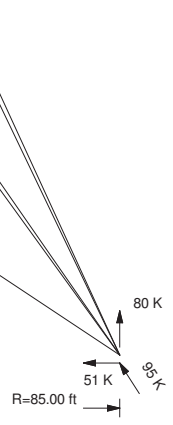
MARK	SIZE	MARK	SIZE
A	4 @ 1.20443		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for a 95 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.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 86.8%

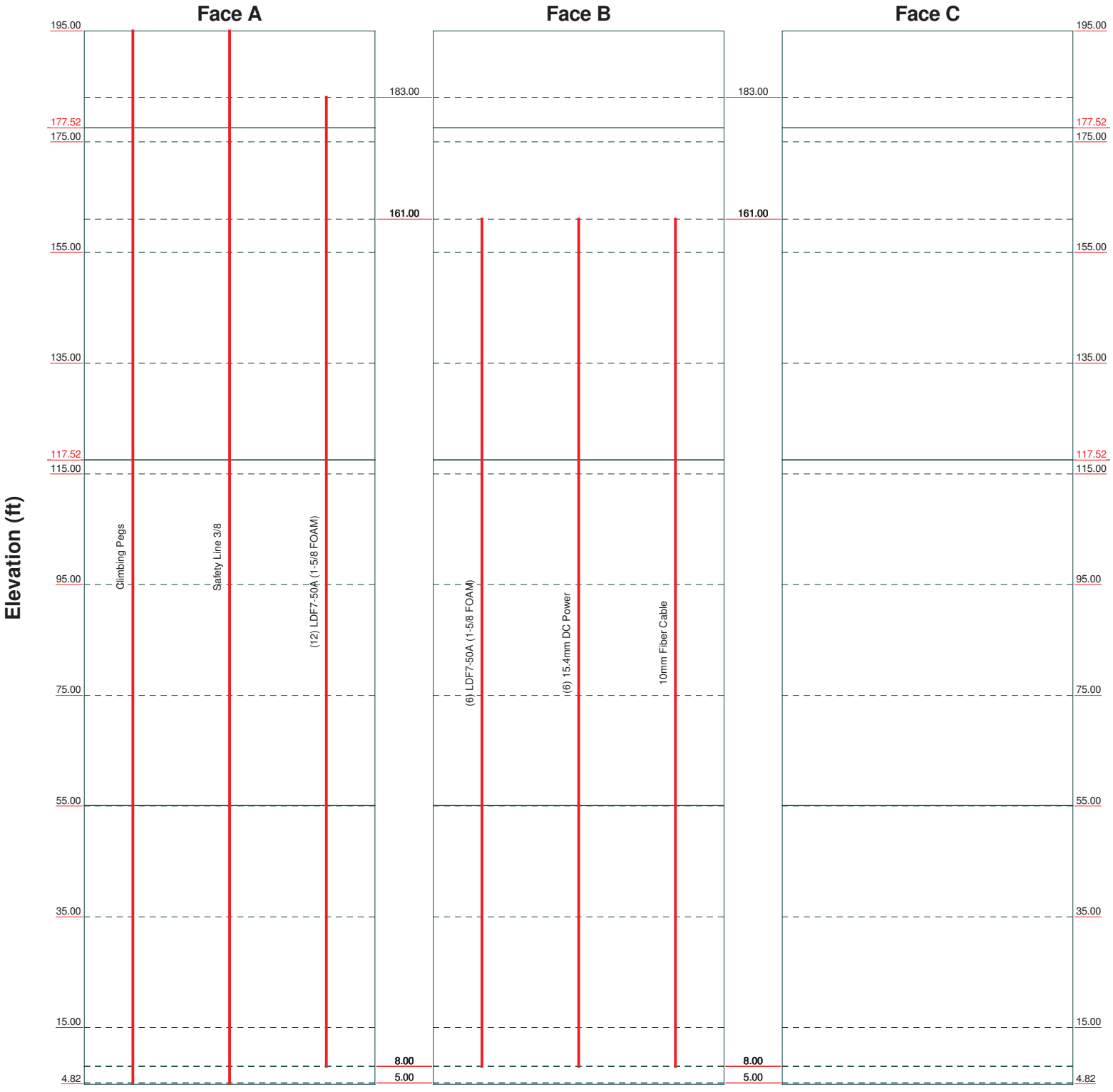


GPD GROUP
520 S. Main St., Suite 2531
Akron, OH 44311
Phone: (614) 210-0751
FAX: (614) 210-0752

Job: 65066 (CT2055) MONTVILLE BUTLER TOWN RD			
Project: 2013723.13.65066.01			
Client: SAI Communications	Drawn by: kdavis	App'd:	
Code: TIA/EIA-222-F	Date: 12/10/13	Scale: NTS	
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723.13 65066.01 SAI SA\TNX\CT2055.er		Dwg No. E-1	

Feed Line Distribution Chart
4'9-27/32" - 195'

Round | Flat | App In Face | App Out Face | Truss Leg



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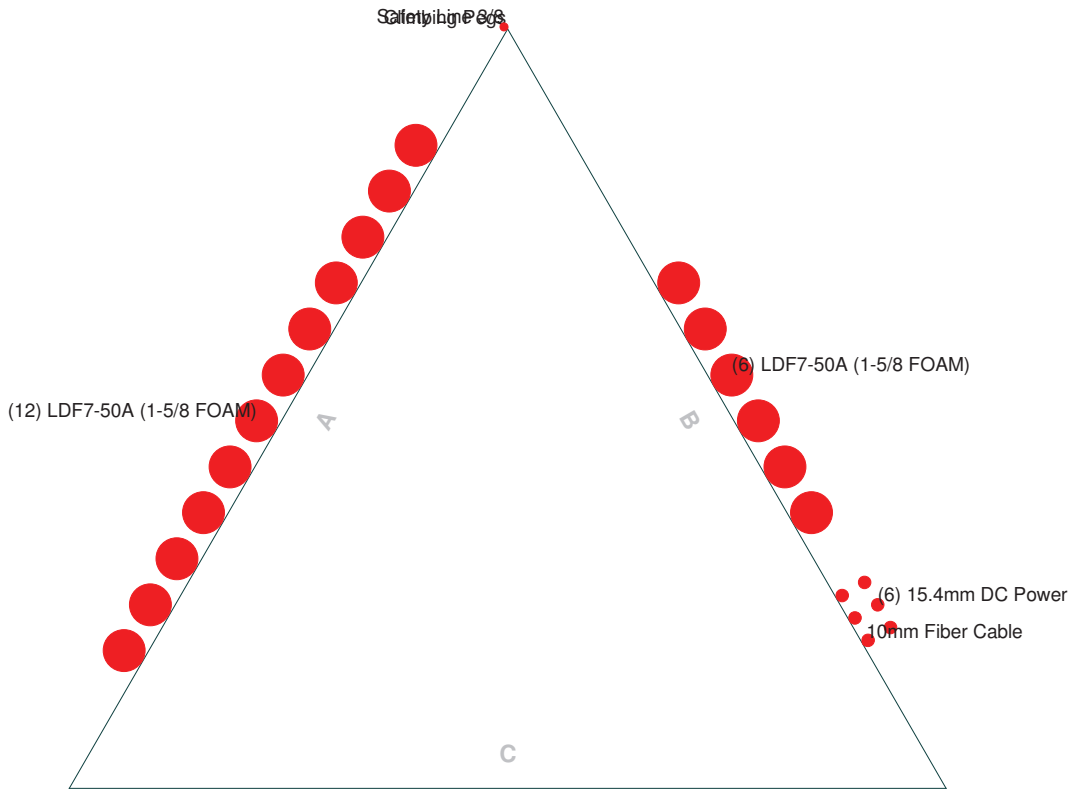
Project: 2013723.13.65066.01			
Client: SAI Communications	Drawn by: kdavis	App'd:	
Code: TIA/EIA-222-F	Date: 12/10/13	Scale: NTS	
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723.13 65066.01 SAI SA\TNX\CT2055.er		Dwg No. E-7	

Feed Line Plan
15'

Round Flat App In Face App Out Face

Section @ 15'



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Project: 2013723.13.65066.01			
Client: SAI Communications	Drawn by: kdavis	App'd:	
Code: TIA/EIA-222-F	Date: 12/09/13	Scale: NTS	
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723.13 65066.01 SAI SA\TNX\Coax\CT2055.er		Dwg No. E-7	

APPENDIX D

Foundation Analysis

Guyed Tower Base Foundation
65066 (CT2055) MONTVILLE BUTLER TOWN RD
2013723.13.65066.01

Tower Reactions		
Axial	164	k
Shear	1	k
Pad & Pier Geometry		
Height	5	ft
Height above Grade	0.5	ft
Pad Width	11.5	ft
Pad Thickness	2	ft
Pier Shape	Round	
Round Pier Diameter	3	ft

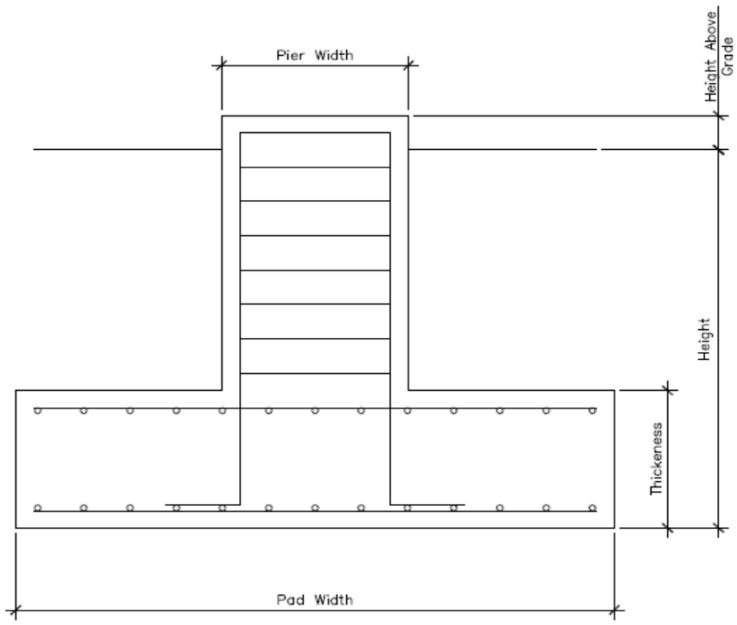
Pad & Pier Reinforcing		
F_c'	3	ksi
Clear Cover	3	in
Rebar Fy	60	ksi
Pad Rebar Size	# 7	
Pad Rebar Quantity	13	
Pier Rebar Size	# 7	
Pier Rebar Quantity	12	

Soil Properties		
Concrete Unit Weight	150	pcf
Soil Unit Weight	130	pcf
Bearing Type	Gross	
Allowable Bearing	4	ksf
Water Table Depth	3	ft

Bearing Capacity Calculations		
Vs	375.54	ft^3
Vc	289.24	ft^3
Ws	48.82	k
Wc	43.39	k
Q_{max}	1.96	ksf
Q_{max} @ 45°	1.97	ksf

Reinforcing Calculations		
Pad Moment Capacity		
Mu=	15.20	k-ft
∅Mn=	58.06	k-ft
Moment Capacity	26.2%	**OK**
Punching Shear		
Vu=	213.20	k
ØVc=	565.95	k
Shear Capacity	37.7%	**OK**
Pier Compression		
Pu=	229.6	k
øPn=	1662.60	k
Compression Capacity	13.8%	**OK**

Overall Capacities		
Bearing Capacity	49.2%	**OK**
Reinforcement Capacity	37.7%	**OK**
Controlling Capacity	**49.2%**	**OK**



GPD GROUP

Guyed Tower Anchor Foundation TIA/EIA-222-F
65066 (CT2055) MONTVILLE BUTLER TOWN RD
2013723.13.65066

Guy Anchor Location	
Azimuth/Leg	*0*
Radius	*85*
Tower Height (ft)	*195*

Tower Reactions		
Vertical	80	k
Horizontal	51	k

Anchor Block Geometry		
Width	4	ft
Height	3.5	ft
Length	25	ft
Depth	14	ft

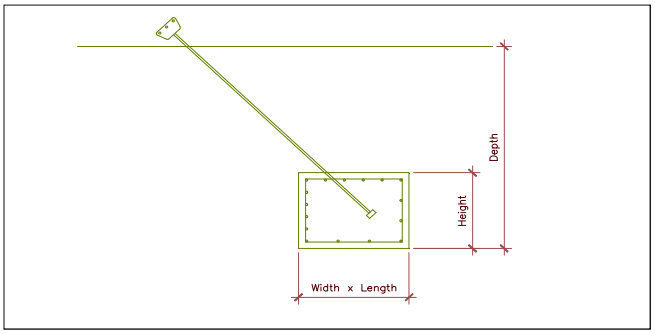
Soil Capacity Calcualtions		
W_s	324.01	k
W_c	30.66	k
$(W_s+W_c)/1.5$	236.45	k
$(W_s/2)+(W_c/1.25)$	186.53	k
Uplift Resistance	274.51	k
Horizontal Resistance	181.36	k
Uplift Capacity=	29.1%	**OK**
Horizontal Capacity=	28.1%	**OK**

Anchor Block Reinformement		
Is Reinforcement Known?	yes	
Fc'	3	ksi
Fy	60	ksi
Clear Cover	3	in
Top Bar Size	# 10	
Top Bar Quantity	5	
Front Bar Size	# 10	
Front Bar Quantity	3	
Back & Bottom Bar Size	# 10	
Back & Bottom Bar Quantity	0	

Reinforcement Capacity Calculations		
Moment Check		
M_u=	325.00	k-ft
ϕM_n=	1033.31	k-ft
Moment Capacity	31.5%	**OK**
Minimum Reinforcment		
A_{smin} Requirements Met?	**Yes**	

Capacity Summary		
Soil Capacity=	29.1%	**OK**
Reinforcing Capacity=	31.5%	**OK**
Controlling Capacity=	**31.5%**	**OK**

Soil Properties					
Layer	C, psf	ϕ, degrees	γ_{soil}, pcf	$\gamma_{concrete}$, pcf	d, ft
1	0	0	130	150	10
2	0	36	135	150	10
3	0	0	0	0	0
4					
Ignored Depth	3.33	ft	Consider soil for uplift		
Water Table	3	ft	Granular		



APPENDIX E

SOW Summary Form

Site Information

Scope Date	12/3/2013
UTRAN ID	CTL02055
Site Number	CT2055
Polygon	LTE W6
Stucture Type	Guyed
AT&T CL	161
Equipment Location	Indoor
ProjectCode	2051319679
FA Code	10035374
Scoping Notes:	

Defined SOW Summary

ANT QTY:	12
Surge Type:	SQUID
Surge QTY:	3
A2 QTY:	6
RRH QTY:	18
TMA QTY:	3
Fiber Trunk QTY:	1
DC Trunk QTY:	6
Power:	Galaxy +24V
Node Type:	Indoor RBS6601
RAN Area:	1
RRH Location:	TOP

Existing Configuration

		Alpha	Beta	Gamma
UMTS/GSM Existing Configuration				
COAX (UMTS/GSM)	Coax MFG	Commscope	Commscope	Commscope
	Coax QTY	4	4	4
	Coax Diameter	1 5/8	1 5/8	1 5/8
Antenna (UMTS/GSM)	Antenna Count	2	2	2
	Antenna Type	7770	7770	7770
	AZ	143	263	23
TMA (UMTS/GSM)	TMA Type	LGP21401	LGP21401	LGP21401
	TMA Count	2	2	2
Diplexer (BTS)	Diplexer Type	LGP21901	LGP21901	LGP21901
	Diplexer Count	4 / (2)	4 / (2)	4 / (2)
RETS	QTY	6		
Current UMTS RRH Location 1900	Top/Bottom	Bottom		
Current UMTS RRH Location 850	Top/Bottom	Bottom		
LTE Existing Configuration				
Antenna (LTE)	Antenna Count			
	Antenna Type			
	AZ			
Existing Fiber Pairs	12 or 18	0		
TMA (LTE)	TMA Type			
	TMA Count			
Diplexer (BTS)	Diplexer Type			
	Diplexer Count			
CCI Existing Configuration				
Auxillary Equipment	Booster	0		
	RxAIT	0		
	LLC	0		

Final Configuration

		Alpha	Beta	Gamma
Integrated Antenna Schedule (ANT)	ANT 1 Type	HPA-65R-BUU-H8 - (8' HEX)	HPA-65R-BUU-H6 - (6' HEX)	SBNHH-1D65A - (4' HEX)
	ANT 1 AZ	0	120	240
	ANT 2 Type	HPA-65R-BUU-H8 - (8' HEX)	HPA-65R-BUU-H6 - (6' HEX)	SBNHH-1D65A - (4' HEX)
	ANT 2 AZ	0	120	240
	ANT 3 Type	HPA-65R-BUU-H8 - (8' HEX)	HPA-65R-BUU-H6 - (6' HEX)	SBNHH-1D65A - (4' HEX)
	ANT 3 AZ	0	120	240
	ANT 4 Type	7770	7770	7770
	ANT 4 AZ	143	263	23
	RAD	161	161	161
RRH (TOP)	RRH Model 1 QTY	2	2	2
	RRH Model 1 Type	RRUS-11	RRUS-11	RRUS-11
	RRH Model 2 QTY	2	2	2
	RRH Model 2 Type	RRUS-12	RRUS-12	RRUS-12
	RRH Model 3 QTY	1	1	1
	RRH Model 3 Type	RRUS-E2	RRUS-E2	RRUS-E2
	RRH Model 4 QTY	1	1	1
	RRH Model 4 Type	RRUS-32	RRUS-32	RRUS-32
	UMTS RRH 1900 QTY	0	0	0
	UMTS RRH 1900 Type	RRUS-11	RRUS-11	RRUS-11
	UMTS RRH 850 QTY	0	0	0
	UMTS RRH 850 Type	RRUS-11	RRUS-11	RRUS-11
A2 Module (TOP)	QTY	2	2	2
TMA (ANT)	TMA Count	1	1	1
	TMA Type	DTMABP7819VG12A-BP	DTMABP7819VG12A-BP	DTMABP7819VG12A-BP
Surge Protection Device (ANT)	Surge Type	SQUID		
	Surge QTY	1	1	1
Fiber & DC	Fiber Trunk QTY	1		
	New 18 Pair Req'd?	Need to Verify Pairs		
	DC Trunk QTY	6		
Triplexer (BTS)	Tri/Quadplexer Count	n/a	n/a	n/a
	Tri/Quadplexer Type	n/a	n/a	n/a
Diplexer (BTS)	Diplexer Count	2	2	2
	Diplexer Type	LGP21901	LGP21901	LGP21901
CCI Gear (BTS)	RxAIT	850		
	Booster	n/a		
	LLC	n/a		

End Of Form

Mark Roberts

From: Michelle Giroux <MGiroux@montville-ct.org>
Sent: Wednesday, August 10, 2016 3:25 PM
To: Mark Roberts
Subject: 376 Butlertown Road - Tower Information (Wireless Solutions, Ltd)

Mark:

As requested – the tower at 376 Butlertown Road, Montville, CT as shown on Assessor's Map 5 Lot 32-003; was originally approved on March 28, 2000 as follows:

Wireless Solutions, Ltd: Application for a special permit and site plan review to install a 195' cellular transmission tower on property located at 376 Butlertown Road, Montville, Ct. Shown on Assessor's Map 5, Lot 32-003. **GRANTED with CONDITIONS.**

There were conditions to the approval and they are as follows:

1. One driveway must be permanently closed/blocked off and the area be loamed and seeded.
2. Wetlands violations be corrected.
3. Permit not be issued until the designated driveway gas has been permanently closed/blocked off.

If you have any further questions/require additional information; give me a call.

Sincerely,

Michelle Giroux

Administrative Assistant
Town of Montville
Planning & Zoning
310 Norwich New London Tpke.
Uncasville, CT 06382
(860) 848-6779
MGiroux@montville-ct.org


Hartford New London Tpke
024-000
028-000
009-000
029-000
027-000
027-001
001-008
031-000
027-004
027-002
027-003
001-007
027-005
Sachatello Industrial Dr
027-010
001-006
032-001
027-006
027-009
032-002
027-008
001-003
032-003
027-007
001-005
032-004
027-012
001-004
Flanders Rd
027-013
001-002
016-000
032-005
027-014
001-001
017-000
004-000
027-015
Butlertown Rd
015-000
003-000
006-000
005-000
002-000
005-00A

Property Location: 376 BUTLERTOWN RD | **MAP ID:** 005/ 032/ 003/ / | **Bldg Name:** TONY'S WELL DRLLNG & L LSI | **State Use:** 4022

Vision ID: 199 | **Account #** L9600005 | **Bldg #:** 1 of 1 | **Sec #:** 1 of 1 | **Card** 1 of 1 | **Print Date:** 01/11/2016 13:34

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
IACONIELLO ANTONIO J	1 Level	7 Electric	1 Paved	Sl Murphy Schl
536 ROUTE 161				F Chesterfield
OAKDALE, CT 06370-1849				
Additional Owners:				

SUPPLEMENTAL DATA

Other ID:	005/032-003
Census	695202
Dev Lot	
Subdiv	
Map #	
Zoning Notes	LI
GIS ID:	005/032-003
Callback	
ASSOC PID#	

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
Ind Land	3-1	108,030	75,620
Ind Bldg	3-2	137,680	96,380
Ind Imprv	3-3	186,400	130,480
Util Land	4-1	3,780	2,650
	Total	435,890	305,130

6086
MONTVILLE, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
IACONIELLO ANTONIO J	0293/0502	12/03/1996		V	0	

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2015	3-1	75,620	2014	3-1	75,620	2013	3-1	75,620
2015	3-2	96,380	2014	3-2	96,380	2013	3-2	96,380
2015	3-3	130,480	2014	3-3	130,480	2013	3-3	130,480
2015	4-1	2,650	2014	4-1	2,650	2013	4-1	2,650
	Total:	305,130		*Total:*	305,130		*Total:*	305,130

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	130,150
Appraised XF (B) Value (Bldg)	7,530
Appraised OB (L) Value (Bldg)	186,400
Appraised Land Value (Bldg)	111,810
Special Land Value	0
Total Appraised Parcel Value	435,890
Valuation Method:	C
Exemptions	0
Adjustment:	0
Net Total Appraised Parcel Value	**435,890**

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A				

NOTES

CELL TOWER (2) 12X16 CELL SHEDS

TONY'S WELL DRILLING

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
B2014-0063	03/21/2014	79	Misc	40,000	09/09/2014	1		REMOVE 3 ANTENNAS
B2009-0066	03/24/2009	79	Misc	20,000		100		AT&T EQUIPMENT CH
E2001-0191	09/10/2001	00	Electrical	8,000		100		ELECTRICAL & ELECT
B2001-0274	05/29/2001	79	Misc	50,000		100		EQUIP BLDG & TOWEI
B2000-0357	08/14/2000	79	Misc	100,000		100	01/17/2002	CO ISSUED-INSTALL A
B2000-0186	05/10/2000	79	Misc	37,000		100	07/17/2000	CO ISSUED-195' TOWE

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result
03/28/2013			BAA	BN	BAA No Change
04/21/2011			JW	00	Interior + Exterior Inspect

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing		S Adj Fact	Adj. Unit Price	Land Value
1	4022	Industrial Bldg	LI				43,560	SF	2.75	0.9000	B	1.0000	1.00		0.00				1.00		108,030
1	4340	Cell Tower	LI				0.84	AC	4,500.00	1.0000	0	1.0000	1.00		0.00	CELL SITE			1.00		3,780

Total Card Land Units: 1.84 AC | **Parcel Total Land Area:** 1.84 AC | **Total Land Value:** 111,810

Property Location: 376 BUTLERTOWN RD | **MAP ID:** 005/ 032/ 003/ / | **Bldg Name:** TONY'S WELL DRLLNG & L LSI | **State Use:** 4022

Vision ID: 199 | **Account #** L9600005 | **Bldg #:** 1 of 1 | **Sec #:** 1 of 1 | **Card** 1 of 1 | **Print Date:** 01/11/2016 13:34

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	95		Garage/Office
Model	96		Industrial
Grade	08		C
Stories	1		
Occupancy	1		
Exterior Wall A	27		Pre-finsh Metl
Exterior Wall B			
Roof Structure	03		Gable
Roof Cover	01		Metal
Interior Wall A	01		Minimum
Interior Wall B	05		Drywall
Interior Floor A	03		Concrete
Interior Floor B	14		Carpet
Heating Fuel	03		Gas
Heating Type	03		Hot Air-No Duc
AC Type	06		Partial
Bldg Use	4022		Industrial Bldg
Heat/AC	01		HEAT/AC PKGS
Frame Type	05		STEEL
Baths/Plumbing	02		AVERAGE
Ceiling/Walls	01		SUSP-CEIL ONLY
Rooms/Prtns	02		AVERAGE
Wall Height	16		
% Comn Wall			

CONSTRUCTION DETAIL (CONTINUED)

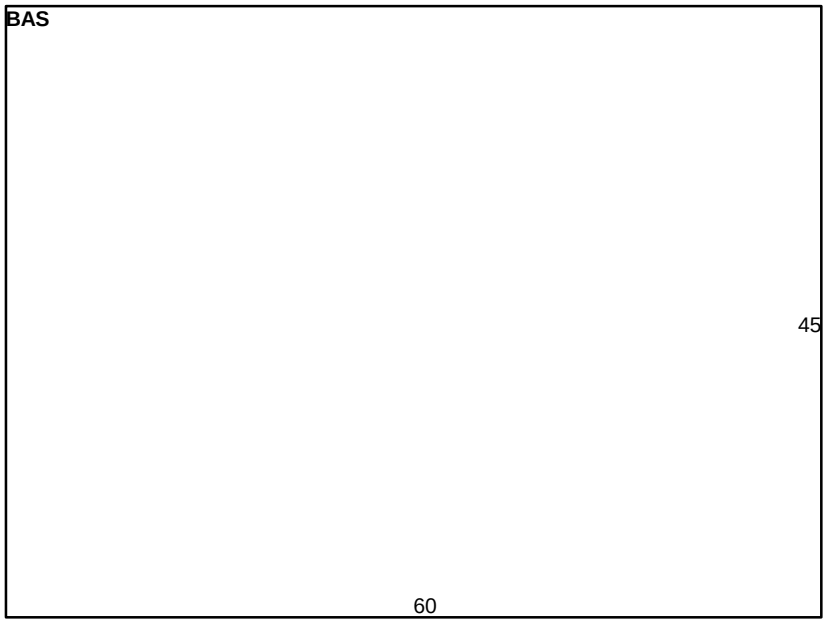
Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
4022	Industrial Bldg	100

COST/MARKET VALUATION

Adj. Base Rate:	53.56
AYB	1998
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	10
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	90
Apprais Val	130,150
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	



OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
PAV1	Paving-Asphalt			L	3,000	2.00	2011	A		AV	50	3,000
CELL	Cell Tower Site			L	1	163,600.00	2009		0		100	163,600
CELS	Cell Shed			L	192	100.00	2009	A		AV	50	9,600
CELS	Cell Shed			L	192	100.00	2009	A		AV	50	9,600
FN3	6' Chain Fence			L	100	12.00	2009	A		AV	50	600
MEZ1	Unfin Mezzanin			B	598	14.00	2001		1		100	7,530

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
BAS	First Floor	2,700	2,700		53.56	144,612
	Ttl. Gross Liv/Lease Area:	2,700	2,700			