

PROJECT INFORMATION	
SCOPE OF WORK:	<p><u>ITEMS TO BE MOUNTED ON THE EXISTING TOWER:</u>            (9) LTE ANTENNAS, (9) RRH'S, (3) A2 MODULES, (3) SURGE ARRESTORS,            (6) DC POWER CABLES, (3) FIBER LINES</p> <p><u>ITEMS TO BE INSTALLED INSIDE THE EXISTING AT&amp;T EQUIPMENT AREA:</u>            (1) DUS &amp; (1) XMU</p> <p><u>ITEMS TO REMAIN:</u>            (3) UMS ANTENNAS, (3) RRH'S, (3) SURGE ARRESTORS, (12) LINES OF Ø1-5/8" COAX CABLES</p> <p><u>ITEMS TO BE REMOVED:</u>            (3) LTE ANTENNAS, (3) GSM ANTENNAS, (3) RRH'S, (3) TMA'S, (1) DC-10E, (1) DC-9E,            (2) DC POWER CABLES &amp; (1) FIBER LINES</p> <p>PTN: 2051A02ITA / 2051A03JL2            RFDS VERSION: FINAL            DATE: 02-16-2016</p>
SITE ADDRESS:	26 WASHINGTON STREET NEW LONDON, CT 06320
LATITUDE:	41.353881° N, 41° 21' 13.97" W
LONGITUDE:	72.097860° W, 72° 5' 52.296" W
USID:	65070
LANDLORD:	SOUTHERN NEW ENGLAND TEL CO C/O SBC COMMUNICATIONS INC.
TOWER OWNER:	FRONTIER 250 SOUTH COOKEVILLE, FRANKLIN TN 038501
TYPE OF SITE:	ROOFTOP/SELF-SUPPORT
TOWER HEIGHT:	226'-0"±
RAD CENTER:	105'-0" / 191'-0"
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY



**FA NUMBER: 10035053**  
**SITE NUMBER: CTL02080**  
**SITE NAME: NEW LONDON**  
**26 WASHINGTON STREET**  
**NEW LONDON, CT 06320**  
**PROJECT: LTE 3C/4C**

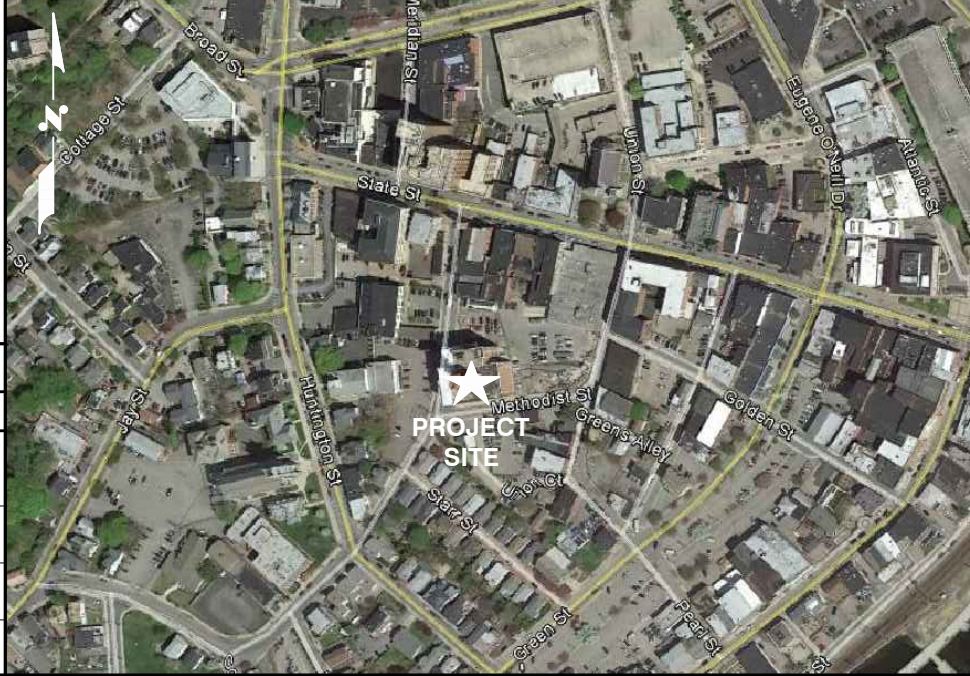
PROJECT TEAM	
<b>CLIENT REPRESENTATIVE</b>	<b>RF ENGINEER</b>
COMPANY: SMARTLINK, LLC	COMPANY: AT&T MOBILITY – NEW ENGLAND
ADDRESS: 1997 ANNAPOLIS EXCHANGE PARKWAY, SUITE 200	ADDRESS: 550 COCHITUATE ROAD SUITE 550 13 AND 14
CITY, STATE, ZIP: ANNAPOLIS, MD 21401	CITY, STATE, ZIP: FRAMINGHAM, MA 01701
CONTACT: TIM BOYCE	CONTACT: CAMERON SYME
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E-MAIL: tboyce@smartlinkllc.com	E-MAIL: cs6970@att.com
<b>SITE ACQUISITION</b>	<b>CONSTRUCTION MANAGER</b>
COMPANY: SMARTLINK, LLC	COMPANY: SMARTLINK, LLC.
ADDRESS: 85 RANGEWAY RD, SUITE 102	ADDRESS: 85 RANGEWAY RD, SUITE 102
CITY, STATE, ZIP: BILLERICA, MA 01862	CITY, STATE, ZIP: BILLERICA, MA 01862
CONTACT: SHARON R. KEEFE	CONTACT: MARK J. DONNELLY
PHONE: (978) 930-3918	PHONE: (617) 515-2080
E-MAIL: sharon.keefe@smartlinkllc.com	E-MAIL: mark.donnelly@smartlinkllc.com
<b>ENGINEERING</b>	
COMPANY: HUDSON DESIGN GROUP, LLC.	
ADDRESS: 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090	
CITY, STATE, ZIP: NORTH ANDOVER, MA 01845	
CONTACT: DANIEL P. HAMM, PE	
PHONE: (978) 557-5553	
E-MAIL: info@hudsondesigngrouppllc.com	

**DRAWING INDEX**

SHEET NO.	DESCRIPTION	REV.
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**VICINITY MAP**

**DIRECTIONS TO SITE:**  
 FROM ROCKY HILL, CT: HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD 0.3 MI. TURN LEFT AT CAPITAL BLVD 0.3 MI. TURN LEFT AT WEST ST 0.3 MI. TURN LEFT TO MERGE ONTO I-91 S TOWARD NEW HAVEN 1.5 MI. TAKE EXIT 22S ON THE LEFT TO MERGE ONTO CT-9 S TOWARD MIDDLETOWN/OLD SAYBROOK 5.8 MI. CONTINUE ONTO CT-17 S 0.5 MI. CONTINUE ONTO CT-9 S 22.9 MI. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR US-1 N/I-95 N/NEW LON/PROVIDENCE AND MERGE ONTO I-95 N/US-1 N. CONTINUE TO FOLLOW I-95 N 15.2 MI. TAKE EXIT 83 TOWARD CT-32 N/NORWICH/DOWNTOWN/NEW LONDON 489 FT. MERGE ONTO I-95 FRONTAGE RD 0.3 MI. CONTINUE ONTO HUNTINGTON ST 0.7 MI. TURN LEFT AT STATE ST 436 FT. TAKE THE 1ST RIGHT ONTO WASHINGTON ST. THE SITE AT 26 WASHINGTON ST WILL BE ON THE LEFT SIDE OF THE STREET.



**GENERAL NOTES**

- 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.
- 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.
- 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.

**APPROVALS**

DISCIPLINE:	SIGNATURE:	DATE:
THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.		
SMARTLINK SITE ACQUISITION:		
SMARTLINK CONSTRUCTION MANAGER:		
AT&T PROJECT MANAGER:		

**72 HOURS**

CALL BEFORE YOU DIG

CALL TOLL FREE 1-888-DIG-SAFE

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

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NO.	DATE	REVISIONS	BY	CHK	APP'D
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0	05/13/16	ISSUED FOR REVIEW	FM	HC	DPH

SCALE: AS SHOWN    DESIGNED BY: HC    DRAWN BY: FM

SITE NUMBER	DRAWING NUMBER	REV
CTL02080	T-1	1

AT&T  
TITLE SHEET  
(LTE 3C/4C)

**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 AWS 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 – SMARTLINK  
 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: IBC 2012 WITH 2016 CT STATE BUILDING CODE AMENDMENTS  
 ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS  
 LIGHTNING 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-G,  
 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**  
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 N. ANDOVER, MA 01845  
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 FAX: (978) 336-5586

**smartlink**  
 1997 ANNAPOLIS EXCHANGE PKWY  
 SUITE 200  
 ANNAPOLIS, MD 21401

**SITE NUMBER: CTL02080**  
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 26 WASHINGTON STREET  
 NEW LONDON, CT 06320  
 NEW LONDON COUNTY

**at&t**  
 550 COCHITUATE ROAD  
 FRAMINGHAM, MA 01701

1	06/02/17	ISSUED FOR CONSTRUCTION	RB	JC	GC
0	05/13/16	ISSUED FOR REVIEW	FM	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: FM		

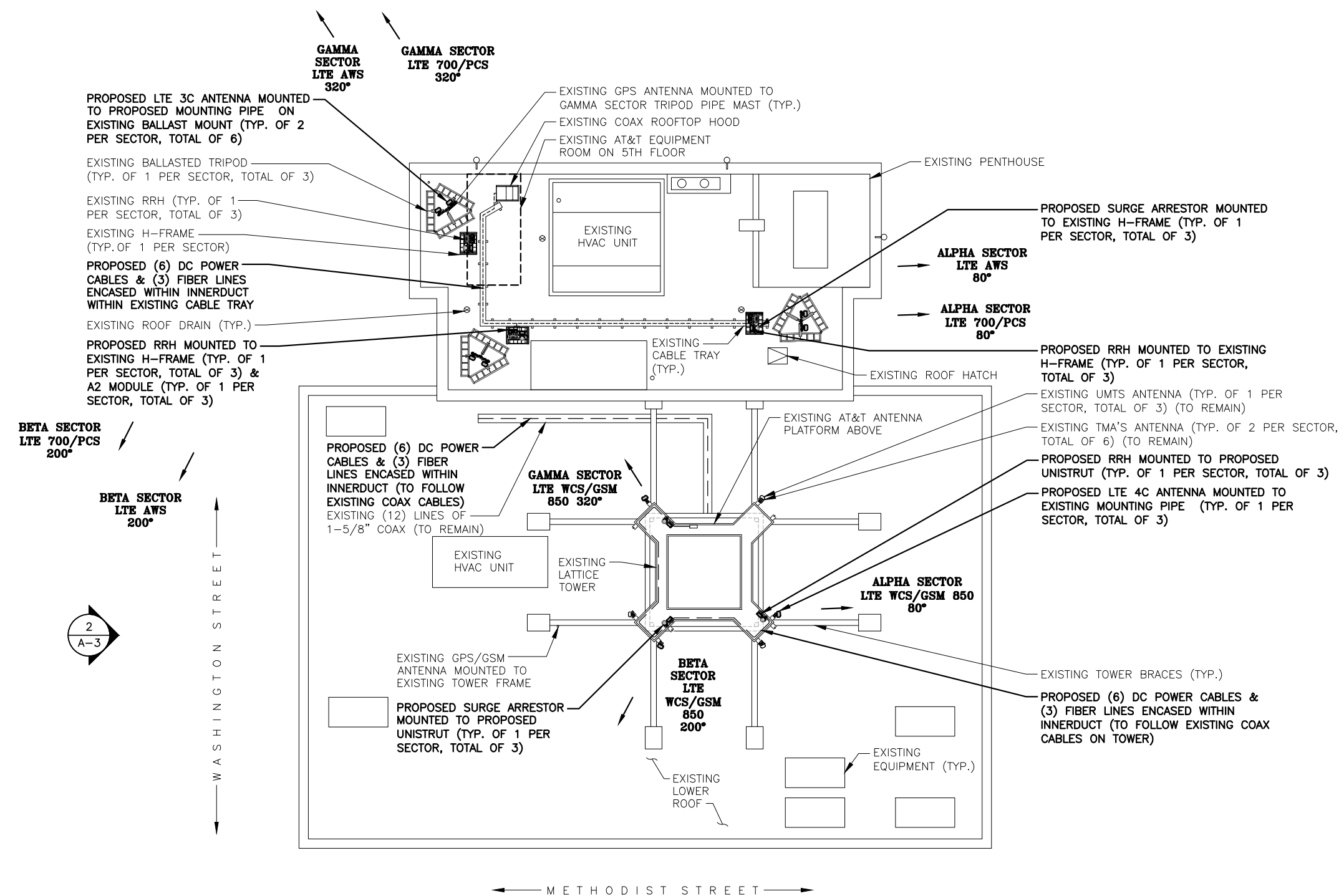
**AT&T**  
**GENERAL NOTES**  
**(LTE 3C/4C)**  
 SITE NUMBER: CTL02080  
 DRAWING NUMBER: GN-1  
 REV: 1



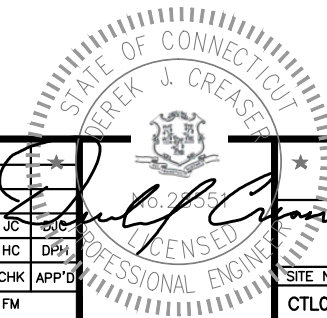
**NOTE:**  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

**NOTE:**  
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC. DATED: MAY 23, 2017 FOR THE CAPACITY OF THE EXISTING EQUIPMENT AND ANTENNA MOUNTS TO SUPPORT THE PROPOSED EQUIPMENT.

**NOTE:**  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING TOWER STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. PRIOR TO COMMENCING CONSTRUCTION, GC SHALL REFER TO STRUCTURAL ANALYSIS BY TOWER OWNER. DRAWINGS ARE SUBJECT TO CHANGE PENDING THESE RESULTS.



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



**Hudson Design Group, LLC**  
1600 OSGOOD STREET  
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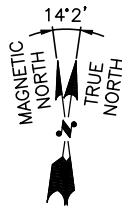
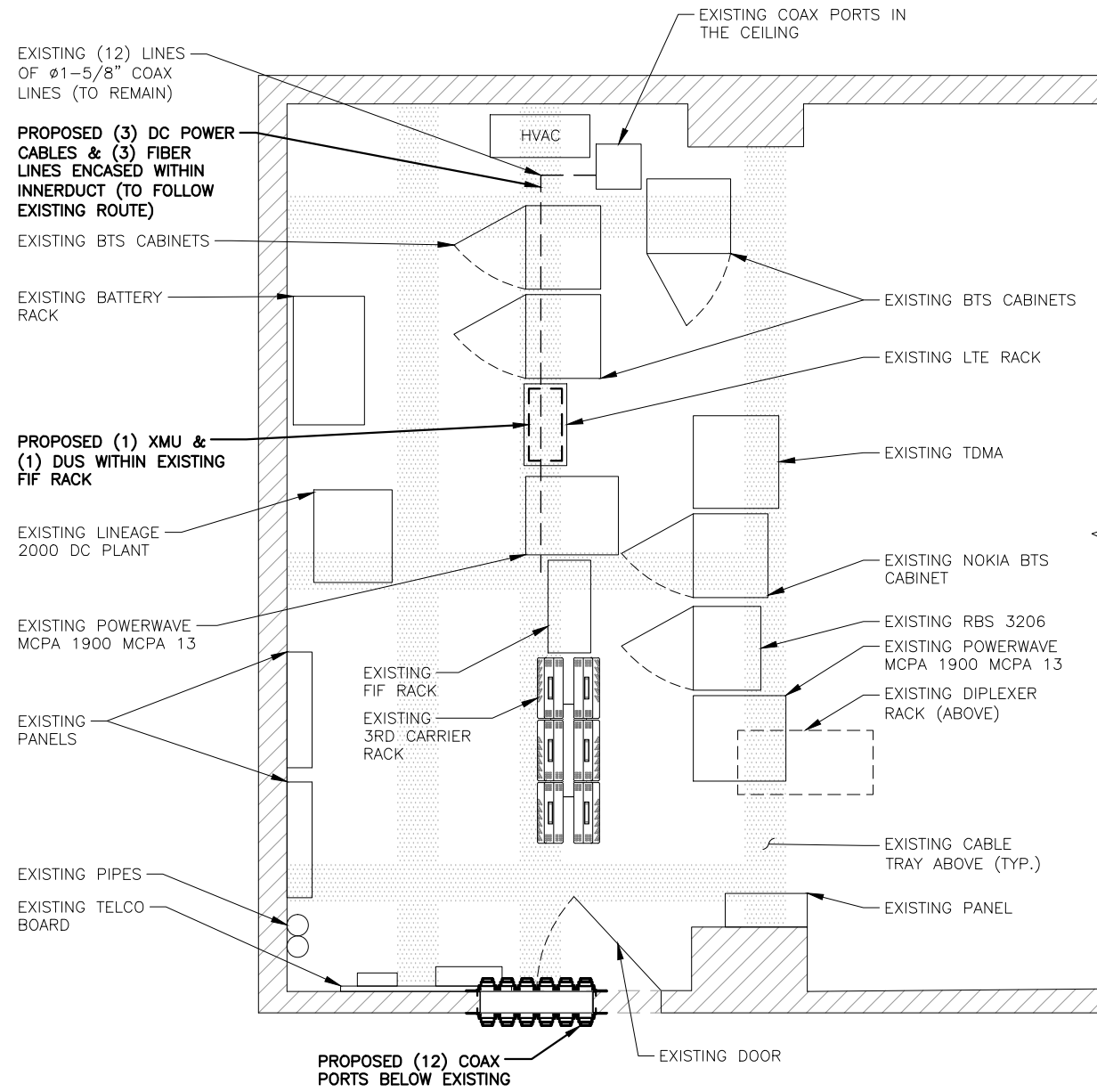
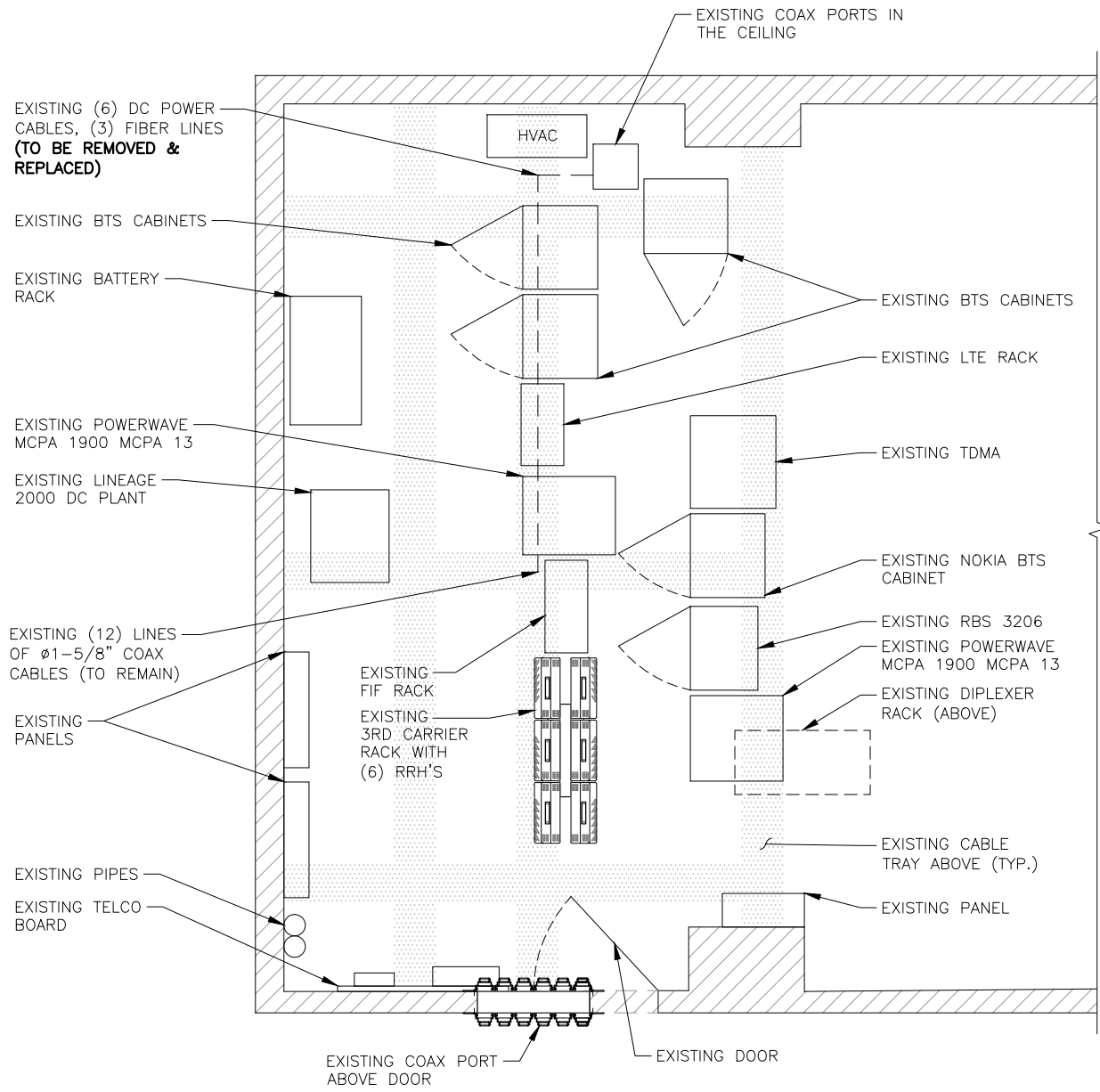
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**AT&T**  
**ROOFTOP PLAN**  
**(LTE 3C/4C)**  
SITE NUMBER: CTL02080  
DRAWING NUMBER: A-1  
REV: 1

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

1  
A-2



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

2  
A-2



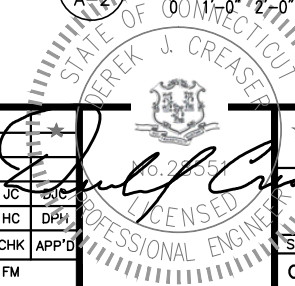
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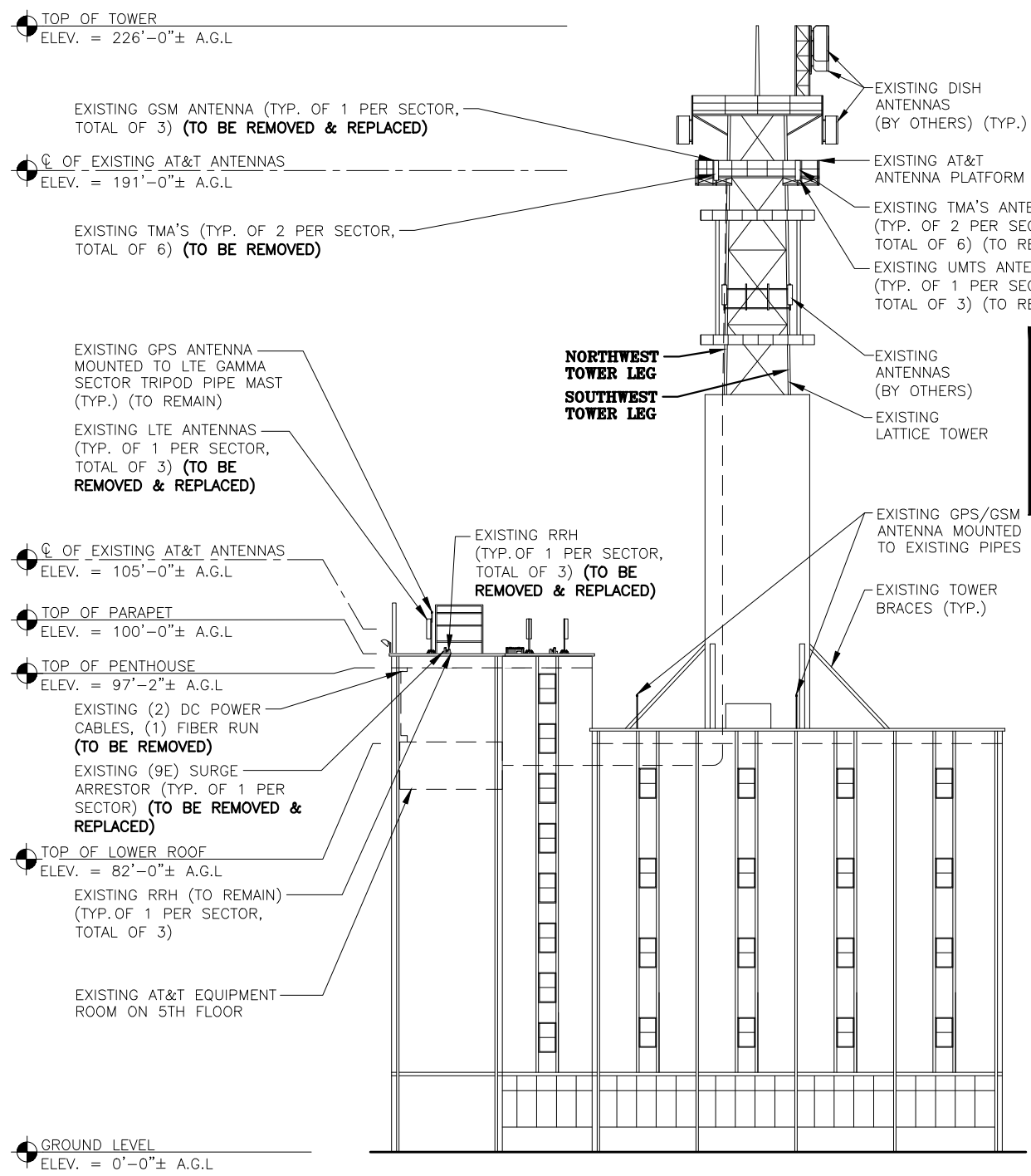
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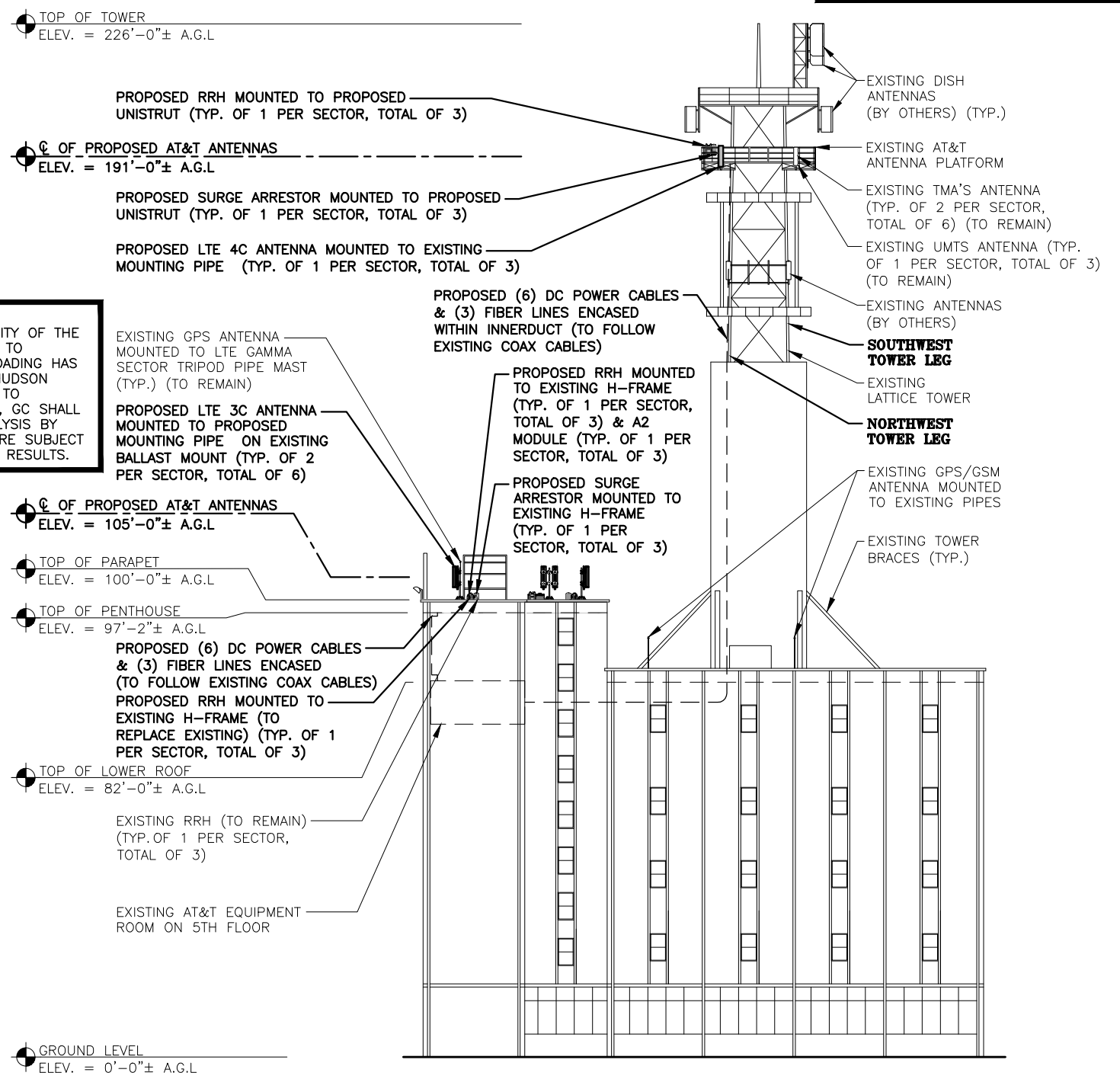
**AT&T**  
**COMPOUND & EQUIPMENT PLANS**  
**(LTE 3C/4C)**  
SITE NUMBER: CTL02080  
DRAWING NUMBER: A-2  
REV: 1

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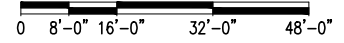


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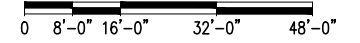
**EXISTING WEST ELEVATION**  
22x34 SCALE: 1/16"=1'-0"  
11x17 SCALE: 1/32"=1'-0"

1  
A-3



**PROPOSED WEST ELEVATION**  
22x34 SCALE: 1/16"=1'-0"  
11x17 SCALE: 1/32"=1'-0"

2  
A-3



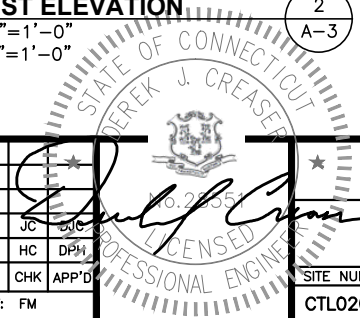
**Hudson Design Group**  
1600 OSGOOD STREET  
BUILDING 20 NORTH, SUITE 309D  
N. ANDOVER, MA 01845  
TEL: (978) 557-5553  
FAX: (978) 336-5586

**smartlink**  
1997 ANNAPOLIS EXCHANGE PKWY  
SUITE 200  
ANNAPOLIS, MD 21401

**SITE NUMBER: CTL02080**  
**SITE NAME: NEW LONDON**  
  
26 WASHINGTON STREET  
NEW LONDON, CT 06320  
NEW LONDON COUNTY

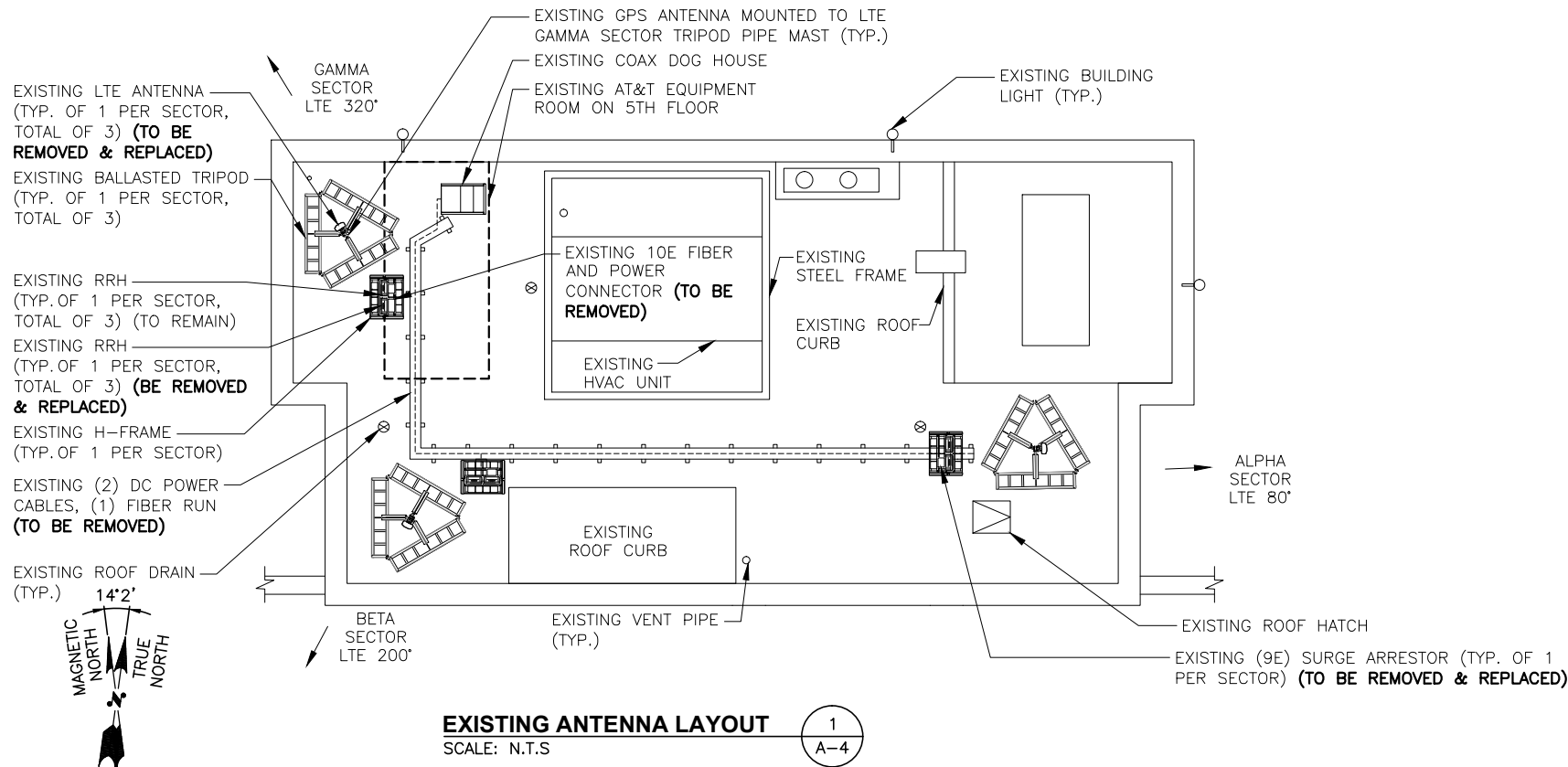
**at&t**  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

1	06/02/17	ISSUED FOR CONSTRUCTION	RB	JC	CHK
0	05/13/16	ISSUED FOR REVIEW	FM	HC	APP'D
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: FM		



**AT&T**  
**ELEVATIONS (LTE 3C/4C)**  
SITE NUMBER: CTL02080  
DRAWING NUMBER: A-3  
REV: 1



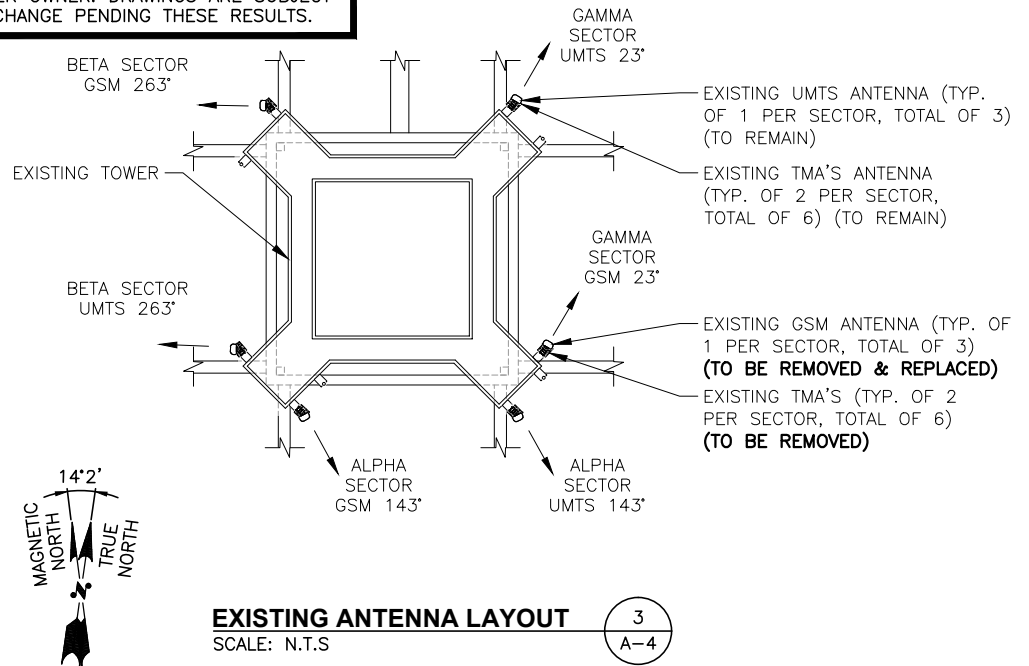


**EXISTING ANTENNA LAYOUT** (1)  
SCALE: N.T.S. A-4

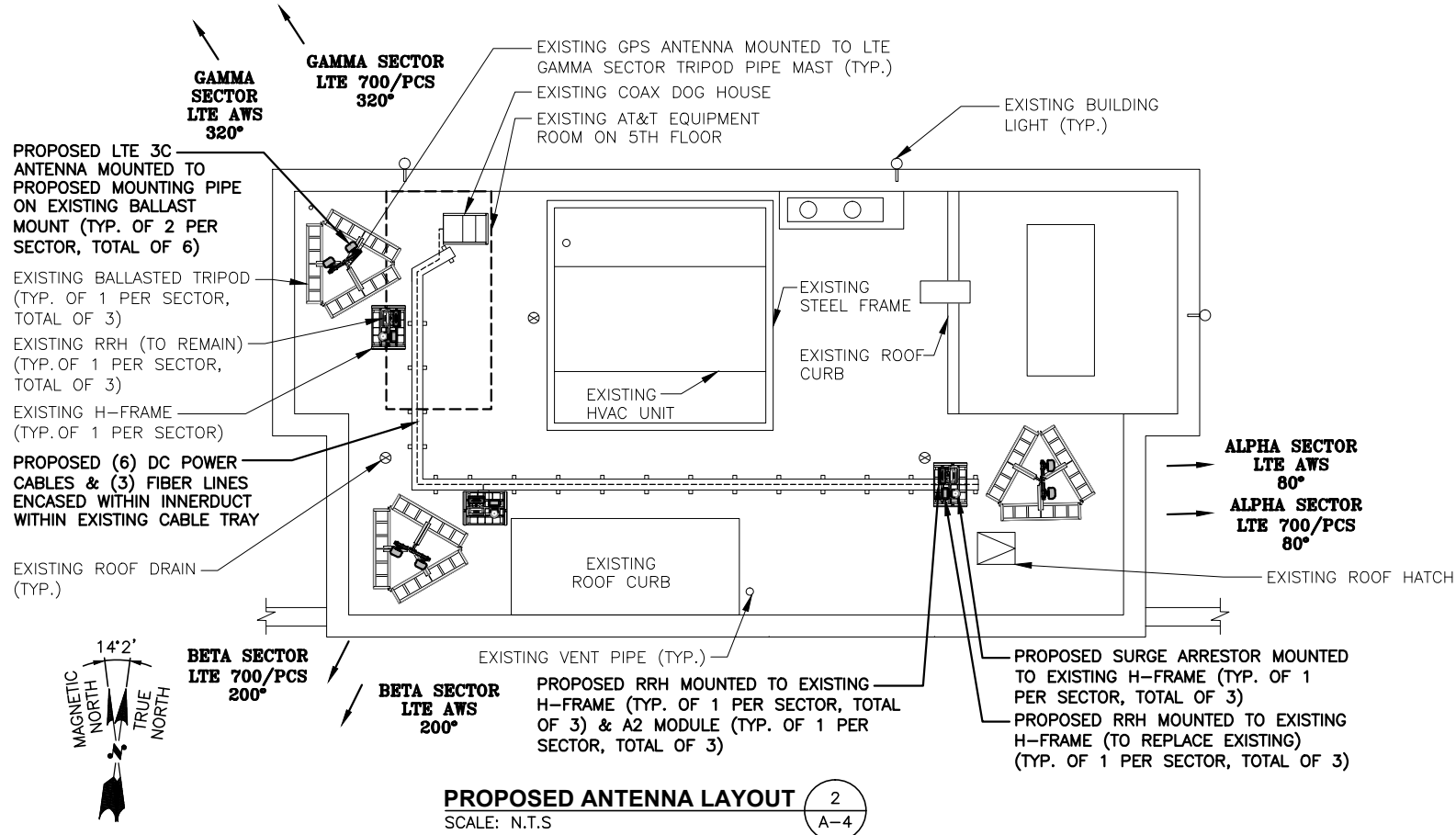
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**NOTE:**  
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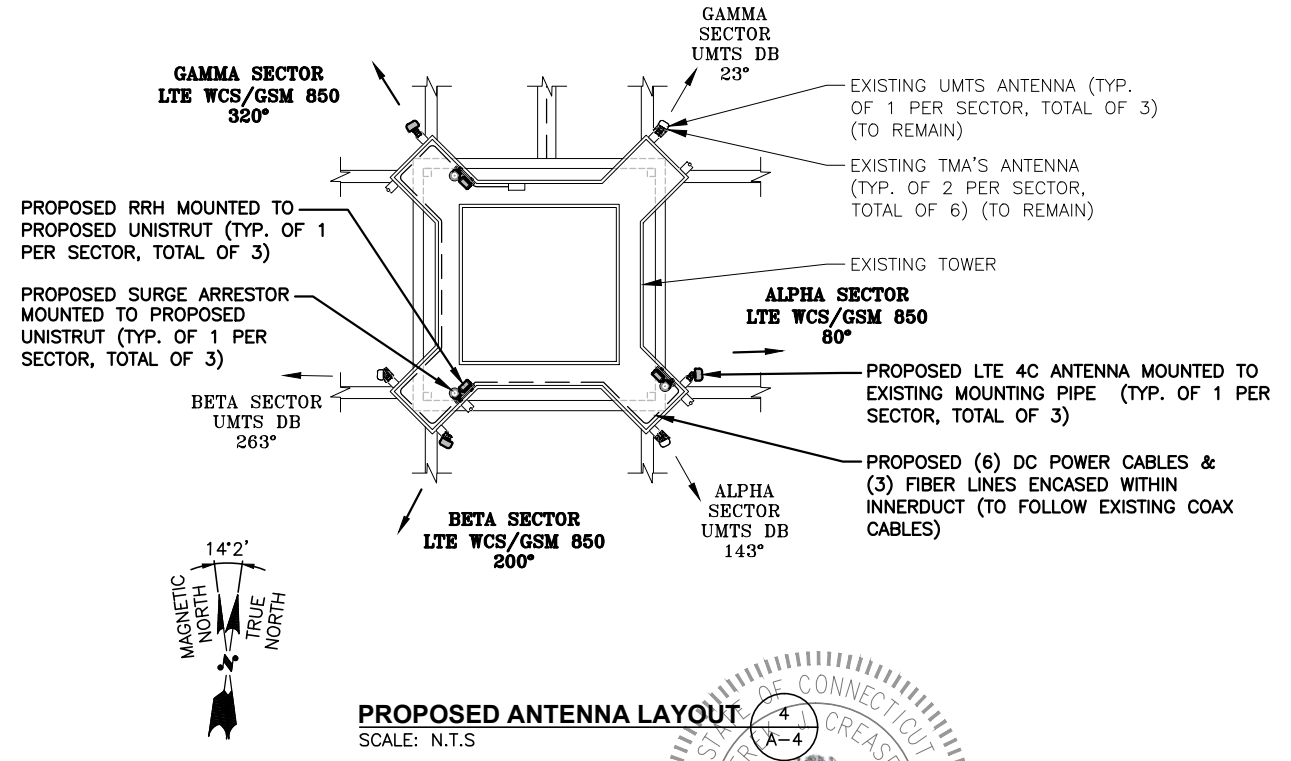
**NOTE:**  
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC. DATED: MAY 23, 2017 FOR THE CAPACITY OF THE EXISTING EQUIPMENT AND ANTENNA MOUNTS TO SUPPORT THE PROPOSED EQUIPMENT.



**EXISTING ANTENNA LAYOUT** (3)  
SCALE: N.T.S. A-4



**PROPOSED ANTENNA LAYOUT** (2)  
SCALE: N.T.S. A-4



**PROPOSED ANTENNA LAYOUT** (4)  
SCALE: N.T.S. A-4



**SITE NUMBER: CTL02080**  
**SITE NAME: NEW LONDON**  
  
26 WASHINGTON STREET  
NEW LONDON, CT 06320  
NEW LONDON COUNTY



1	06/02/17	ISSUED FOR CONSTRUCTION	RB	JC	DK
0	05/13/16	ISSUED FOR REVIEW	FM	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: FM		



AT&T		
ANTENNA LAYOUTS & ELEVATION (LTE 3C/4C)		
SITE NUMBER	DRAWING NUMBER	REV
CTL02080	A-2	1

**NOTE:**  
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EXISTING & PROPOSED ANTENNA SCHEDULE							
SECTOR	TECHNOLOGY	EXISTING/PROPOSED	RAD CENTER	AZIMUTH	MAKE	MODEL#	SIZE (INCHES) (L x W x D)
ALPHA	UMTS	EXISTING	191'-0"±	143°	POWERWAVE	7770	55.0x11.0x5.0
	LTE 3C	PROPOSED	105'-0"±	80°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
	LTE 3C	PROPOSED	105'-0"±	80°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
	LTE 4C	PROPOSED	191'-0"±	80°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
BETA	UMTS	EXISTING	191'-0"±	263°	POWERWAVE	7770	55.0x11.0x5.0
	LTE 3C	PROPOSED	105'-0"±	200°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
	LTE 3C	PROPOSED	105'-0"±	200°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
	LTE 4C	PROPOSED	191'-0"±	200°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
GAMMA	UMTS	EXISTING	191'-0"±	23°	POWERWAVE	7770	55.0x11.0x5.0
	LTE 3C	PROPOSED	105'-0"±	320°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
	LTE 3C	PROPOSED	105'-0"±	320°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1
	LTE 4C	PROPOSED	191'-0"±	320°	ANDREW	SBNHH-1D65A	55.0x11.9x7.1

EXISTING & PROPOSED RRU SCHEDULE				
SECTOR	EXISTING/PROPOSED	MAKE	MODEL#	SIZE (INCHES) (L x W x D)
ALPHA	PROPOSED	ERICSSON	RRUS-11 A2	19.7x17.0x7.2
	PROPOSED	ERICSSON	RRUS-11 A2	16.4x15.2x3.4
	EXISTING	ERICSSON	RRUS-11	19.7x17.0x7.2
	PROPOSED	ERICSSON	RRUS-32 B2	26.7x12.1x6.7
BETA	PROPOSED	ERICSSON	RRUS-11 A2	19.7x17.0x7.2
	PROPOSED	ERICSSON	RRUS-11 A2	16.4x15.2x3.4
	EXISTING	ERICSSON	RRUS-11	19.7x17.0x7.2
	PROPOSED	ERICSSON	RRUS-32 B2	26.7x12.1x6.7
GAMMA	PROPOSED	ERICSSON	RRUS-11 A2	19.7x17.0x7.2
	PROPOSED	ERICSSON	RRUS-11 A2	16.4x15.2x3.4
	EXISTING	ERICSSON	RRUS-11	19.7x17.0x7.2
	PROPOSED	ERICSSON	RRUS-32 B2	26.7x12.1x6.7

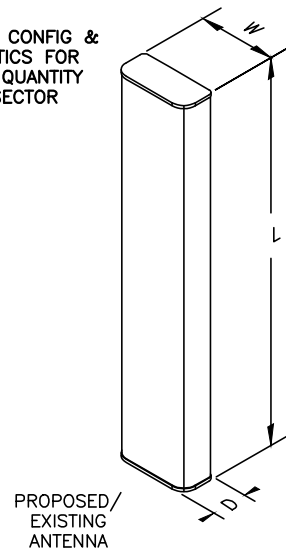
DC SURGE ARRESTOR		
SECTOR	DC POWER CABLES	FIBER CABLES
ALPHA	2	1
BETA	2	1
GAMMA	2	1

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

**NOTE:**  
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC. DATED: MAY 23, 2017 FOR THE CAPACITY OF THE EXISTING EQUIPMENT AND ANTENNA MOUNTS TO SUPPORT THE PROPOSED EQUIPMENT.

**NOTES:**

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



**PROPOSED ANTENNA DETAIL**  
SCALE: N.T.S

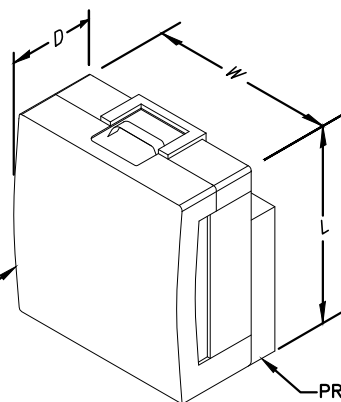
1  
A-5

**NOTE:**

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

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

NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS.



**PROPOSED RRH DETAIL**  
SCALE: N.T.S

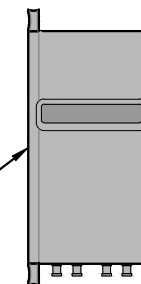
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A-5

**NOTE:**

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

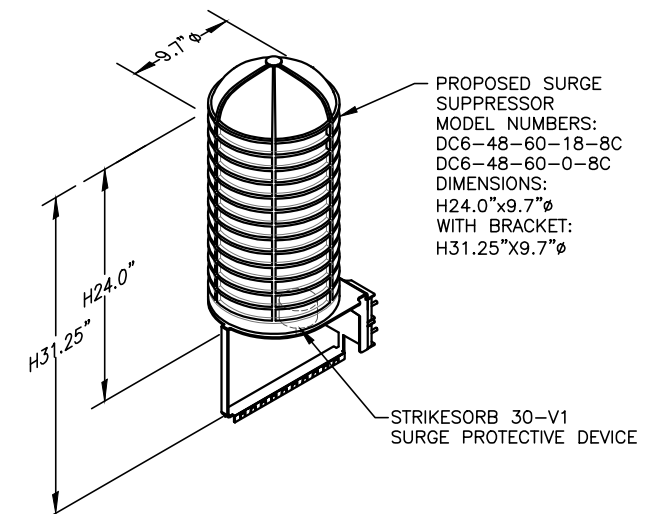
PROPOSED RRH REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS.



**PROPOSED RRH DETAIL**  
SCALE: N.T.S

3  
A-5



NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

**DC SURGE SUPPRESSOR DETAIL**  
SCALE: N.T.S

4  
A-5

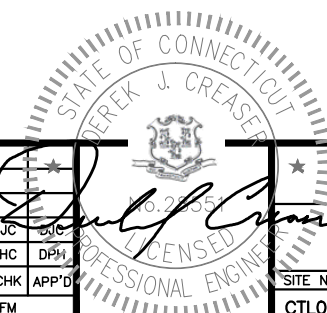


**SITE NUMBER: CTL02080**  
**SITE NAME: NEW LONDON**

26 WASHINGTON STREET  
NEW LONDON, CT 06320  
NEW LONDON COUNTY



1	06/02/17	ISSUED FOR CONSTRUCTION	RB	JC	HC
0	05/13/16	ISSUED FOR REVIEW	FM	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: FM		



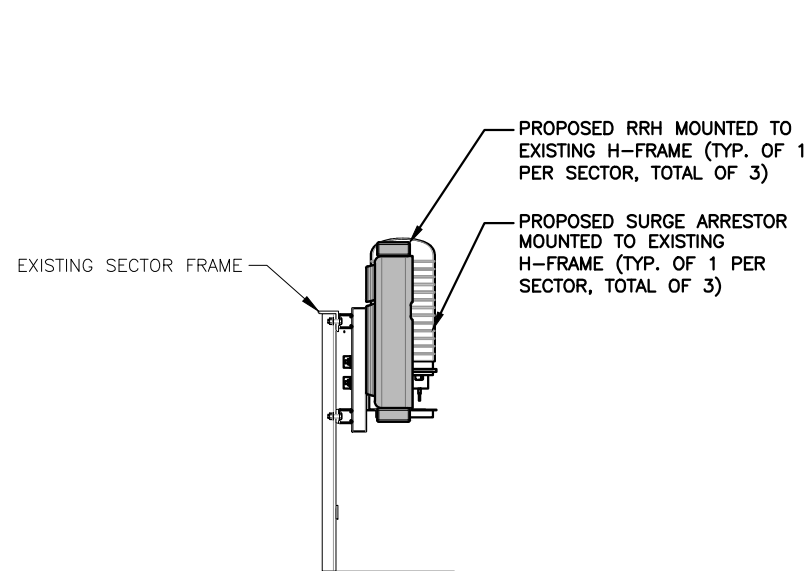
**AT&T**  
**DETAILS**  
**(LTE 3C/4C)**

SITE NUMBER	DRAWING NUMBER	REV
CTL02080	A-5	1

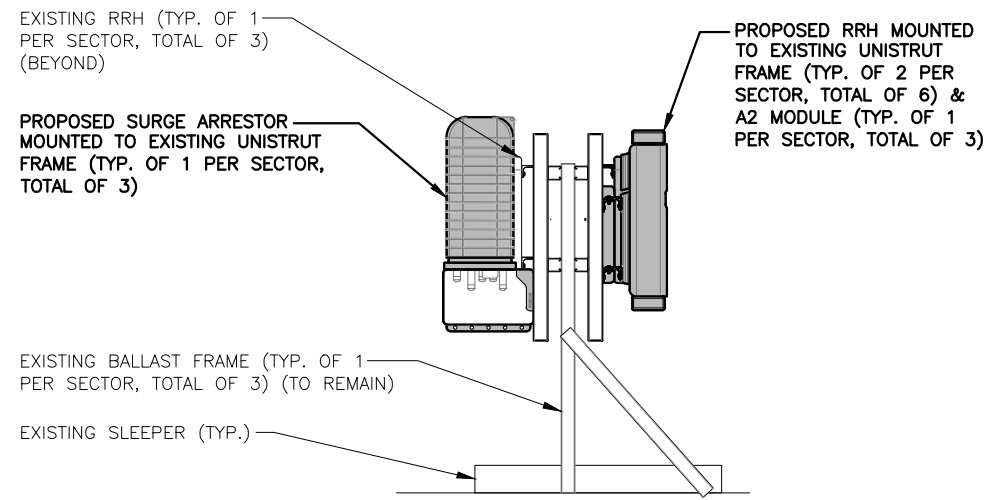
**NOTE:**  
REFER TO THE FINAL RF DATA SHEET  
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**NOTE:**  
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HUDSON DESIGN GROUP, LLC.  
DATED: MAY 23, 2017 FOR THE  
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PROPOSED EQUIPMENT.

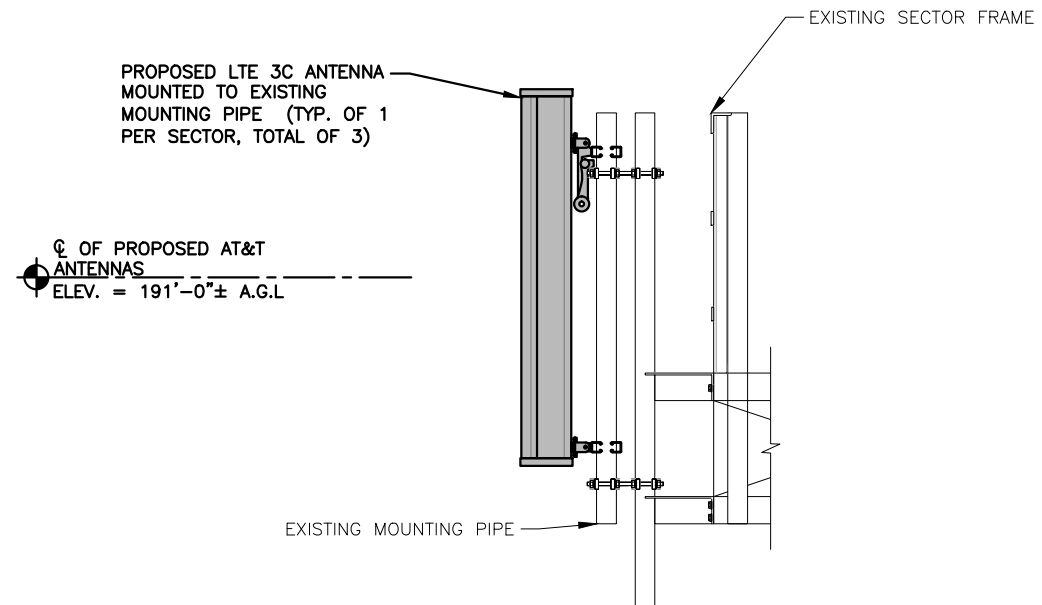
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**PROPOSED RRH MOUNTING DETAIL**  
SCALE: N.T.S. 1  
A-6

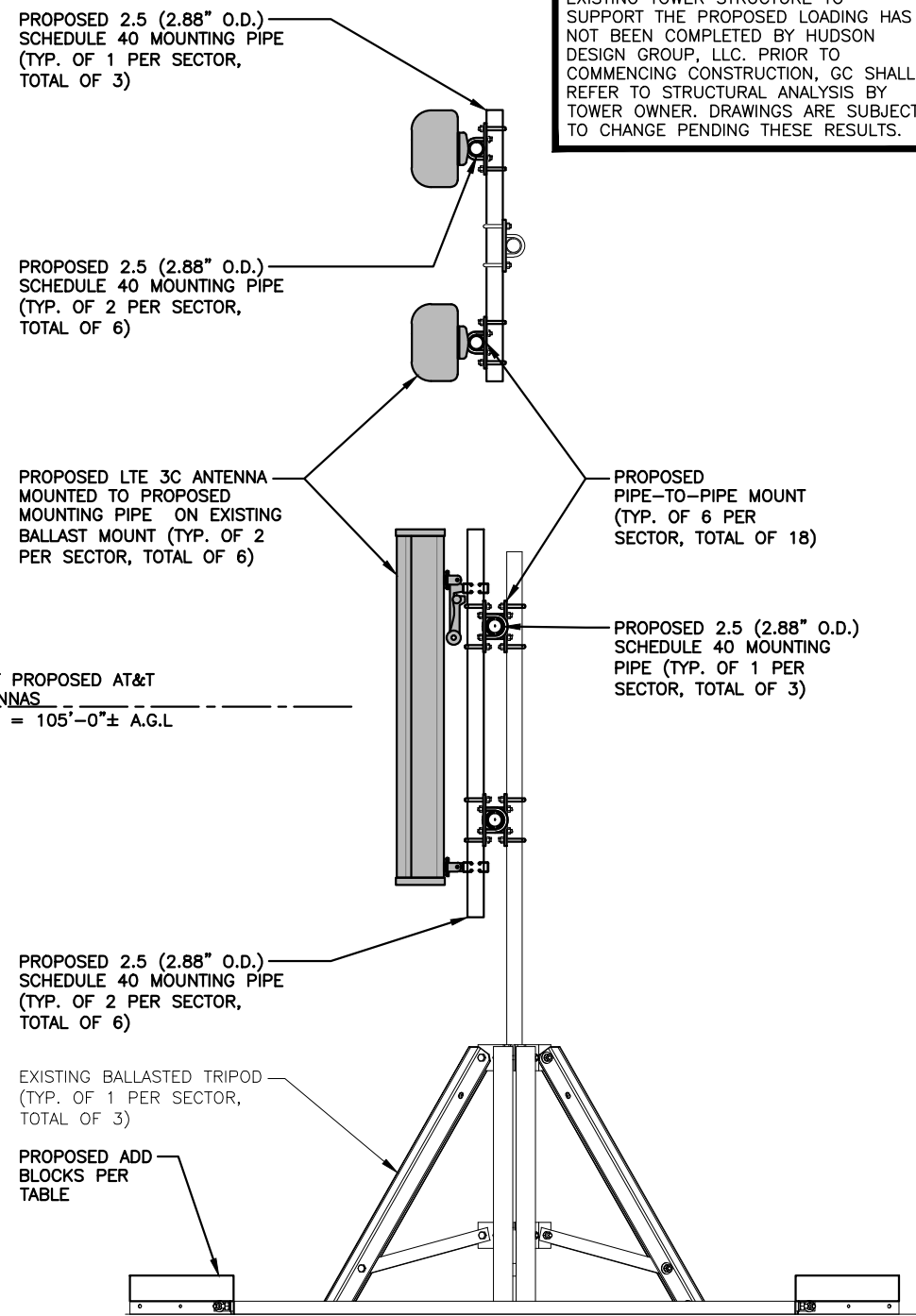


**PROPOSED RRH & SURGE ARRESTOR MOUNTING DETAIL**  
SCALE: N.T.S. 2  
A-6



**PROPOSED 3C LTE ANTENNA MOUNTING DETAIL**  
SCALE: N.T.S. 3  
A-6

NUMBER OF BLOCKS PER SIDE	7
SIZE OF BLOCKS	4"x8"x16" (SOLID)
WEIGHT OF BLOCKS	38 lbs. EACH
TOTAL WEIGHT OF BLOCKS PER SIDE	266
TOTAL NUMBER OF BLOCKS	21
TOTAL BALLAST WEIGHT	798



**PROPOSED 3C LTE ANTENNA MOUNTING DETAIL**  
SCALE: N.T.S. 4  
A-6

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

**smartlink**  
1997 ANNAPOLIS EXCHANGE PKWY  
SUITE 200  
ANNAPOLIS, MD 21401

**SITE NUMBER: CTL02080**  
**SITE NAME: NEW LONDON**  
26 WASHINGTON STREET  
NEW LONDON, CT 06320  
NEW LONDON COUNTY

**at&t**  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

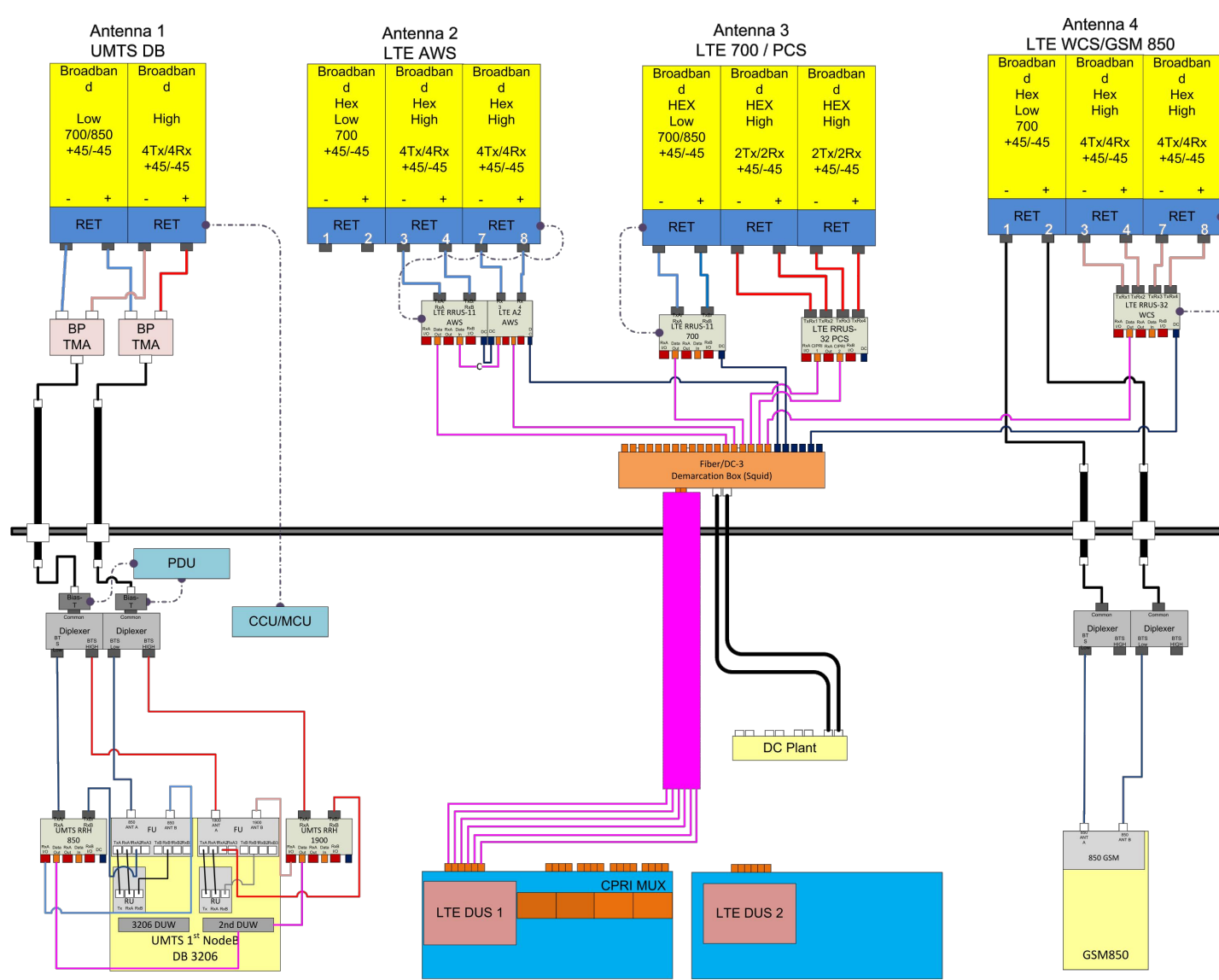
NO.	DATE	REVISIONS	BY	CHK	APP'D
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0	05/13/16	ISSUED FOR REVIEW	FM	HC	[Signature]

SCALE: AS SHOWN    DESIGNED BY: HC    DRAWN BY: FM

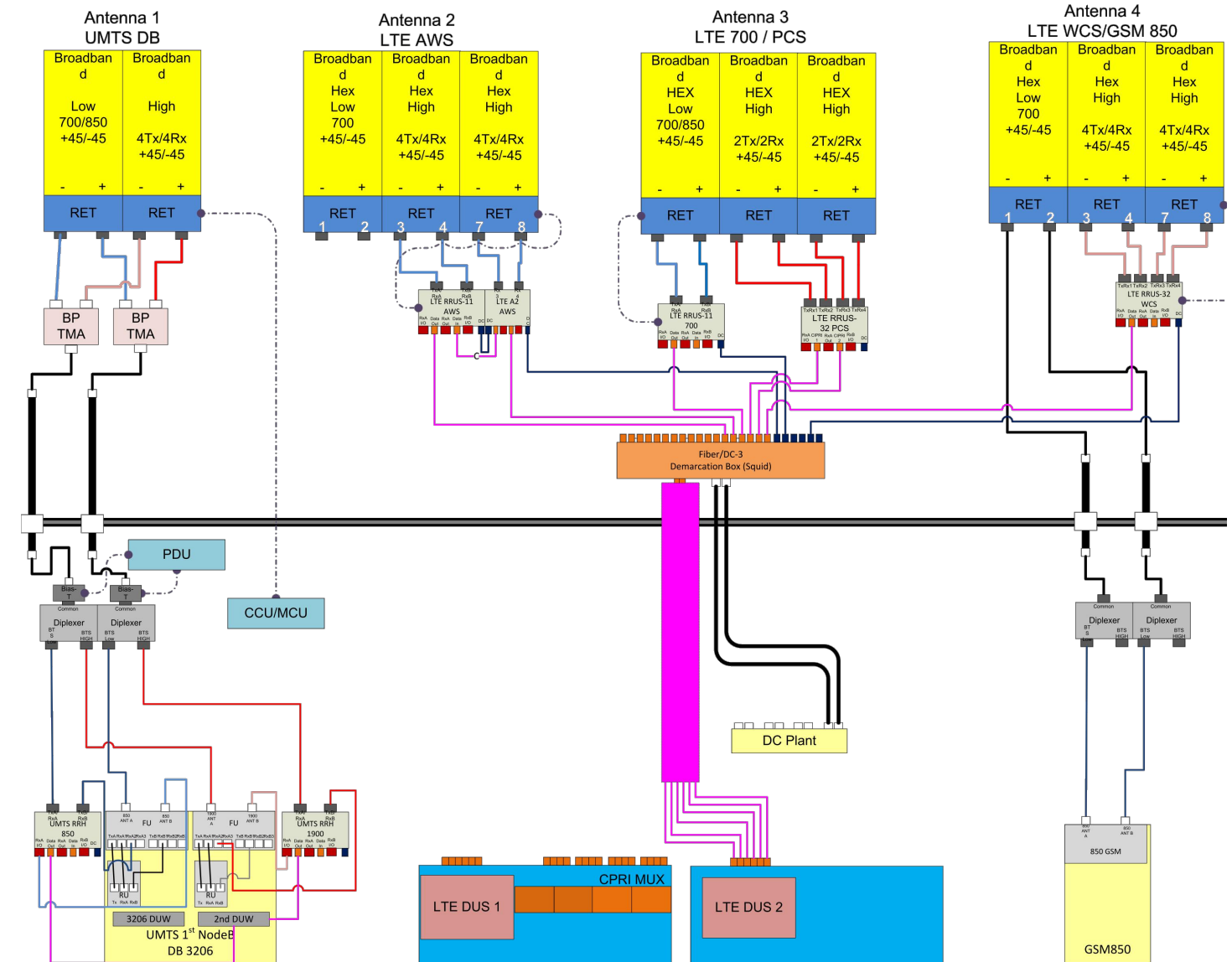
**AT&T**  
**DETAILS**  
**(LTE 3C/4C)**

SITE NUMBER	DRAWING NUMBER	REV
CTL02080	A-6	1





ALPHA/GAMMA SECTOR



BETA SECTOR

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.

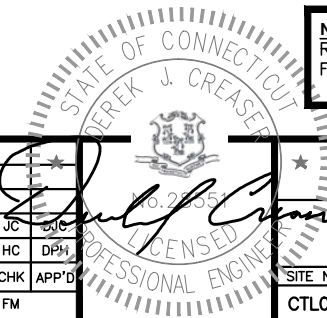
**Hudson Design Group**  
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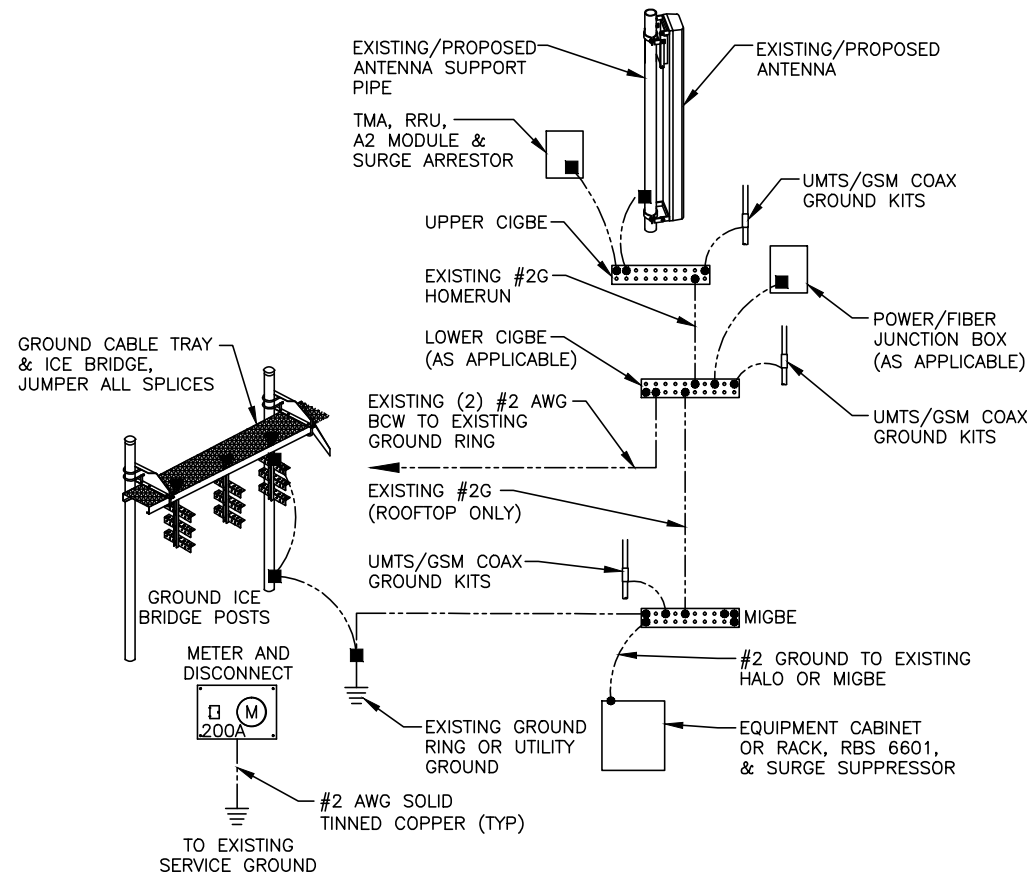
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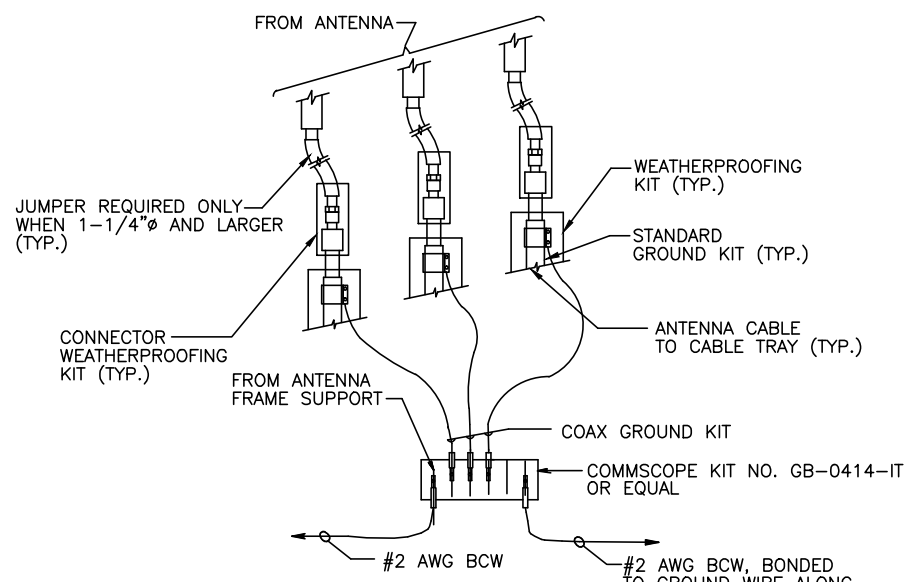
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0	05/13/16	ISSUED FOR REVIEW	FM	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: FM		



**AT&T**  
RF PLUMBING DIAGRAM  
(LTE 3C/4C)  
SITE NUMBER: CTL02080  
DRAWING NUMBER: RF-1  
REV: 1

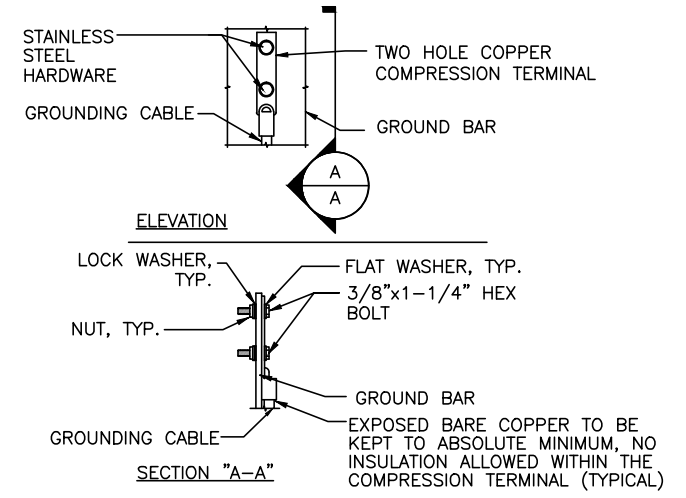


**GROUNDING RISER DIAGRAM** 1  
SCALE: N.T.S. G-1



**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** 2  
SCALE: N.T.S. G-1



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

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

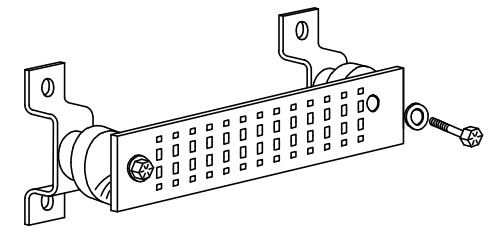
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

**SECTION "P" - SURGE PRODUCERS**

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- 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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N. ANDOVER, MA 01845  
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NEW LONDON COUNTY

**at&t**  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

NO.		DATE	REVISIONS	BY	CHK	APP'D	 <b>Derek J. Creaser</b> LICENSED PROFESSIONAL ENGINEER	AT&T	
1	06/02/17	ISSUED FOR CONSTRUCTION		RB	JC	DK		GROUNDING DETAILS (LTE 3C/4C)	
0	05/13/16	ISSUED FOR REVIEW		FM	HC	DPH	SITE NUMBER: CTL02080		
SCALE:		DESIGNED BY:		DRAWN BY:		DRAWING NUMBER:		REV:	
AS SHOWN		HC		FM		G-1		1	



June 7, 2017

Kristen LeDuc  
Smartlink  
85 Rangeway Road  
Bldg. #3 Suite 102  
North Billerica, MA 01862

Ramaker & Associates, Inc.  
855 Community Drive  
Sauk City, WI 53583

**SUBJECT: STRUCTURAL ASSESSMENT  
126-FOOT ROOFTOP SELF-SUPPORT TOWER**

**CARRIER: AT&T**

**SITE: NEW LONDON (CT2080)  
26 WASHINGTON STREET  
NEW LONDON, NEW LONDON COUNTY, CONNECTICUT 06320  
RAMAKER & ASSOCIATES PROJECT NUMBER: 30511**

**RESULTS: TOWER: 96.8% PASS**

Dear Kristen LeDuc:

Ramaker & Associates, Inc. (RAMAKER) respectfully submits this structural assessment for the above mentioned site. The purpose of this report is to determine the structural integrity of the existing structure with the existing and proposed loading. Engineering recommendations regarding the analysis results are provided in the following pages.

RAMAKER developed a finite element model of the tower using tnxTower and RISA analysis software. All information contained herein is valid only for the described structure configuration and loading conditions. RAMAKER reserves the right to modify our recommendations should alterations to the tower loading occur.

If you have any questions or comments, please do not hesitate to contact our office.

Sincerely,

RAMAKER & ASSOCIATES, INC.

*Ryan J. Nelson*  
Ryan J. Nelson  
Structural Designer

*James R. Skowronski*  
James R. Skowronski, P.E.  
Supervising Engineer





**ANALYSIS CRITERIA**

Adopted Building Code	2012 IBC
Referenced Standard	TIA-222-G
Risk Category	II
Ultimate Design Wind Speed, $V_{ult}$	134 mph (3 sec. gust)
Nominal Design Wind Speed, $V_{asd}$	105 mph (3 sec. gust)
Design Wind Speed w/ Ice	50 mph (3 sec. gust)
Ice Thickness	3/4 inch
Exposure Category	C
Topographic Category	1
Crest Height	N/A

**SUPPORTING DOCUMENTATION**

- Structural analysis by Malouf Engineering Intl., Inc., job number CT02769S-11V0, dated June 21, 2011
- Tower mapping report by Hightower Solutions, dated July 01, 2015
- Structural analysis by RAMAKER, job number 30511, dated August 31, 2015
- Construction drawings by RAMAKER, project number 30511
- Site visit(s) conducted by RAMAKER
- Other pertinent data procured or assumed by RAMAKER during site due diligence activities

**TOWER LOADING**

RAMAKER understands that the loading to be used for this analysis will consist of the antenna equipment, mount, and cable configurations as shown in the following chart:

Elevation	Appurtenance	Mount	Coax	Owner	Status
221.9	Lightning Rod	(1) 13' Extension	--	Tower	Existing
220.3	(2) Beacons		(1) 1		
215.1	(2) 10' Dish Antennas		(2) EW52		
203.6	---	Pipe Mount	--	Unknown	Existing
199.6	---	Pipe Mount	--	Unknown	Existing
196.6	<b>(3) Powerwave 7770.00</b>	Handrail	(12) 1-5/8	AT&T	<b>Remove</b>
	(2) Gabriel USR10P-59FP				Existing
	(3) Powerwave 7770.00				
	(3) Raycap DC6-48-60-18-8F				
	(6) Powerwave LGP21401				
	<b>(3) Andrew SBNHH-1D65A</b>				
<b>(3) Ericsson RRUS-32</b>					
196.3	---	Pipe Mount	--	Unknown	Existing
173.1	(3) RFS APXV9ERR18-C	(3) 16' Face Mounts	(1) 1-1/4 Hybrid	Sprint	Existing
	(6) ALU 1900 MHz RRUs				
	(3) ALU 800 MHz RRUs				
	(6) Combiners				

**TOWER RESULTS**

The maximum tower member stress capacities under the loading conditions previously described are as follows:

<b>Component Type</b>	<b>Percent Capacity</b>	<b>Pass/Fail</b>
Leg	58.7	Pass
Diagonal	96.8	Pass
Horizontal	37.4	Pass
Secondary Horizontal	25.7	Pass
Redundant Horizontal	4.2	Pass
Redundant Diagonal	56.3	Pass
Redundant Sub Horizontal	44.6	Pass
Redundant Vertical	96.2	Pass
Inner Bracing	31.9	Pass
Bolts	53.5	Pass
<b>RATING</b>	<b>96.8</b>	<b>PASS</b>

Note: A rating of 105% or less is within engineering tolerances and considered acceptable.

Results of the analysis show that the existing tower will be stressed to a maximum of 96.8 percent of capacity. Therefore, the existing tower will pass the TIA-222-G analysis requirements under proposed loading conditions.

**BUILDING STRUCTURE**

The tower connection to the building was determined to provide sufficient capacity under the proposed loading configuration. Therefore, the building supporting structure was assumed to provide adequate support.



**LIMITATIONS**

The recommendations contained within this report were developed using the supporting documentation as previously described. All recommendations pertain only to the proposed antenna installation activities as described in this report. RAMAKER assumes no responsibility for failures caused by factors beyond our control. These include but are not limited to the following:

- Missing, corroding, and/or deteriorating members
- Improper manufacturing and/or construction
- Improper maintenance

RAMAKER assumes no responsibility for modifications completed prior to or hereafter in which RAMAKER was not directly involved. These modifications include but are not limited to the following:

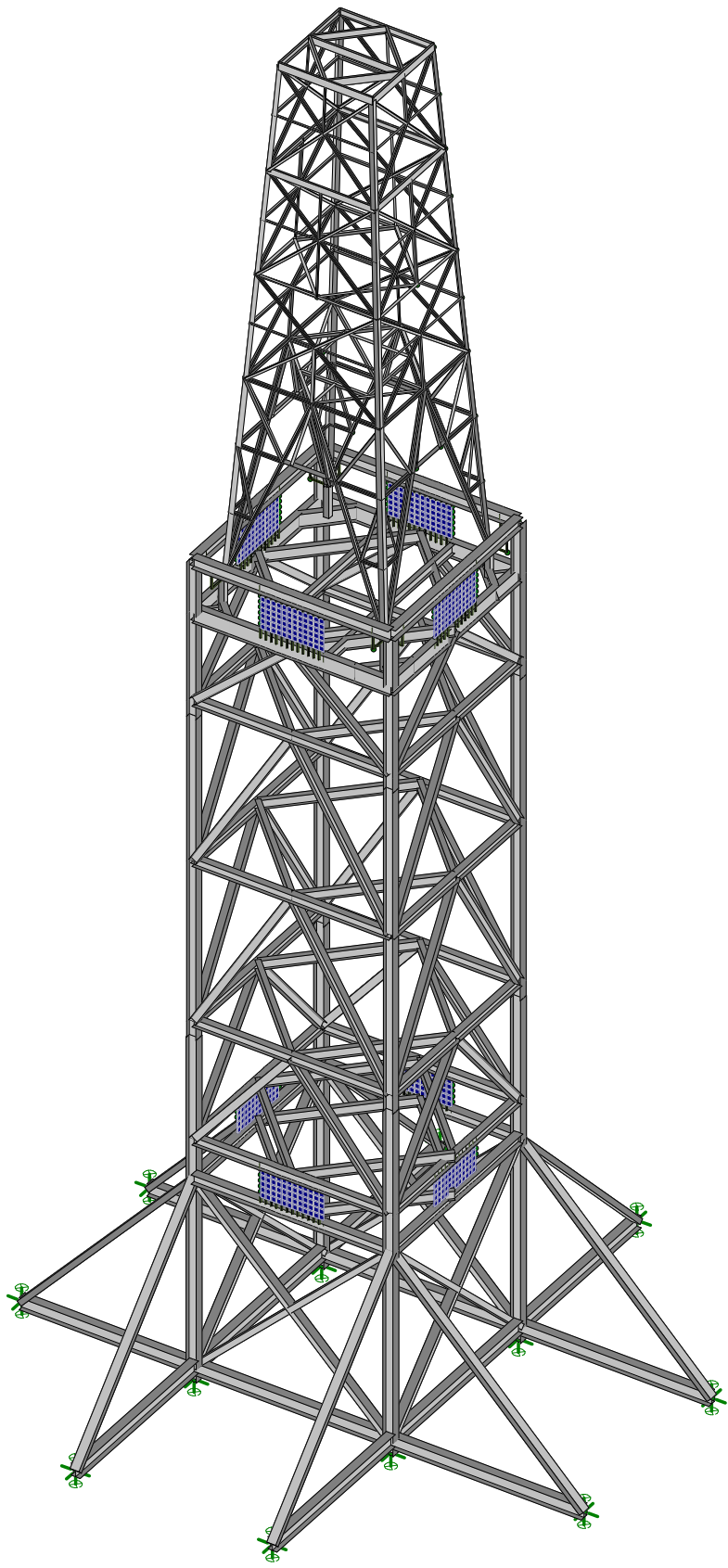
- Replacing or strengthening bracing members
- Reinforcing or extending vertical members
- Installing or removing antenna mounting gates or side arms
- Changing loading configurations

The tower owner is responsible for verifying that the existing loading on the structure is consistent with the loading applied to the structure within this report. If there is any information contrary to that contained herein, or if there are any defects arising from the original design, material, fabrication and erection deficiencies, this report should be disregarded and RAMAKER should be contacted immediately. RAMAKER is not liable for any representation, recommendation, or conclusion not expressly stated herein.

This analysis pertains only to the tower structure, and no analyses or conclusions were made regarding the antenna and equipment mounting structure(s). Analysis and certification of the antenna and equipment mounting structure(s) is performed and submitted separately.

**ATTACHMENTS**

- Analysis Figures
- Analysis Calculations



Envelope Only Solution

Ramaker and Associates, I...

RJN

30511

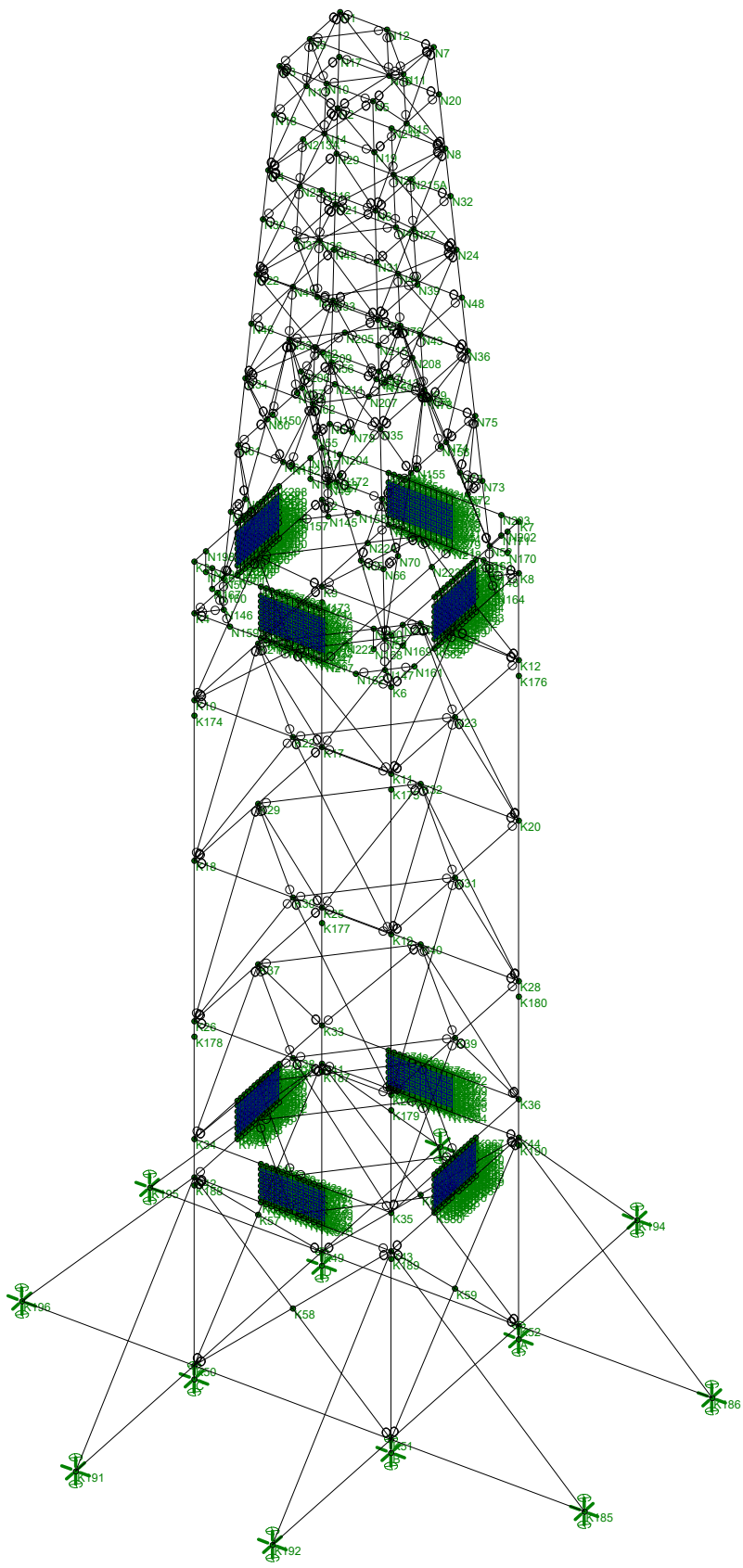
New London (CT2080)

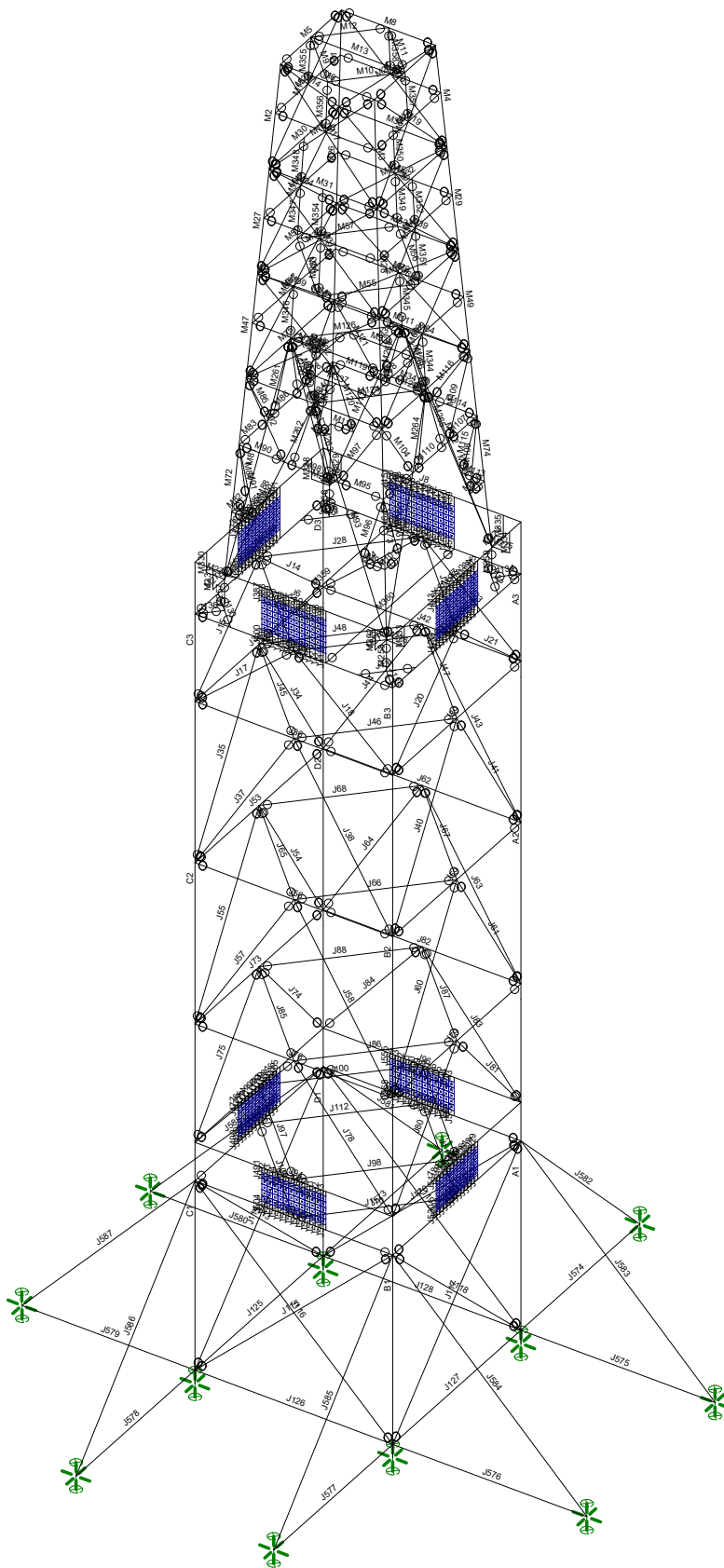
SK - 1

June 7, 2017 at 4:35 PM

30511 Tower.rt3







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RJN

30511

New London (CT2080)

SK - 3

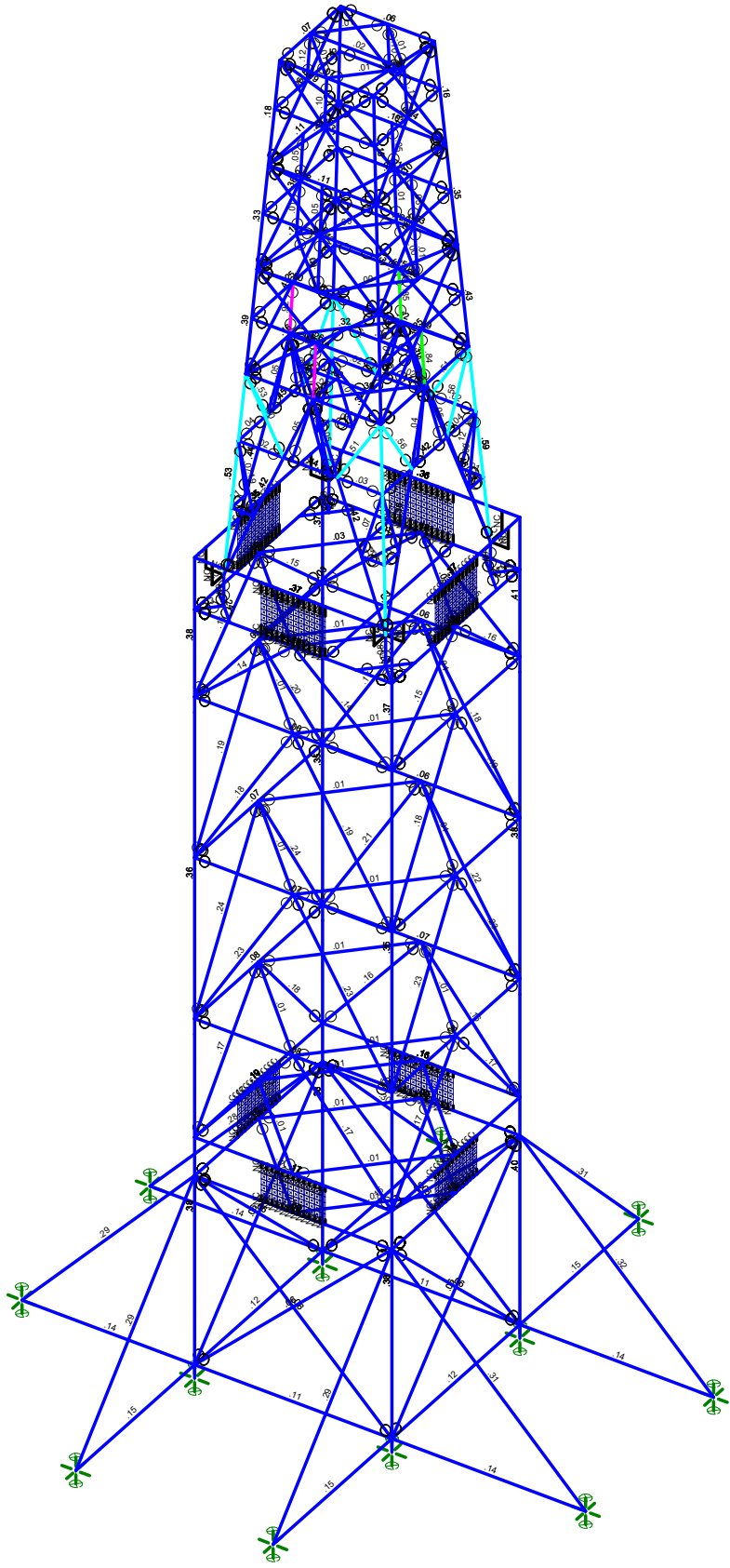
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30511 Tower.rt3



Code Check  
( Env )

- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0-.50



Member Code Checks Displayed (Enveloped)  
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30511

New London (CT2080)

SK - 4

June 7, 2017 at 4:41 PM

30511 Tower.rt3





### Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1...	Density[k/f...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36	29000	11200	.295	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
3	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.4	58	1.3
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.4	58	1.3
6	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2

### Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	TWR_LEG_T1	L5x5x1/2	Column	Single Angle	A36	Typical	4.75	11.3	11.3	.417
2	TWR_TOP_GIRT_T1	C8x11.5	Beam	Channel	A36	Typical	3.37	1.31	32.5	.13
3	TWR_INNER_SUPP_...	C8x11.5	Beam	Channel	A36	Typical	3.37	1.31	32.5	.13
4	TWR_DIAG_T1	2L2 1/2x2x3/16...	Column	Double Angle (3/...	A36	Typical	1.62	1.378	1.02	.019
5	TWR_STEP_T1	L2 1/2x2x3/16	Beam	Single Angle	A36	Typical	.809	.291	.509	.01
6	TWR_LEG_T2	L5x5x1/2	Column	Single Angle	A36	Typical	4.75	11.3	11.3	.417
7	TWR_HORZ_T2	C7x9.8	Beam	Channel	A36	Typical	2.87	.957	21.2	.1
8	TWR_DIAG_T2	2L2 1/2x2x3/16...	Column	Double Angle (3/...	A36	Typical	1.62	1.378	1.02	.019
9	TWR_STEP_T2	L2 1/2x2x3/16	Beam	Single Angle	A36	Typical	.809	.291	.509	.01
10	TWR_LEG_T3	L5x5x1/2	Column	Single Angle	A36	Typical	4.75	11.3	11.3	.417
11	TWR_HORZ_T3	L3x3x1/4	Beam	Single Angle	A36	Typical	1.44	1.24	1.24	.032
12	TWR_INNER_SUPP_...	L3x3x1/4	Beam	Single Angle	A36	Typical	1.44	1.24	1.24	.032
13	TWR_DIAG_T3	2L2 1/2x2x3/16...	Column	Double Angle (3/...	A36	Typical	1.62	1.378	1.02	.019
14	TWR_STEP_T3	L2 1/2x2x3/16	Beam	Single Angle	A36	Typical	.809	.291	.509	.01
15	TWR_LEG_T4	L6x6x1/2	Column	Single Angle	A36	Typical	5.75	19.9	19.9	.501
16	TWR_HORZ_T4	2L2 1/2x2 1/2x...	Beam	Double Angle (3/...	A36	Typical	2.38	3.347	1.41	.049
17	TWR_DIAG_T4	2L2 1/2x3 1/2x...	Column	Double Angle (3/...	A36	Typical	3.55	10.623	1.88	.116
18	TWR_RED_HORZ_T4	2L2 1/2x2x3/16...	Beam	Double Angle (3/...	A36	Typical	1.62	1.378	1.02	.019
19	TWR_RED_HORZ_2_...	2L2 1/2x2 1/2x...	Beam	Double Angle (3/...	A36	Typical	1.8	2.499	1.09	.021
20	TWR_RED_DIAG_T4	L2 1/2x2x3/16	Column	Single Angle	A36	Typical	.809	.291	.509	.01
21	TWR_RED_DIAG_2_T4	L3x3x3/16	Column	Single Angle	A36	Typical	1.09	.96	.96	.014
22	TWR_RED_SUBHOR...	L5x3x1/4	Beam	Single Angle	A36	Typical	1.94	1.44	5.11	.044
23	TWR_INNER_SUPP_...	L3x3x3/16	Beam	Single Angle	A36	Typical	1.09	.96	.96	.014
24	TWR_LEG_T1_1	W10x77	Column	Wide Flange	A36	Typical	22.7	154	455	5.11
25	TWR_TOP_GIRT_T1_1	W12x53	Beam	Wide Flange	A36	Typical	15.6	95.8	425	1.58
26	TWR_LEG_T2_1	W10x77	Column	Wide Flange	A36	Typical	22.7	154	455	5.11
27	TWR_HORZ_T2_1	W18x65	Beam	Wide Flange	A36	Typical	19.1	54.8	1070	2.73
28	TWR_DIAG_T2_1	W8x31	Column	Wide Flange	A36	Typical	9.13	37.1	110	.536
29	TWR_INNER_SUPP_...	W12x26	Beam	Wide Flange	A36	Typical	7.65	17.3	204	.3
30	TWR_LEG_T3_1	W10x77	Column	Wide Flange	A36	Typical	22.7	154	455	5.11
31	TWR_HORZ_T3_1	W10x33	Beam	Wide Flange	A36	Typical	9.71	36.6	171	.583
32	TWR_DIAG_T3_1	W8x31	Column	Wide Flange	A36	Typical	9.13	37.1	110	.536
33	TWR_INNER_SUPP_...	W10x26	Beam	Wide Flange	A36	Typical	7.61	14.1	144	.402
34	TWR_LEG_T4_1	W10x77	Column	Wide Flange	A36	Typical	22.7	154	455	5.11
35	TWR_HORZ_T4_1	W10x33	Beam	Wide Flange	A36	Typical	9.71	36.6	171	.583
36	TWR_DIAG_T4_1	W8x31	Column	Wide Flange	A36	Typical	9.13	37.1	110	.536
37	TWR_INNER_SUPP_...	W10x26	Beam	Wide Flange	A36	Typical	7.61	14.1	144	.402
38	TWR_LEG_T5	W10x112	Column	Wide Flange	A36	Typical	32.9	236	716	15.1
39	TWR_HORZ_T5	W10x33	Beam	Wide Flange	A36	Typical	9.71	36.6	171	.583
40	TWR_DIAG_T5	W8x31	Column	Wide Flange	A36	Typical	9.13	37.1	110	.536
41	TWR_INNER_SUPP_...	W10x26	Beam	Wide Flange	A36	Typical	7.61	14.1	144	.402
42	TWR_LEG_T6	W10x112	Column	Wide Flange	A36	Typical	32.9	236	716	15.1
43	TWR_TOP_GIRT_T6	W10x33	Beam	Wide Flange	A36	Typical	9.71	36.6	171	.583
44	TWR_INNER_SUPP_...	W10x26	Beam	Wide Flange	A36	Typical	7.61	14.1	144	.402
45	TWR_LEG_T7	W10x112	Column	Wide Flange	A36	Typical	32.9	236	716	15.1



**Hot Rolled Steel Section Sets (Continued)**

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Ivy [in4]	Izz [in4]	J [in4]
46	TWR_TOP_GIRT_T7	W10x77	Beam	Wide Flange	A36	Typical	22.7	154	455	5.11
47	TWR_INNER_SUPP_...	W10x26	Beam	Wide Flange	A36	Typical	7.61	14.1	144	.402
48	TWR_DIAG_T7	TS6x10x.375	Column	Tube	A500 Gr.46	Typical	11.1	145	65.4	147
49	TWR_LEG_T8	W10x112	Column	Wide Flange	A36	Typical	32.9	236	716	15.1
50	TWR_TOP_GIRT_T8	W14x61	Beam	Wide Flange	A36	Typical	17.9	107	640	2.19
51	TWR_LEG_SUPPORT	HSS6x6x10	Column	Tube	A500 Gr.46	Typical	11.7	55.2	55.2	94.9
52	TWR_RED_DIAG_T5	L3x3x3	Beam	Single Angle	A36	Typical	1.09	.948	.948	.014
53	TWR_LEG_SUPPOR...	W16x50	Beam	Wide Flange	A36	Typical	14.7	37.2	659	1.52
54	W8x15	W8x15	Beam	Wide Flange	A36	Typical	4.44	3.41	48	.137
55	W14x61	W14x61	Beam	Wide Flange	A36	Typical	17.9	107	640	2.19
56	HSS10x6x6	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical	10.4	61.8	137	139
57	L2.5x2x3	L2.5x2x3	Beam	Single Angle	A36	Typical	.818	.292	.511	.01
58	W10x22	W10x22	Beam	Wide Flange	A36	Typical	6.49	11.4	118	.239

**Member Primary Data**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	J573	K49	K193			W14x61	Beam	Wide Flange	A36	Typical
2	J574	K52	K194			W14x61	Beam	Wide Flange	A36	Typical
3	J575	K52	K186			W14x61	Beam	Wide Flange	A36	Typical
4	J576	K51	K185			W14x61	Beam	Wide Flange	A36	Typical
5	J577	K51	K192			W14x61	Beam	Wide Flange	A36	Typical
6	J578	K50	K191			W14x61	Beam	Wide Flange	A36	Typical
7	J579	K50	K196			W14x61	Beam	Wide Flange	A36	Typical
8	J580	K49	K195			W14x61	Beam	Wide Flange	A36	Typical
9	M359	N220	N219			W10x22	Beam	Wide Flange	A36	Typical
10	M360	N218	N217			W10x22	Beam	Wide Flange	A36	Typical
11	J133	N145	K2			W8x15	Beam	Wide Flange	A36	Typical
12	J134	N148	K8			W8x15	Beam	Wide Flange	A36	Typical
13	J135	N147	K6			W8x15	Beam	Wide Flange	A36	Typical
14	J136	N146	K4			W8x15	Beam	Wide Flange	A36	Typical
15	J125	K49	K50			TWR_TOP_GIRT_T8	Beam	Wide Flange	A36	Typical
16	J126	K50	K51			TWR_TOP_GIRT_T8	Beam	Wide Flange	A36	Typical
17	J127	K51	K52			TWR_TOP_GIRT_T8	Beam	Wide Flange	A36	Typical
18	J128	K52	K49			TWR_TOP_GIRT_T8	Beam	Wide Flange	A36	Typical
19	J105	K41	K42			TWR_TOP_GIRT_T7	Beam	Wide Flange	A36	Typical
20	J106	K42	K43			TWR_TOP_GIRT_T7	Beam	Wide Flange	A36	Typical
21	J107	K43	K44			TWR_TOP_GIRT_T7	Beam	Wide Flange	A36	Typical
22	J108	K44	K41			TWR_TOP_GIRT_T7	Beam	Wide Flange	A36	Typical
23	J93	K33	K34			TWR_TOP_GIRT_T6	Beam	Wide Flange	A36	Typical
24	J94	K34	K35			TWR_TOP_GIRT_T6	Beam	Wide Flange	A36	Typical
25	J95	K35	K36			TWR_TOP_GIRT_T6	Beam	Wide Flange	A36	Typical
26	J96	K36	K33			TWR_TOP_GIRT_T6	Beam	Wide Flange	A36	Typical
27	J5	K1	K3			TWR_TOP_GIRT_...	Beam	Wide Flange	A36	Typical
28	J6	K3	K5			TWR_TOP_GIRT_...	Beam	Wide Flange	A36	Typical
29	J7	K5	K7			TWR_TOP_GIRT_...	Beam	Wide Flange	A36	Typical
30	J8	K7	K1			TWR_TOP_GIRT_...	Beam	Wide Flange	A36	Typical
31	M5	N1	N3	176.265		TWR_TOP_GIRT_T1	Beam	Channel	A36	Typical
32	M6	N3	N5	176.265		TWR_TOP_GIRT_T1	Beam	Channel	A36	Typical
33	M7	N5	N7	176.265		TWR_TOP_GIRT_T1	Beam	Channel	A36	Typical
34	M8	N7	N1	176.265		TWR_TOP_GIRT_T1	Beam	Channel	A36	Typical
35	M67	N45	N46	86.265		TWR_STEP_T3	Beam	Single Angle	A36	Typical
36	M68	N46	N47	86.265		TWR_STEP_T3	Beam	Single Angle	A36	Typical
37	M69	N47	N48	86.265		TWR_STEP_T3	Beam	Single Angle	A36	Typical
38	M70	N48	N45	86.265		TWR_STEP_T3	Beam	Single Angle	A36	Typical
39	M42	N29	N30	86.265		TWR_STEP_T2	Beam	Single Angle	A36	Typical



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
40	M43	N30	N31		86.265	TWR_STEP_T2	Beam	Single Angle	A36	Typical
41	M44	N31	N32		86.265	TWR_STEP_T2	Beam	Single Angle	A36	Typical
42	M45	N32	N29		86.265	TWR_STEP_T2	Beam	Single Angle	A36	Typical
43	M22	N17	N18		86.265	TWR_STEP_T1	Beam	Single Angle	A36	Typical
44	M23	N18	N19		86.265	TWR_STEP_T1	Beam	Single Angle	A36	Typical
45	M24	N19	N20		86.265	TWR_STEP_T1	Beam	Single Angle	A36	Typical
46	M25	N20	N17		86.265	TWR_STEP_T1	Beam	Single Angle	A36	Typical
47	M86	N57	N60		266.265	TWR_RED_SUBH...	Beam	Single Angle	A36	Typical
48	M98	N64	N67		266.265	TWR_RED_SUBH...	Beam	Single Angle	A36	Typical
49	M110	N71	N74		266.265	TWR_RED_SUBH...	Beam	Single Angle	A36	Typical
50	M122	N78	N80		266.265	TWR_RED_SUBH...	Beam	Single Angle	A36	Typical
51	M77	N54	N55		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
52	M82	N58	N59		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
53	M89	N59	N63		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
54	M94	N65	N66		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
55	M101	N66	N70		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
56	M106	N72	N73		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
57	M113	N73	N77		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
58	M118	N79	N54		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
59	M78	N56	N57		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
60	M83	N60	N61		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
61	M90	N61	N64		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
62	M95	N67	N68		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
63	M102	N68	N71		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
64	M107	N74	N75		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
65	M114	N75	N78		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
66	M119	N80	N56		356.265	TWR_RED_HORZ...	Beam	Double Angle ...	A36	Typical
67	M260	N149	N53		180	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
68	M261	N150	N53		90	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
69	M262	N152	N62		180	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
70	M263	N153	N62		90	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
71	M264	N155	N69		180	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
72	M265	N156	N69		90	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
73	M266	N158	N76		180	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
74	M267	N159	N76		90	TWR_RED_DIAG...	Beam	Single Angle	A36	Typical
75	M79	N55	N56		104.235	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
76	M84	N58	N61		75.765	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
77	M91	N63	N61		104.235	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
78	M96	N65	N68		75.765	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
79	M103	N70	N68		104.235	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
80	M108	N72	N75		75.765	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
81	M115	N77	N75		104.235	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
82	M120	N79	N56		75.765	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
83	M320	N55	N79			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
84	M321	N63	N58			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
85	M322	N70	N65			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
86	M323	N77	N72			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
87	M324	N80	N57			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
88	M325	N60	N64			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
89	M326	N67	N71			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
90	M327	N74	N78			TWR_RED_DIAG...	Column	Single Angle	A36	Typical
91	M80	N57	N33		97.251	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
92	M85	N60	N34		82.749	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
93	M92	N64	N34		97.251	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
94	M97	N67	N35		82.749	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
95	M104	N71	N35		97.251	TWR_RED_DIAG...	Column	Single Angle	A36	Typical
96	M109	N74	N36		82.749	TWR_RED_DIAG...	Column	Single Angle	A36	Typical





**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
97	M116	N78	N36		97.251	TWR_RED_DIAG_...	Column	Single Angle	A36	Typical
98	M121	N80	N33		82.749	TWR_RED_DIAG_...	Column	Single Angle	A36	Typical
99	J121	D	K49		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
100	J122	C	K50		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
101	J123	B	K51		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
102	J124	A	K52		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
103	D1	D	K177		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
104	C1	C	K178		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
105	B1	B	K179		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
106	A1	A	K180		90	TWR_LEG T8	Column	Wide Flange	A36	Typical
107	J101	K49	K41		90	TWR_LEG T7	Column	Wide Flange	A36	Typical
108	J102	K50	K42		90	TWR_LEG T7	Column	Wide Flange	A36	Typical
109	J103	K51	K43		90	TWR_LEG T7	Column	Wide Flange	A36	Typical
110	J104	K52	K44		90	TWR_LEG T7	Column	Wide Flange	A36	Typical
111	J89	K41	K33		45	TWR_LEG T6	Column	Wide Flange	A36	Typical
112	J90	K42	K34		90	TWR_LEG T6	Column	Wide Flange	A36	Typical
113	J91	K43	K35		90	TWR_LEG T6	Column	Wide Flange	A36	Typical
114	J92	K44	K36		90	TWR_LEG T6	Column	Wide Flange	A36	Typical
115	J69	K33	K25		90	TWR_LEG T5	Column	Wide Flange	A36	Typical
116	J70	K34	K26		90	TWR_LEG T5	Column	Wide Flange	A36	Typical
117	J71	K35	K27		90	TWR_LEG T5	Column	Wide Flange	A36	Typical
118	J72	K36	K28		90	TWR_LEG T5	Column	Wide Flange	A36	Typical
119	J49	K25	K17		90	TWR_LEG T4 1	Column	Wide Flange	A36	Typical
120	J50	K26	K18		90	TWR_LEG T4 1	Column	Wide Flange	A36	Typical
121	J51	K27	K19		90	TWR_LEG T4 1	Column	Wide Flange	A36	Typical
122	J52	K28	K20		90	TWR_LEG T4 1	Column	Wide Flange	A36	Typical
123	M71	N49	N33		135	TWR_LEG T4	Column	Single Angle	A36	Typical
124	M72	N50	N34		135	TWR_LEG T4	Column	Single Angle	A36	Typical
125	M73	N51	N35		135	TWR_LEG T4	Column	Single Angle	A36	Typical
126	M74	N52	N36		135	TWR_LEG T4	Column	Single Angle	A36	Typical
127	J29	K17	K9		90	TWR_LEG T3 1	Column	Wide Flange	A36	Typical
128	J30	K18	K10		90	TWR_LEG T3 1	Column	Wide Flange	A36	Typical
129	J31	K19	K11		90	TWR_LEG T3 1	Column	Wide Flange	A36	Typical
130	J32	K20	K12		90	TWR_LEG T3 1	Column	Wide Flange	A36	Typical
131	M46	N33	N21		135	TWR_LEG T3	Column	Single Angle	A36	Typical
132	M47	N34	N22		135	TWR_LEG T3	Column	Single Angle	A36	Typical
133	M48	N35	N23		135	TWR_LEG T3	Column	Single Angle	A36	Typical
134	M49	N36	N24		135	TWR_LEG T3	Column	Single Angle	A36	Typical
135	J9	K9	K2		90	TWR_LEG T2 1	Column	Wide Flange	A36	Typical
136	J10	K10	K4		90	TWR_LEG T2 1	Column	Wide Flange	A36	Typical
137	J11	K11	K6		90	TWR_LEG T2 1	Column	Wide Flange	A36	Typical
138	J12	K12	K8		90	TWR_LEG T2 1	Column	Wide Flange	A36	Typical
139	M26	N21	N2		135	TWR_LEG T2	Column	Single Angle	A36	Typical
140	M27	N22	N4		135	TWR_LEG T2	Column	Single Angle	A36	Typical
141	M28	N23	N6		135	TWR_LEG T2	Column	Single Angle	A36	Typical
142	M29	N24	N8		135	TWR_LEG T2	Column	Single Angle	A36	Typical
143	J1	K2	K1		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
144	J2	K4	K3		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
145	J3	K6	K5		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
146	J4	K8	K7		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
147	D2	K177	K173		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
148	C2	K178	K174		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
149	B2	K179	K175		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
150	A2	K180	K176		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
151	D3	K173	K1		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
152	C3	K174	K3		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical
153	B3	K175	K5		90	TWR_LEG T1 1	Column	Wide Flange	A36	Typical





**Member Primary Data (Continued)**

Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules	
154	A3	K176	K7		90	TWR_LEG_T1_1	Column	Wide Flange	A36	Typical
155	M1	N2	N1		135	TWR_LEG_T1	Column	Single Angle	A36	Typical
156	M2	N4	N3		135	TWR_LEG_T1	Column	Single Angle	A36	Typical
157	M3	N6	N5		135	TWR_LEG_T1	Column	Single Angle	A36	Typical
158	M4	N8	N7		135	TWR_LEG_T1	Column	Single Angle	A36	Typical
159	J129	N157	N158A			TWR_LEG_SUPPO...	Beam	Wide Flange	A36	Typical
160	J130	N159A	N160			TWR_LEG_SUPPO...	Beam	Wide Flange	A36	Typical
161	J131	N161	N162			TWR_LEG_SUPPO...	Beam	Wide Flange	A36	Typical
162	J132	N163	N164			TWR_LEG_SUPPO...	Beam	Wide Flange	A36	Typical
163	M256	N145	N49			TWR_LEG_SUPPO...	Column	Tube	A500 Gr.46	Typical
164	M257	N146	N50			TWR_LEG_SUPPO...	Column	Tube	A500 Gr.46	Typical
165	M258	N147	N51			TWR_LEG_SUPPO...	Column	Tube	A500 Gr.46	Typical
166	M259	N148	N52			TWR_LEG_SUPPO...	Column	Tube	A500 Gr.46	Typical
167	J109	K53	K54			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
168	J110	K54	K55			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
169	J111	K55	K56			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
170	J112	K56	K53			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
171	J97	K45	K46			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
172	J98	K46	K47			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
173	J99	K47	K48			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
174	J100	K48	K45			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
175	J85	K37	K38			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
176	J86	K38	K39			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
177	J87	K39	K40			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
178	J88	K40	K37			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
179	J65	K29	K30			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
180	J66	K30	K31			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
181	J67	K31	K32			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
182	J68	K32	K29			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
183	M123	N53	N62		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
184	M124	N62	N69		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
185	M125	N69	N76		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
186	M126	N76	N53		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
187	M127	N53	N209		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
188	M336	N205	N206			TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
189	M337	N206	N207			TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
190	M338	N207	N208			TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
191	M339	N208	N205			TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
192	M340	N62	N211		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
193	M341	N69	N213		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
194	M342	N76	N215		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
195	J45	K21	K22			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
196	J46	K22	K23			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
197	J47	K23	K24			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
198	J48	K24	K21			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
199	M54	N37	N38		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
200	M55	N38	N39		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
201	M56	N39	N40		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
202	M57	N40	N37		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
203	M58	N37	N39		90	TWR_INNER_SUP...	Beam	Single Angle	A36	Typical
204	J25	K13	K14			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
205	J26	K14	K15			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
206	J27	K15	K16			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
207	J28	K16	K13			TWR_INNER_SUP...	Beam	Wide Flange	A36	Typical
208	M9	N9	N10		180	TWR_INNER_SUP...	Beam	Channel	A36	Typical
209	M10	N10	N11		180	TWR_INNER_SUP...	Beam	Channel	A36	Typical
210	M11	N11	N12		180	TWR_INNER_SUP...	Beam	Channel	A36	Typical



**Member Primary Data (Continued)**

Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules	
211	M12	N12	N9		180	TWR_INNER_SUP...	Beam	Channel	A36	Typical
212	M13	N9	N11		180	TWR_INNER_SUP...	Beam	Channel	A36	Typical
213	J73	K25	K26			TWR_HORZ_T5	Beam	Wide Flange	A36	Typical
214	J76	K26	K27			TWR_HORZ_T5	Beam	Wide Flange	A36	Typical
215	J79	K27	K28			TWR_HORZ_T5	Beam	Wide Flange	A36	Typical
216	J82	K28	K25			TWR_HORZ_T5	Beam	Wide Flange	A36	Typical
217	J53	K17	K18			TWR_HORZ_T4_1	Beam	Wide Flange	A36	Typical
218	J56	K18	K19			TWR_HORZ_T4_1	Beam	Wide Flange	A36	Typical
219	J59	K19	K20			TWR_HORZ_T4_1	Beam	Wide Flange	A36	Typical
220	J62	K20	K17			TWR_HORZ_T4_1	Beam	Wide Flange	A36	Typical
221	M75	N33	N34		356.265	TWR_HORZ_T4	Beam	Double Angle ...	A36	Typical
222	M87	N34	N35		356.265	TWR_HORZ_T4	Beam	Double Angle ...	A36	Typical
223	M99	N35	N36		356.265	TWR_HORZ_T4	Beam	Double Angle ...	A36	Typical
224	M111	N36	N33		356.265	TWR_HORZ_T4	Beam	Double Angle ...	A36	Typical
225	J33	K9	K10			TWR_HORZ_T3_1	Beam	Wide Flange	A36	Typical
226	J36	K10	K11			TWR_HORZ_T3_1	Beam	Wide Flange	A36	Typical
227	J39	K11	K12			TWR_HORZ_T3_1	Beam	Wide Flange	A36	Typical
228	J42	K12	K9			TWR_HORZ_T3_1	Beam	Wide Flange	A36	Typical
229	M50	N21	N22		86.265	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
230	M51	N22	N23		86.265	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
231	M52	N23	N24		86.265	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
232	M53	N24	N21		86.265	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
233	J13	K2	K4			TWR_HORZ_T2_1	Beam	Wide Flange	A36	Typical
234	J16	K4	K6			TWR_HORZ_T2_1	Beam	Wide Flange	A36	Typical
235	J19	K6	K8			TWR_HORZ_T2_1	Beam	Wide Flange	A36	Typical
236	J22	K8	K2			TWR_HORZ_T2_1	Beam	Wide Flange	A36	Typical
237	M30	N2	N4		176.265	TWR_HORZ_T2	Beam	Channel	A36	Typical
238	M31	N4	N6		176.265	TWR_HORZ_T2	Beam	Channel	A36	Typical
239	M32	N6	N8		176.265	TWR_HORZ_T2	Beam	Channel	A36	Typical
240	M33	N8	N2		176.265	TWR_HORZ_T2	Beam	Channel	A36	Typical
241	J113	K49	K42			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
242	J114	K50	K41			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
243	J115	K50	K43			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
244	J116	K51	K42			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
245	J117	K51	K44			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
246	J118	K52	K43			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
247	J119	K52	K41			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
248	J120	K49	K44			TWR_DIAG_T7	Column	Tube	A500 Gr.46	Typical
249	J74	K33	K37			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
250	J75	K34	K37			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
251	J77	K34	K38			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
252	J78	K35	K38			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
253	J80	K35	K39			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
254	J81	K36	K39			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
255	J83	K36	K40			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
256	J84	K33	K40			TWR_DIAG_T5	Column	Wide Flange	A36	Typical
257	J54	K25	K29			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
258	J55	K26	K29			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
259	J57	K26	K30			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
260	J58	K27	K30			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
261	J60	K27	K31			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
262	J61	K28	K31			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
263	J63	K28	K32			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
264	J64	K25	K32			TWR_DIAG_T4_1	Column	Wide Flange	A36	Typical
265	M76	N49	N53		169.958	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical
266	M81	N50	N53		190.042	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical
267	M88	N50	N62		169.958	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
268	M93	N51	N62		190.042	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical
269	M100	N51	N69		169.958	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical
270	M105	N52	N69		190.042	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical
271	M112	N52	N76		169.958	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical
272	M117	N49	N76		190.042	TWR_DIAG_T4	Column	Double Angle ...	A36	Typical
273	J34	K17	K21			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
274	J35	K18	K21			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
275	J37	K18	K22			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
276	J38	K19	K22			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
277	J40	K19	K23			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
278	J41	K20	K23			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
279	J43	K20	K24			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
280	J44	K17	K24			TWR_DIAG_T3_1	Column	Wide Flange	A36	Typical
281	M59	N33	N22		355.16	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
282	M60	N34	N21		4.84	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
283	M61	N34	N23		355.16	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
284	M62	N35	N22		4.84	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
285	M63	N35	N24		355.16	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
286	M64	N36	N23		4.84	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
287	M65	N36	N21		355.16	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
288	M66	N33	N24		4.84	TWR_DIAG_T3	Column	Double Angle ...	A36	Typical
289	J14	K9	K13			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
290	J15	K10	K13			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
291	J17	K10	K14			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
292	J18	K11	K14			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
293	J20	K11	K15			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
294	J21	K12	K15			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
295	J23	K12	K16			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
296	J24	K9	K16			TWR_DIAG_T2_1	Column	Wide Flange	A36	Typical
297	M34	N21	N4		354.917	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
298	M35	N22	N2		5.083	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
299	M36	N22	N6		354.917	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
300	M37	N23	N4		5.083	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
301	M38	N23	N8		354.917	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
302	M39	N24	N6		5.083	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
303	M40	N24	N2		354.917	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
304	M41	N21	N8		5.083	TWR_DIAG_T2	Column	Double Angle ...	A36	Typical
305	M14	N2	N3		354.586	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
306	M15	N4	N1		5.414	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
307	M16	N4	N5		354.586	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
308	M17	N6	N3		5.414	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
309	M18	N6	N7		354.586	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
310	M19	N8	N5		5.414	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
311	M20	N8	N1		354.586	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
312	M21	N2	N7		5.414	TWR_DIAG_T1	Column	Double Angle ...	A36	Typical
313	M272	N49	N165			RIGID	None	None	RIGID	DR1
314	M273	N49	N172			RIGID	None	None	RIGID	DR1
315	M274	N52	N171			RIGID	None	None	RIGID	DR1
316	M275	N52	N170			RIGID	None	None	RIGID	DR1
317	M276	N51	N169			RIGID	None	None	RIGID	DR1
318	M277	N51	N168			RIGID	None	None	RIGID	DR1
319	M278	N50	N167			RIGID	None	None	RIGID	DR1
320	M279	N50	N166			RIGID	None	None	RIGID	DR1
321	J296	K13	K181		90	RIGID	None	None	RIGID	DR1
322	J297	K14	K182		90	RIGID	None	None	RIGID	DR1
323	J298	K15	K183		90	RIGID	None	None	RIGID	DR1
324	J299	K16	K184		90	RIGID	None	None	RIGID	DR1



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
325	J300	K53	K45		90	RIGID	None	None	RIGID	DR1
326	J301	K54	K46		90	RIGID	None	None	RIGID	DR1
327	J302	K55	K47		90	RIGID	None	None	RIGID	DR1
328	J303	K56	K48		90	RIGID	None	None	RIGID	DR1
329	M328	N165	N197			RIGID	None	None	RIGID	DR1
330	M329	N172	N204			RIGID	None	None	RIGID	DR1
331	M330	N166	N198			RIGID	None	None	RIGID	DR1
332	M331	N167	N199			RIGID	None	None	RIGID	DR1
333	M332	N168	N200			RIGID	None	None	RIGID	DR1
334	M333	N169	N201			RIGID	None	None	RIGID	DR1
335	M334	N170	N202			RIGID	None	None	RIGID	DR1
336	M335	N171	N203			RIGID	None	None	RIGID	DR1
337	J361	K199	K288			RIGID	None	None	RIGID	DR1
338	J362	K203	K290			RIGID	None	None	RIGID	DR1
339	J363	K204	K291			RIGID	None	None	RIGID	DR1
340	J364	K205	K292			RIGID	None	None	RIGID	DR1
341	J365	K206	K293			RIGID	None	None	RIGID	DR1
342	J366	K207	K294			RIGID	None	None	RIGID	DR1
343	J367	K197	K181			RIGID	None	None	RIGID	DR1
344	J368	K208	K295			RIGID	None	None	RIGID	DR1
345	J369	K209	K296			RIGID	None	None	RIGID	DR1
346	J370	K210	K297			RIGID	None	None	RIGID	DR1
347	J371	K211	K298			RIGID	None	None	RIGID	DR1
348	J372	K212	K299			RIGID	None	None	RIGID	DR1
349	J373	K201	K289			RIGID	None	None	RIGID	DR1
350	J374	K200	K300			RIGID	None	None	RIGID	DR1
351	J375	K278	K302			RIGID	None	None	RIGID	DR1
352	J376	K279	K303			RIGID	None	None	RIGID	DR1
353	J377	K280	K304			RIGID	None	None	RIGID	DR1
354	J378	K281	K305			RIGID	None	None	RIGID	DR1
355	J379	K282	K306			RIGID	None	None	RIGID	DR1
356	J380	K198	K13			RIGID	None	None	RIGID	DR1
357	J381	K283	K307			RIGID	None	None	RIGID	DR1
358	J382	K284	K308			RIGID	None	None	RIGID	DR1
359	J383	K285	K309			RIGID	None	None	RIGID	DR1
360	J384	K286	K310			RIGID	None	None	RIGID	DR1
361	J385	K287	K311			RIGID	None	None	RIGID	DR1
362	J386	K202	K301			RIGID	None	None	RIGID	DR1
363	J387	K344	K433			RIGID	None	None	RIGID	DR1
364	J388	K348	K435			RIGID	None	None	RIGID	DR1
365	J389	K349	K436			RIGID	None	None	RIGID	DR1
366	J390	K350	K437			RIGID	None	None	RIGID	DR1
367	J391	K351	K438			RIGID	None	None	RIGID	DR1
368	J392	K352	K439			RIGID	None	None	RIGID	DR1
369	J393	K342	K182			RIGID	None	None	RIGID	DR1
370	J394	K353	K440			RIGID	None	None	RIGID	DR1
371	J395	K354	K441			RIGID	None	None	RIGID	DR1
372	J396	K355	K442			RIGID	None	None	RIGID	DR1
373	J397	K356	K443			RIGID	None	None	RIGID	DR1
374	J398	K357	K444			RIGID	None	None	RIGID	DR1
375	J399	K346	K434			RIGID	None	None	RIGID	DR1
376	J400	K345	N219			RIGID	None	None	RIGID	DR1
377	J401	K423	K447			RIGID	None	None	RIGID	DR1
378	J402	K424	K448			RIGID	None	None	RIGID	DR1
379	J403	K425	K449			RIGID	None	None	RIGID	DR1
380	J404	K426	K450			RIGID	None	None	RIGID	DR1
381	J405	K427	K451			RIGID	None	None	RIGID	DR1





**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
382	J406	K343	K14			RIGID	None	None	RIGID	DR1
383	J407	K428	K452			RIGID	None	None	RIGID	DR1
384	J408	K429	K453			RIGID	None	None	RIGID	DR1
385	J409	K430	K454			RIGID	None	None	RIGID	DR1
386	J410	K431	K455			RIGID	None	None	RIGID	DR1
387	J411	K432	K456			RIGID	None	None	RIGID	DR1
388	J412	K347	N217			RIGID	None	None	RIGID	DR1
389	J413	K461	K550			RIGID	None	None	RIGID	DR1
390	J414	K465	K552			RIGID	None	None	RIGID	DR1
391	J415	K466	K553			RIGID	None	None	RIGID	DR1
392	J416	K467	K554			RIGID	None	None	RIGID	DR1
393	J417	K468	K555			RIGID	None	None	RIGID	DR1
394	J418	K469	K556			RIGID	None	None	RIGID	DR1
395	J419	K459	K183			RIGID	None	None	RIGID	DR1
396	J420	K470	K557			RIGID	None	None	RIGID	DR1
397	J421	K471	K558			RIGID	None	None	RIGID	DR1
398	J422	K472	K559			RIGID	None	None	RIGID	DR1
399	J423	K473	K560			RIGID	None	None	RIGID	DR1
400	J424	K474	K561			RIGID	None	None	RIGID	DR1
401	J425	K463	K551			RIGID	None	None	RIGID	DR1
402	J426	K462	K562			RIGID	None	None	RIGID	DR1
403	J427	K540	K564			RIGID	None	None	RIGID	DR1
404	J428	K541	K565			RIGID	None	None	RIGID	DR1
405	J429	K542	K566			RIGID	None	None	RIGID	DR1
406	J430	K543	K567			RIGID	None	None	RIGID	DR1
407	J431	K544	K568			RIGID	None	None	RIGID	DR1
408	J432	K460	K15			RIGID	None	None	RIGID	DR1
409	J433	K545	K569			RIGID	None	None	RIGID	DR1
410	J434	K546	K570			RIGID	None	None	RIGID	DR1
411	J435	K547	K571			RIGID	None	None	RIGID	DR1
412	J436	K548	K572			RIGID	None	None	RIGID	DR1
413	J437	K549	K573			RIGID	None	None	RIGID	DR1
414	J438	K464	K563			RIGID	None	None	RIGID	DR1
415	J439	K578	K667			RIGID	None	None	RIGID	DR1
416	J440	K582	K669			RIGID	None	None	RIGID	DR1
417	J441	K583	K670			RIGID	None	None	RIGID	DR1
418	J442	K584	K671			RIGID	None	None	RIGID	DR1
419	J443	K585	K672			RIGID	None	None	RIGID	DR1
420	J444	K586	K673			RIGID	None	None	RIGID	DR1
421	J445	K576	K184			RIGID	None	None	RIGID	DR1
422	J446	K587	K674			RIGID	None	None	RIGID	DR1
423	J447	K588	K675			RIGID	None	None	RIGID	DR1
424	J448	K589	K676			RIGID	None	None	RIGID	DR1
425	J449	K590	K677			RIGID	None	None	RIGID	DR1
426	J450	K591	K678			RIGID	None	None	RIGID	DR1
427	J451	K580	K668			RIGID	None	None	RIGID	DR1
428	J452	K579	N218			RIGID	None	None	RIGID	DR1
429	J453	K657	K681			RIGID	None	None	RIGID	DR1
430	J454	K658	K682			RIGID	None	None	RIGID	DR1
431	J455	K659	K683			RIGID	None	None	RIGID	DR1
432	J456	K660	K684			RIGID	None	None	RIGID	DR1
433	J457	K661	K685			RIGID	None	None	RIGID	DR1
434	J458	K577	K16			RIGID	None	None	RIGID	DR1
435	J459	K662	K686			RIGID	None	None	RIGID	DR1
436	J460	K663	K687			RIGID	None	None	RIGID	DR1
437	J461	K664	K688			RIGID	None	None	RIGID	DR1
438	J462	K665	K689			RIGID	None	None	RIGID	DR1





**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
439	J463	K666	K690			RIGID	None	None	RIGID	DR1
440	J464	K581	N220			RIGID	None	None	RIGID	DR1
441	J465	K695	K760A			RIGID	None	None	RIGID	DR1
442	J466	K697	K761A			RIGID	None	None	RIGID	DR1
443	J467	K698	K762A			RIGID	None	None	RIGID	DR1
444	J468	K699	K763A			RIGID	None	None	RIGID	DR1
445	J469	K700	K764A			RIGID	None	None	RIGID	DR1
446	J470	K701	K765A			RIGID	None	None	RIGID	DR1
447	J471	K691	K45			RIGID	None	None	RIGID	DR1
448	J472	K702	K766A			RIGID	None	None	RIGID	DR1
449	J473	K703	K767A			RIGID	None	None	RIGID	DR1
450	J474	K704	K768A			RIGID	None	None	RIGID	DR1
451	J475	K705	K769			RIGID	None	None	RIGID	DR1
452	J476	K706	K770			RIGID	None	None	RIGID	DR1
453	J477	K693	K759A			RIGID	None	None	RIGID	DR1
454	J478	K696	K772			RIGID	None	None	RIGID	DR1
455	J479	K759	K773			RIGID	None	None	RIGID	DR1
456	J480	K760	K774			RIGID	None	None	RIGID	DR1
457	J481	K761	K775			RIGID	None	None	RIGID	DR1
458	J482	K762	K776			RIGID	None	None	RIGID	DR1
459	J483	K763	K777			RIGID	None	None	RIGID	DR1
460	J484	K692	K53			RIGID	None	None	RIGID	DR1
461	J485	K764	K778			RIGID	None	None	RIGID	DR1
462	J486	K765	K779			RIGID	None	None	RIGID	DR1
463	J487	K766	K780			RIGID	None	None	RIGID	DR1
464	J488	K767	K781			RIGID	None	None	RIGID	DR1
465	J489	K768	K782			RIGID	None	None	RIGID	DR1
466	J490	K694	K771			RIGID	None	None	RIGID	DR1
467	J491	K789	K864			RIGID	None	None	RIGID	DR1
468	J492	K791	K865			RIGID	None	None	RIGID	DR1
469	J493	K792	K866			RIGID	None	None	RIGID	DR1
470	J494	K793	K867			RIGID	None	None	RIGID	DR1
471	J495	K794	K868			RIGID	None	None	RIGID	DR1
472	J496	K795	K869			RIGID	None	None	RIGID	DR1
473	J497	K785	K46			RIGID	None	None	RIGID	DR1
474	J498	K796	K870			RIGID	None	None	RIGID	DR1
475	J499	K797	K871			RIGID	None	None	RIGID	DR1
476	J500	K798	K872			RIGID	None	None	RIGID	DR1
477	J501	K799	K873			RIGID	None	None	RIGID	DR1
478	J502	K800	K874			RIGID	None	None	RIGID	DR1
479	J503	K787	K863			RIGID	None	None	RIGID	DR1
480	J504	K790	K876			RIGID	None	None	RIGID	DR1
481	J505	K853	K877			RIGID	None	None	RIGID	DR1
482	J506	K854	K878			RIGID	None	None	RIGID	DR1
483	J507	K855	K879			RIGID	None	None	RIGID	DR1
484	J508	K856	K880			RIGID	None	None	RIGID	DR1
485	J509	K857	K881			RIGID	None	None	RIGID	DR1
486	J510	K786	K54			RIGID	None	None	RIGID	DR1
487	J511	K858	K882			RIGID	None	None	RIGID	DR1
488	J512	K859	K883			RIGID	None	None	RIGID	DR1
489	J513	K860	K884			RIGID	None	None	RIGID	DR1
490	J514	K861	K885			RIGID	None	None	RIGID	DR1
491	J515	K862	K886			RIGID	None	None	RIGID	DR1
492	J516	K788	K875			RIGID	None	None	RIGID	DR1
493	J517	K893	K968			RIGID	None	None	RIGID	DR1
494	J518	K895	K969			RIGID	None	None	RIGID	DR1
495	J519	K896	K970			RIGID	None	None	RIGID	DR1



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
496	J520	K897	K971			RIGID	None	None	RIGID	DR1
497	J521	K898	K972			RIGID	None	None	RIGID	DR1
498	J522	K899	K973			RIGID	None	None	RIGID	DR1
499	J523	K889	K47			RIGID	None	None	RIGID	DR1
500	J524	K900	K974			RIGID	None	None	RIGID	DR1
501	J525	K901	K975			RIGID	None	None	RIGID	DR1
502	J526	K902	K976			RIGID	None	None	RIGID	DR1
503	J527	K903	K977			RIGID	None	None	RIGID	DR1
504	J528	K904	K978			RIGID	None	None	RIGID	DR1
505	J529	K891	K967			RIGID	None	None	RIGID	DR1
506	J530	K894	K980			RIGID	None	None	RIGID	DR1
507	J531	K957	K981			RIGID	None	None	RIGID	DR1
508	J532	K958	K982			RIGID	None	None	RIGID	DR1
509	J533	K959	K983			RIGID	None	None	RIGID	DR1
510	J534	K960	K984			RIGID	None	None	RIGID	DR1
511	J535	K961	K985			RIGID	None	None	RIGID	DR1
512	J536	K890	K55			RIGID	None	None	RIGID	DR1
513	J537	K962	K986			RIGID	None	None	RIGID	DR1
514	J538	K963	K987			RIGID	None	None	RIGID	DR1
515	J539	K964	K988			RIGID	None	None	RIGID	DR1
516	J540	K965	K989			RIGID	None	None	RIGID	DR1
517	J541	K966	K990			RIGID	None	None	RIGID	DR1
518	J542	K892	K979			RIGID	None	None	RIGID	DR1
519	J543	K997	K1072			RIGID	None	None	RIGID	DR1
520	J544	K999	K1073			RIGID	None	None	RIGID	DR1
521	J545	K1000	K1074			RIGID	None	None	RIGID	DR1
522	J546	K1001	K1075			RIGID	None	None	RIGID	DR1
523	J547	K1002	K1076			RIGID	None	None	RIGID	DR1
524	J548	K1003	K1077			RIGID	None	None	RIGID	DR1
525	J549	K993	K48			RIGID	None	None	RIGID	DR1
526	J550	K1004	K1078			RIGID	None	None	RIGID	DR1
527	J551	K1005	K1079			RIGID	None	None	RIGID	DR1
528	J552	K1006	K1080			RIGID	None	None	RIGID	DR1
529	J553	K1007	K1081			RIGID	None	None	RIGID	DR1
530	J554	K1008	K1082			RIGID	None	None	RIGID	DR1
531	J555	K995	K1071			RIGID	None	None	RIGID	DR1
532	J556	K998	K1084			RIGID	None	None	RIGID	DR1
533	J557	K1061	K1085			RIGID	None	None	RIGID	DR1
534	J558	K1062	K1086			RIGID	None	None	RIGID	DR1
535	J559	K1063	K1087			RIGID	None	None	RIGID	DR1
536	J560	K1064	K1088			RIGID	None	None	RIGID	DR1
537	J561	K1065	K1089			RIGID	None	None	RIGID	DR1
538	J562	K994	K56			RIGID	None	None	RIGID	DR1
539	J563	K1066	K1090			RIGID	None	None	RIGID	DR1
540	J564	K1067	K1091			RIGID	None	None	RIGID	DR1
541	J565	K1068	K1092			RIGID	None	None	RIGID	DR1
542	J566	K1069	K1093			RIGID	None	None	RIGID	DR1
543	J567	K1070	K1094			RIGID	None	None	RIGID	DR1
544	J568	K996	K1083			RIGID	None	None	RIGID	DR1
545	M343	N42	N62		90	L2.5x2x3	Beam	Single Angle	A36	Typical
546	M344	N69	N43		90	L2.5x2x3	Beam	Single Angle	A36	Typical
547	M345	N76	N44		90	L2.5x2x3	Beam	Single Angle	A36	Typical
548	M346	N53	N41		90	L2.5x2x3	Beam	Single Angle	A36	Typical
549	M347	N25	N37		270	L2.5x2x3	Beam	Single Angle	A36	Typical
550	M348	N25	N213A		270	L2.5x2x3	Beam	Single Angle	A36	Typical
551	M349	N40	N28		270	L2.5x2x3	Beam	Single Angle	A36	Typical
552	M350	N28	N214		270	L2.5x2x3	Beam	Single Angle	A36	Typical



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
553	M351	N39	N27		270	L2.5x2x3	Beam	Single Angle	A36	Typical
554	M352	N27	N215A		270	L2.5x2x3	Beam	Single Angle	A36	Typical
555	M353	N38	N26		270	L2.5x2x3	Beam	Single Angle	A36	Typical
556	M354	N26	N216		270	L2.5x2x3	Beam	Single Angle	A36	Typical
557	M355	N9	N13		270	L2.5x2x3	Beam	Single Angle	A36	Typical
558	M356	N14	N10		270	L2.5x2x3	Beam	Single Angle	A36	Typical
559	M357	N15	N11		270	L2.5x2x3	Beam	Single Angle	A36	Typical
560	M358	N16	N12		270	L2.5x2x3	Beam	Single Angle	A36	Typical
561	J581	K193	K41		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical
562	J582	K194	K44		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical
563	J583	K186	K44		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical
564	J584	K185	K43		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical
565	J585	K192	K43		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical
566	J586	K191	K42		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical
567	J587	K196	K42		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical
568	J588	K195	K41		90	HSS10x6x6	Beam	Tube	A500 Gr.46	Typical

**Joint Coordinates and Temperatures**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-4.395834	205.433334	4.395834	0	
2	N2	-5.043125	195.516667	5.043125	0	
3	N3	4.395834	205.433334	4.395834	0	
4	N4	5.043125	195.516667	5.043125	0	
5	N5	4.395834	205.433334	-4.395834	0	
6	N6	5.043125	195.516667	-5.043125	0	
7	N7	-4.395834	205.433334	-4.395834	0	
8	N8	-5.043125	195.516667	-5.043125	0	
9	N9	0	205.433334	4.395834	0	
10	N10	4.395834	205.433334	0	0	
11	N11	0	205.433334	-4.395834	0	
12	N12	-4.395834	205.433334	0	0	
13	N13	0	200.815026	4.697285	0	
14	N14	4.697285	200.815026	0	0	
15	N15	0	200.815026	-4.697285	0	
16	N16	-4.697285	200.815026	0	0	
17	N17	-4.697285	200.815026	4.697285	0	
18	N18	4.697285	200.815026	4.697285	0	
19	N19	4.697285	200.815026	-4.697285	0	
20	N20	-4.697285	200.815026	-4.697285	0	
21	N21	-5.690415	185.6	5.690415	0	
22	N22	5.690415	185.6	5.690415	0	
23	N23	5.690415	185.6	-5.690415	0	
24	N24	-5.690415	185.6	-5.690415	0	
25	N25	0	190.857348	5.347252	0	
26	N26	5.347252	190.857348	0	0	
27	N27	0	190.857348	-5.347252	0	
28	N28	-5.347252	190.857348	0	0	
29	N29	-5.347252	190.857348	5.347252	0	
30	N30	5.347252	190.857348	5.347252	0	
31	N31	5.347252	190.857348	-5.347252	0	
32	N32	-5.347252	190.857348	-5.347252	0	
33	N33	-6.337706	175.683333	6.337706	0	
34	N34	6.337706	175.683333	6.337706	0	
35	N35	6.337706	175.683333	-6.337706	0	
36	N36	-6.337706	175.683333	-6.337706	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
37	N37	0	185.6	5.690415	0	
38	N38	5.690415	185.6	0	0	
39	N39	0	185.6	-5.690415	0	
40	N40	-5.690415	185.6	0	0	
41	N41	0	180.908498	5.996644	0	
42	N42	5.996644	180.908498	0	0	
43	N43	0	180.908498	-5.996644	0	
44	N44	-5.996644	180.908498	0	0	
45	N45	-5.996644	180.908498	5.996644	0	
46	N46	5.996644	180.908498	5.996644	0	
47	N47	5.996644	180.908498	-5.996644	0	
48	N48	-5.996644	180.908498	-5.996644	0	
49	N49	-7.583334	156.6	7.583334	0	
50	N50	7.583334	156.6	7.583334	0	
51	N51	7.583334	156.6	-7.583334	0	
52	N52	-7.583334	156.6	-7.583334	0	
53	N53	0	175.683333	6.337706	0	
54	N54	-7.168124	162.961111	7.168124	0	
55	N55	-5.055556	162.961111	7.168124	0	
56	N56	-6.752915	169.322222	6.752915	0	
57	N57	-2.527778	169.322222	6.752915	0	
58	N58	5.055556	162.961111	7.168124	0	
59	N59	7.168124	162.961111	7.168124	0	
60	N60	2.527778	169.322222	6.752915	0	
61	N61	6.752915	169.322222	6.752915	0	
62	N62	6.337706	175.683333	0	0	
63	N63	7.168124	162.961111	5.055556	0	
64	N64	6.752915	169.322222	2.527778	0	
65	N65	7.168124	162.961111	-5.055556	0	
66	N66	7.168124	162.961111	-7.168124	0	
67	N67	6.752915	169.322222	-2.527778	0	
68	N68	6.752915	169.322222	-6.752915	0	
69	N69	0	175.683333	-6.337706	0	
70	N70	5.055556	162.961111	-7.168124	0	
71	N71	2.527778	169.322222	-6.752915	0	
72	N72	-5.055556	162.961111	-7.168124	0	
73	N73	-7.168124	162.961111	-7.168124	0	
74	N74	-2.527778	169.322222	-6.752915	0	
75	N75	-6.752915	169.322222	-6.752915	0	
76	N76	-6.337706	175.683333	0	0	
77	N77	-7.168124	162.961111	-5.055556	0	
78	N78	-6.752915	169.322222	-2.527778	0	
79	N79	-7.168124	162.961111	5.055556	0	
80	N80	-6.752915	169.322222	2.527778	0	
81	K1	-9.25	158.6	9.25	0	
82	K2	-9.25	153.6	9.25	0	
83	K3	9.25	158.6	9.25	0	
84	K4	9.25	153.6	9.25	0	
85	K5	9.25	158.6	-9.25	0	
86	K6	9.25	153.6	-9.25	0	
87	K7	-9.25	158.6	-9.25	0	
88	K8	-9.25	153.6	-9.25	0	
89	K9	-9.25	145.2	9.25	0	
90	K10	9.25	145.2	9.25	0	
91	K11	9.25	145.2	-9.25	0	
92	K12	-9.25	145.2	-9.25	0	
93	K13	0	153.6	9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
94	K14	9.25	153.6	0	0	
95	K15	0	153.6	-9.25	0	
96	K16	-9.25	153.6	0	0	
97	K17	-9.25	129.7	9.25	0	
98	K18	9.25	129.7	9.25	0	
99	K19	9.25	129.7	-9.25	0	
100	K20	-9.25	129.7	-9.25	0	
101	K21	0	145.2	9.25	0	
102	K22	9.25	145.2	0	0	
103	K23	0	145.2	-9.25	0	
104	K24	-9.25	145.2	0	0	
105	K25	-9.25	114.2	9.25	0	
106	K26	9.25	114.2	9.25	0	
107	K27	9.25	114.2	-9.25	0	
108	K28	-9.25	114.2	-9.25	0	
109	K29	0	129.7	9.25	0	
110	K30	9.25	129.7	0	0	
111	K31	0	129.7	-9.25	0	
112	K32	-9.25	129.7	0	0	
113	K33	-9.25	102.8	9.25	0	
114	K34	9.25	102.8	9.25	0	
115	K35	9.25	102.8	-9.25	0	
116	K36	-9.25	102.8	-9.25	0	
117	K37	0	114.2	9.25	0	
118	K38	9.25	114.2	0	0	
119	K39	0	114.2	-9.25	0	
120	K40	-9.25	114.2	0	0	
121	K41	-9.25	99.1	9.25	0	
122	K42	9.25	99.1	9.25	0	
123	K43	9.25	99.1	-9.25	0	
124	K44	-9.25	99.1	-9.25	0	
125	K45	0	102.8	9.25	0	
126	K46	9.25	102.8	0	0	
127	K47	0	102.8	-9.25	0	
128	K48	-9.25	102.8	0	0	
129	K49	-9.25	80.9	9.25	0	
130	K50	9.25	80.9	9.25	0	
131	K51	9.25	80.9	-9.25	0	
132	K52	-9.25	80.9	-9.25	0	
133	K53	0	99.1	9.25	0	
134	K54	9.25	99.1	0	0	
135	K55	0	99.1	-9.25	0	
136	K56	-9.25	99.1	0	0	
137	K57	0	90	9.25	0	
138	K58	9.25	90	0	0	
139	K59	0	90	-9.25	0	
140	K60	-9.25	90	0	0	
141	D	-9.25	79.6	9.25	0	
142	C	9.25	79.6	9.25	0	
143	B	9.25	79.6	-9.25	0	
144	A	-9.25	79.6	-9.25	0	
145	N145	-7.583334	153.6	7.583334	0	
146	N146	7.583334	153.6	7.583334	0	
147	N147	7.583334	153.6	-7.583334	0	
148	N148	-7.583334	153.6	-7.583334	0	
149	N149	-1.777778	169.322222	6.752915	0	
150	N150	1.777778	169.322222	6.752915	0	





**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
151	N152	6.752915	169.322222	1.777778	0	
152	N153	6.752915	169.322222	-1.777778	0	
153	N155	1.777778	169.322222	-6.752915	0	
154	N156	-1.777778	169.322222	-6.752915	0	
155	N158	-6.752915	169.322222	-1.777778	0	
156	N159	-6.752915	169.322222	1.777778	0	
157	N157	-5.916667	153.6	9.25	0	
158	N158A	-9.25	153.6	5.916667	0	
159	N159A	9.25	153.6	5.916667	0	
160	N160	5.916667	153.6	9.25	0	
161	N161	5.916667	153.6	-9.25	0	
162	N162	9.25	153.6	-5.916667	0	
163	N163	-9.25	153.6	-5.916667	0	
164	N164	-5.916667	153.6	-9.25	0	
165	N165	-7.583333	156.6	9.25	0	
166	N166	7.583333	156.6	9.25	0	
167	N167	9.25	156.6	7.583333	0	
168	N168	9.25	156.6	-7.583333	0	
169	N169	7.583333	156.6	-9.25	0	
170	N170	-7.583333	156.6	-9.25	0	
171	N171	-9.25	156.6	-7.583333	0	
172	N172	-9.25	156.6	7.583333	0	
173	K173	-9.25	143.7	9.25	0	
174	K174	9.25	143.7	9.25	0	
175	K175	9.25	143.7	-9.25	0	
176	K176	-9.25	143.7	-9.25	0	
177	K177	-9.25	112.7	9.25	0	
178	K178	9.25	112.7	9.25	0	
179	K179	9.25	112.7	-9.25	0	
180	K180	-9.25	112.7	-9.25	0	
181	K181	0	158.6	9.25	0	
182	K182	9.25	158.6	0	0	
183	K183	0	158.6	-9.25	0	
184	K184	-9.25	158.6	0	0	
185	K185	9.25	80.9	-27.417	0	
186	K186	-9.25	80.9	-27.417	0	
187	K187	-9.25	98.35	9.25	0	
188	K188	9.25	98.35	9.25	0	
189	K189	9.25	98.35	-9.25	0	
190	K190	-9.25	98.35	-9.25	0	
191	K191	26.417	80.9	9.25	0	
192	K192	26.417	80.9	-9.25	0	
193	K193	-26.417	80.9	9.25	0	
194	K194	-26.417	80.9	-9.25	0	
195	K195	-9.25	80.9	25.417	0	
196	K196	9.25	80.9	25.417	0	
197	N197	-7.583333	158.6	9.25	0	
198	N198	7.583333	158.6	9.25	0	
199	N199	9.25	158.6	7.583333	0	
200	N200	9.25	158.6	-7.583333	0	
201	N201	7.583333	158.6	-9.25	0	
202	N202	-7.583333	158.6	-9.25	0	
203	N203	-9.25	158.6	-7.583333	0	
204	N204	-9.25	158.6	7.583333	0	
205	N205	-3.168853	175.683333	3.168853	0	
206	N206	3.168853	175.683333	3.168853	0	
207	N207	3.168853	175.683333	-3.168853	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
208	N208	-3.168853	175.683333	-3.168853	0	
209	N209	0	175.683333	3.168853	0	
210	N211	3.168853	175.683333	-0.	0	
211	N213	-0.	175.683333	-3.168853	0	
212	N215	-3.168853	175.683333	0.	0	
213	N213A	0	195.516667	5.043125	0	
214	N214	-5.043125	195.516667	0	0	
215	N215A	0	195.516667	-5.043125	0	
216	N216	5.043125	195.516667	0	0	
217	N217	9.25	153.6	-3	0	
218	N218	-9.25	153.6	-3	0	
219	N219	9.25	153.6	3	0	
220	N220	-9.25	153.6	3	0	
221	N221	6.25	153.6	3	0	
222	N222	6.25	153.6	-3	0	
223	N223	-6.25	153.6	-3	0	
224	N224	-6.25	153.6	3	0	
225	K197	0	157.6835	9.25	0	
226	K198	0	154.5165	9.25	0	
227	K199	-3	157.6835	9.25	0	
228	K200	-3	154.5165	9.25	0	
229	K201	3	157.6835	9.25	0	
230	K202	3	154.5165	9.25	0	
231	K203	-2.5	157.6835	9.25	0	
232	K204	-2	157.6835	9.25	0	
233	K205	-1.5	157.6835	9.25	0	
234	K206	-1	157.6835	9.25	0	
235	K207	-.5	157.6835	9.25	0	
236	K208	.5	157.6835	9.25	0	
237	K209	1	157.6835	9.25	0	
238	K210	1.5	157.6835	9.25	0	
239	K211	2	157.6835	9.25	0	
240	K212	2.5	157.6835	9.25	0	
241	K213	-3	157.155667	9.25	0	
242	K214	-2.5	157.155667	9.25	0	
243	K215	-2	157.155667	9.25	0	
244	K216	-1.5	157.155667	9.25	0	
245	K217	-1	157.155667	9.25	0	
246	K218	-.5	157.155667	9.25	0	
247	K219	0	157.155667	9.25	0	
248	K220	.5	157.155667	9.25	0	
249	K221	1	157.155667	9.25	0	
250	K222	1.5	157.155667	9.25	0	
251	K223	2	157.155667	9.25	0	
252	K224	2.5	157.155667	9.25	0	
253	K225	3	157.155667	9.25	0	
254	K226	-3	156.627833	9.25	0	
255	K227	-2.5	156.627833	9.25	0	
256	K228	-2	156.627833	9.25	0	
257	K229	-1.5	156.627833	9.25	0	
258	K230	-1	156.627833	9.25	0	
259	K231	-.5	156.627833	9.25	0	
260	K232	0	156.627833	9.25	0	
261	K233	.5	156.627833	9.25	0	
262	K234	1	156.627833	9.25	0	
263	K235	1.5	156.627833	9.25	0	
264	K236	2	156.627833	9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
265	K237	2.5	156.627833	9.25	0	
266	K238	3	156.627833	9.25	0	
267	K239	-3	156.1	9.25	0	
268	K240	-2.5	156.1	9.25	0	
269	K241	-2	156.1	9.25	0	
270	K242	-1.5	156.1	9.25	0	
271	K243	-1	156.1	9.25	0	
272	K244	-.5	156.1	9.25	0	
273	K245	0	156.1	9.25	0	
274	K246	.5	156.1	9.25	0	
275	K247	1	156.1	9.25	0	
276	K248	1.5	156.1	9.25	0	
277	K249	2	156.1	9.25	0	
278	K250	2.5	156.1	9.25	0	
279	K251	3	156.1	9.25	0	
280	K252	-3	155.572167	9.25	0	
281	K253	-2.5	155.572167	9.25	0	
282	K254	-2	155.572167	9.25	0	
283	K255	-1.5	155.572167	9.25	0	
284	K256	-1	155.572167	9.25	0	
285	K257	-.5	155.572167	9.25	0	
286	K258	0	155.572167	9.25	0	
287	K259	.5	155.572167	9.25	0	
288	K260	1	155.572167	9.25	0	
289	K261	1.5	155.572167	9.25	0	
290	K262	2	155.572167	9.25	0	
291	K263	2.5	155.572167	9.25	0	
292	K264	3	155.572167	9.25	0	
293	K265	-3	155.044333	9.25	0	
294	K266	-2.5	155.044333	9.25	0	
295	K267	-2	155.044333	9.25	0	
296	K268	-1.5	155.044333	9.25	0	
297	K269	-1	155.044333	9.25	0	
298	K270	-.5	155.044333	9.25	0	
299	K271	0	155.044333	9.25	0	
300	K272	.5	155.044333	9.25	0	
301	K273	1	155.044333	9.25	0	
302	K274	1.5	155.044333	9.25	0	
303	K275	2	155.044333	9.25	0	
304	K276	2.5	155.044333	9.25	0	
305	K277	3	155.044333	9.25	0	
306	K278	-2.5	154.5165	9.25	0	
307	K279	-2	154.5165	9.25	0	
308	K280	-1.5	154.5165	9.25	0	
309	K281	-1	154.5165	9.25	0	
310	K282	-.5	154.5165	9.25	0	
311	K283	.5	154.5165	9.25	0	
312	K284	1	154.5165	9.25	0	
313	K285	1.5	154.5165	9.25	0	
314	K286	2	154.5165	9.25	0	
315	K287	2.5	154.5165	9.25	0	
316	K288	-3	158.6	9.25	0	
317	K289	3	158.6	9.25	0	
318	K290	-2.5	158.6	9.25	0	
319	K291	-2	158.6	9.25	0	
320	K292	-1.5	158.6	9.25	0	
321	K293	-1	158.6	9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
322	K294	-5	158.6	9.25	0	
323	K295	.5	158.6	9.25	0	
324	K296	1	158.6	9.25	0	
325	K297	1.5	158.6	9.25	0	
326	K298	2	158.6	9.25	0	
327	K299	2.5	158.6	9.25	0	
328	K300	-3	153.6	9.25	0	
329	K301	3	153.6	9.25	0	
330	K302	-2.5	153.6	9.25	0	
331	K303	-2	153.6	9.25	0	
332	K304	-1.5	153.6	9.25	0	
333	K305	-1	153.6	9.25	0	
334	K306	-.5	153.6	9.25	0	
335	K307	.5	153.6	9.25	0	
336	K308	1	153.6	9.25	0	
337	K309	1.5	153.6	9.25	0	
338	K310	2	153.6	9.25	0	
339	K311	2.5	153.6	9.25	0	
340	K342	9.25	157.6835	-0.	0	
341	K343	9.25	154.5165	-0.	0	
342	K344	9.25	157.6835	3	0	
343	K345	9.25	154.5165	3	0	
344	K346	9.25	157.6835	-3	0	
345	K347	9.25	154.5165	-3	0	
346	K348	9.25	157.6835	2.5	0	
347	K349	9.25	157.6835	2	0	
348	K350	9.25	157.6835	1.5	0	
349	K351	9.25	157.6835	1	0	
350	K352	9.25	157.6835	.5	0	
351	K353	9.25	157.6835	-.5	0	
352	K354	9.25	157.6835	-1	0	
353	K355	9.25	157.6835	-1.5	0	
354	K356	9.25	157.6835	-2	0	
355	K357	9.25	157.6835	-2.5	0	
356	K358	9.25	157.155667	3	0	
357	K359	9.25	157.155667	2.5	0	
358	K360	9.25	157.155667	2	0	
359	K361	9.25	157.155667	1.5	0	
360	K362	9.25	157.155667	1	0	
361	K363	9.25	157.155667	.5	0	
362	K364	9.25	157.155667	-0.	0	
363	K365	9.25	157.155667	-.5	0	
364	K366	9.25	157.155667	-1	0	
365	K367	9.25	157.155667	-1.5	0	
366	K368	9.25	157.155667	-2	0	
367	K369	9.25	157.155667	-2.5	0	
368	K370	9.25	157.155667	-3	0	
369	K371	9.25	156.627833	3	0	
370	K372	9.25	156.627833	2.5	0	
371	K373	9.25	156.627833	2	0	
372	K374	9.25	156.627833	1.5	0	
373	K375	9.25	156.627833	1	0	
374	K376	9.25	156.627833	.5	0	
375	K377	9.25	156.627833	-0.	0	
376	K378	9.25	156.627833	-.5	0	
377	K379	9.25	156.627833	-1	0	
378	K380	9.25	156.627833	-1.5	0	





**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
379	K381	9.25	156.627833	-2	0	
380	K382	9.25	156.627833	-2.5	0	
381	K383	9.25	156.627833	-3	0	
382	K384	9.25	156.1	3	0	
383	K385	9.25	156.1	2.5	0	
384	K386	9.25	156.1	2	0	
385	K387	9.25	156.1	1.5	0	
386	K388	9.25	156.1	1	0	
387	K389	9.25	156.1	.5	0	
388	K390	9.25	156.1	-0.	0	
389	K391	9.25	156.1	-0.5	0	
390	K392	9.25	156.1	-1	0	
391	K393	9.25	156.1	-1.5	0	
392	K394	9.25	156.1	-2	0	
393	K395	9.25	156.1	-2.5	0	
394	K396	9.25	156.1	-3	0	
395	K397	9.25	155.572167	3	0	
396	K398	9.25	155.572167	2.5	0	
397	K399	9.25	155.572167	2	0	
398	K400	9.25	155.572167	1.5	0	
399	K401	9.25	155.572167	1	0	
400	K402	9.25	155.572167	.5	0	
401	K403	9.25	155.572167	-0.	0	
402	K404	9.25	155.572167	-0.5	0	
403	K405	9.25	155.572167	-1	0	
404	K406	9.25	155.572167	-1.5	0	
405	K407	9.25	155.572167	-2	0	
406	K408	9.25	155.572167	-2.5	0	
407	K409	9.25	155.572167	-3	0	
408	K410	9.25	155.044333	3	0	
409	K411	9.25	155.044333	2.5	0	
410	K412	9.25	155.044333	2	0	
411	K413	9.25	155.044333	1.5	0	
412	K414	9.25	155.044333	1	0	
413	K415	9.25	155.044333	.5	0	
414	K416	9.25	155.044333	-0.	0	
415	K417	9.25	155.044333	-0.5	0	
416	K418	9.25	155.044333	-1	0	
417	K419	9.25	155.044333	-1.5	0	
418	K420	9.25	155.044333	-2	0	
419	K421	9.25	155.044333	-2.5	0	
420	K422	9.25	155.044333	-3	0	
421	K423	9.25	154.5165	2.5	0	
422	K424	9.25	154.5165	2	0	
423	K425	9.25	154.5165	1.5	0	
424	K426	9.25	154.5165	1	0	
425	K427	9.25	154.5165	.5	0	
426	K428	9.25	154.5165	-0.5	0	
427	K429	9.25	154.5165	-1	0	
428	K430	9.25	154.5165	-1.5	0	
429	K431	9.25	154.5165	-2	0	
430	K432	9.25	154.5165	-2.5	0	
431	K433	9.25	158.6	3	0	
432	K434	9.25	158.6	-3	0	
433	K435	9.25	158.6	2.5	0	
434	K436	9.25	158.6	2	0	
435	K437	9.25	158.6	1.5	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
436	K438	9.25	158.6	1	0	
437	K439	9.25	158.6	.5	0	
438	K440	9.25	158.6	-.5	0	
439	K441	9.25	158.6	-1	0	
440	K442	9.25	158.6	-1.5	0	
441	K443	9.25	158.6	-2	0	
442	K444	9.25	158.6	-2.5	0	
443	K447	9.25	153.6	2.5	0	
444	K448	9.25	153.6	2	0	
445	K449	9.25	153.6	1.5	0	
446	K450	9.25	153.6	1	0	
447	K451	9.25	153.6	.5	0	
448	K452	9.25	153.6	-.5	0	
449	K453	9.25	153.6	-1	0	
450	K454	9.25	153.6	-1.5	0	
451	K455	9.25	153.6	-2	0	
452	K456	9.25	153.6	-2.5	0	
453	K459	-0.	157.6835	-9.25	0	
454	K460	-0.	154.5165	-9.25	0	
455	K461	3	157.6835	-9.25	0	
456	K462	3	154.5165	-9.25	0	
457	K463	-3	157.6835	-9.25	0	
458	K464	-3	154.5165	-9.25	0	
459	K465	2.5	157.6835	-9.25	0	
460	K466	2	157.6835	-9.25	0	
461	K467	1.5	157.6835	-9.25	0	
462	K468	1	157.6835	-9.25	0	
463	K469	.5	157.6835	-9.25	0	
464	K470	-.5	157.6835	-9.25	0	
465	K471	-1	157.6835	-9.25	0	
466	K472	-1.5	157.6835	-9.25	0	
467	K473	-2	157.6835	-9.25	0	
468	K474	-2.5	157.6835	-9.25	0	
469	K475	3	157.155667	-9.25	0	
470	K476	2.5	157.155667	-9.25	0	
471	K477	2	157.155667	-9.25	0	
472	K478	1.5	157.155667	-9.25	0	
473	K479	1	157.155667	-9.25	0	
474	K480	.5	157.155667	-9.25	0	
475	K481	-0.	157.155667	-9.25	0	
476	K482	-.5	157.155667	-9.25	0	
477	K483	-1	157.155667	-9.25	0	
478	K484	-1.5	157.155667	-9.25	0	
479	K485	-2	157.155667	-9.25	0	
480	K486	-2.5	157.155667	-9.25	0	
481	K487	-3	157.155667	-9.25	0	
482	K488	3	156.627833	-9.25	0	
483	K489	2.5	156.627833	-9.25	0	
484	K490	2	156.627833	-9.25	0	
485	K491	1.5	156.627833	-9.25	0	
486	K492	1	156.627833	-9.25	0	
487	K493	.5	156.627833	-9.25	0	
488	K494	-0.	156.627833	-9.25	0	
489	K495	-.5	156.627833	-9.25	0	
490	K496	-1	156.627833	-9.25	0	
491	K497	-1.5	156.627833	-9.25	0	
492	K498	-2	156.627833	-9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
493	K499	-2.5	156.627833	-9.25	0	
494	K500	-3	156.627833	-9.25	0	
495	K501	3	156.1	-9.25	0	
496	K502	2.5	156.1	-9.25	0	
497	K503	2	156.1	-9.25	0	
498	K504	1.5	156.1	-9.25	0	
499	K505	1	156.1	-9.25	0	
500	K506	.5	156.1	-9.25	0	
501	K507	-0.	156.1	-9.25	0	
502	K508	-.5	156.1	-9.25	0	
503	K509	-1	156.1	-9.25	0	
504	K510	-1.5	156.1	-9.25	0	
505	K511	-2	156.1	-9.25	0	
506	K512	-2.5	156.1	-9.25	0	
507	K513	-3	156.1	-9.25	0	
508	K514	3	155.572167	-9.25	0	
509	K515	2.5	155.572167	-9.25	0	
510	K516	2	155.572167	-9.25	0	
511	K517	1.5	155.572167	-9.25	0	
512	K518	1	155.572167	-9.25	0	
513	K519	.5	155.572167	-9.25	0	
514	K520	-0.	155.572167	-9.25	0	
515	K521	-.5	155.572167	-9.25	0	
516	K522	-1	155.572167	-9.25	0	
517	K523	-1.5	155.572167	-9.25	0	
518	K524	-2	155.572167	-9.25	0	
519	K525	-2.5	155.572167	-9.25	0	
520	K526	-3	155.572167	-9.25	0	
521	K527	3	155.044333	-9.25	0	
522	K528	2.5	155.044333	-9.25	0	
523	K529	2	155.044333	-9.25	0	
524	K530	1.5	155.044333	-9.25	0	
525	K531	1	155.044333	-9.25	0	
526	K532	.5	155.044333	-9.25	0	
527	K533	-0.	155.044333	-9.25	0	
528	K534	-.5	155.044333	-9.25	0	
529	K535	-1	155.044333	-9.25	0	
530	K536	-1.5	155.044333	-9.25	0	
531	K537	-2	155.044333	-9.25	0	
532	K538	-2.5	155.044333	-9.25	0	
533	K539	-3	155.044333	-9.25	0	
534	K540	2.5	154.5165	-9.25	0	
535	K541	2	154.5165	-9.25	0	
536	K542	1.5	154.5165	-9.25	0	
537	K543	1	154.5165	-9.25	0	
538	K544	.5	154.5165	-9.25	0	
539	K545	-.5	154.5165	-9.25	0	
540	K546	-1	154.5165	-9.25	0	
541	K547	-1.5	154.5165	-9.25	0	
542	K548	-2	154.5165	-9.25	0	
543	K549	-2.5	154.5165	-9.25	0	
544	K550	3	158.6	-9.25	0	
545	K551	-3	158.6	-9.25	0	
546	K552	2.5	158.6	-9.25	0	
547	K553	2	158.6	-9.25	0	
548	K554	1.5	158.6	-9.25	0	
549	K555	1	158.6	-9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
550	K556	.5	158.6	-9.25	0	
551	K557	-.5	158.6	-9.25	0	
552	K558	-1	158.6	-9.25	0	
553	K559	-1.5	158.6	-9.25	0	
554	K560	-2	158.6	-9.25	0	
555	K561	-2.5	158.6	-9.25	0	
556	K562	3	153.6	-9.25	0	
557	K563	-3	153.6	-9.25	0	
558	K564	2.5	153.6	-9.25	0	
559	K565	2	153.6	-9.25	0	
560	K566	1.5	153.6	-9.25	0	
561	K567	1	153.6	-9.25	0	
562	K568	.5	153.6	-9.25	0	
563	K569	-.5	153.6	-9.25	0	
564	K570	-1	153.6	-9.25	0	
565	K571	-1.5	153.6	-9.25	0	
566	K572	-2	153.6	-9.25	0	
567	K573	-2.5	153.6	-9.25	0	
568	K576	-9.25	157.6835	0.	0	
569	K577	-9.25	154.5165	0.	0	
570	K578	-9.25	157.6835	-3	0	
571	K579	-9.25	154.5165	-3	0	
572	K580	-9.25	157.6835	3	0	
573	K581	-9.25	154.5165	3	0	
574	K582	-9.25	157.6835	-2.5	0	
575	K583	-9.25	157.6835	-2	0	
576	K584	-9.25	157.6835	-1.5	0	
577	K585	-9.25	157.6835	-1	0	
578	K586	-9.25	157.6835	-.5	0	
579	K587	-9.25	157.6835	.5	0	
580	K588	-9.25	157.6835	1	0	
581	K589	-9.25	157.6835	1.5	0	
582	K590	-9.25	157.6835	2	0	
583	K591	-9.25	157.6835	2.5	0	
584	K592	-9.25	157.155667	-3	0	
585	K593	-9.25	157.155667	-2.5	0	
586	K594	-9.25	157.155667	-2	0	
587	K595	-9.25	157.155667	-1.5	0	
588	K596	-9.25	157.155667	-1	0	
589	K597	-9.25	157.155667	-.5	0	
590	K598	-9.25	157.155667	0.	0	
591	K599	-9.25	157.155667	.5	0	
592	K600	-9.25	157.155667	1	0	
593	K601	-9.25	157.155667	1.5	0	
594	K602	-9.25	157.155667	2	0	
595	K603	-9.25	157.155667	2.5	0	
596	K604	-9.25	157.155667	3	0	
597	K605	-9.25	156.627833	-3	0	
598	K606	-9.25	156.627833	-2.5	0	
599	K607	-9.25	156.627833	-2	0	
600	K608	-9.25	156.627833	-1.5	0	
601	K609	-9.25	156.627833	-1	0	
602	K610	-9.25	156.627833	-.5	0	
603	K611	-9.25	156.627833	0.	0	
604	K612	-9.25	156.627833	.5	0	
605	K613	-9.25	156.627833	1	0	
606	K614	-9.25	156.627833	1.5	0	





**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
607	K615	-9.25	156.627833	2	0	
608	K616	-9.25	156.627833	2.5	0	
609	K617	-9.25	156.627833	3	0	
610	K618	-9.25	156.1	-3	0	
611	K619	-9.25	156.1	-2.5	0	
612	K620	-9.25	156.1	-2	0	
613	K621	-9.25	156.1	-1.5	0	
614	K622	-9.25	156.1	-1	0	
615	K623	-9.25	156.1	-.5	0	
616	K624	-9.25	156.1	0.	0	
617	K625	-9.25	156.1	.5	0	
618	K626	-9.25	156.1	1	0	
619	K627	-9.25	156.1	1.5	0	
620	K628	-9.25	156.1	2	0	
621	K629	-9.25	156.1	2.5	0	
622	K630	-9.25	156.1	3	0	
623	K631	-9.25	155.572167	-3	0	
624	K632	-9.25	155.572167	-2.5	0	
625	K633	-9.25	155.572167	-2	0	
626	K634	-9.25	155.572167	-1.5	0	
627	K635	-9.25	155.572167	-1	0	
628	K636	-9.25	155.572167	-.5	0	
629	K637	-9.25	155.572167	0.	0	
630	K638	-9.25	155.572167	.5	0	
631	K639	-9.25	155.572167	1	0	
632	K640	-9.25	155.572167	1.5	0	
633	K641	-9.25	155.572167	2	0	
634	K642	-9.25	155.572167	2.5	0	
635	K643	-9.25	155.572167	3	0	
636	K644	-9.25	155.044333	-3	0	
637	K645	-9.25	155.044333	-2.5	0	
638	K646	-9.25	155.044333	-2	0	
639	K647	-9.25	155.044333	-1.5	0	
640	K648	-9.25	155.044333	-1	0	
641	K649	-9.25	155.044333	-.5	0	
642	K650	-9.25	155.044333	0.	0	
643	K651	-9.25	155.044333	.5	0	
644	K652	-9.25	155.044333	1	0	
645	K653	-9.25	155.044333	1.5	0	
646	K654	-9.25	155.044333	2	0	
647	K655	-9.25	155.044333	2.5	0	
648	K656	-9.25	155.044333	3	0	
649	K657	-9.25	154.5165	-2.5	0	
650	K658	-9.25	154.5165	-2	0	
651	K659	-9.25	154.5165	-1.5	0	
652	K660	-9.25	154.5165	-1	0	
653	K661	-9.25	154.5165	-.5	0	
654	K662	-9.25	154.5165	.5	0	
655	K663	-9.25	154.5165	1	0	
656	K664	-9.25	154.5165	1.5	0	
657	K665	-9.25	154.5165	2	0	
658	K666	-9.25	154.5165	2.5	0	
659	K667	-9.25	158.6	-3	0	
660	K668	-9.25	158.6	3	0	
661	K669	-9.25	158.6	-2.5	0	
662	K670	-9.25	158.6	-2	0	
663	K671	-9.25	158.6	-1.5	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
664	K672	-9.25	158.6	-1	0	
665	K673	-9.25	158.6	-5	0	
666	K674	-9.25	158.6	.5	0	
667	K675	-9.25	158.6	1	0	
668	K676	-9.25	158.6	1.5	0	
669	K677	-9.25	158.6	2	0	
670	K678	-9.25	158.6	2.5	0	
671	K681	-9.25	153.6	-2.5	0	
672	K682	-9.25	153.6	-2	0	
673	K683	-9.25	153.6	-1.5	0	
674	K684	-9.25	153.6	-1	0	
675	K685	-9.25	153.6	-5	0	
676	K686	-9.25	153.6	.5	0	
677	K687	-9.25	153.6	1	0	
678	K688	-9.25	153.6	1.5	0	
679	K689	-9.25	153.6	2	0	
680	K690	-9.25	153.6	2.5	0	
681	K691	0	102.325	9.25	0	
682	K692	0	99.575	9.25	0	
683	K693	3	102.325	9.25	0	
684	K694	3	99.575	9.25	0	
685	K695	-3	102.325	9.25	0	
686	K696	-3	99.575	9.25	0	
687	K697	-2.5	102.325	9.25	0	
688	K698	-2	102.325	9.25	0	
689	K699	-1.5	102.325	9.25	0	
690	K700	-1	102.325	9.25	0	
691	K701	-.5	102.325	9.25	0	
692	K702	.5	102.325	9.25	0	
693	K703	1	102.325	9.25	0	
694	K704	1.5	102.325	9.25	0	
695	K705	2	102.325	9.25	0	
696	K706	2.5	102.325	9.25	0	
697	K707	-3	101.775	9.25	0	
698	K708	-2.5	101.775	9.25	0	
699	K709	-2	101.775	9.25	0	
700	K710	-1.5	101.775	9.25	0	
701	K711	-1	101.775	9.25	0	
702	K712	-.5	101.775	9.25	0	
703	K713	0	101.775	9.25	0	
704	K714	.5	101.775	9.25	0	
705	K715	1	101.775	9.25	0	
706	K716	1.5	101.775	9.25	0	
707	K717	2	101.775	9.25	0	
708	K718	2.5	101.775	9.25	0	
709	K719	3	101.775	9.25	0	
710	K720	-3	101.225	9.25	0	
711	K721	-2.5	101.225	9.25	0	
712	K722	-2	101.225	9.25	0	
713	K723	-1.5	101.225	9.25	0	
714	K724	-1	101.225	9.25	0	
715	K725	-.5	101.225	9.25	0	
716	K726	0	101.225	9.25	0	
717	K727	.5	101.225	9.25	0	
718	K728	1	101.225	9.25	0	
719	K729	1.5	101.225	9.25	0	
720	K730	2	101.225	9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
721	K731	2.5	101.225	9.25	0	
722	K732	3	101.225	9.25	0	
723	K733	-3	100.675	9.25	0	
724	K734	-2.5	100.675	9.25	0	
725	K735	-2	100.675	9.25	0	
726	K736	-1.5	100.675	9.25	0	
727	K737	-1	100.675	9.25	0	
728	K738	-.5	100.675	9.25	0	
729	K739	0	100.675	9.25	0	
730	K740	.5	100.675	9.25	0	
731	K741	1	100.675	9.25	0	
732	K742	1.5	100.675	9.25	0	
733	K743	2	100.675	9.25	0	
734	K744	2.5	100.675	9.25	0	
735	K745	3	100.675	9.25	0	
736	K746	-3	100.125	9.25	0	
737	K747	-2.5	100.125	9.25	0	
738	K748	-2	100.125	9.25	0	
739	K749	-1.5	100.125	9.25	0	
740	K750	-1	100.125	9.25	0	
741	K751	-.5	100.125	9.25	0	
742	K752	0	100.125	9.25	0	
743	K753	.5	100.125	9.25	0	
744	K754	1	100.125	9.25	0	
745	K755	1.5	100.125	9.25	0	
746	K756	2	100.125	9.25	0	
747	K757	2.5	100.125	9.25	0	
748	K758	3	100.125	9.25	0	
749	K759	-2.5	99.575	9.25	0	
750	K760	-2	99.575	9.25	0	
751	K761	-1.5	99.575	9.25	0	
752	K762	-1	99.575	9.25	0	
753	K763	-.5	99.575	9.25	0	
754	K764	.5	99.575	9.25	0	
755	K765	1	99.575	9.25	0	
756	K766	1.5	99.575	9.25	0	
757	K767	2	99.575	9.25	0	
758	K768	2.5	99.575	9.25	0	
759	K759A	3	102.8	9.25	0	
760	K760A	-3	102.8	9.25	0	
761	K761A	-2.5	102.8	9.25	0	
762	K762A	-2	102.8	9.25	0	
763	K763A	-1.5	102.8	9.25	0	
764	K764A	-1	102.8	9.25	0	
765	K765A	-.5	102.8	9.25	0	
766	K766A	.5	102.8	9.25	0	
767	K767A	1	102.8	9.25	0	
768	K768A	1.5	102.8	9.25	0	
769	K769	2	102.8	9.25	0	
770	K770	2.5	102.8	9.25	0	
771	K771	3	99.1	9.25	0	
772	K772	-3	99.1	9.25	0	
773	K773	-2.5	99.1	9.25	0	
774	K774	-2	99.1	9.25	0	
775	K775	-1.5	99.1	9.25	0	
776	K776	-1	99.1	9.25	0	
777	K777	-.5	99.1	9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
778	K778	.5	99.1	9.25	0	
779	K779	1	99.1	9.25	0	
780	K780	1.5	99.1	9.25	0	
781	K781	2	99.1	9.25	0	
782	K782	2.5	99.1	9.25	0	
783	K785	9.25	102.325	-0.	0	
784	K786	9.25	99.575	-0.	0	
785	K787	9.25	102.325	-3	0	
786	K788	9.25	99.575	-3	0	
787	K789	9.25	102.325	3	0	
788	K790	9.25	99.575	3	0	
789	K791	9.25	102.325	2.5	0	
790	K792	9.25	102.325	2	0	
791	K793	9.25	102.325	1.5	0	
792	K794	9.25	102.325	1	0	
793	K795	9.25	102.325	.5	0	
794	K796	9.25	102.325	-.5	0	
795	K797	9.25	102.325	-1	0	
796	K798	9.25	102.325	-1.5	0	
797	K799	9.25	102.325	-2	0	
798	K800	9.25	102.325	-2.5	0	
799	K801	9.25	101.775	3	0	
800	K802	9.25	101.775	2.5	0	
801	K803	9.25	101.775	2	0	
802	K804	9.25	101.775	1.5	0	
803	K805	9.25	101.775	1	0	
804	K806	9.25	101.775	.5	0	
805	K807	9.25	101.775	-0.	0	
806	K808	9.25	101.775	-.5	0	
807	K809	9.25	101.775	-1	0	
808	K810	9.25	101.775	-1.5	0	
809	K811	9.25	101.775	-2	0	
810	K812	9.25	101.775	-2.5	0	
811	K813	9.25	101.775	-3	0	
812	K814	9.25	101.225	3	0	
813	K815	9.25	101.225	2.5	0	
814	K816	9.25	101.225	2	0	
815	K817	9.25	101.225	1.5	0	
816	K818	9.25	101.225	1	0	
817	K819	9.25	101.225	.5	0	
818	K820	9.25	101.225	-0.	0	
819	K821	9.25	101.225	-.5	0	
820	K822	9.25	101.225	-1	0	
821	K823	9.25	101.225	-1.5	0	
822	K824	9.25	101.225	-2	0	
823	K825	9.25	101.225	-2.5	0	
824	K826	9.25	101.225	-3	0	
825	K827	9.25	100.675	3	0	
826	K828	9.25	100.675	2.5	0	
827	K829	9.25	100.675	2	0	
828	K830	9.25	100.675	1.5	0	
829	K831	9.25	100.675	1	0	
830	K832	9.25	100.675	.5	0	
831	K833	9.25	100.675	-0.	0	
832	K834	9.25	100.675	-.5	0	
833	K835	9.25	100.675	-1	0	
834	K836	9.25	100.675	-1.5	0	





**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
835	K837	9.25	100.675	-2	0	
836	K838	9.25	100.675	-2.5	0	
837	K839	9.25	100.675	-3	0	
838	K840	9.25	100.125	3	0	
839	K841	9.25	100.125	2.5	0	
840	K842	9.25	100.125	2	0	
841	K843	9.25	100.125	1.5	0	
842	K844	9.25	100.125	1	0	
843	K845	9.25	100.125	.5	0	
844	K846	9.25	100.125	-0.	0	
845	K847	9.25	100.125	-5	0	
846	K848	9.25	100.125	-1	0	
847	K849	9.25	100.125	-1.5	0	
848	K850	9.25	100.125	-2	0	
849	K851	9.25	100.125	-2.5	0	
850	K852	9.25	100.125	-3	0	
851	K853	9.25	99.575	2.5	0	
852	K854	9.25	99.575	2	0	
853	K855	9.25	99.575	1.5	0	
854	K856	9.25	99.575	1	0	
855	K857	9.25	99.575	.5	0	
856	K858	9.25	99.575	-5	0	
857	K859	9.25	99.575	-1	0	
858	K860	9.25	99.575	-1.5	0	
859	K861	9.25	99.575	-2	0	
860	K862	9.25	99.575	-2.5	0	
861	K863	9.25	102.8	-3	0	
862	K864	9.25	102.8	3	0	
863	K865	9.25	102.8	2.5	0	
864	K866	9.25	102.8	2	0	
865	K867	9.25	102.8	1.5	0	
866	K868	9.25	102.8	1	0	
867	K869	9.25	102.8	.5	0	
868	K870	9.25	102.8	-5	0	
869	K871	9.25	102.8	-1	0	
870	K872	9.25	102.8	-1.5	0	
871	K873	9.25	102.8	-2	0	
872	K874	9.25	102.8	-2.5	0	
873	K875	9.25	99.1	-3	0	
874	K876	9.25	99.1	3	0	
875	K877	9.25	99.1	2.5	0	
876	K878	9.25	99.1	2	0	
877	K879	9.25	99.1	1.5	0	
878	K880	9.25	99.1	1	0	
879	K881	9.25	99.1	.5	0	
880	K882	9.25	99.1	-5	0	
881	K883	9.25	99.1	-1	0	
882	K884	9.25	99.1	-1.5	0	
883	K885	9.25	99.1	-2	0	
884	K886	9.25	99.1	-2.5	0	
885	K889	-0.	102.325	-9.25	0	
886	K890	-0.	99.575	-9.25	0	
887	K891	-3	102.325	-9.25	0	
888	K892	-3	99.575	-9.25	0	
889	K893	3	102.325	-9.25	0	
890	K894	3	99.575	-9.25	0	
891	K895	2.5	102.325	-9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
892	K896	2	102.325	-9.25	0	
893	K897	1.5	102.325	-9.25	0	
894	K898	1	102.325	-9.25	0	
895	K899	.5	102.325	-9.25	0	
896	K900	-.5	102.325	-9.25	0	
897	K901	-1	102.325	-9.25	0	
898	K902	-1.5	102.325	-9.25	0	
899	K903	-2	102.325	-9.25	0	
900	K904	-2.5	102.325	-9.25	0	
901	K905	3	101.775	-9.25	0	
902	K906	2.5	101.775	-9.25	0	
903	K907	2	101.775	-9.25	0	
904	K908	1.5	101.775	-9.25	0	
905	K909	1	101.775	-9.25	0	
906	K910	.5	101.775	-9.25	0	
907	K911	-0.	101.775	-9.25	0	
908	K912	-.5	101.775	-9.25	0	
909	K913	-1	101.775	-9.25	0	
910	K914	-1.5	101.775	-9.25	0	
911	K915	-2	101.775	-9.25	0	
912	K916	-2.5	101.775	-9.25	0	
913	K917	-3	101.775	-9.25	0	
914	K918	3	101.225	-9.25	0	
915	K919	2.5	101.225	-9.25	0	
916	K920	2	101.225	-9.25	0	
917	K921	1.5	101.225	-9.25	0	
918	K922	1	101.225	-9.25	0	
919	K923	.5	101.225	-9.25	0	
920	K924	-0.	101.225	-9.25	0	
921	K925	-.5	101.225	-9.25	0	
922	K926	-1	101.225	-9.25	0	
923	K927	-1.5	101.225	-9.25	0	
924	K928	-2	101.225	-9.25	0	
925	K929	-2.5	101.225	-9.25	0	
926	K930	-3	101.225	-9.25	0	
927	K931	3	100.675	-9.25	0	
928	K932	2.5	100.675	-9.25	0	
929	K933	2	100.675	-9.25	0	
930	K934	1.5	100.675	-9.25	0	
931	K935	1	100.675	-9.25	0	
932	K936	.5	100.675	-9.25	0	
933	K937	-0.	100.675	-9.25	0	
934	K938	-.5	100.675	-9.25	0	
935	K939	-1	100.675	-9.25	0	
936	K940	-1.5	100.675	-9.25	0	
937	K941	-2	100.675	-9.25	0	
938	K942	-2.5	100.675	-9.25	0	
939	K943	-3	100.675	-9.25	0	
940	K944	3	100.125	-9.25	0	
941	K945	2.5	100.125	-9.25	0	
942	K946	2	100.125	-9.25	0	
943	K947	1.5	100.125	-9.25	0	
944	K948	1	100.125	-9.25	0	
945	K949	.5	100.125	-9.25	0	
946	K950	-0.	100.125	-9.25	0	
947	K951	-.5	100.125	-9.25	0	
948	K952	-1	100.125	-9.25	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
949	K953	-1.5	100.125	-9.25	0	
950	K954	-2	100.125	-9.25	0	
951	K955	-2.5	100.125	-9.25	0	
952	K956	-3	100.125	-9.25	0	
953	K957	2.5	99.575	-9.25	0	
954	K958	2	99.575	-9.25	0	
955	K959	1.5	99.575	-9.25	0	
956	K960	1	99.575	-9.25	0	
957	K961	.5	99.575	-9.25	0	
958	K962	-.5	99.575	-9.25	0	
959	K963	-1	99.575	-9.25	0	
960	K964	-1.5	99.575	-9.25	0	
961	K965	-2	99.575	-9.25	0	
962	K966	-2.5	99.575	-9.25	0	
963	K967	-3	102.8	-9.25	0	
964	K968	3	102.8	-9.25	0	
965	K969	2.5	102.8	-9.25	0	
966	K970	2	102.8	-9.25	0	
967	K971	1.5	102.8	-9.25	0	
968	K972	1	102.8	-9.25	0	
969	K973	.5	102.8	-9.25	0	
970	K974	-.5	102.8	-9.25	0	
971	K975	-1	102.8	-9.25	0	
972	K976	-1.5	102.8	-9.25	0	
973	K977	-2	102.8	-9.25	0	
974	K978	-2.5	102.8	-9.25	0	
975	K979	-3	99.1	-9.25	0	
976	K980	3	99.1	-9.25	0	
977	K981	2.5	99.1	-9.25	0	
978	K982	2	99.1	-9.25	0	
979	K983	1.5	99.1	-9.25	0	
980	K984	1	99.1	-9.25	0	
981	K985	.5	99.1	-9.25	0	
982	K986	-.5	99.1	-9.25	0	
983	K987	-1	99.1	-9.25	0	
984	K988	-1.5	99.1	-9.25	0	
985	K989	-2	99.1	-9.25	0	
986	K990	-2.5	99.1	-9.25	0	
987	K993	-9.25	102.325	0.	0	
988	K994	-9.25	99.575	0.	0	
989	K995	-9.25	102.325	3	0	
990	K996	-9.25	99.575	3	0	
991	K997	-9.25	102.325	-3	0	
992	K998	-9.25	99.575	-3	0	
993	K999	-9.25	102.325	-2.5	0	
994	K1000	-9.25	102.325	-2	0	
995	K1001	-9.25	102.325	-1.5	0	
996	K1002	-9.25	102.325	-1	0	
997	K1003	-9.25	102.325	-.5	0	
998	K1004	-9.25	102.325	.5	0	
999	K1005	-9.25	102.325	1	0	
1000	K1006	-9.25	102.325	1.5	0	
1001	K1007	-9.25	102.325	2	0	
1002	K1008	-9.25	102.325	2.5	0	
1003	K1009	-9.25	101.775	-3	0	
1004	K1010	-9.25	101.775	-2.5	0	
1005	K1011	-9.25	101.775	-2	0	



**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1006	K1012	-9.25	101.775	-1.5	0	
1007	K1013	-9.25	101.775	-1	0	
1008	K1014	-9.25	101.775	-.5	0	
1009	K1015	-9.25	101.775	0.	0	
1010	K1016	-9.25	101.775	.5	0	
1011	K1017	-9.25	101.775	1	0	
1012	K1018	-9.25	101.775	1.5	0	
1013	K1019	-9.25	101.775	2	0	
1014	K1020	-9.25	101.775	2.5	0	
1015	K1021	-9.25	101.775	3	0	
1016	K1022	-9.25	101.225	-3	0	
1017	K1023	-9.25	101.225	-2.5	0	
1018	K1024	-9.25	101.225	-2	0	
1019	K1025	-9.25	101.225	-1.5	0	
1020	K1026	-9.25	101.225	-1	0	
1021	K1027	-9.25	101.225	-.5	0	
1022	K1028	-9.25	101.225	0.	0	
1023	K1029	-9.25	101.225	.5	0	
1024	K1030	-9.25	101.225	1	0	
1025	K1031	-9.25	101.225	1.5	0	
1026	K1032	-9.25	101.225	2	0	
1027	K1033	-9.25	101.225	2.5	0	
1028	K1034	-9.25	101.225	3	0	
1029	K1035	-9.25	100.675	-3	0	
1030	K1036	-9.25	100.675	-2.5	0	
1031	K1037	-9.25	100.675	-2	0	
1032	K1038	-9.25	100.675	-1.5	0	
1033	K1039	-9.25	100.675	-1	0	
1034	K1040	-9.25	100.675	-.5	0	
1035	K1041	-9.25	100.675	0.	0	
1036	K1042	-9.25	100.675	.5	0	
1037	K1043	-9.25	100.675	1	0	
1038	K1044	-9.25	100.675	1.5	0	
1039	K1045	-9.25	100.675	2	0	
1040	K1046	-9.25	100.675	2.5	0	
1041	K1047	-9.25	100.675	3	0	
1042	K1048	-9.25	100.125	-3	0	
1043	K1049	-9.25	100.125	-2.5	0	
1044	K1050	-9.25	100.125	-2	0	
1045	K1051	-9.25	100.125	-1.5	0	
1046	K1052	-9.25	100.125	-1	0	
1047	K1053	-9.25	100.125	-.5	0	
1048	K1054	-9.25	100.125	0.	0	
1049	K1055	-9.25	100.125	.5	0	
1050	K1056	-9.25	100.125	1	0	
1051	K1057	-9.25	100.125	1.5	0	
1052	K1058	-9.25	100.125	2	0	
1053	K1059	-9.25	100.125	2.5	0	
1054	K1060	-9.25	100.125	3	0	
1055	K1061	-9.25	99.575	-2.5	0	
1056	K1062	-9.25	99.575	-2	0	
1057	K1063	-9.25	99.575	-1.5	0	
1058	K1064	-9.25	99.575	-1	0	
1059	K1065	-9.25	99.575	-.5	0	
1060	K1066	-9.25	99.575	.5	0	
1061	K1067	-9.25	99.575	1	0	
1062	K1068	-9.25	99.575	1.5	0	





**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1063	K1069	-9.25	99.575	2	0	
1064	K1070	-9.25	99.575	2.5	0	
1065	K1071	-9.25	102.8	3	0	
1066	K1072	-9.25	102.8	-3	0	
1067	K1073	-9.25	102.8	-2.5	0	
1068	K1074	-9.25	102.8	-2	0	
1069	K1075	-9.25	102.8	-1.5	0	
1070	K1076	-9.25	102.8	-1	0	
1071	K1077	-9.25	102.8	-.5	0	
1072	K1078	-9.25	102.8	.5	0	
1073	K1079	-9.25	102.8	1	0	
1074	K1080	-9.25	102.8	1.5	0	
1075	K1081	-9.25	102.8	2	0	
1076	K1082	-9.25	102.8	2.5	0	
1077	K1083	-9.25	99.1	3	0	
1078	K1084	-9.25	99.1	-3	0	
1079	K1085	-9.25	99.1	-2.5	0	
1080	K1086	-9.25	99.1	-2	0	
1081	K1087	-9.25	99.1	-1.5	0	
1082	K1088	-9.25	99.1	-1	0	
1083	K1089	-9.25	99.1	-.5	0	
1084	K1090	-9.25	99.1	.5	0	
1085	K1091	-9.25	99.1	1	0	
1086	K1092	-9.25	99.1	1.5	0	
1087	K1093	-9.25	99.1	2	0	
1088	K1094	-9.25	99.1	2.5	0	

**Joint Boundary Conditions**

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N49						
2	N50						
3	N51						
4	N52						
5	D	Reaction	Reaction	Reaction		Reaction	
6	C	Reaction	Reaction	Reaction		Reaction	
7	B	Reaction	Reaction	Reaction		Reaction	
8	A	Reaction	Reaction	Reaction		Reaction	
9	N145						
10	N146						
11	N147						
12	N148						
13	N157						
14	N158A						
15	N159A						
16	N160						
17	N161						
18	N162						
19	N163						
20	N164						
21	N165						
22	N166						
23	N167						
24	N168						
25	N169						
26	N170						



**Joint Boundary Conditions (Continued)**

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
27	N171						
28	N172						
29	K185	Reaction	Reaction	Reaction		Reaction	
30	K186	Reaction	Reaction	Reaction		Reaction	
31	K187						
32	K188						
33	K189						
34	K190						
35	K191	Reaction	Reaction	Reaction		Reaction	
36	K192	Reaction	Reaction	Reaction		Reaction	
37	K193	Reaction	Reaction	Reaction		Reaction	
38	K194	Reaction	Reaction	Reaction		Reaction	
39	K195	Reaction	Reaction	Reaction		Reaction	
40	K196	Reaction	Reaction	Reaction		Reaction	
41	N197						
42	N198						
43	N199						
44	N200						
45	N201						
46	N202						
47	N203						
48	N204						

**Basic Load Cases**

	BLC Description	Category	X ...	Y Gravity	Z ...	Joint	Point	Distributed	Area(Mem...	Surface(PI...
1	Dead	None		-1		28	238	20		
2	No Ice Wind 0 deg	None				40	580	76		
3	No Ice Wind 45 deg	None				80	548	72		
4	No Ice Wind 90 deg	None				40	572	76		
5	No Ice Wind 135 deg	None				80	560	104		
6	No Ice Wind 180 deg	None				40	580	76		
7	No Ice Wind 225 deg	None				80	548	72		
8	No Ice Wind 270 deg	None				40	572	76		
9	No Ice Wind 315 deg	None				80	560	104		
10	Ice	None				28	238	266		
11	Temperature Drop	None						258		
12	Ice Wind 0 deg	None				40	576	56		
13	Ice Wind 45 deg	None				80	548	48		
14	Ice Wind 90 deg	None				40	568	56		
15	Ice Wind 135 deg	None				80	560	80		
16	Ice Wind 180 deg	None				40	576	56		
17	Ice Wind 225 deg	None				80	548	48		
18	Ice Wind 270 deg	None				40	568	56		
19	Ice Wind 315 deg	None				80	560	80		
20	Service Wind 0 deg	None				40	580	56		
21	Service Wind 45 deg	None				80	548	48		
22	Service Wind 90 deg	None				40	572	56		
23	Service Wind 135 deg	None				80	560	80		
24	Service Wind 180 deg	None				40	580	56		
25	Service Wind 225 deg	None				80	548	48		
26	Service Wind 270 deg	None				40	572	56		
27	Service Wind 315 deg	None				80	560	80		



**Load Combinations**

	Description	S...	PD...	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	Dead Only	Yes	Y		1	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0	0	0
2	Dead+Wind 0 deg - No Ice	Yes	Y		1	1	2	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
3	Dead+Wind 45 deg - No ...	Yes	Y		1	1	3	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
4	Dead+Wind 90 deg - No ...	Yes	Y		1	1	4	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
5	Dead+Wind 135 deg - N...	Yes	Y		1	1	5	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
6	Dead+Wind 180 deg - N...	Yes	Y		1	1	6	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
7	Dead+Wind 225 deg - N...	Yes	Y		1	1	7	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
8	Dead+Wind 270 deg - N...	Yes	Y		1	1	8	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
9	Dead+Wind 315 deg - N...	Yes	Y		1	1	9	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
10	Dead+Ice+Temp	Yes	Y		1	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0	0	0
11	Dead+Wind 0 deg+Ice+T...	Yes	Y		1	1	12	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
12	Dead+Wind 45 deg+Ice+...	Yes	Y		1	1	13	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
13	Dead+Wind 90 deg+Ice+...	Yes	Y		1	1	14	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
14	Dead+Wind 135 deg+Ice...	Yes	Y		1	1	15	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
15	Dead+Wind 180 deg+Ice...	Yes	Y		1	1	16	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
16	Dead+Wind 225 deg+Ice...	Yes	Y		1	1	17	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
17	Dead+Wind 270 deg+Ice...	Yes	Y		1	1	18	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
18	Dead+Wind 315 deg+Ice...	Yes	Y		1	1	19	1	10	1	11	1	28	1	29	1	0	0	0	0	0	0
19	Dead+Wind 0 deg - Servi...		Y		1	1	20	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
20	Dead+Wind 45 deg - Ser...		Y		1	1	21	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
21	Dead+Wind 90 deg - Ser...		Y		1	1	22	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
22	Dead+Wind 135 deg - S...		Y		1	1	23	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
23	Dead+Wind 180 deg - S...		Y		1	1	24	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
24	Dead+Wind 225 deg - S...		Y		1	1	25	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
25	Dead+Wind 270 deg - S...		Y		1	1	26	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0
26	Dead+Wind 315 deg - S...		Y		1	1	27	1	28	1	29	1	0	0	0	0	0	0	0	0	0	0

**Envelope Joint Reactions**

Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	D	max	2.177	6	183.953	7	38.679	14	0	1	.01	18	0	1
2		min	-33.951	18	-119.028	3	-2.641	8	0	1	-.004	9	0	1
3	C	max	34.012	12	185.48	5	38.509	16	0	1	.004	3	0	1
4		min	-1.902	5	-130.852	9	-2.702	5	0	1	-.011	12	0	1
5	B	max	34.086	14	186.525	3	2.797	4	0	1	.004	9	0	1
6		min	-1.985	2	-120.799	7	-40.761	18	0	1	-.004	18	0	1
7	A	max	2.123	2	198.381	9	2.666	9	0	1	.004	12	0	1
8		min	-33.958	16	-122.318	5	-40.857	12	0	1	-.005	3	0	1
9	K185	max	.351	8	30.425	3	33.667	3	0	1	1.124	13	0	1
10		min	-.345	4	-22.588	7	-63.681	16	0	1	-.39	9	0	1
11	K186	max	.343	8	31.413	9	34.717	9	0	1	.331	3	0	1
12		min	-.353	4	-22.505	5	-64.035	14	0	1	-1.119	17	0	1
13	K191	max	67.204	18	31.601	5	.343	2	0	1	1.113	15	0	1
14		min	-33.814	5	-25.53	9	-.34	6	0	1	-.342	3	0	1
15	K192	max	66.752	16	30.996	3	.338	2	0	1	.33	5	0	1
16		min	-33.422	3	-23.741	7	-.344	6	0	1	-1.141	11	0	1
17	K193	max	34.34	7	32.098	7	.344	2	0	1	.345	9	0	1
18		min	-67.197	12	-23.809	3	-.341	6	0	1	-1.111	15	0	1
19	K194	max	35.781	9	33.616	9	.337	2	0	1	1.136	11	0	1
20		min	-67.201	14	-24.244	5	-.344	6	0	1	-.308	7	0	1
21	K195	max	.312	8	32.434	7	66.011	12	0	1	1.276	17	0	1
22		min	-.322	4	-25.097	3	-32.467	7	0	1	-.37	5	0	1
23	K196	max	.32	8	33.425	5	66.078	18	0	1	.393	7	0	1
24		min	-.313	4	-27.245	9	-33.354	5	0	1	-1.281	13	0	1
25	Totals:	max	115.401	8	266.897	16	112.579	2						



**Envelope Joint Reactions (Continued)**

Joint	X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
26	min	-113.763	4	161.482	3	-110.131	6					

**Envelope AISC 14th(360-10): LRFD Steel Code Checks**

Member	Shape	Code Ch...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc	[...phi*Pnt [k]	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	J573	W14x61	.152	0	18	.019	0	y	18	399.102	579.96	88.56	275.4	2...H1-1b
2	J574	W14x61	.152	0	16	.019	0	y	16	399.102	579.96	88.56	275.4	2...H1-1b
3	J575	W14x61	.137	0	12	.017	0	y	12	381.613	579.96	88.56	275.4	2...H1-1b
4	J576	W14x61	.137	0	18	.017	0	y	18	381.613	579.96	88.56	275.4	2...H1-1b
5	J577	W14x61	.152	0	14	.019	0	y	14	399.102	579.96	88.56	275.4	2...H1-1b
6	J578	W14x61	.152	0	12	.019	0	y	12	399.102	579.96	88.56	275.4	2...H1-1b
7	J579	W14x61	.144	0	16	.018	.168	y	16	416.335	579.96	88.56	275.4	2...H1-1b
8	J580	W14x61	.144	0	14	.018	0	y	14	416.335	579.96	88.56	275.4	2...H1-1b
9	M359	W10x22	.026	9.828	2	.006	18.5	y	2	52.256	210.276	16.47	44.34	1...H1-1b
10	M360	W10x22	.025	9.635	6	.006	18.5	y	6	52.256	210.276	16.47	44.475	1...H1-1b
11	J133	W8x15	.034	0	12	.005	0	z	8	136.18	143.856	7.209	36.72	1...H1-1b*
12	J134	W8x15	.034	0	14	.005	0	z	8	136.18	143.856	7.209	36.72	1...H1-1b*
13	J135	W8x15	.034	0	16	.004	0	z	5	136.18	143.856	7.209	36.72	1...H1-1b*
14	J136	W8x15	.034	0	18	.005	0	z	4	136.18	143.856	7.209	36.72	1...H1-1b*
15	J125	W14x61	.115	9.443	15	.008	0	y	13	375.749	579.96	88.56	242.111	1 H1-1b
16	J126	W14x61	.112	11.177	12	.009	0	y	11	375.749	579.96	88.56	242.111	1 H1-1b
17	J127	W14x61	.115	9.057	11	.008	18.5	y	13	375.749	579.96	88.56	242.111	1 H1-1b
18	J128	W14x61	.112	7.323	18	.009	18.5	y	11	375.749	579.96	88.56	242.111	1 H1-1b
19	J105	W10x77	.100	6.167	8	.067	6.745	y	8	668.418	735.48	123.93	263.52	1 H1-1b
20	J106	W10x77	.095	12.333	11	.059	11.755	y	2	668.418	735.48	123.93	263.52	1 H1-1b
21	J107	W10x77	.098	12.333	8	.066	11.755	y	8	668.418	735.48	123.93	263.52	1 H1-1b
22	J108	W10x77	.093	6.167	11	.058	11.177	y	11	668.418	735.48	123.93	263.52	1 H1-1b
23	J93	W10x33	.186	0	8	.135	7.13	y	17	264.868	314.604	37.8	102.523	1 H1-1b
24	J94	W10x33	.171	18.5	2	.133	11.37	y	11	264.868	314.604	37.8	102.523	1 H1-1b
25	J95	W10x33	.182	18.5	8	.134	11.37	y	17	264.868	314.604	37.8	102.523	1 H1-1b
26	J96	W10x33	.161	0	2	.132	7.13	y	11	264.868	314.604	37.8	102.523	1 H1-1b
27	J5	W12x53	.348	1.734	7	.133	12.333	y	14	331.272	505.44	78.57	186.337	1 H1-1b
28	J6	W12x53	.374	0	14	.162	16.958	y	3	331.272	505.44	78.57	186.337	1 H1-1b
29	J7	W12x53	.368	16.766	9	.134	12.333	y	9	331.272	505.44	78.57	186.337	1 H1-1b
30	J8	W12x53	.358	18.5	16	.172	1.542	y	9	331.272	505.44	78.57	186.337	1 H1-1b
31	M5	C8x11.5	.072	4.396	15	.013	4.396	y	15	74.906	109.188	3.353	23.558	1 H1-1b
32	M6	C8x11.5	.073	4.396	13	.013	4.396	y	13	74.906	109.188	3.353	23.558	1 H1-1b
33	M7	C8x11.5	.063	4.396	11	.012	4.396	y	11	74.906	109.188	3.353	23.558	1 H1-1b
34	M8	C8x11.5	.065	4.396	17	.012	4.396	y	17	74.906	109.188	3.353	23.558	1 H1-1b
35	M67	L2 1/2x2x3/16	.255	5.997	15	.006	5.997	z	17	6.435	26.212	.344	.805	1 H2-1
36	M68	L2 1/2x2x3/16	.257	5.997	13	.006	5.997	z	14	6.435	26.212	.344	.805	1 H2-1
37	M69	L2 1/2x2x3/16	.249	5.997	11	.006	5.997	z	12	6.435	26.212	.344	.805	1 H2-1
38	M70	L2 1/2x2x3/16	.248	5.997	18	.006	5.997	z	11	6.435	26.212	.344	.805	1 H2-1
39	M42	L2 1/2x2x3/16	.193	5.459	17	.005	5.347	z	12	8.093	26.212	.344	.877	1 H2-1
40	M43	L2 1/2x2x3/16	.201	5.459	15	.005	5.347	z	18	8.093	26.212	.344	.877	1 H2-1
41	M44	L2 1/2x2x3/16	.218	5.347	13	.005	5.347	z	14	8.093	26.212	.344	.877	1 H2-1
42	M45	L2 1/2x2x3/16	.208	5.347	15	.005	5.347	z	13	8.093	26.212	.344	.877	1 H2-1
43	M22	L2 1/2x2x3/16	.153	4.697	13	.005	4.697	z	18	10.457	26.212	.344	.96	1 H2-1
44	M23	L2 1/2x2x3/16	.147	4.697	15	.005	4.697	z	18	10.457	26.212	.344	.96	1 H2-1
45	M24	L2 1/2x2x3/16	.150	4.697	17	.005	4.697	z	14	10.457	26.212	.344	.96	1 H2-1
46	M25	L2 1/2x2x3/16	.156	4.697	15	.005	4.697	z	12	10.457	26.212	.344	.96	1 H2-1
47	M86	L5x3x1/4	.446	.79	16	.022	0	z	17	35.469	62.856	1.034	7.341	1 H2-1
48	M98	L5x3x1/4	.445	4.266	12	.022	5.056	z	11	35.469	62.856	1.034	7.341	1 H2-1
49	M110	L5x3x1/4	.421	4.266	18	.021	5.056	z	17	35.469	62.856	1.034	7.341	1 H2-1
50	M122	L5x3x1/4	.412	.79	18	.020	0	z	11	35.469	62.856	1.034	7.341	1 H2-1
51	M77	2L2 1/2x2x3...	.012	0	8	.001	0	y	17	41.041	52.488	2.722	2.536	1 H1-1b*



**Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)**

Member	Shape	Code Ch...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc f...	phi*Pnt [k]	phi*Mn v...	phi*Mn z...	Cb	Egn	
52	M82	2L2 1/2x2x3...	.006	1.056	17	.001	0	y	17	41.041	52.488	2.722	2.536	1	H1-1b
53	M89	2L2 1/2x2x3...	.013	0	7	.001	0	y	15	41.041	52.488	2.722	2.536	1	H1-1b*
54	M94	2L2 1/2x2x3...	.007	1.056	11	.001	0	y	15	41.041	52.488	2.722	2.536	1	H1-1b
55	M101	2L2 1/2x2x3...	.009	0	5	.001	0	y	13	41.041	52.488	2.722	2.536	1	H1-1b*
56	M106	2L2 1/2x2x3...	.008	0	4	.001	0	y	13	41.041	52.488	2.722	2.536	1	H1-1b*
57	M113	2L2 1/2x2x3...	.008	1.056	11	.001	0	y	11	41.041	52.488	2.722	2.536	1	H1-1b
58	M118	2L2 1/2x2x3...	.006	1.056	14	.001	0	y	11	41.041	52.488	2.722	2.536	1	H1-1b
59	M78	2L2 1/2x2 1/...	.033	0	4	.002	4.225	y	12	43.143	58.32	4.017	2.611	1	H1-1b*
60	M83	2L2 1/2x2 1/...	.042	0	8	.002	4.225	y	13	43.143	58.32	4.017	2.611	1	H1-1b*
61	M90	2L2 1/2x2 1/...	.025	2.113	11	.002	4.225	y	11	43.143	58.32	4.017	2.611	1	H1-1b
62	M95	2L2 1/2x2 1/...	.026	2.113	15	.002	4.225	y	11	43.143	58.32	4.017	2.611	1	H1-1b
63	M102	2L2 1/2x2 1/...	.034	0	8	.002	4.225	y	17	43.143	58.32	4.017	2.611	1	H1-1b*
64	M107	2L2 1/2x2 1/...	.042	0	4	.002	4.225	y	17	43.143	58.32	4.017	2.611	1	H1-1b*
65	M114	2L2 1/2x2 1/...	.025	2.113	16	.002	4.225	y	14	43.143	58.32	4.017	2.611	1	H1-1b
66	M119	2L2 1/2x2 1/...	.024	2.113	11	.002	4.225	y	15	43.143	58.32	4.017	2.611	1	H1-1b
67	M260	L3x3x3	.051	3.033	8	.001	0	y	17	13.335	35.316	1.32	2.237	1...	H2-1
68	M261	L3x3x3	.051	3.033	4	.001	0	z	17	13.335	35.316	1.32	2.237	1...	H2-1
69	M262	L3x3x3	.050	3.033	6	.001	6.618	y	11	13.335	35.316	1.32	2.237	1...	H2-1
70	M263	L3x3x3	.053	3.033	2	.001	6.618	z	11	13.335	35.316	1.32	2.237	1...	H2-1
71	M264	L3x3x3	.043	3.033	4	.001	6.618	y	3	13.335	35.316	1.32	2.237	1...	H2-1
72	M265	L3x3x3	.047	3.033	8	.001	6.618	z	3	13.335	35.316	1.32	2.237	1...	H2-1
73	M266	L3x3x3	.042	3.033	2	.001	0	y	7	13.335	35.316	1.32	2.237	1...	H2-1
74	M267	L3x3x3	.039	3.033	15	.001	0	z	7	13.335	35.316	1.32	2.237	1...	H2-1
75	M79	L2 1/2x2x3/16	.182	3.092	4	.001	0	z	14	5.318	26.212	.344	1.25	1	H2-1
76	M84	L2 1/2x2x3/16	.070	3.367	17	.001	0	z	13	5.318	26.212	.344	1.16	1	H2-1
77	M91	L2 1/2x2x3/16	.193	3.092	3	.001	0	z	10	5.318	26.212	.344	1.25	1	H2-1
78	M96	L2 1/2x2x3/16	.074	3.367	11	.001	6.597	z	13	5.318	26.212	.344	1.16	1	H2-1
79	M103	L2 1/2x2x3/16	.166	3.092	9	.001	6.597	z	11	5.318	26.212	.344	1.25	1	H2-1
80	M108	L2 1/2x2x3/16	.090	3.092	8	.001	0	z	14	5.318	26.212	.344	1.16	1	H2-1
81	M115	L2 1/2x2x3/16	.116	3.092	7	.001	0	z	11	5.318	26.212	.344	1.25	1	H2-1
82	M120	L2 1/2x2x3/16	.070	3.367	14	.001	6.597	z	17	5.318	26.212	.344	1.16	1	H2-1
83	M80	L3x3x3/16	.516	3.636	6	.003	7.426	z	12	11.014	35.316	-1.851	2.054	1	H2-1
84	M85	L3x3x3/16	.531	3.636	5	.003	0	z	17	11.014	35.316	-1.851	2.054	1	H2-1
85	M92	L3x3x3/16	.501	3.636	4	.003	0	z	10	11.014	35.316	-1.851	2.054	1	H2-1
86	M97	L3x3x3/16	.506	3.636	4	.003	7.426	z	13	11.014	35.316	-1.851	2.054	1	H2-1
87	M104	L3x3x3/16	.558	3.636	3	.003	7.426	z	12	11.014	35.316	-1.851	2.054	1	H2-1
88	M109	L3x3x3/16	.563	3.636	9	.003	0	z	13	11.014	35.316	-1.851	2.054	1	H2-1
89	M116	L3x3x3/16	.511	3.636	8	.003	7.426	z	11	11.014	35.316	-1.851	2.054	1	H2-1
90	M121	L3x3x3/16	.524	3.636	8	.003	7.426	z	18	11.014	35.316	-1.851	2.054	1	H2-1
91	D1	W10x112	.382	23.101	7	.209	1.034	y	14	756.894	1065.96	186.84	382.875	1	H1-1a
92	C1	W10x112	.383	23.101	5	.208	1.034	y	16	756.894	1065.96	186.84	382.875	1	H1-1a
93	B1	W10x112	.377	23.101	3	.220	1.034	y	18	756.894	1065.96	186.84	382.875	1	H1-1a
94	A1	W10x112	.404	23.101	9	.221	1.034	y	12	756.894	1065.96	186.84	382.875	1	H1-1a
95	M71	L6x6x1/2	.538	0	7	.018	12.776	y	4	149.184	186.3	7.512	28.608	1	H2-1
96	M72	L6x6x1/2	.535	0	5	.016	12.776	z	8	149.184	186.3	7.512	28.608	1	H2-1
97	M73	L6x6x1/2	.543	0	3	.018	12.776	y	8	149.184	186.3	7.512	28.608	1	H2-1
98	M74	L6x6x1/2	.587	0	9	.016	12.776	z	4	149.184	186.3	7.512	28.608	1	H2-1
99	M46	L5x5x1/2	.375	5.187	7	.004	5.291	y	7	124	153.9	5.198	20.221	1	H2-1
100	M47	L5x5x1/2	.392	5.187	5	.004	5.291	y	5	124	153.9	5.198	20.221	1	H2-1
101	M48	L5x5x1/2	.371	5.187	3	.004	5.291	y	3	124	153.9	5.198	20.221	1	H2-1
102	M49	L5x5x1/2	.429	5.187	9	.004	5.291	y	9	124	153.9	5.198	20.221	1	H2-1
103	M26	L5x5x1/2	.314	5.291	7	.036	9.959	y	4	123.67	153.9	5.198	20.203	1	H2-1
104	M27	L5x5x1/2	.329	5.291	5	.036	9.959	z	8	123.67	153.9	5.198	20.203	1	H2-1
105	M28	L5x5x1/2	.306	5.291	3	.033	9.959	z	6	123.67	153.9	5.198	20.203	1	H2-1
106	M29	L5x5x1/2	.349	5.291	9	.035	9.959	y	6	123.67	153.9	5.198	20.203	1	H2-1
107	D2	W10x77	.353	1.292	7	.014	17.115	y	6	562.314	735.48	123.93	254.308	1	H1-1a
108	C2	W10x77	.357	1.292	5	.014	17.115	y	6	562.314	735.48	123.93	254.308	1	H1-1a





**Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)**

Member	Shape	Code Ch...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc	[...phi*Pnt [k]	phi*Mn y...	phi*Mn z...	Cb	Eqn	
109	B2	W10x77	.352	1.292	3	.014	17.115	y	2	562.314	735.48	123.93	254.308	1	H1-1a
110	A2	W10x77	.378	1.292	9	.014	17.115	y	2	562.314	735.48	123.93	254.308	1	H1-1a
111	D3	W10x77	.374	14.9	7	.078	9.933	y	7	663.984	735.48	123.93	263.52	1	H1-1b
112	C3	W10x77	.380	14.9	5	.082	9.933	y	5	663.984	735.48	123.93	263.52	1	H1-1b
113	B3	W10x77	.368	14.9	3	.084	9.933	y	3	663.984	735.48	123.93	263.52	1	H1-1b
114	A3	W10x77	.414	14.9	9	.088	9.933	y	9	663.984	735.48	123.93	263.52	1	H1-1b
115	M1	L5x5x1/2	.151	0	7	.085	9.959	y	4	123.247	153.9	5.198	20.18	1	H2-1
116	M2	L5x5x1/2	.183	0	16	.106	9.959	y	2	123.247	153.9	5.198	20.18	1	H2-1
117	M3	L5x5x1/2	.155	0	2	.095	9.959	z	2	123.247	153.9	5.198	20.18	1	H2-1
118	M4	L5x5x1/2	.160	0	9	.053	9.959	z	9	123.247	153.9	5.198	20.18	1	H2-1
119	J129	W16x50	.221	2.357	16	.153	4.714	y	7	445.606	476.28	44.01	248.4	1...	H1-1b
120	J130	W16x50	.241	2.357	14	.158	0	y	5	445.606	476.28	44.01	248.4	1...	H1-1b
121	J131	W16x50	.234	2.357	12	.152	4.714	y	3	445.606	476.28	44.01	248.4	1...	H1-1b
122	J132	W16x50	.223	2.357	9	.172	0	y	9	445.606	476.28	44.01	248.4	1...	H1-1b
123	M256	HSS6x6x10	.085	0	7	.029	0	y	9	475.512	484.38	80.04	80.04	1	H1-1b*
124	M257	HSS6x6x10	.087	0	5	.032	0	y	7	475.512	484.38	80.04	80.04	1	H1-1b*
125	M258	HSS6x6x10	.085	0	3	.031	0	y	9	475.512	484.38	80.04	80.04	1	H1-1b*
126	M259	HSS6x6x10	.095	0	9	.026	0	y	3	475.512	484.38	80.04	80.04	1	H1-1b*
127	J109	W10x26	.014	6.541	16	.005	13.081	y	13	122.421	246.564	20.25	66.927	1	H1-1b
128	J110	W10x26	.014	6.541	13	.005	13.081	y	13	122.421	246.564	20.25	66.927	1	H1-1b
129	J111	W10x26	.014	6.541	17	.005	13.081	y	16	122.421	246.564	20.25	66.927	1	H1-1b
130	J112	W10x26	.014	6.541	13	.005	13.081	y	18	122.421	246.564	20.25	66.927	1	H1-1b
131	J97	W10x26	.014	6.541	14	.005	13.081	y	16	122.421	246.564	20.25	66.927	1	H1-1b
132	J98	W10x26	.014	6.541	11	.005	13.081	y	16	122.421	246.564	20.25	66.927	1	H1-1b
133	J99	W10x26	.014	6.541	16	.005	13.081	y	16	122.421	246.564	20.25	66.927	1	H1-1b
134	J100	W10x26	.014	6.541	18	.005	13.081	y	11	122.421	246.564	20.25	66.927	1	H1-1b
135	J85	W10x26	.014	6.541	18	.005	13.081	y	16	122.421	246.564	20.25	66.927	1	H1-1b
136	J86	W10x26	.014	6.541	14	.005	13.081	y	18	122.421	246.564	20.25	66.927	1	H1-1b
137	J87	W10x26	.014	6.541	16	.005	13.081	y	12	122.421	246.564	20.25	66.927	1	H1-1b
138	J88	W10x26	.014	6.541	13	.005	13.081	y	14	122.421	246.564	20.25	66.927	1	H1-1b
139	J65	W10x26	.014	6.541	18	.005	13.081	y	12	122.421	246.564	20.25	66.927	1	H1-1b
140	J66	W10x26	.014	6.541	15	.005	0	y	14	122.421	246.564	20.25	66.927	1	H1-1b
141	J67	W10x26	.014	6.541	15	.005	13.081	y	16	122.421	246.564	20.25	66.927	1	H1-1b
142	J68	W10x26	.014	6.541	13	.005	0	y	18	122.421	246.564	20.25	66.927	1	H1-1b
143	M123	L3x3x3/16	.319	4.481	11	.009	0	z	15	7.561	35.316	-1.851	1.887	1	H2-1
144	M124	L3x3x3/16	.303	4.481	15	.009	8.963	z	11	7.561	35.316	-1.851	1.887	1	H2-1
145	M125	L3x3x3/16	.303	4.481	12	.009	8.963	z	13	7.561	35.316	-1.851	1.887	1	H2-1
146	M126	L3x3x3/16	.318	4.481	14	.009	8.963	z	11	7.561	35.316	-1.851	1.887	1	H2-1
147	M127	L3x3x3/16	.037	1.584	11	.003	0	z	13	3.781	35.316	-1.851	1.536	1	H2-1
148	M336	L3x3x3/16	.001	6.338	13	.002	6.338	y	13	26.426	35.316	.509	2.183	1	H2-1
149	M337	L3x3x3/16	.001	0	17	.002	0	y	15	26.426	35.316	.509	2.183	1	H2-1
150	M338	L3x3x3/16	.001	6.338	13	.002	0	y	13	26.426	35.316	.509	2.183	1	H2-1
151	M339	L3x3x3/16	.001	0	15	.002	6.338	y	15	26.426	35.316	.509	2.183	1	H2-1
152	M340	L3x3x3/16	.023	1.584	17	.002	0	z	11	3.781	35.316	-1.851	1.536	1	H2-1
153	M341	L3x3x3/16	.023	1.584	15	.002	0	z	13	3.781	35.316	-1.851	1.536	1	H2-1
154	M342	L3x3x3/16	.023	1.584	13	.002	0	z	11	3.781	35.316	-1.851	1.536	1	H2-1
155	J45	W10x26	.014	6.541	14	.005	13.081	y	11	122.421	246.564	20.25	66.927	1	H1-1b
156	J46	W10x26	.014	6.541	12	.005	13.081	y	12	122.421	246.564	20.25	66.927	1	H1-1b
157	J47	W10x26	.014	6.541	18	.005	13.081	y	15	122.421	246.564	20.25	66.927	1	H1-1b
158	J48	W10x26	.014	6.541	16	.005	13.081	y	16	122.421	246.564	20.25	66.927	1	H1-1b
159	M54	L3x3x1/4	.001	0	2	.005	8.047	z	16	12.225	46.656	.673	2.895	1	H2-1
160	M55	L3x3x1/4	.001	0	6	.005	8.047	z	18	12.225	46.656	.673	2.895	1	H2-1
161	M56	L3x3x1/4	.001	0	4	.005	8.047	z	12	12.225	46.656	.673	2.895	1	H2-1
162	M57	L3x3x1/4	.000	0	5	.005	8.047	z	18	12.225	46.656	.673	2.895	1	H2-1
163	J25	W12x26	.027	8.857	14	.009	13.081	y	5	139.661	247.86	22.059	79.432	1	H1-1b
164	J26	W12x26	.027	4.224	12	.010	0	y	3	139.661	247.86	22.059	79.432	1	H1-1b
165	J27	W12x26	.027	8.857	18	.010	13.081	y	8	139.661	247.86	22.059	79.432	1	H1-1b



**Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)**

Member	Shape	Code Ch...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn v...	phi*Mn z...	Cb	Eqn
166	J28	W12x26	.027	4.224	16	.009	0	y	8	139.661	247.86	22.059	79.432	1 H1-1b
167	M9	C8x11.5	.008	3.108	14	.003	6.217	y	14	51.387	109.188	3.353	21.086	1 H1-1b
168	M10	C8x11.5	.008	3.108	17	.003	6.217	y	17	51.387	109.188	3.353	21.086	1 H1-1b
169	M11	C8x11.5	.008	3.108	14	.003	6.217	y	18	51.387	109.188	3.353	21.086	1 H1-1b
170	M12	C8x11.5	.008	3.108	11	.003	6.217	y	17	51.387	109.188	3.353	21.086	1 H1-1b
171	M13	C8x11.5	.019	4.396	13	.004	0	y	12	26.589	109.188	3.353	17.592	1 H1-1b
172	J73	W10x33	.079	9.443	8	.011	18.5	y	11	264.868	314.604	37.8	102.523	1 H1-1b*
173	J76	W10x33	.079	0	2	.011	18.5	y	17	264.868	314.604	37.8	102.523	1 H1-1b*
174	J79	W10x33	.077	0	8	.011	18.5	y	15	264.868	314.604	37.8	102.523	1 H1-1b*
175	J82	W10x33	.074	9.443	2	.011	18.5	y	13	264.868	314.604	37.8	102.523	1 H1-1b*
176	J53	W10x33	.069	9.443	8	.013	18.5	y	11	264.868	314.604	37.8	102.523	1 H1-1b*
177	J56	W10x33	.067	0	2	.013	18.5	y	17	264.868	314.604	37.8	102.523	1 H1-1b*
178	J59	W10x33	.067	0	8	.013	18.5	y	15	264.868	314.604	37.8	102.523	1 H1-1b*
179	J62	W10x33	.062	9.443	2	.013	18.5	y	13	264.868	314.604	37.8	102.523	1 H1-1b*
180	M75	2L2 1/2x2 1/...	.158	6.47	8	.004	6.338	y	15	46.122	77.112	5.381	2.133	1 H1-1b*
181	M87	2L2 1/2x2 1/...	.162	0	2	.004	6.338	y	13	46.122	77.112	5.381	3.414	1 H1-1b*
182	M99	2L2 1/2x2 1/...	.136	6.338	5	.004	6.338	y	11	46.122	77.112	5.381	2.133	1 H1-1b*
183	M111	2L2 1/2x2 1/...	.122	0	5	.004	6.338	y	17	46.122	77.112	5.381	3.414	1 H1-1b*
184	J33	W10x33	.068	9.25	9	.013	18.5	y	11	264.868	314.604	37.8	102.523	1 H1-1b*
185	J36	W10x33	.063	0	9	.013	18.5	y	17	264.868	314.604	37.8	102.523	1 H1-1b*
186	J39	W10x33	.066	9.25	9	.013	18.5	y	15	264.868	314.604	37.8	102.523	1 H1-1b
187	J42	W10x33	.062	9.25	9	.013	18.5	y	13	264.868	314.604	37.8	102.523	1 H1-1b
188	M50	L3x3x1/4	.148	4.742	15	.004	11.381	z	15	23.159	46.656	.673	3.203	1 H2-1
189	M51	L3x3x1/4	.148	6.639	13	.004	11.381	z	13	23.159	46.656	.673	3.203	1 H2-1
190	M52	L3x3x1/4	.124	6.402	2	.004	11.381	z	11	23.159	46.656	.673	3.203	1 H2-1
191	M53	L3x3x1/4	.123	4.742	17	.004	5.69	z	13	23.159	46.656	.673	3.203	1 H2-1
192	J13	W18x65	.188	12.333	13	.088	18.5	y	5	493.623	618.84	60.75	340.956	1 H1-1b
193	J16	W18x65	.189	3.276	14	.080	18.5	y	3	493.623	618.84	60.75	340.956	1 H1-1b
194	J19	W18x65	.182	6.167	13	.096	18.5	y	9	493.623	618.84	60.75	340.956	1 H1-1b
195	J22	W18x65	.181	15.224	16	.083	0	y	9	493.623	618.84	60.75	340.956	1 H1-1b
196	M30	C7x9.8	.108	5.043	15	.010	5.043	y	15	14.758	92.988	2.669	11.613	1 H1-1b
197	M31	C7x9.8	.107	5.043	13	.010	5.043	y	13	14.758	92.988	2.669	11.613	1 H1-1b
198	M32	C7x9.8	.095	5.043	11	.009	5.043	y	11	14.758	92.988	2.669	11.613	1 H1-1b
199	M33	C7x9.8	.095	5.043	17	.009	5.043	y	17	14.758	92.988	2.669	11.613	1 H1-1b
200	J113	TS6x10x.375	.056	12.976	11	.003	12.976	y	12	348.421	459.54	123.855	86.94	1 H1-1b
201	J114	TS6x10x.375	.057	12.976	11	.003	12.976	y	18	348.421	459.54	123.855	86.94	1 H1-1b
202	J115	TS6x10x.375	.058	12.976	17	.003	12.976	y	18	348.421	459.54	123.855	86.94	1 H1-1b
203	J116	TS6x10x.375	.057	0	4	.003	12.976	y	16	348.421	459.54	123.855	86.94	1 H1-1b*
204	J117	TS6x10x.375	.057	12.976	15	.003	12.976	y	16	348.421	459.54	123.855	86.94	1 H1-1b
205	J118	TS6x10x.375	.056	12.976	15	.003	12.976	y	14	348.421	459.54	123.855	86.94	1 H1-1b
206	J119	TS6x10x.375	.057	12.976	13	.003	12.976	y	14	348.421	459.54	123.855	86.94	1 H1-1b
207	J120	TS6x10x.375	.058	12.976	13	.003	12.976	y	12	348.421	459.54	123.855	86.94	1 H1-1b
208	J74	W8x31	.175	0	8	.005	14.681	y	13	197.878	295.812	38.07	74.297	1 H1-1b*
209	J75	W8x31	.173	0	4	.005	0	y	13	197.878	295.812	38.07	74.297	1 H1-1b*
210	J77	W8x31	.170	0	6	.005	14.681	y	14	197.878	295.812	38.07	74.297	1 H1-1b*
211	J78	W8x31	.174	0	2	.005	14.681	y	13	197.878	295.812	38.07	74.297	1 H1-1b*
212	J80	W8x31	.166	0	4	.005	0	y	13	197.878	295.812	38.07	74.297	1 H1-1b*
213	J81	W8x31	.171	0	8	.005	14.681	y	15	197.878	295.812	38.07	74.297	1 H1-1b*
214	J83	W8x31	.164	0	2	.005	14.681	y	15	197.878	295.812	38.07	74.297	1 H1-1b*
215	J84	W8x31	.159	0	6	.005	14.681	y	15	197.878	295.812	38.07	74.297	1 H1-1b*
216	J54	W8x31	.239	8.273	8	.005	0	y	10	161.079	295.812	38.07	70.127	1 H1-1a
217	J55	W8x31	.236	8.273	4	.005	0	y	10	161.079	295.812	38.07	70.127	1 H1-1a
218	J57	W8x31	.227	8.273	6	.005	0	y	11	161.079	295.812	38.07	70.127	1 H1-1a
219	J58	W8x31	.234	8.273	2	.005	0	y	12	161.079	295.812	38.07	70.127	1 H1-1a
220	J60	W8x31	.225	8.273	4	.005	0	y	11	161.079	295.812	38.07	70.127	1 H1-1a
221	J61	W8x31	.233	8.273	8	.005	0	y	11	161.079	295.812	38.07	70.127	1 H1-1a
222	J63	W8x31	.219	8.273	2	.005	0	y	10	161.079	295.812	38.07	70.127	1 H1-1a



**Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)**

Member	Shape	Code Ch...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [...]	phi*Pnt [k]	phi*Mn y...	phi*Mn z...	Cb	Eqn
223	J64	W8x31	.211	8.273	6	.005	18.05	y	12	161.079	295.812	38.07	70.127	1 H1-1a
224	M76	2L2 1/2x3 1/...	.465	6.858	7	.002	13.715	y	16	58.671	115.02	12.446	2.726	1 H1-1a
225	M81	2L2 1/2x3 1/...	.445	4.5	4	.002	13.715	y	15	58.671	115.02	12.446	2.726	1 H1-1a
226	M88	2L2 1/2x3 1/...	.420	13.715	6	.002	13.501	y	14	58.671	115.02	12.446	4.361	1 H1-1a
227	M93	2L2 1/2x3 1/...	.425	6.858	3	.002	13.501	y	12	58.671	115.02	12.446	2.726	1 H1-1a
228	M100	2L2 1/2x3 1/...	.360	5.786	3	.002	13.501	y	12	58.671	115.02	12.446	2.726	1 H1-1a
229	M105	2L2 1/2x3 1/...	.461	5.786	9	.002	13.715	y	18	58.671	115.02	12.446	2.726	1 H1-1a
230	M112	2L2 1/2x3 1/...	.408	6.858	9	.002	13.715	y	18	58.671	115.02	12.446	2.726	1 H1-1a
231	M117	2L2 1/2x3 1/...	.323	6	7	.002	13.501	y	16	58.671	115.02	12.446	2.726	1 H1-1a
232	J34	W8x31	.195	0	8	.005	0	y	11	161.079	295.812	38.07	70.127	1 H1-1b*
233	J35	W8x31	.192	0	4	.005	0	y	11	161.079	295.812	38.07	70.127	1 H1-1b*
234	J37	W8x31	.184	0	6	.005	0	y	10	161.079	295.812	38.07	70.127	1 H1-1b*
235	J38	W8x31	.191	0	2	.005	0	y	10	161.079	295.812	38.07	70.127	1 H1-1b*
236	J40	W8x31	.182	0	4	.005	0	y	18	161.079	295.812	38.07	70.127	1 H1-1b*
237	J41	W8x31	.189	0	8	.005	0	y	10	161.079	295.812	38.07	70.127	1 H1-1b*
238	J43	W8x31	.176	0	2	.005	0	y	11	161.079	295.812	38.07	70.127	1 H1-1b*
239	J44	W8x31	.168	0	6	.005	0	y	11	161.079	295.812	38.07	70.127	1 H1-1b*
240	M59	2L2 1/2x2x3...	.499	8.289	7	.005	8.126	y	13	23.186	52.488	2.722	1.585	1 H1-1a
241	M60	2L2 1/2x2x3...	.430	8.289	4	.005	8.126	y	17	23.186	52.488	2.722	1.585	1 H1-1a
242	M61	2L2 1/2x2x3...	.442	8.289	6	.005	8.126	y	11	23.186	52.488	2.722	1.585	1 H1-1a
243	M62	2L2 1/2x2x3...	.485	8.289	3	.005	8.126	y	15	23.186	52.488	2.722	1.585	1 H1-1a
244	M63	2L2 1/2x2x3...	.363	8.289	3	.005	8.126	y	17	23.186	52.488	2.722	1.585	1 H1-1a
245	M64	2L2 1/2x2x3...	.487	8.289	9	.005	8.126	y	13	23.186	52.488	2.722	1.585	1 H1-1a
246	M65	2L2 1/2x2x3...	.461	8.289	9	.005	8.126	y	15	23.186	52.488	2.722	1.585	1 H1-1a
247	M66	2L2 1/2x2x3...	.351	8.289	7	.005	8.126	y	11	23.186	52.488	2.722	1.585	1 H1-1a
248	J14	W8x31	.152	0	7	.005	12.495	y	17	221.067	295.812	38.07	77.002	1 H1-1b*
249	J15	W8x31	.151	0	5	.005	12.495	y	10	221.067	295.812	38.07	77.002	1 H1-1b*
250	J17	W8x31	.143	0	5	.005	12.495	y	11	221.067	295.812	38.07	77.002	1 H1-1b*
251	J18	W8x31	.143	0	3	.005	12.495	y	13	221.067	295.812	38.07	77.002	1 H1-1b*
252	J20	W8x31	.147	0	3	.005	12.495	y	16	221.067	295.812	38.07	77.002	1 H1-1b*
253	J21	W8x31	.164	0	9	.005	12.495	y	16	221.067	295.812	38.07	77.002	1 H1-1b*
254	J23	W8x31	.150	0	9	.005	0	y	15	221.067	295.812	38.07	77.002	1 H1-1b*
255	J24	W8x31	.136	0	7	.005	12.495	y	15	221.067	295.812	38.07	77.002	1 H1-1b*
256	M34	2L2 1/2x2x3...	.379	7.619	8	.004	7.619	y	12	25.322	52.488	2.722	1.585	1 H1-1a
257	M35	2L2 1/2x2x3...	.385	7.619	4	.004	7.619	y	18	25.322	52.488	2.722	1.585	1 H1-1a
258	M36	2L2 1/2x2x3...	.399	7.619	6	.004	7.619	y	18	25.322	52.488	2.722	1.585	1 H1-1a
259	M37	2L2 1/2x2x3...	.417	7.619	2	.004	7.619	y	16	25.322	52.488	2.722	1.585	1 H1-1a
260	M38	2L2 1/2x2x3...	.276	7.619	4	.004	7.619	y	16	25.322	52.488	2.722	1.585	1 H1-1a
261	M39	2L2 1/2x2x3...	.326	7.619	8	.004	7.619	y	14	25.322	52.488	2.722	1.585	1 H1-1a
262	M40	2L2 1/2x2x3...	.321	3.809	9	.004	7.619	y	14	25.322	52.488	2.722	2.536	1 H1-1a
263	M41	2L2 1/2x2x3...	.276	7.619	6	.004	7.619	y	12	25.322	52.488	2.722	1.585	1 H1-1a
264	M14	2L2 1/2x2x3...	.294	7.281	7	.004	7.281	y	12	27.351	52.488	2.722	1.585	1 H1-1a
265	M15	2L2 1/2x2x3...	.262	7.281	4	.004	7.281	y	18	27.351	52.488	2.722	1.585	1 H1-1a
266	M16	2L2 1/2x2x3...	.285	7.281	6	.004	7.281	y	18	27.351	52.488	2.722	1.585	1 H1-1a
267	M17	2L2 1/2x2x3...	.306	7.281	2	.004	7.281	y	16	27.351	52.488	2.722	1.585	1 H1-1a
268	M18	2L2 1/2x2x3...	.131	0	4	.004	7.281	y	16	27.351	52.488	2.722	2.536	1 H1-1b*
269	M19	2L2 1/2x2x3...	.242	7.281	9	.004	7.281	y	14	27.351	52.488	2.722	1.585	1 H1-1a
270	M20	2L2 1/2x2x3...	.219	7.281	9	.004	7.281	y	14	27.351	52.488	2.722	1.585	1 H1-1a
271	M21	2L2 1/2x2x3...	.124	0	6	.004	7.281	y	12	27.351	52.488	2.722	2.536	1 H1-1b*
272	M343	L2.5x2x3	.962	3.436	13	.000	0	z	7	10.315	26.503	.625	1.173	1 H2-1
273	M344	L2.5x2x3	.843	1.8	11	.000	0	z	7	10.315	26.503	.625	1.173	1 H2-1
274	M345	L2.5x2x3	.851	1.8	17	.000	5.236	z	7	10.315	26.503	.625	1.173	1 H2-1
275	M346	L2.5x2x3	.924	1.8	15	.000	5.236	z	7	10.315	26.503	.625	1.173	1 H2-1
276	M347	L2.5x2x3	.011	2.305	11	.000	5.269	z	7	8.39	26.503	.625	1.283	1 H2-1
277	M348	L2.5x2x3	.054	1.508	15	.000	0	z	7	10.643	26.503	.625	1.326	1 H2-1
278	M349	L2.5x2x3	.011	2.964	13	.000	5.269	z	4	8.39	26.503	.625	1.283	1 H2-1
279	M350	L2.5x2x3	.050	1.508	17	.000	0	z	7	10.643	26.503	.625	1.326	1 H2-1



Company : Ramaker and Associates, Inc.  
 Designer : RJN  
 Job Number : 30511  
 Model Name : New London (CT2080)

June 7, 2017  
 5:23 PM  
 Checked By: \_\_\_\_\_

**Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)**

Member	Shape	Code Ch...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc l...	phi*Pnt [k]	phi*Mn v...	phi*Mn z...	Cb	Eqn
280	M351	L2.5x2x3	.011	2.964	15	.000	5.269	z	6	8.39	26.503	.625	1.283	1... H2-1
281	M352	L2.5x2x3	.050	1.508	11	.000	0	z	6	10.643	26.503	.625	1.326	1... H2-1
282	M353	L2.5x2x3	.011	2.964	17	.000	0	z	2	8.39	26.503	.625	1.283	1... H2-1
283	M354	L2.5x2x3	.053	1.508	13	.000	0	z	7	10.643	26.503	.625	1.326	1... H2-1
284	M355	L2.5x2x3	.116	3.134	15	.000	0	z	7	10.811	26.503	.625	1.33	1... H2-1
285	M356	L2.5x2x3	.103	1.495	13	.000	4.628	z	7	10.811	26.503	.625	1.33	1... H2-1
286	M357	L2.5x2x3	.108	1.495	11	.000	4.628	z	7	10.811	26.503	.625	1.33	1... H2-1
287	M358	L2.5x2x3	.096	1.495	17	.000	4.628	z	7	10.811	26.503	.625	1.33	1... H2-1
288	J581	HSS10x6x6	.297	0	7	.011	25.019	z	4	154.892	430.56	81.765	116.61	1... H1-1a
289	J582	HSS10x6x6	.311	0	9	.011	25.019	z	4	154.892	430.56	81.765	116.61	1... H1-1a
290	J583	HSS10x6x6	.316	0	9	.010	25.715	z	6	146.616	430.56	81.765	116.61	1... H1-1a
291	J584	HSS10x6x6	.306	0	3	.011	25.715	z	6	146.616	430.56	81.765	116.61	1... H1-1a
292	J585	HSS10x6x6	.287	0	3	.011	25.019	z	8	154.892	430.56	81.765	116.61	1... H1-1a
293	J586	HSS10x6x6	.293	0	5	.011	25.019	z	8	154.892	430.56	81.765	116.61	1... H1-1a
294	J587	HSS10x6x6	.285	0	5	.011	24.344	z	2	163.605	430.56	81.765	116.61	1... H1-1a
295	J588	HSS10x6x6	.277	0	7	.011	24.344	z	2	163.605	430.56	81.765	116.61	1... H1-1a

**Wind Load on Antennas ASCE 7-05**

$$q_z = 0.00256 K_z K_{zt} K_d V^2 I$$

$$F = q_z G C_f A_f$$

Occupancy:	II	Table 1-1
Exposure:	C	Exposure Category
V:	105 mph	Basic Wind Speed (Figure 6-1)
z:	119.1 ft	Height above ground level
I:	1.00	Importance Factor (6.5.5, Table 6-1)
K <sub>z</sub> :	1.31	Velocity Pressure Exposure Coefficient (Table 6-3 page 79)
K <sub>zt</sub> :	1.00	Topographic Factor (6.5.7.2)
K <sub>d</sub> :	0.90	Wind Directionality Factor (Table 6-4)
q <sub>z</sub> :	33.4 psf	Velocity Pressure at Height z
G:	0.85	Self Support structures 450 feet or less in height
Increase:	1.00	Rooftop Structures < 60 ft = 1.9 (6.5.15.1)

**Mount & Antenna Wind Loads**

Appurtenance	Height	Width	h/D	Shape	C <sub>f</sub>	A <sub>f</sub>	Force
	<i>in</i>	<i>in</i>				<i>sq ft</i>	<i>lb</i>
19' x 18.5' x 18.5' Panel	228.0	222.0	1.0	Flat	1.300	351.50	12959.4
19' x 18.5' x 18.5' Panel w/ ice	228.0	223.5	1.0	Flat	1.300	353.88	13045.8
30' x 18.5' x 18.5' Panel	360.0	222.0	1.6	Flat	1.310	555.00	20618.1
30' x 18.5' x 18.5' Panel w/ ice	360.0	223.5	1.6	Flat	1.310	558.75	20754.5
70' x 18.5' x 18.5' Panel	840.0	222.0	3.8	Flat	1.346	1295.00	49431.9
70' x 18.5' x 18.5' Panel w/ ice	840.0	223.5	3.8	Flat	1.346	1303.75	49750.2
70' x 26.2' x 26.2' Panel	840.0	314.4	2.7	Flat	1.328	1834.00	69042.5
70' x 26.2' x 26.2' Panel w/ ice	840.0	317.9	2.6	Flat	1.327	1854.42	69785.4





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## **SmartLink, LLC on behalf of AT&T Mobility, LLC**

**Site FA – 10035053**

**Site ID – CTL02080 (Retrofit)**

**USID – 65070**

**Site Name – New London**

**Site Compliance Report**

**26 Washington Street  
New London, CT 06320**

Latitude: N41-21-13.97  
Longitude: W72-5-52.30  
Structure Type: Rooftop

Report generated date: June 14, 2017  
Report by: Leo Romero  
Customer Contact: David Barbagallo

---

**AT&T Mobility, LLC will be compliant when the  
remediation recommended in Section 5.2 or  
other appropriate remediation is implemented.**

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# 1 General Site Summary

## 1.1 Report Summary

AT&T Mobility, LLC	Summary
<b>Access to Antennas Locked?</b>	Yes
<b>RF Sign(s) @ access point(s)</b>	(1) Information 1 @ Access 1 (1) Information 1, (1) Caution and (1) Notice @ Access 2
<b>RF Sign(s) @ antennas</b>	(1) Information 1 and (1) Caution 2 @ Alpha (1) Information 1 and (1) Caution 2 @ Beta (1) Information 1 and (1) Caution 2 @ Gamma
<b>Barrier(s) @ sectors</b>	Alpha
<b>Max cumulative simulated RFE level on the Rooftop</b>	688.0% General Public Limit at AT&T Mobility, LLC Alpha Sector Antenna #3
<b>FCC &amp; AT&amp;T Compliant?</b>	Will Be Compliant

**Note:** The existing signage was documented at a previous site visit (09/28/15). All other existing signage at the access point(s) belong to other wireless operators.

The following documents were provided by the client and were utilized to create this report:

**RFDS: NEW-ENGLAND\_CONNECTICUT\_CTU2080\_2016-LTE-Next-Carrier\_LTE\_om636a\_2051A02...**

**CD's: 10035053\_AE201\_170602\_CTL02080\_REV1**

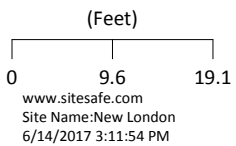
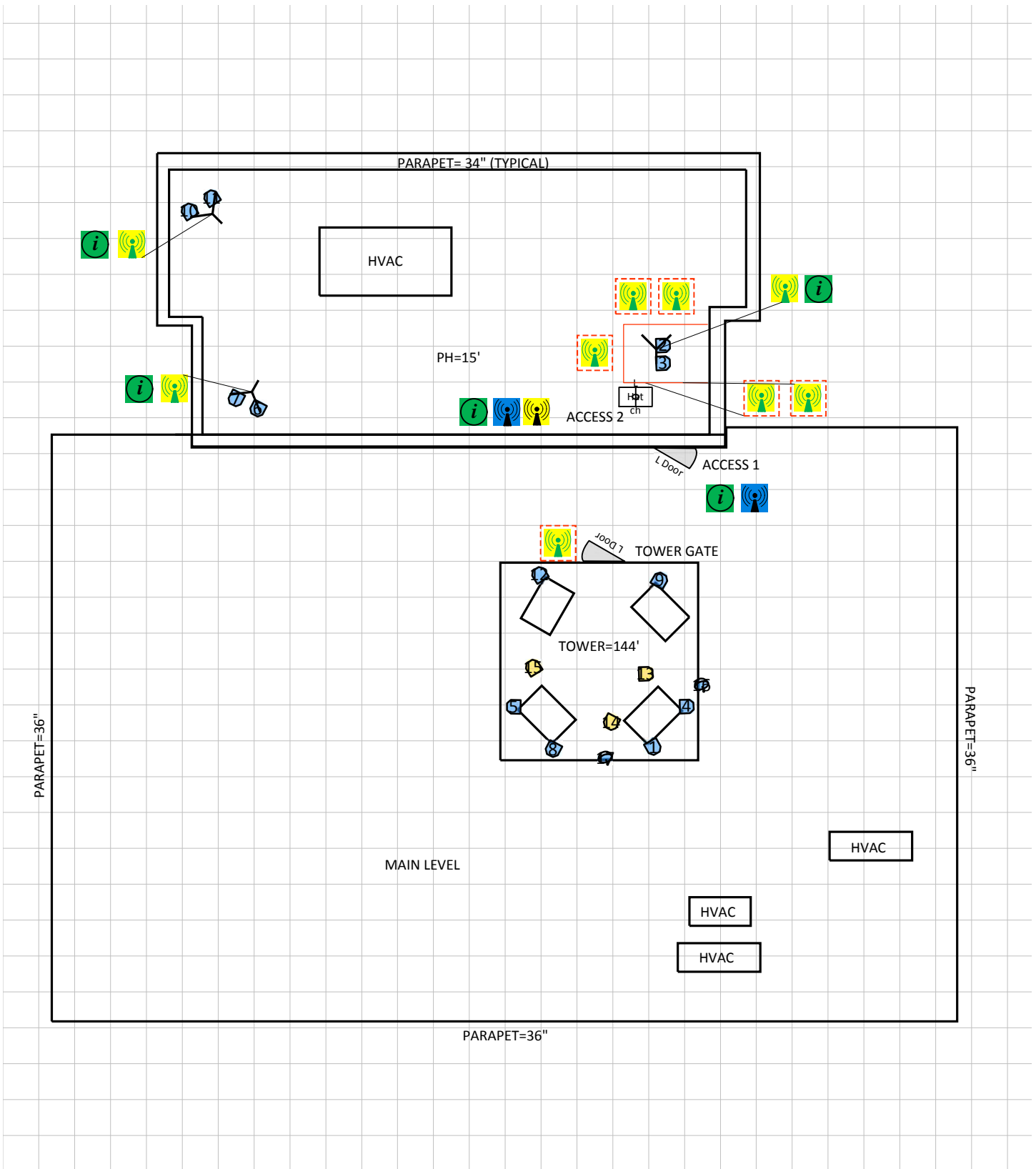
**RF Powers Used: RFDS ERP Values**

## 2 Scale Maps of Site

The following diagrams are included:

- ) Site Scale Map
- ) RF Exposure Diagram
- ) RF Exposure Diagram – Detail View
- ) AT&T Mobility, LLC Contribution

# Sit Scale Map For: New London



**Carrier Identification**

- AT&T MOBILITY LLC (Blue circle)
- VERIZON WIRELESS (Red circle)
- T-MOBILE (Pink circle)
- SPRINT (Yellow circle)
- UNKNOWN CARRIER (White circle)

**Sign Legend**

- Caution 1 (Yellow sign with antenna)
- Caution 2 (Yellow sign with antenna)
- Notice 2 (Blue sign with antenna)
- Notice 1 (Blue sign with antenna)
- Warning (Orange sign with antenna)
- Info 1 (Green sign with 'i')
- Info 2 (Green sign with 'i')

**Barrier** (Solid red line)

**Proposed Barriers/ Signs** (Dashed red line)



### 3 Antenna Inventory

The following antenna inventory on this and the following page, were obtained by the customer and were utilized to create the site model diagrams:

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	2G GSM Radio(s)	3G UMTS Radio(s)	4G Radio(s)	Total ERP (Watts)	X	Y	Z
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	143	82	4.6	11.51	0	2	0	578.1	270.6'	90.2'	106.7'
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	143	86	4.6	13.41	0	1	0	322.1	270.6'	90.2'	106.7'
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	143	86	4.6	13.41	0	1	0	559.8	270.6'	90.2'	106.7'
2	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	2100	80	62	4.6	14.6	0	0	1	1990.7	272'	146.2'	20.7'
3	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	737	80	66	4.6	11.29	0	0	1	792.5	272'	143.7'	20.7'
3	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	1900	80	65	4.6	14.65	0	0	1	1733.8	272'	143.7'	20.7'
4	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	2300	80	61	4.6	14.3	0	0	1	1094	275.3'	95.9'	106.7'
5	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	263	82	4.6	11.51	0	2	0	578.1	251.2'	95.8'	106.7'
5	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	263	86	4.6	13.41	0	1	0	322.1	251.2'	95.8'	106.7'
5	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	263	86	4.6	13.41	0	1	0	559.8	251.2'	95.8'	106.7'
6	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	2100	200	62	4.6	14.6	0	0	1	1990.7	215.5'	137.4'	20.7'
7	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	737	200	66	4.6	11.29	0	0	1	792.5	212.5'	138.8'	20.7'
7	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	1900	200	65	4.6	14.65	0	0	1	1733.8	212.5'	138.8'	20.7'
8	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	2300	200	61	4.6	14.3	0	0	1	1094	256.7'	89.9'	106.7'
9	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	23	82	4.6	11.51	0	2	0	578.1	271.6'	113.5'	106.7'
9	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	23	86	4.6	13.41	0	1	0	322.1	271.6'	113.5'	106.7'
9	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	23	86	4.6	13.41	0	1	0	559.8	271.6'	113.5'	106.7'
10	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	2100	320	62	4.6	14.6	0	0	1	1990.7	205.9'	164.9'	20.7'
11	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	737	320	66	4.6	11.29	0	0	1	792.5	209.1'	166.8'	20.7'
11	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	1900	320	65	4.6	14.65	0	0	1	1733.8	209.1'	166.8'	20.7'
12	AT&T MOBILITY LLC (Proposed)	Andrew SBNHH-1D65A	Panel	2300	320	61	4.6	14.3	0	0	1	1094	254.8'	114.3'	106.7'
13	SPRINT	Generic Panel	Panel	1900	80	65	6.3	16.26	-	-	-	2536	269.6'	100.5'	47.9'

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	2G GSM Radio(s)	3G UMTS Radio(s)	4G Radio(s)	Total ERP (Watts)	X	Y	Z
13	SPRINT	Generic Panel	Panel	862	80	65	6.3	13.43	-	-	-	881.2	269.6'	100.5'	47.9'
14	SPRINT	Generic Panel	Panel	1900	200	65	6.3	16.26	-	-	-	2536	264.8'	93.7'	47.9'
14	SPRINT	Generic Panel	Panel	862	200	65	6.3	13.43	-	-	-	881.2	264.8'	93.7'	47.9'
15	SPRINT	Generic Panel	Panel	1900	320	65	6.3	16.26	-	-	-	2536	253.9'	101.4'	47.9'
15	SPRINT	Generic Panel	Panel	862	320	65	6.3	13.43	-	-	-	881.2	253.9'	101.4'	47.9'
16	AT&T MOBILITY LLC	Generic Microwave	Aperture	6315	153.3	2	4	32.86	-	-	-	6384.8	277.4'	98.8'	138'
17	AT&T MOBILITY LLC	Generic Microwave	Aperture	6315	153.3	2	4	32.86	-	-	-	6384.8	264'	88.7'	138'

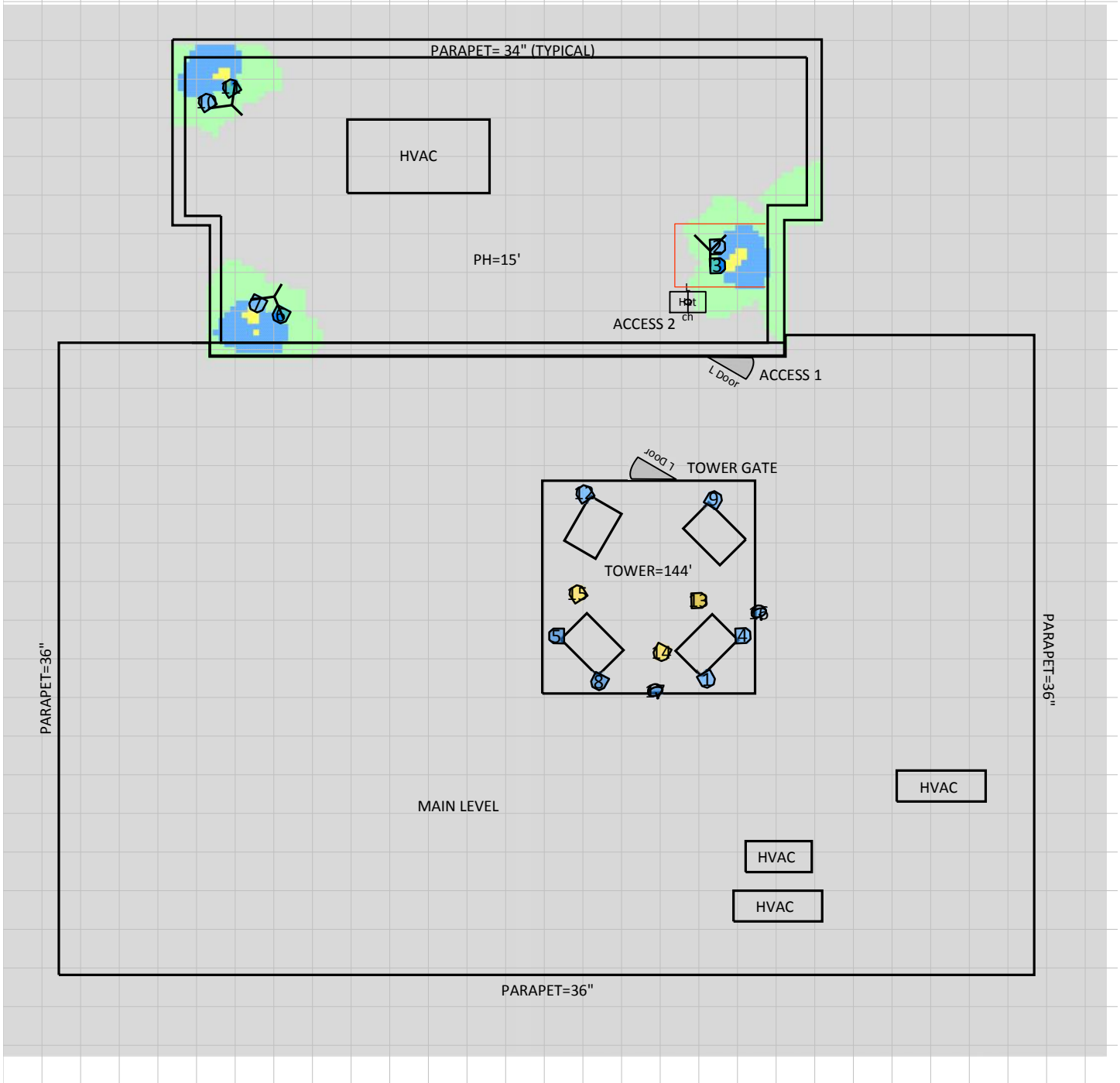
NOTE: X, Y and Z indicate relative position of the bottom of the antenna to the origin location on the site, displayed in the model results diagram. Specifically, the Z reference indicates the bottom of the antenna height above the main site level unless otherwise indicated. The distance to the bottom of the antenna is calculated by subtracting half of the length of the antenna from the antenna centerline. Effective Radiated Power (ERP) is provided by the operator or based on Sitesafe experience. The values used in the modeling may be greater than are currently deployed. For other operators at this site the use of "Generic" as an antenna model or "Unknown" for a wireless operator means the information with regard to operator, their FCC license and/or antenna information was not available nor could it be secured while on site. Other operator's equipment, antenna models and powers used for modeling are based on obtained information or Sitesafe experience.

## 4 Emission Predictions

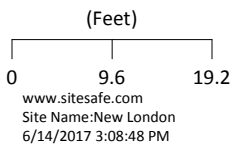
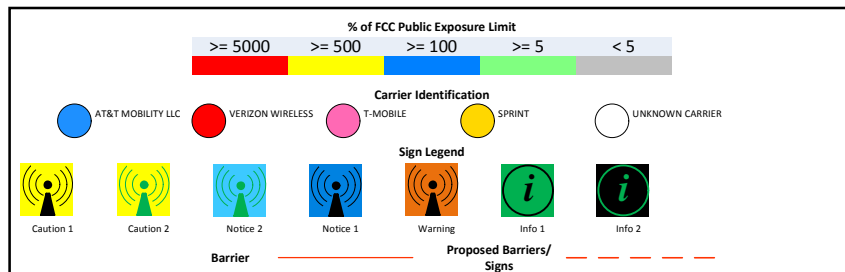
In the RF Exposure Simulations below all heights are reflected with respect to main site level. In most rooftop cases this is the height of the main rooftop and in other cases this can be ground level. Each different height area, rooftop, or platform level is labeled with its height relative to the main site level. Emissions are calculated appropriately based on the relative height and location of that area to all antennas.

The Antenna Inventory heights are referenced to the same level.

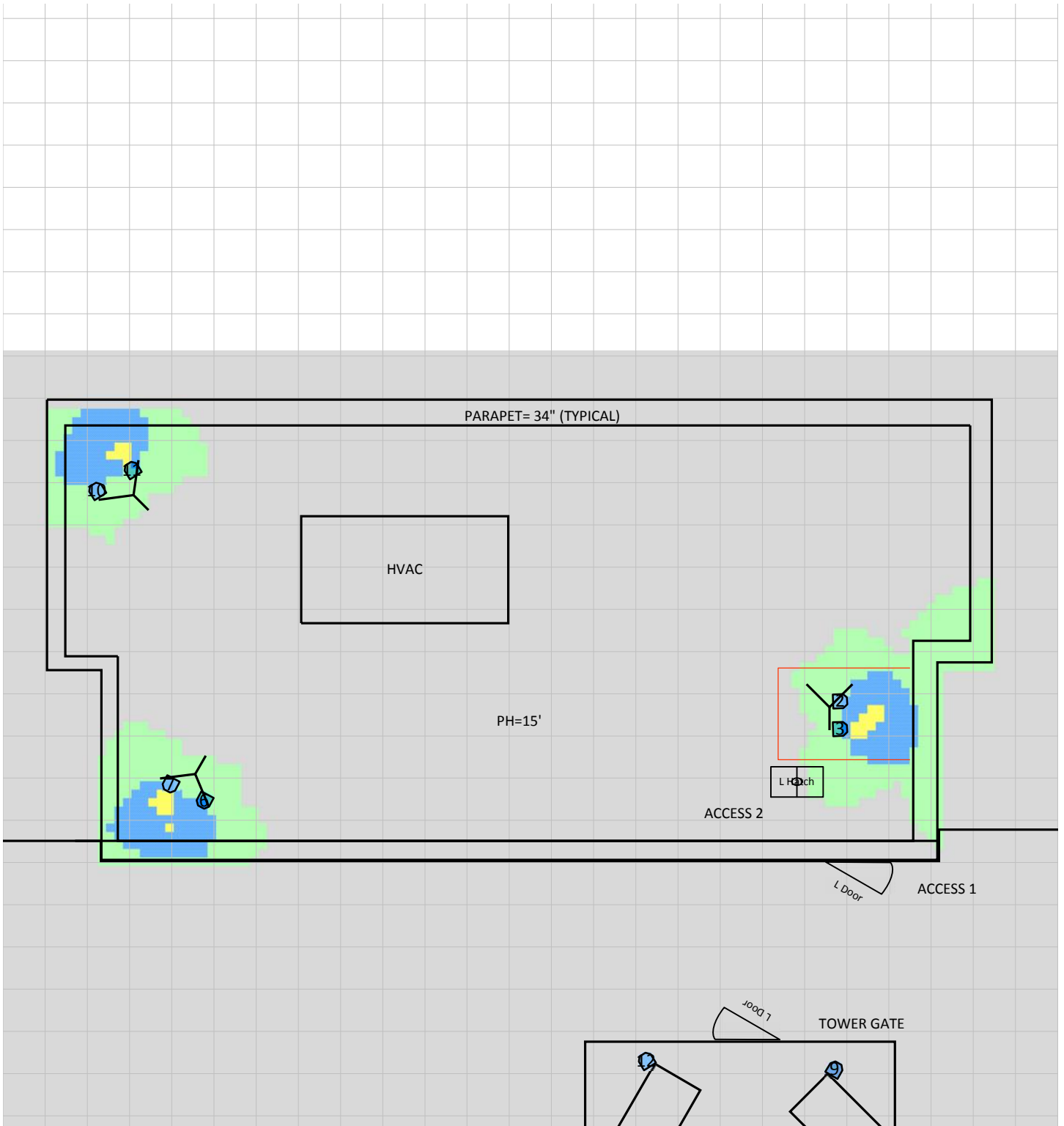
# RF Exposure Simulation For: New London



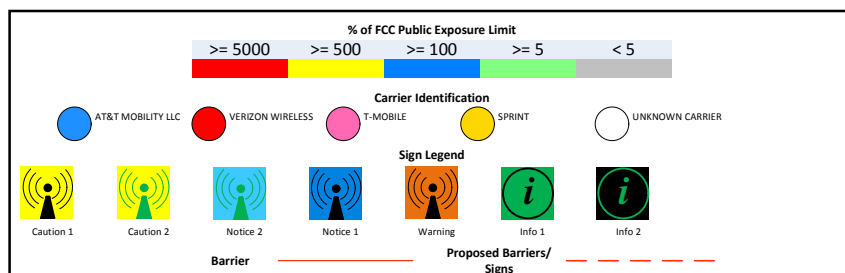
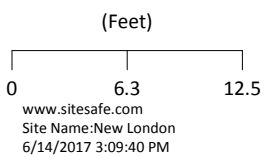
% of FCC Public Exposure Limit  
Spatial average 0' - 6'



# RF Exposure Simulation For: New London Detail View

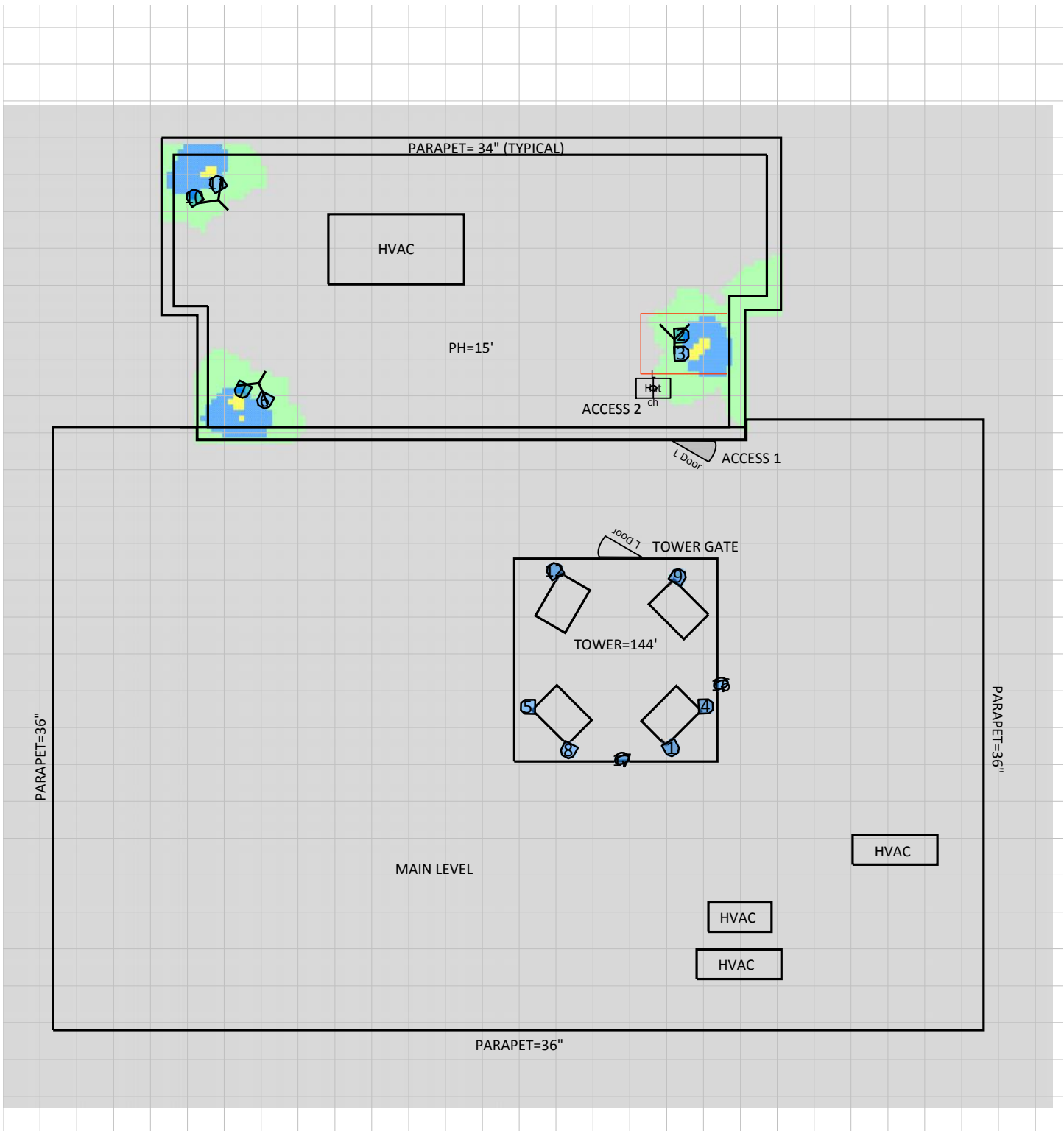


% of FCC Public Exposure Limit  
Spatial average 0' - 6'

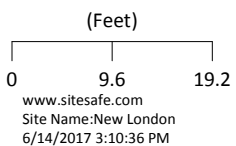
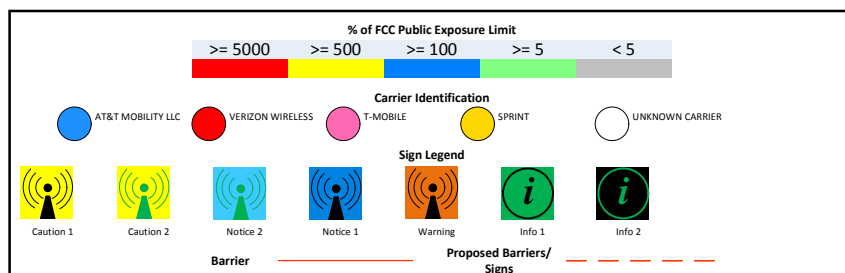




# RF Exposure Simulation For: New London AT&T Mobility, LLC Contribution



% of FCC Public Exposure Limit  
Spatial average 0' - 6'



## 5 Site Compliance

### 5.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, RF hazard signage and antenna locations, Sitesafe has determined that:

AT&T Mobility, LLC will be compliant when the remediation recommended in Section 5.2 or other appropriate remediation is implemented.

The compliance determination is based on General Public RFE levels derived from theoretical modeling, RF signage placement, proposed antenna inventory and the level of restricted access to the antennas at the site. Any deviation from the AT&T Mobility, LLC's proposed deployment plan could result in the site being rendered non-compliant.

Modeling is used for determining compliance and the percentage of MPE contribution.

### 5.2 Actions for Site Compliance

Based on FCC regulations, common industry practice, and our understanding of AT&T Mobility, LLC RF Safety Policy requirements, this section provides a statement of recommendations for site compliance. Recommendations have been proposed based on our understanding of existing access restrictions, signage, and an analysis of predicted RFE levels.

AT&T Mobility, LLC will be made compliant if the following changes are implemented:

#### **Tower Access Gate**

Caution 2 sign required.

#### **AT&T Mobility, LLC Proposed Alpha Sector Location**

Install 5 total Caution 2 sign(s) on the existing barrier chain segments.

- ) 12ft segment: (2) Caution 2 sign(s)
- ) 8ft segment: (1) Caution 2 sign(s)
- ) 12ft segment: (2) Caution 2 sign(s)

#### **Notes:**

- ) Signage on the barriers should be placed in the middle of each barrier segment no more than 8' apart from each other.
- ) Barriers are not required at AT&T Mobility, LLC Beta and Gamma sectors at this time. The parapet wall is less than 39" and the areas predicted to exceed the General Public MPE limit are within 6' of the unprotected roof edge.
- ) Ensure all existing signage and barriers documented in this report still exist at the site.

## 6 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

That I am an employee of Sitesafe, Inc., in Arlington, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Leo Romero.

June 14, 2017

## Appendix A – Statement of Limiting Conditions

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, that Sitesafe became aware of during the normal research involved in creating this report. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data collected by Sitesafe provided by a second party and data collected by Sitesafe, the data will be used.

## Appendix B – Regulatory Background Information

### FCC Rules and Regulations

In 1996, the Federal Communication Commission (FCC) adopted regulations for the evaluating of the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (“OET Bulletin 65”), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or “Controlled environment” and General Public or “Uncontrolled environment”. The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

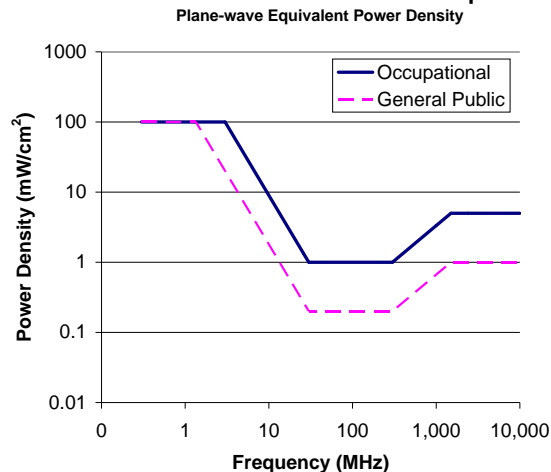
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:

**FCC Limits for Maximum Permissible Exposure (MPE)**





### Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

### Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

\*Plane-wave equivalent power density

## OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

(a) Each employer –

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lock Out Tag Out procedure aimed to control the unexpected energization or start up of machines when maintenance or service is being performed.

## Appendix C – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

**General Maintenance Work:** Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

**Training and Qualification Verification:** All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).

**Physical Access Control:** Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- ) Locked door or gate
- ) Alarmed door
- ) Locked ladder access
- ) Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

**RF Signage:** Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

**Assume all antennas are active:** Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

**Maintain a 3 foot clearance from all antennas:** There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

**Site RF Emissions Diagram:** Section 4 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.

## Appendix D – RF Emissions

The RF Emissions Simulation(s) in this report display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix E.

The key at the bottom of each RF Emissions Simulation indicates percentages displayed referenced to FCC General Public Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

- J Areas indicated as Gray are predicted to be below 5% of the MPE limits. **Gray represents areas more than 20 times below the most conservative exposure limit.**
- J Green represents areas are predicted to be between 5% and 100% of the MPE limits. **Green areas are accessible to anyone.**
- J Blue represents areas predicted to exceed the General Public MPE limits but are less than Occupational limits. **Blue areas should be accessible only to RF trained workers.**
- J Yellow represents areas predicted to exceed Occupational MPE limits. **Yellow areas should be accessible only to RF trained workers able to assess current exposure levels.**
- J Red represents areas predicted to have exposure more than 10 times the Occupational MPE limits. **Red indicates that the RF levels must be reduced prior to access.** An RF Safety Plan is required which outlines how to reduce the RF energy in these areas prior to access.

## Appendix E – Assumptions and Definitions

### General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The modeling is based on recommendations from the FCC's OET-65 bulletin with the following variances per AT&T guidance. Reflection has not been considered in the modeling, i.e. the reflection factor is 1.0. The near / far field boundary has been set to 1.5 times the aperture height of the antenna and modeling beyond that point is the lesser of the near field cylindrical model and the far field model taking into account the gain of the antenna.

The site has been modeled with these assumptions to show the maximum RF energy density. Areas modeled with exposure greater than 100% of the General Public MPE level may not actually occur, but are shown as a prediction that could be realized. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

### Use of Generic Antennas

For the purposes of this report, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, Sitesafe recommends remodeling of the site utilizing the more complete and accurate data. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest Maximum Permissible Exposure (MPE), resulting in a conservative analysis.

## Definitions

**5% Rule** – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

**Compliance** – The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.

**Decibel (dB)** – A unit for measuring power or strength of a signal.

**Duty Cycle** – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

**Effective (or Equivalent) Isotropic Radiated Power (EIRP)** – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

**Effective Radiated Power (ERP)** – In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.

**Gain (of an antenna)** – The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from an isotropic radiator. Gain is a measure of the relative efficiency of a directional antennas as compared to an omni directional antenna.

**General Population/Uncontrolled Environment** – Defined by the FCC, as an area where exposure to RF energy may occur to persons who are **unaware** of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.

**Generic Antenna** – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.

**Isotropic Antenna** – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

**Maximum Measurement** – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

**Maximum Permissible Exposure (MPE)** – The maximum levels of RF exposure a person may be exposed to without harmful effect and with acceptable safety factor.

**Occupational/Controlled Environment** – Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are **aware** of the



potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

**OET Bulletin 65** – Technical guideline developed by the FCC’s Office of Engineering and Technology to determine the impact of Radio Frequency radiation on Humans. The guideline was published in August 1997.

**OSHA (Occupational Safety and Health Administration)** – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA’s role is to promote the safety and health of America’s working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit [www.osha.gov](http://www.osha.gov).

**Radio Frequency (RF)** – The frequencies of electromagnetic waves which are used for radio communications. Approximately 3 kHz to 300 GHz.

**Radio Frequency Exposure (RFE)** – The amount of RF power density that a person is or might be exposed to.

**Spatial Average Measurement** – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average power density an average sized human will be exposed to at a location.

**Transmitter Power Output (TPO)** – The radio frequency output power of a transmitter’s final radio frequency stage as measured at the output terminal while connected to a load.

## Appendix F – References

The following references can be followed for further information about RF Health and Safety.

Sitesafe, Inc.

<http://www.sitesafe.com>

FCC Radio Frequency Safety

<http://www.fcc.gov/encyclopedia/radio-frequency-safety>

National Council on Radiation Protection and Measurements (NCRP)

<http://www.ncrponline.org>

Institute of Electrical and Electronics Engineers, Inc., (IEEE)

<http://www.ieee.org>

American National Standards Institute (ANSI)

<http://www.ansi.org>

Environmental Protection Agency (EPA)

<http://www.epa.gov/radtown/wireless-tech.html>

National Institutes of Health (NIH)

<http://www.niehs.nih.gov/health/topics/agents/emf/>

Occupational Safety and Health Agency (OSHA)

<http://www.osha.gov/SLTC/radiofrequencyradiation/>

International Commission on Non-Ionizing Radiation Protection (ICNIRP)

<http://www.icnirp.org>

World Health Organization (WHO)

<http://www.who.int/peh-emf/en/>

National Cancer Institute

<http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones>

American Cancer Society (ACS)

[http://www.cancer.org/docroot/PED/content/PED\\_1\\_3X\\_Cellular\\_Phone\\_Towers.asp?sitearea=PED](http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?sitearea=PED)

European Commission Scientific Committee on Emerging and Newly Identified Health Risks

[http://ec.europa.eu/health/ph\\_risk/committees/04\\_scenihp/docs/scenihp\\_o\\_022.pdf](http://ec.europa.eu/health/ph_risk/committees/04_scenihp/docs/scenihp_o_022.pdf)

Fairfax County, Virginia Public School Survey

<http://www.fcps.edu/fts/safety-security/RFEESurvey/>

UK Health Protection Agency Advisory Group on Non-ionising Radiation

[http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb\\_C/1317133826368](http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368)

Norwegian Institute of Public Health

<http://www.fhi.no/dokumenter/545eea7147.pdf>



June 13, 2017

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

**Re: Notice of Exempt Modification – Antenna Swap**  
**Property Address: 26 WASHINGTON STREET NEW LONDON, CT 06320**  
**Applicant: AT&T Mobility, LLC**

Dear Ms. Bachman:

On behalf of AT&T, please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b) (2).

AT&T currently maintains a wireless telecommunications facility consisting of nine (12) wireless telecommunication antennas, (6) at an antenna center line height of 191-feet on an existing 226 foot – roof top tower and (6) at an antenna center line height of 80 feet on existing ballast mounts, owned by Southern New England Telephone Co. C/O of SBC Communications, Inc.

AT&T now intends to replace (3) Powerwave 7770, (1) per sector with (3) Andrew SBNHH-1D65A on position four (1) per sector ( tower) replace (3) Andrew AM-X-CD-14-65-00T-RET (1) per sector with (3) Andrew SBNHH-1D65A on position three (1) per sector (ballast mount) add (3) Andrew SBNHH-1D65A on position two (1) per sector and (3) Powerwave 7770, (1) per sector on position one ( tower) to remain. AT&T also plans to install (9) RRH's (3 on tower) (3) A-2 modules, (6) power cables, (3) fiber lines, and (3) surge arrestors. (3) RRH's, (3) TMA's, (1) DC-10E, (1) DC-9E, (2) power cables & (1) fiber line will be removed and (3) RRH's, (3) surge arrestors, (12) lines of 15/8 coax will remain.

This facility approved by the Building division, Department of Public Works- City of New London, Ct. the Application for Building Permit No. 3615 on December 21, 1966 to construct a microwave tower as per plans on file by Topper & Griggs; Brown Construction on the existing building. SEE ATTACHED.



The following is a list of subsequent decisions:

Springwich Cellular Ltd. Partnership notice of intent to modify an existing telecommunications facility located at 26 Washington St., **New London**.

**EM-CING-095-060613** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 26 Washington Street, **New London**, Connecticut.

**EM-CING-095-110624** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 26 Washington Street, **New London**, Connecticut.

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-510j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent Michael Passero, Mayor, Tammy Daugherty Director of the Office of Development & Planning, New London City Hall 181 State Street New London, CT 06320. A copy of this letter is also being sent to the land/ building owner; Southern New England Telephone Company C/O SBC Communication, Inc. 227 Church Street New Haven, CT 06510 and the to the tower owner; Frontier 25 South Cookeville Franklin, Tn. 038501.

The planned modifications to AT&T's 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 roof top tower. AT&T's replacement antennas will be installed at the 191-foot level of the 226 foot roof top tower.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require and extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in Tab 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).



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

Sincerely,

David Barbagallo

Enclosures  
CC w/enclosures:

| Michael Passero, Mayor and Tammy Daugherty Director of the  
Office of Development & Planning City of New London  
Building Owner; Southern New England Telephone Company  
C/O SBC Communication, Inc.  
Tower Owner; Frontier



Final Inspection *7-11-66 JJ*

Date December 21, 1966

# APPLICATION FOR BUILDING PERMIT

Estimated Cost \$100,000.00  
Fee . . . . . \$ 400.00  
Occupancy Fee \$ .....  
Additional Cost \$ .....

## Nº 3615

TO: THE BUILDING DIVISION, Dept. Public Works - City of New London, Conn.

The undersigned, hereby applies for a permit to do work according to the following specifications:

No. 26 Washington Street Lot No. Side of Street Zone

Owner of Building SNETCO Address

Builder Topper & Griggs; Brown Construction Address Plainfield; Norwich

Architect Address

Size Main Bldg.: Ft. Front Overall Ft. Deep Overall Net Area Garages

No. of Families No. of Stories Construction No. of rooms: 1st 2nd 3rd

Size of Lot Dist. from Street Line Dist. from Side Street Line

Purpose of this Permit Construct microwave tower as per plans on file

Sewer  Septic

# 26 WASHINGTON ST

**Location** 26 WASHINGTON ST

**Mblu** F12/ 144/ 9/ /

**Acct#** F12 0144 0009

**Owner** SOUTHERN NEW ENGLAND  
TEL CO

**Assessment** \$1,785,000

**Appraisal** \$2,550,000

**PID** 4665

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2013	\$2,239,400	\$310,600	\$2,550,000

Assessment			
Valuation Year	Improvements	Land	Total
2013	\$1,567,580	\$217,420	\$1,785,000

## Owner of Record

**Owner** SOUTHERN NEW ENGLAND TEL CO  
**Co-Owner**  
**Address** 401 MERRITT SEVEN  
NORWALK, CT 06851

**Sale Price** \$0  
**Certificate**  
**Book & Page** 294/ 611  
**Sale Date** 01/01/1700

## Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
SOUTHERN NEW ENGLAND TEL CO	\$0		294/ 611	01/01/1700

## Building Information

### Building 1 : Section 1

**Year Built:** 1961  
**Living Area:** 66,688  
**Replacement Cost:** \$5,256,121  
**Building Percent** 47  
**Good:**  
**Replacement Cost**  
**Less Depreciation:** \$2,470,400

Building Attributes	
Field	Description

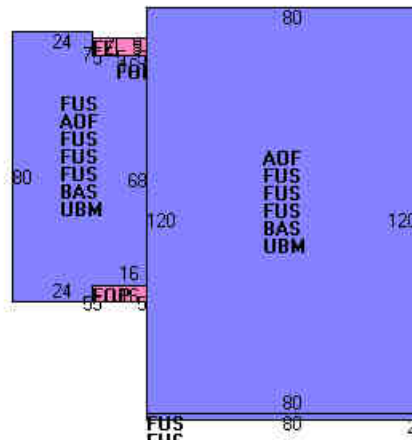
STYLE	Telephone Bldg
MODEL	Commercial
Grade	Average
Stories:	5
Occupancy	1
Exterior Wall 1	Brick Veneer
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	Central
Bldg Use	OTH MTR SS
Total Rooms	
Total Bedrms	00
Total Baths	0
Conv Type	
1st Floor Use:	3380
Heat/AC	HEAT/AC SPLIT
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	16
% Comn Wall	

### Building Photo



(<http://images.vgsi.com/photos/NewLondonCTPhotos//\00\01\1>)

### Building Layout



Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
FUS	Upper Story, Finished	41,472	41,472	
AOF	Office, (Average)	12,608	12,608	
BAS	First Floor	12,608	12,608	
FEP	Porch, Enclosed, Finished	35	0	
FOP	Porch, Open, Finished	285	0	
UBM	Basement, Unfinished	12,768	0	
		79,776	66,688	

### Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
ELS1	Pass Stops	6 UNITS	\$10,600	1
ELV1	Elevator, Pass	1 UNITS	\$37,600	1
SPR1	SPRINKLERS-WET	9600 S.F.	\$4,500	1

## Land

### Land Use

**Use Code** 3380  
**Description** OTH MTR SS  
**Zone** CBD2  
**Neighborhood** CBD2  
**Alt Land Appr** No  
**Category**

### Land Line Valuation

**Size (Acres)** 1.55  
**Frontage** 0  
**Depth** 0  
**Assessed Value** \$217,420  
**Appraised Value** \$310,600

## Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	PAVING-ASPHALT			54000 S.F.	\$81,000	1
FN2	FENCE-5' CHAIN			248 L.F.	\$2,500	1
GT1	GATE			5 UNITS	\$1,800	1

## Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$2,239,400	\$310,600	\$2,550,000
2014	\$2,608,400	\$310,600	\$2,919,000
2013	\$2,608,400	\$310,600	\$2,919,000

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$1,567,580	\$217,420	\$1,785,000
2014	\$1,825,880	\$217,420	\$2,043,300
2013	\$1,825,880	\$217,420	\$2,043,300