November 12, 2019

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

Re:	**Notice of Exempt Modification – Antenna and RRU Add**
Property Address:	**Beaver Brook RD, CT 06371**
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 (9) wireless telecommunication antennas at an antenna center line height of 150-feet on an existing 1-foot monopole, owned by Landmark Infrastructure Holding Company, Located at 2141 Rosecrans Avenue Suite 2100 El Segundo, CA 90245. AT&T now intends to remove three (3) P65-17-XLH-RR and (3) P90-15-XLH-RR Panel Antennas, each currently installed in position [3] and position [4], and swap these for three (6) CCI DMP65R-BU8DA Panel Antennas, each to be installed in position [3] and position [4], all sectors. In addition, AT&T intends to remove (3) RRUS-11 B12. AT&T is also proposing to add three (3) B14 4478, (3) 449 B5/B12, (3) 8843 B2/B66A. AT&T is also proposing to add (1) DC9 Squid with (1) Fiber and (2) DC Cables.

Attached is a summary of the planned modifications including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

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. § 16-5I0j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Ronald Rose – Building Official, Town of Lyme, CT at 480 Hamburg Rd, CT 06371 and Steve Mattson – First Selectman, Town of Lyme, CT at 480 Hamburg Rd. Lyme, CT 06371. A copy of this letter is being sent to the property owner, Landmark Infrastructure Holding Company LLC located at 400 N. Continental Blvd Suite 500, El Segundo, CA 90245, to the tower company, Crown Castle at 3 Corporate Park Drive, Suite 101, Clifton Park, NY 12065.

The following is a list of subsequent decisions by the Connecticut Siting Council:

- **EM-CING-075-130124 –** New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 322 Beaver Brook Road, **Lyme**, Connecticut.

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 tower. AT&T's replacement antennas will be installed at the 176 foot level of the 180-foot self-support 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,

Will Noel

CC w/enclosures:
Ronald Rose- Building Inspector, Town of Lyme
Steven Mattson – First Selectman, Town of Lyme
Landmark Infrastructure Holding Company LLC 90245– Property Owners

DOCKET NO. 381 - New Cingular Wireless PCS, LLC (AT&T) application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 27 Gungy Road/322 Beaver Brook Road, Lyme, Connecticut.	}	Connecticut Siting Council December 18, 2009

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to New Cingular Wireless PCS, LLC (AT&T), hereinafter referred to as the Certificate Holder, for a telecommunications facility located at 27 Gungy Road/322 Beaver Brook Road, Lyme, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of the Certificate Holder and other entities, both public and private, but such tower shall not exceed a height of 180 feet above ground level. The height at the top of the Certificate Holder's antennas shall not exceed 180 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Lyme for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Lyme public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.

8. At least one wireless telecommunications carrier shall install their equipment and shall become operational not later than 120 days after the tower is erected. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

9. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Lyme. Any proposed modifications to this Decision and Order shall likewise be so served.

10. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

11. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

12. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Day.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
New Cingular Wireless PCS, LLC (AT&T)	Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601 (914) 761-1300 (914) 761-5372 fax cfisher@cuddyfeder.com

Tracking # 777199095969

Ship date:
Wed, 12/11/2019

Smartlink LLC
North Billerica, MA 01821
US

Delivery date:
Mon, 12/16/2019 2:50 pm

Ronald Rose- Building Inspector
TOWN OF LYME
480 HAMBURG RD
OLD LYME, CT 06371311080
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777199095969
Status:	Delivered: 12/16/2019 2:50 PM Signed for By: JGGFT
Reference:	CTL01281- Lyme
Signed for by:	JGGFT
Delivery location:	Old Lyme, CT
Service type:	FedEx Ground
Packaging type:	Package
Number of pieces:	1
Weight:	1.00 lb.
Standard transit:	12/12/2019

Delivered
Tuesday 1/07/2020 at 2:08 pm

DELIVERED

Signed for by: HHINES

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

Smartlink LLC
Will Noel
85 Rangeway Road
Bldg. 3 - Suite 102
North Billerica, MA US 01821
978 799-1886

TO

Landmark Infrastructure
ATTN: Asset Management
El Segundo, CA US 90245
310 598-3173

Company Name: Smartlink LLC
Name: Will Noel
E-mail: William.noel@smartlinkllc.com

Our records indicate that the following shipment has been delivered:

Reference:	CTL01281-Lyme
Ship date:	Dec 11, 2019
Signed for by:	JGGFT
Delivery location:	Old Lyme, CT
Delivery date:	Mon, 12/16/2019 2:50 pm
Service type:	FedEx Ground
Packaging type:	Package
Number of pieces:	1
Weight:	1.00 lb.
Standard transit:	12/12/2019

Tracking number: 777199133871

Shipper Information	Recipient Information
Smartlink LLC	Steven Mattson- First Selectman
85 Rangeway Road	Town of Lyme
Bldg. 3 - Suite 102	480 Hamburg Road
North Billerica	LYME
MA	CT
US	US

SHEET INDEX

NO.	DESCRIPTION
T1	TITLE SHEET
C1	GENERAL NOTES
C2	OVERALL SITE PLAN
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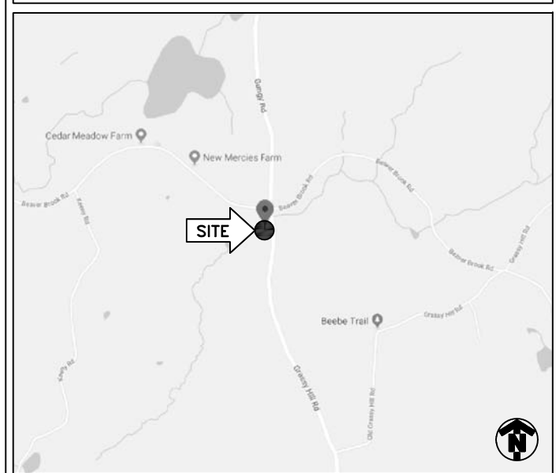
C6	PLUMBING DIAGRAM
C7	GROUNDING DETAILS

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I-90 WEST/MASSACHUETTS TURNPIKE. HEAD NORTHEAST TOWARD LEGGATT MCCALL CONN. TURN LEFT ONTO LEGGATT MCCALL CONN. CONTINUE ONTO BURR STREET. TURN LEFT ONTO COCHITUATE ROAD. USE THE RIGHT LANE TO TAKE THE RAMP TO I-90 EAST/MASSPIKE WEST/SPRINGFIELD/BOSTON. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR I-90 WEST/MASSACHUETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I-90 WEST/MASSACHUETTS TURNPIKE. FOLLOW I-90 WEST/MASSACHUETTS TURNPIKE AND I-395 SOUTH TO CT-85 NORTH IN WATERFORD. TAKE EXIT 2 FROM I-395 SOUTH. MERGE ONTO I-90 WEST/MASSACHUETTS TURNPIKE. TAKE EXIT 10 TOWARD MA-12 NORTH/AUBURN/WORCESTER. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR I-395 SOUTH US-20 EAST/NORWICH CT AND MERGE ONTO I-395 SOUTH. TAKE EXIT 2 FOR CT-85 TOWARD WATERFORD/CHESTERFIELD. FOLLOW CT-85 NORTH AND GRASSY HILL ROAD TO BEAVER BROOK ROAD IN LYME. TURN RIGHT ONTO CT-85 NORTH. TURN LEFT ONTO GRASSY HILL ROAD. TURN RIGHT ONTO UPPER FOURMILE RIVER ROAD/WHISTLETOWN ROAD. SLIGHT RIGHT ONTO BEAVER BROOK ROAD.

LOCATION MAP



at&t

PROJECT

LTE 2C/3C/4C/5C/RETROFIT

SITE NAME

LYME CT BEAVER BROOK ROAD

CELL SITE ID

CTL01281

FA SITE NUMBER

10128116

PACE ID

MRCTB041381/MRCTB041505/MRCTB041576
MRCTB041497/MRCTB041708

SITE ADDRESS

322 BEAVER BROOK ROAD
OLD LYME, CT 06371

STRUCTURE TYPE

MONOPOLE

PROJECT TEAM

smartlink

PROJECT MANAGER

INFINIGY

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

ENGINEER

SCOPE OF WORK (PER LTE RFDS, DATED 07/31/2019 V2.00):

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- FACILITY HAS NO PLUMBING OR REFRIGERANTS.
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.

TOWER
- REMOVE (6) PANEL ANTENNAS
- INSTALL (6) PANEL ANTENNAS
- REMOVE (3) RRUS-11 B12
- INSTALL (3) B14 4478
- INSTALL (3) 4449 B5/B12
- INSTALL (3) 8843 B2/B66A
- INSTALL (1) DC9 SQUID W/ (1) FIBER AND (2) DC CABLES
- REPLACE EXISTING ANTENNA PLATFORM MOUNT

GROUND
- SWAP BB WITH (2) 6630
- ADD XMU
- ADD IDLe CABLE

PROJECT SUMMARY

SITE NAME:	LYME CT BEAVER BROOK ROAD	
CELL SITE ID:	CTL01281	
FA SITE #:	10128116	
SITE ADDRESS:	322 BEAVER BROOK ROAD OLD LYME, CT 06371	
COUNTY:	NEW LONDON	
SITE COORDINATES: LATITUDE: LONGITUDE:	 41.4105000° N 72.2889400° W	 (NAD 83) (NAD 83)
RAD CENTER	±176'	(AGL)
LANDLORD:	LANDMARK INFRASTRUCTURE HOLDING COMPANY LLC 2141 ROSECRANS AVENUE, SUITE 2100 EL SEGUNDO, CA 90245	
APPLICANT:	AT&T MOBILITY 550 COCHITUATE RD. FRAMINGHAM, MA 01701	
CLIENT REPRESENTATIVE:	SMARTLINK, LLC 85 RANGEWAY RD., BUILDING 3, SUITE 102 NORTH BILLERICA, MA 01862	
CONTACT:	EDWARD WEISSMAN (917)528-1857	
ENGINEER:	INFINIGY 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205	
CONTACT:	ALEX WELLER (518) 690-0790	
BUILDING CODE:	2018 CT STATE BUILDING CODE 2015 INTERNATIONAL BUILDING CODE ANSI/TIA-222 G 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL MECHANICAL CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE 2017 NFPA 70	
ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE (LATEST EDITION)	

811 Know what's below. Call before you dig.

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT, CONTACT CALL BEFORE YOU DIG
TOLL FREE: 1-800-922-4455 OR www.cbyd.com
CONNECTICUT STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
10/10/2019
24705
LICENSED PROFESSIONAL ENGINEER

WARNING: ANY ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS

No.	Submittal / Revision	App'd	Date
1	ISSUED FOR PERMIT	ASW	10/10/19
0	ISSUED FOR REVIEW	BMM	09/13/19

Drawn: BMM Date: 09/13/19
Designed: ASW Date: 09/13/19
Checked: AJD Date: 09/13/19

Project Number: 499-006

Project Title: LYME CT BEAVER BROOK ROAD
CTL01281
FA# 10128116
322 BEAVER BROOK ROAD
OLD LYME, CT 06371

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/10/19

CD

Drawing Title: **TITLE PAGE**

Drawing Number: **T1**

GENERAL NOTES

PART 1 – GENERAL REQUIREMENTS

1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC").
D. AND NFPA 101 (LIFE SAFETY CODE).
E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).

1.2 DEFINITIONS:
A: WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
B: COMPANY: AT&T CORPORATION
C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
D: CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
E: THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.

1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.7 NOTICE TO PROCEED:
A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – EXECUTION

2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

2.4 COMPANY FURNISHED MATERIAL AND EQUIPMENT: ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.

2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

2.6 EXISTING CONDITIONS: NOTIFY THE COMPANY REPRESENTATIVE OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

PART 3 – RECEIPT OF MATERIAL & EQUIPMENT

3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION

4.1 CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

4.4 CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION.

4.5 CONDUCT TESTING AS REQUIRED HEREIN.

PART 5 – TESTS AND INSPECTIONS

5.1 TESTS AND INSPECTIONS:
A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.

C. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.

D. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.

E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.

F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.

G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

PART 6 – TRENCHING AND BACKFILLING

6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.

A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.

B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.

C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.

E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.

F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.

G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTLING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
F	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
T	TRANSFORMER
M	KILOWATT HOUR METER
JB	JUNCTION BOX
PB	PULL BOX TO NEC/TELCO STANDARDS
----------	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
OR ⊗	GROUND ROD
OR ⊠	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
G	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES
# / #	REPRESENTS DETAIL NUMBER / REF. DRAWING NUMBER

ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTION
JOHN S. STEVENS
10/10/2019
24705
LICENSED PROFESSIONAL ENGINEER

No.	Submittal / Revision	App'd	Date
1	ISSUED FOR PERMIT	ASW	10/10/19
0	ISSUED FOR REVIEW	BMM	09/13/19

Drawn: BMM Date: 09/13/19
Designed: ASW Date: 09/13/19
Checked: AJD Date: 09/13/19

Project Number: 499-006

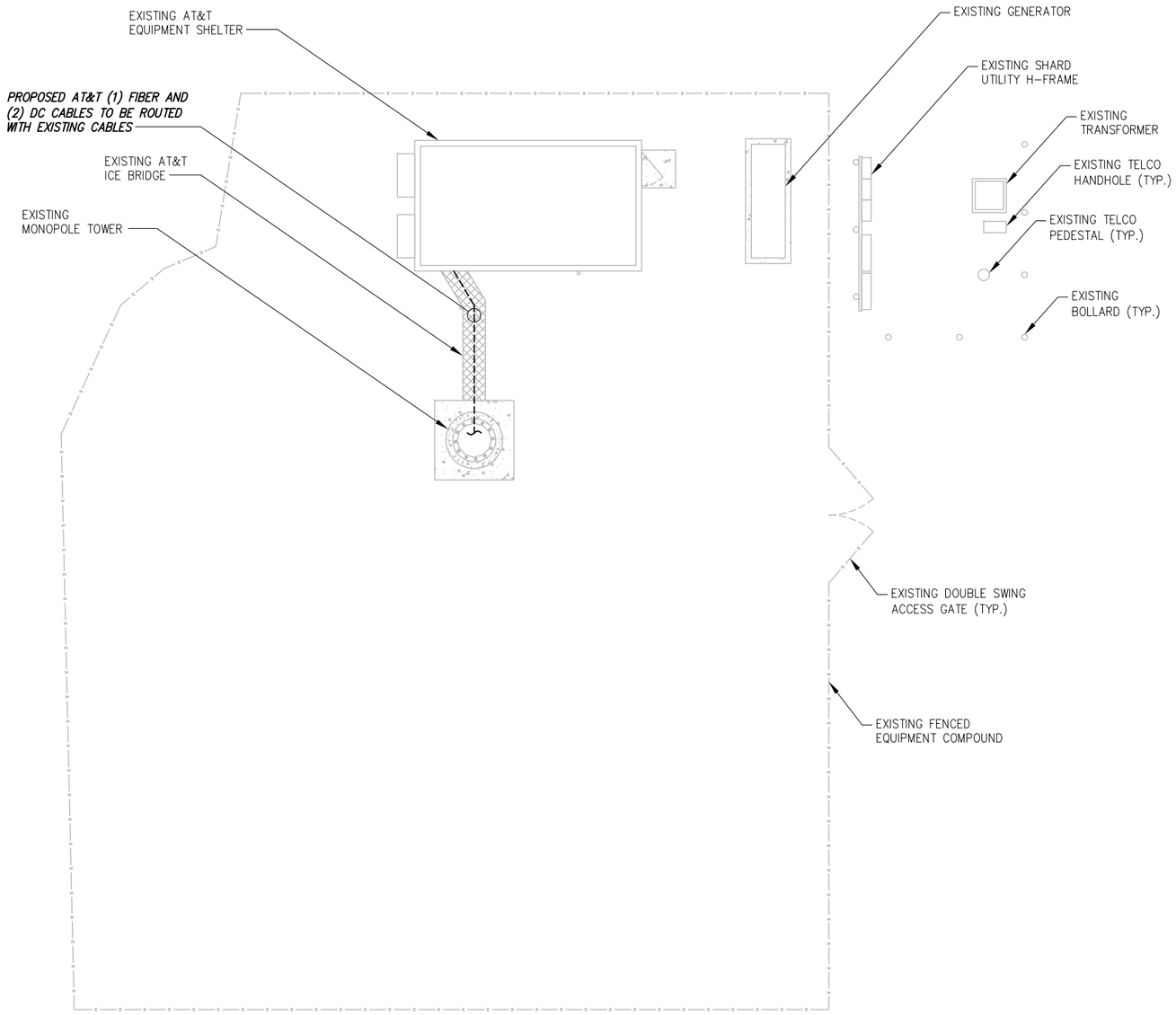
Project Title:
LYME CT BEAVER BROOK ROAD
CTL01281
FA# 10128116
322 BEAVER BROOK ROAD
OLD LYME, CT 06371

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/10/19
CD

Drawing Title
GENERAL NOTES

Drawing Number
C1



BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

TRUE NORTH

1 — SITE PLAN
SCALE: AS NOTED

GRAPHIC SCALE:
10' 5' 0 5' 10'
SCALE (11x17): 1" = 10'-0"
SCALE (22x34): 1" = 5'-0"

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

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smartlink

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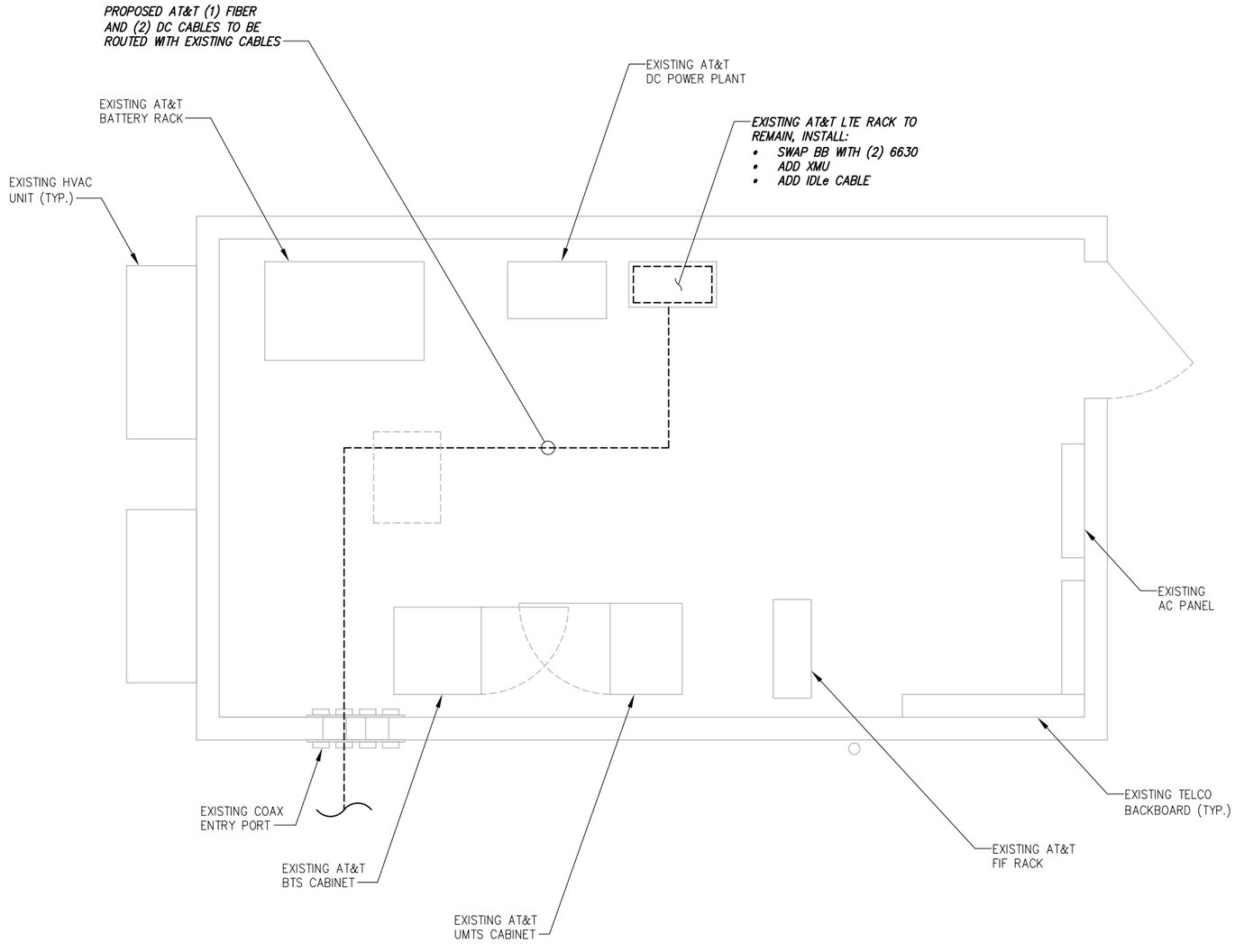
CD

Drawing Title
OVERALL SITE PLAN

Drawing Number
C2



BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

TRUE NORTH

2 ENLARGED EQUIPMENT PLAN
SCALE: AS NOTED

GRAPHIC SCALE:
3' 1'-6" 0 1'-6" 3'
SCALE (11x17): 1" = 3'-0"
SCALE (22x34): 1" = 1'-6"

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INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

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Drawing Title
ENLARGED SITE PLAN

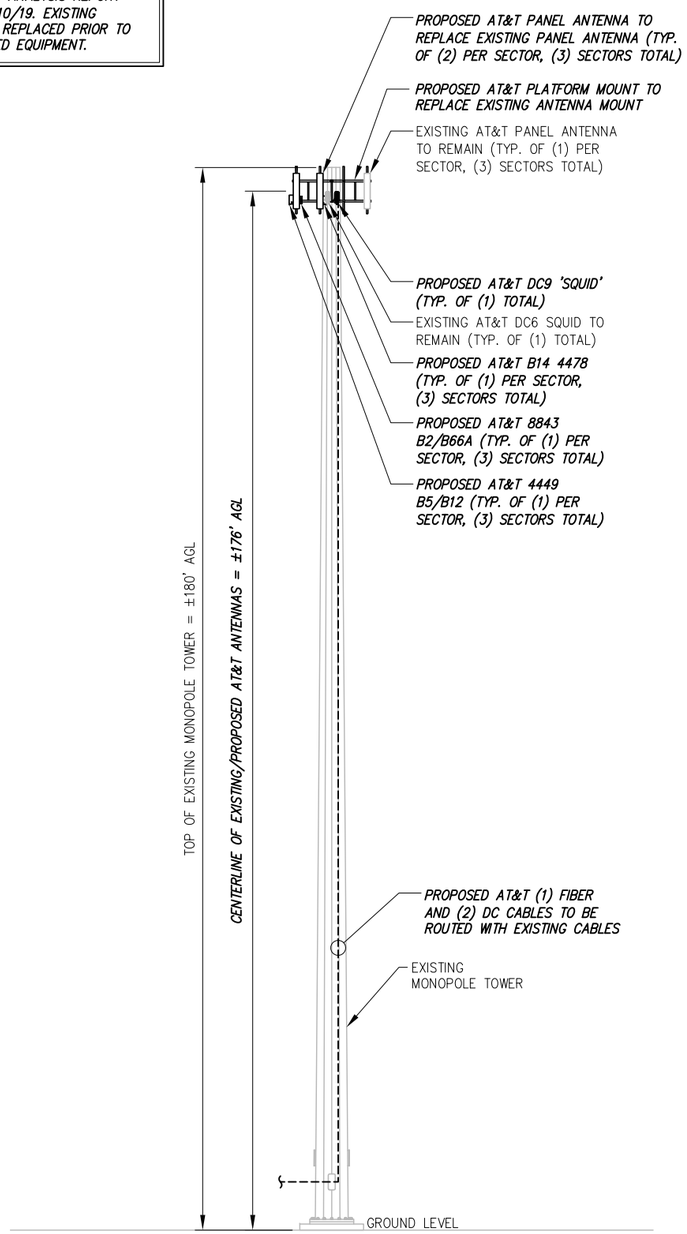
Drawing Number
C2A

NOTE:

- *FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE TOWER STRUCTURE, SEE 'STRUCTURAL ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 9/17/19*
- *FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNTS, SEE 'MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 9/10/19. EXISTING ANTENNA PLATFORM MOUNT TO BE REPLACED PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT.*

NOTE:

- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS



1 ELEVATION VIEW
NOT TO SCALE

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 07/31/19, V2.00

SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/ DIPLEXER	RRUS	AZIMUTH	ANTENNA ℄ HEIGHT	CABLE FEEDER TYPE	CABLE FEEDER LENGTH	RAYCAP UNIT
ALPHA	A-1	(E) UMTS 850	POWERWAVE P90-15-XLH-RR	(1) (E) TT08-19DB111-001	--	0°	±176'	(2) (E) 1-5/8" COAX CABLES	±220'	(1) (E) DC6 'SQUID', (1) (P) DC9 'SQUID'
	A-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	A-3	*(P) LTE 700/1900*	*CCI DMP65R-BU8DA*	--	*(1) (P) B14 4478*	*0°*	*±176'*	(1) (E) FIBER CABLE (2) (E) DC CABLES	--	
	A-4	*(P) LTE 700/850/ AWS/5G 850*	*CCI DMP65R-BU8DA*	--	*(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A*	*0°*	*±176'*	SEE A-3 FOR CABLE INFORMATION	--	
BETA	B-1	(E) UMTS 850	POWERWAVE P90-15-XLH-RR	(1) (E) TT08-19DB111-001	--	110°	±176'	(2) (E) 1-5/8" COAX CABLES	±220'	
	B-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	B-3	*(P) LTE 700/1900*	*CCI DMP65R-BU8DA*	--	*(1) (P) B14 4478*	*110°*	*±176'*	*(1) (P) FIBER CABLE (2) (P) DC CABLES*	--	
	B-4	*(P) LTE 700/850/ AWS/5G 850*	*CCI DMP65R-BU8DA*	--	*(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A*	*110°*	*±176'*	SEE A-3 FOR CABLE INFORMATION	--	
GAMMA	G-1	(E) UMTS 850	POWERWAVE P90-15-XLH-RR	(1) (E) TT08-19DB111-001	--	230°	±176'	(2) (E) 1-5/8" COAX CABLES	±220'	
	G-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	G-3	*(P) LTE 700/1900*	*CCI DMP65R-BU8DA*	--	*(1) (P) B14 4478*	*230°*	*±176'*	SEE A-3 FOR CABLE INFORMATION	--	
	G-4	*(P) LTE 700/850/ AWS/5G 850*	*CCI DMP65R-BU8DA*	--	*(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A*	*230°*	*±176'*	SEE A-3 FOR CABLE INFORMATION	--	

2 AT&T ANTENNA SCHEDULE
NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

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Prepared For: smartlink

Drawing Scale: AS NOTED
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CD

Drawing Title
ELEVATION VIEW

Drawing Number
C3

NOTE:

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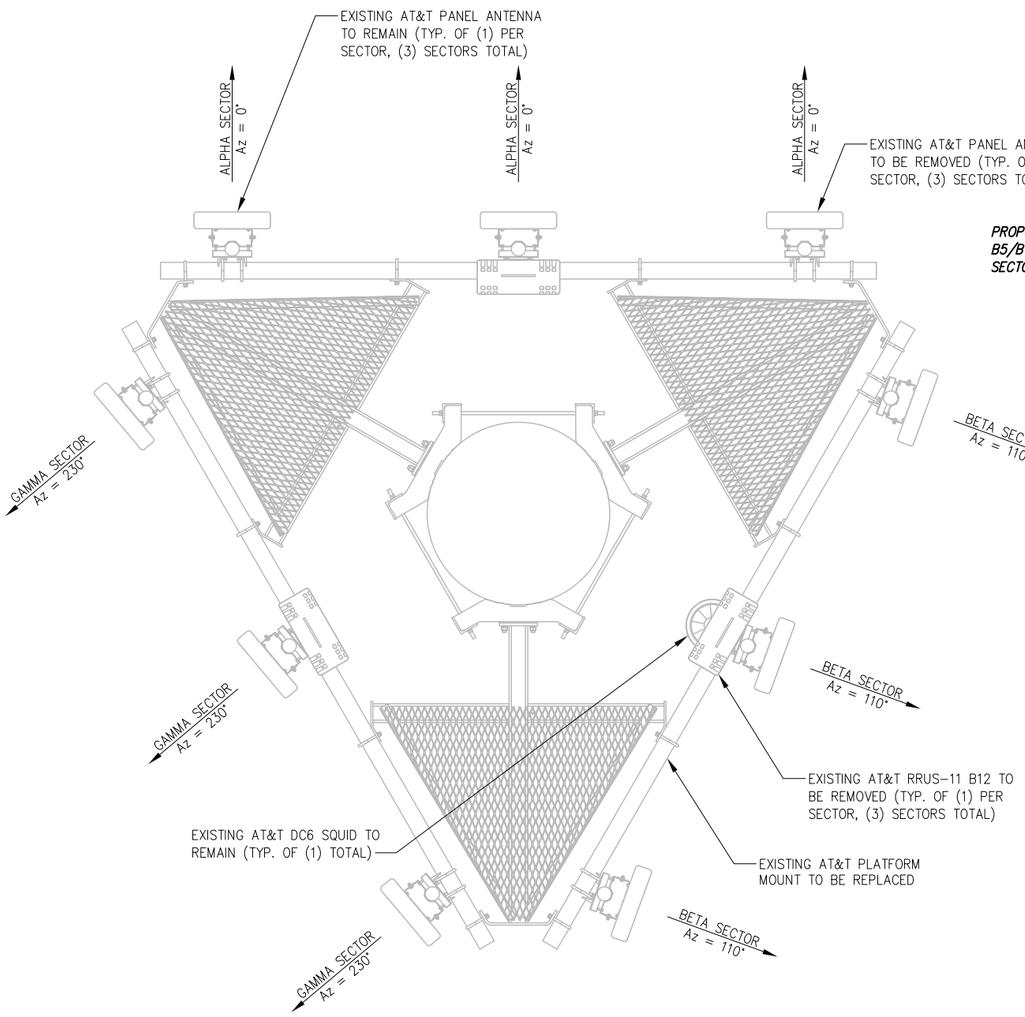
- *FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNTS, SEE 'MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 9/10/19. EXISTING ANTENNA PLATFORM MOUNT TO BE REPLACED PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT.*

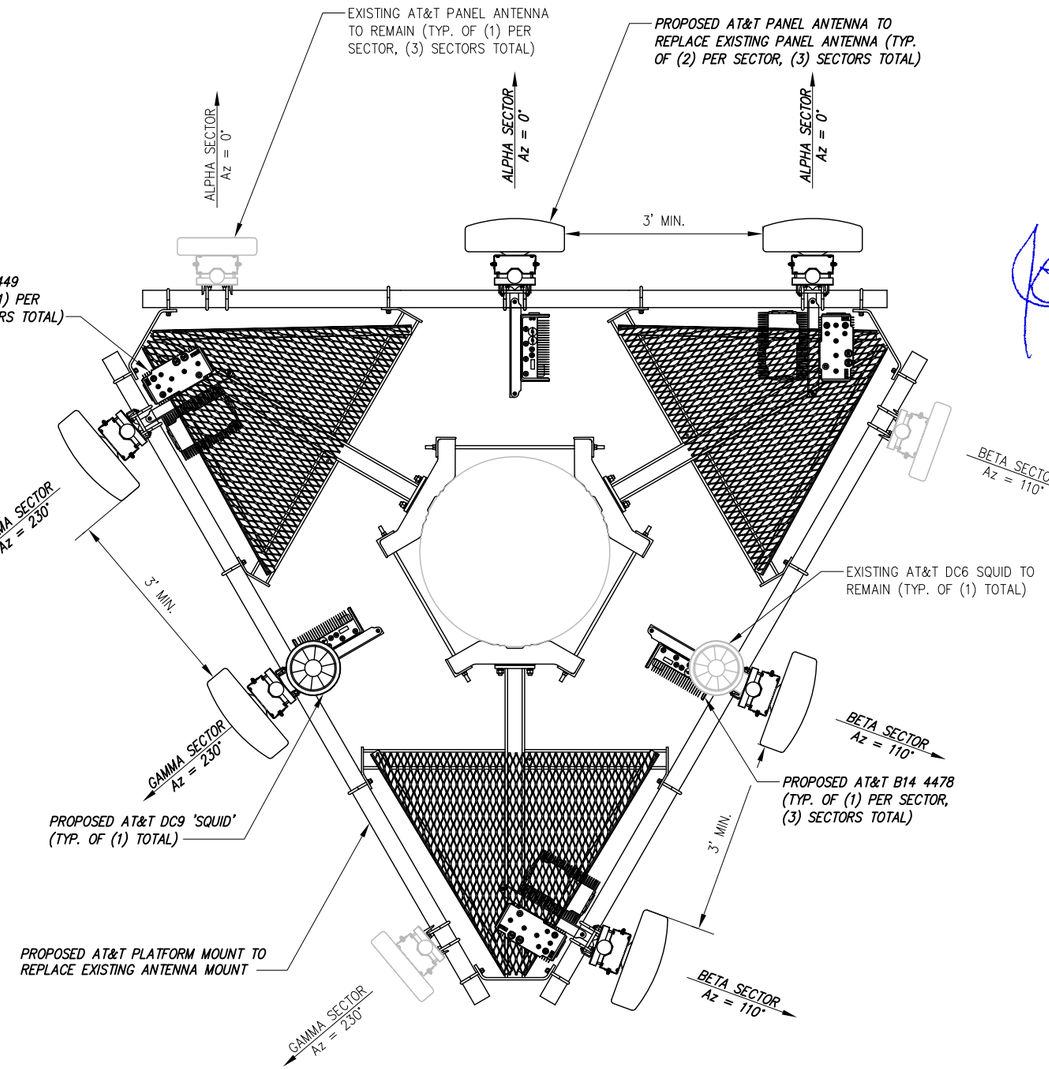
NOTE:

- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS



TRUE NORTH

1 EXISTING ANTENNA ORIENTATION PLAN
NOT TO SCALE



TRUE NORTH

2 PROPOSED ANTENNA ORIENTATION PLAN
NOT TO SCALE

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INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

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Drawing Scale: AS NOTED
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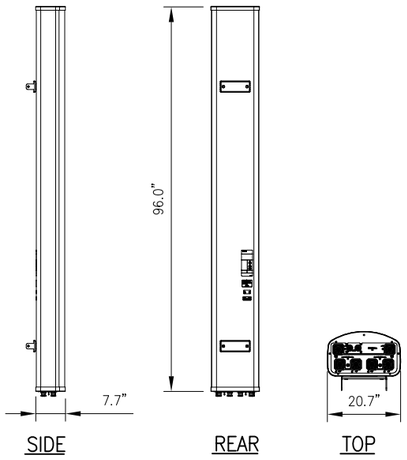
CD

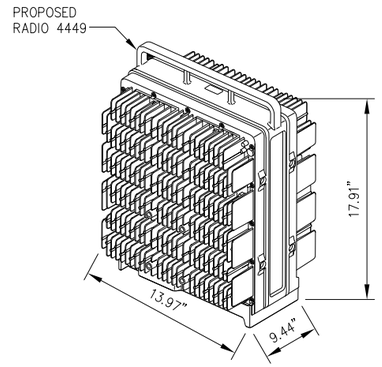
Drawing Title
ANTENNA ORIENTATION PLAN

Drawing Number
C4



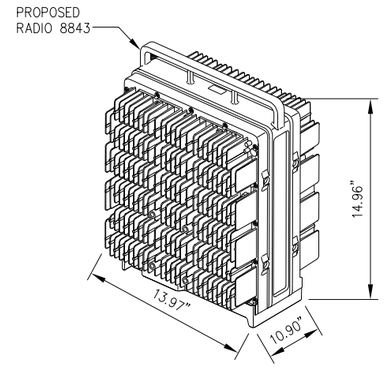
CCI MODEL NO.:	DMP65R-BU8DA
RADOME MATERIAL:	FIBERGLASS, UV RESISTANT
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	96.0"x20.7"x7.7"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	95.7 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
NOT TO SCALE



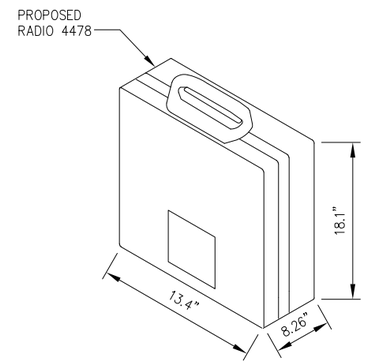
RADIO 4449 SPECIFICATIONS
- HxWxD, (INCHES) : 17.91"x13.97"x9.44"
- WEIGHT (LBS) : 70.54
- COLOR : GRAY

2 ERICSSON RADIO 4449 DETAIL
NOT TO SCALE



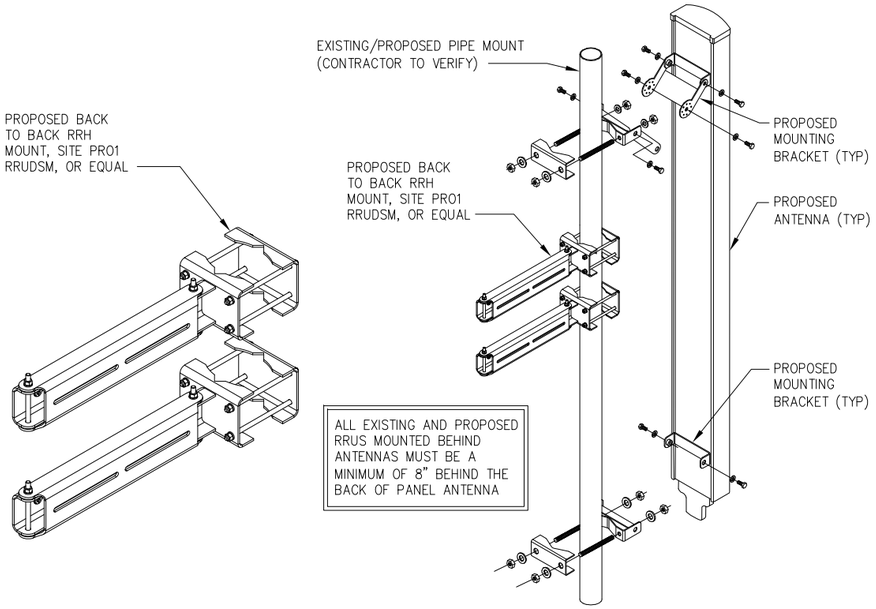
RADIO 8843 SPECIFICATIONS
- HxWxD, (INCHES) : 14.96"x13.97"x10.90"
- WEIGHT (LBS) : 71.87
- COLOR : GRAY

3 ERICSSON RADIO 8843 DETAIL
NOT TO SCALE



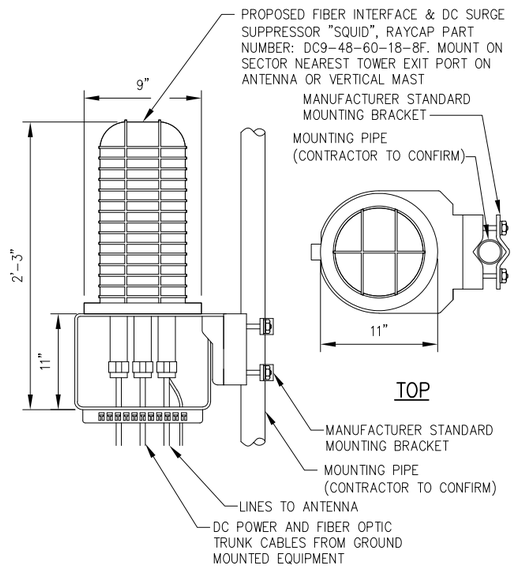
RADIO 4478-B14 SPECIFICATIONS
- HxWxD, (INCHES) : 18.1"x13.4"x8.26"
- WEIGHT (LBS) : 59.5
- COLOR : GRAY
- MOUNTING BRACKET: SXK1250244/1

4 ERICSSON RADIO 4478-B14 DETAIL
NOT TO SCALE

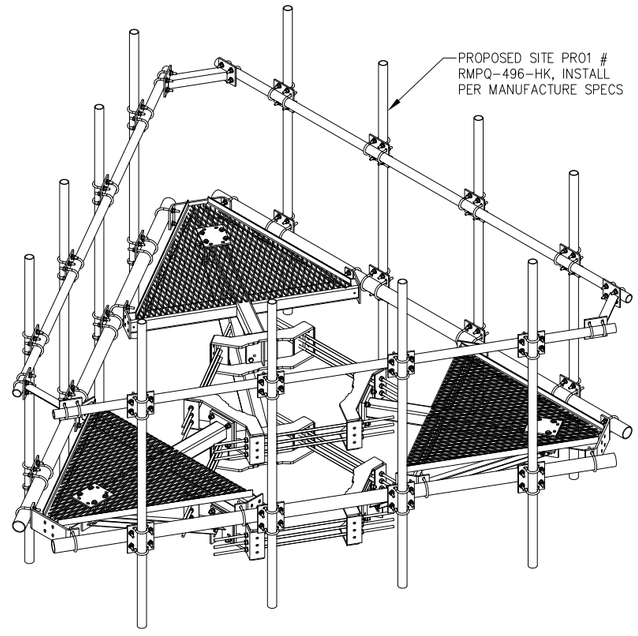


5 BACK TO BACK PIPE MOUNT DETAIL
NOT TO SCALE

6 ANTENNA MOUNTING DETAIL
NOT TO SCALE



7 SQUID DETAIL
NOT TO SCALE



8 PLATFORM MOUNT DETAIL
NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
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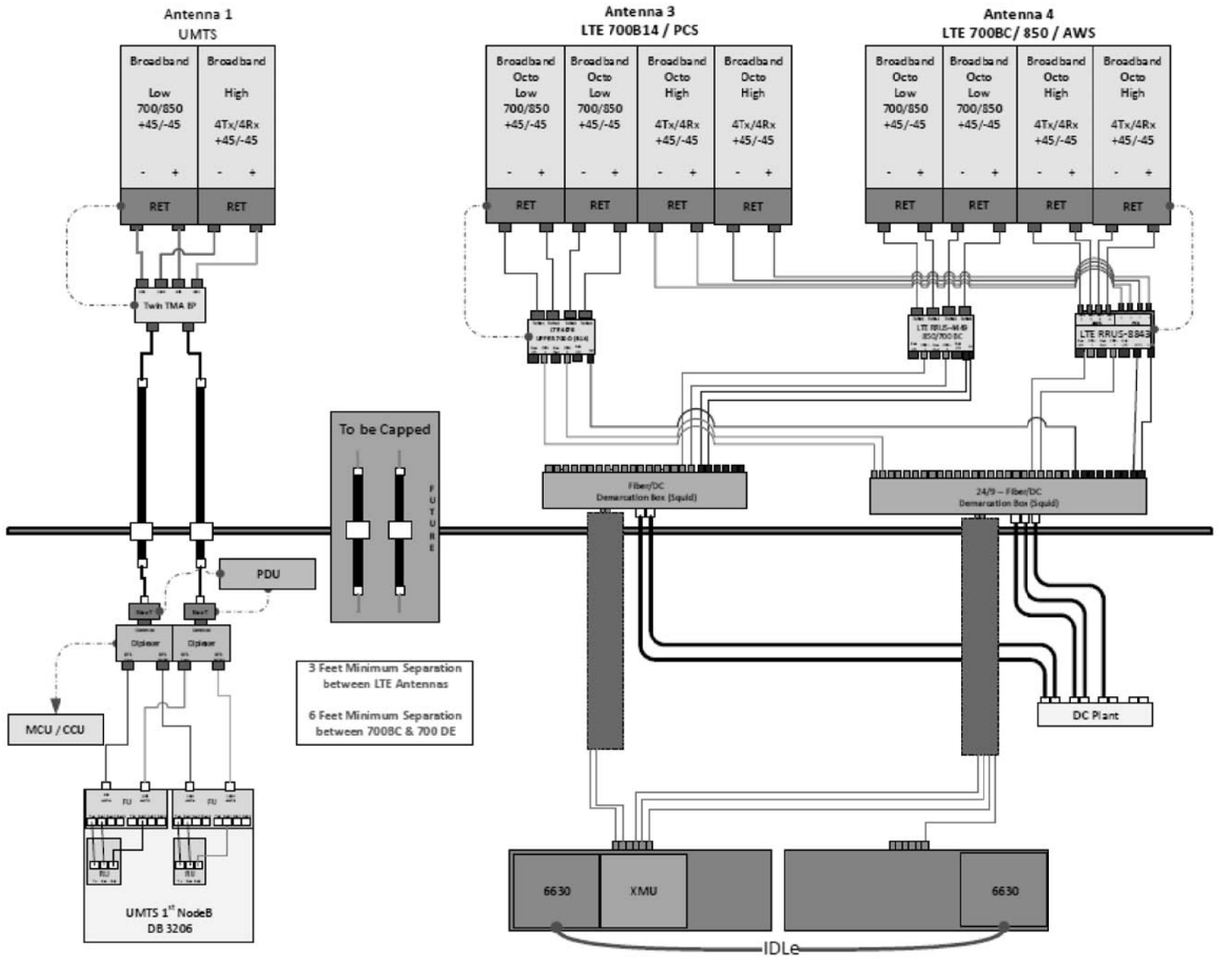
CD

Drawing Title
EQUIPMENT DETAILS

Drawing Number
C5



ALPHA/BETA/GAMMA

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)
NOT TO SCALE

*BASED ON LTE RFDS,
DATED 06/06/2019, V1.00

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
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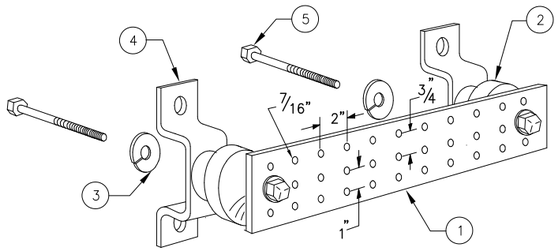
Drawing Title
PLUMBING DIAGRAM

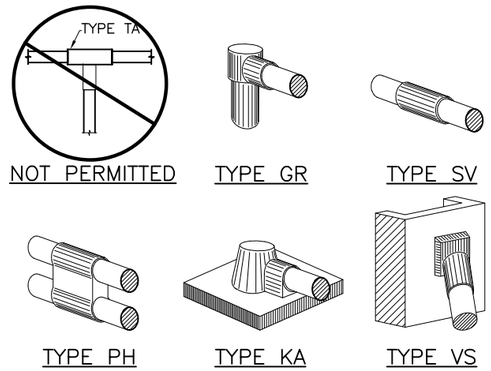
Drawing Number
C6



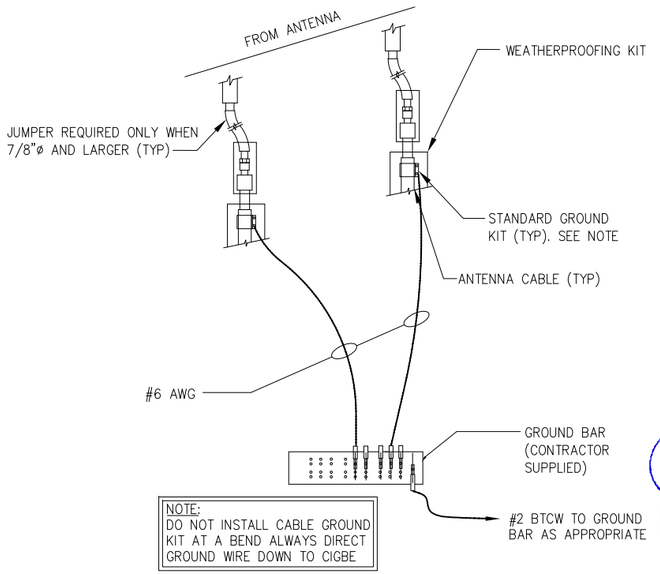
LEGEND

1 – SOLID TINNED COPPER GROUND BAR, 1/4"x 4"x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2 – INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061–4
3 – 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015–8
4 – WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A–6056
5 – 5/8–11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012–1
6 – GROUND BAR SHALL BE SIZED TO ACCOMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
7 – GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
8 – GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
9 – HARDWARE DIAMETER SHALL BE MINIMUM 3/8"

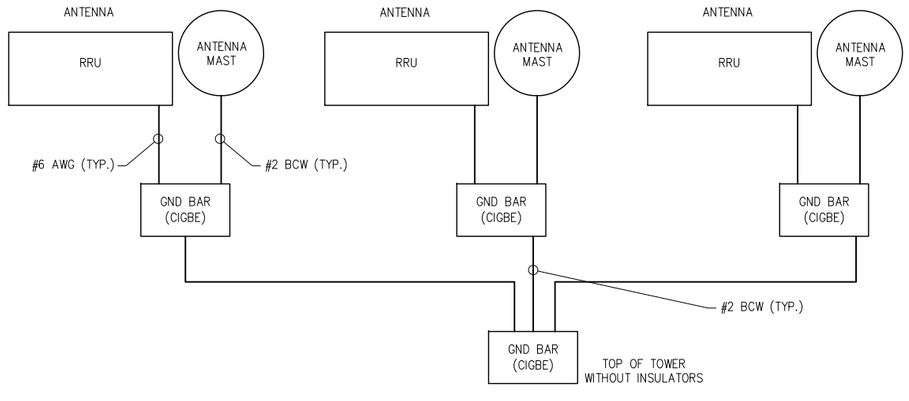
1 — GROUND BAR
NOT TO SCALE



2 — CADWELDS (TYPICAL)
NOT TO SCALE



3 — CONNECTION OF GROUND WIRES TO GROUNDING BARS @ ANTENNAS
NOT TO SCALE



4 — SCHEMATIC DIAGRAM GROUNDING SYSTEM
NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
10/10/2019
24705
LICENSED PROFESSIONAL ENGINEER

No.	Submittal / Revision	App'd	Date
1	ISSUED FOR PERMIT	ASW	10/10/19
0	ISSUED FOR REVIEW	BMM	09/13/19

Drawn: BMM Date: 09/13/19
Designed: ASW Date: 09/13/19
Checked: AJD Date: 09/13/19

Project Number: 499-006

Project Title:
LYME CT BEAVER BROOK ROAD
CTL01281
FA# 10128116
322 BEAVER BROOK ROAD
OLD LYME, CT 06371

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/10/19
CD

Drawing Title
GROUNDING DETAILS

Drawing Number
C7

INFINIGY

FROM ZERO TO INFINIGY

the solutions are endless

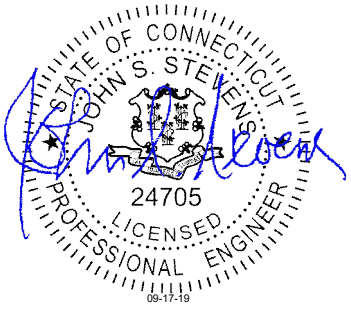
1033 WATERVLIET SHAKER RD, ALBANY, NY 12205

Structural Analysis Report

September 17, 2019

Site Name	Old Lyme-Beaver Brook Road
Site Number	CTL01281
AT&T FA Number	10128116
AT&T PACE Number	MRCTB041381/ MRCTB041505/ MRCTB041576/ MRCTB041497/ MRCTB041708
AT&T PTN Number	2051A0Q923/ 2051A0QAJ6/ 2051A0Q7GG/ 2051A0Q8CD/ 2051A0Q8YP
Infinigy Job Number	1106-A0001-B
Client	Smartlink
Carrier	AT&T Mobility
Site Location	322 Beaver Brook Road Old Lyme, CT 06371 41.4105000 N NAD83 72.2889400 W NAD83
Structure Type	179 ft. Monopole
Structural Usage Ratio	**75.6%**
Overall Result	**Pass**

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The tower and foundations are therefore deemed adequate to support the existing and proposed loading as listed in this report.



Morteza Ashouri, E.I.T.
Structural Engineer II

Contents

Introduction

Infinigy Engineering has been requested to perform a structural analysis on the existing 179 ft. Monopole. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The tower was analyzed using tnxTower version 8.0.3.2 tower analysis software.

Supporting Documentation

RFDS	RFDS ID #3161837, dated July 31, 2019
Construction Drawings	Infinigy Engineering, dated September 13, 2019
Site Photos	Provided by Infinigy, dated June 25, 2019
Structural Analysis Report	GPD Group, dated January 23, 2013
Original Tower Drawings	Sabre Job #11-05006, dated May 7, 2010

Analysis Code Requirements

Wind Speed	132 mph (3-Second Gust)
Wind Speed w/ Ice	50 mph (3 Second Gust) w/ 1.275" Ice
TIA Revision	ANSI/TIA-222-H
Adopted IBC	2015 IBC
Structure Class	II
Exposure Category	B
Topographic Category	1
Spectral Response	S_s = 0.167 g, S_1 = 0.060 g
Site Class	D - Stiff Soil
HMSL	157 ft.

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The tower and foundations are therefore deemed adequate to support the existing and proposed loading as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

Morteza Ashouri
Structural Engineer II | INFINIGY
1517 Old Apex Rd, Cary, NC 27513
(O) (518) 690-0790 | (M) (919) 448-4344
mashouri@infinigy.com | www.infinigy.com

Existing and Reserved Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
176.0	6	POWERWAVE P90-15-XLH-RR	Platform with Handrails	(12) 1-5/8" Coax (1) Fiber Cables (2) DC Cables	AT&T
	3	POWERWAVE P65-17-XLH-RR			
	6	POWERWAVE TT08-19DB111-001			
	3	ERICSSON RRUS-11 B12			
	1	Raycap DC6-48-60-18-8F			

To Be Removed Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
176.0	3	POWERWAVE P90-15-XLH-RR	-	-	AT&T
	3	POWERWAVE P65-17-XLH-RR			
	3	POWERWAVE TT08-19DB111-001			
	3	ERICSSON RRUS-11 B12			

Proposed Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
176.0	6	CCI DMP65R-BU8DA	-	(1) Fiber Cables (2) DC Cables	AT&T
	3	ERICSSON RRUS 4478 B14			
	3	ERICSSON RRUS 4449 B5/B12			
	3	ERICSSON RRUS 8843 B2/B66A			
	1	Raycap DC6-48-60-18-8F			

Final Configuration

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
176.0	3	POWERWAVE P90-15-XLH-RR	Platform with Handrails	(12) 1-5/8" Coax (2) Fiber Cables (4) DC Cables	AT&T
	6	CCI DMP65R-BU8DA			
	3	POWERWAVE TT08-19DB111-001			
	3	ERICSSON RRUS 8843 B2/B66A			
	3	ERICSSON RRUS 4449 B5/B12			
	3	ERICSSON RRUS 4478 B14			
	2	RAYCAP DC6-48-60-18-8F			

Structure Usages

Pole (L2)	65.8%	Pass
Plate Ratio	43.7%	Pass
Bolt Ratio	75.6%	Pass
RATING =	**75.6%**	**Pass**

Foundation Reactions

Reaction Data	Design Reactions	Analysis Reactions	Result
Moment (kip-ft)	--	2924.8	55.2%
Axial (kip)	--	37.5	33.4%
Shear (kip)	--	25.3	16.6%

The existing baseplate, anchor rods, and foundation were found to be adequate through analysis based on provided information. Please refer to the calculations at the end of this report.

Deflection, Twist, and Sway

Antenna Elevation (ft)	Deflection (in)	Twist (°)	Sway (°)
176.0	21.261	0.0019	1.1601

*Per ANSI/TIA-222-H Section 2.8.2 maximum serviceability structural deflection limit is 3% of structure height.
*Per ANSI/TIA-222-H Section 2.8.2 maximum serviceability structural twist and sway limit is 4 degrees.
*Per ANSI/TIA-222-H Section 2.8.3 deflection, Twist, and sway values were calculated using a basic 3-second gust wind speed of 60 mph.
*It is the responsibility of the client to ensure their proposed and/or existing equipment will meet ANSI/TIA-222-H Annex D or other appropriate microwave signal degradation limits based on the provided values above.

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of "like new" and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the tower structure only and does not reflect adequacy of any existing antenna mounts, mount connections, or cable mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.

Structure Usages

Pole (L2)	65.8	Pass
RATING =	**65.8**	**Pass**

Foundation Reactions

Reaction Data	Analysis Reactions
Moment (kip-ft)	2924.8
Axial (kip)	37.5
Shear (kip)	25.3

The existing baseplate, anchor rods, and foundation were found to be adequate through analysis based on provided information. Please refer to the calculations at the end of this report.

Deflection, Twist, and Sway

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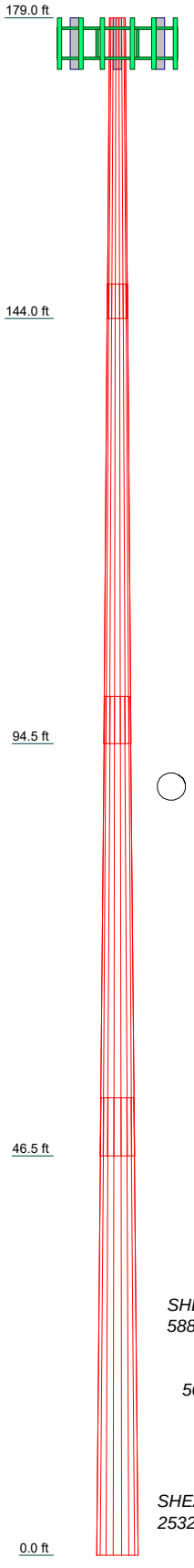
This report is an evaluation of the tower structure only and does not reflect adequacy of any existing antenna mounts, mount connections, or cable mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	35.00	18	0.1875	4.00	21.0000	28.3500		1735.6
2	53.50	18	0.2500	5.50	27.1350	38.3700		4695.2
3	53.50	18	0.3125	6.75	36.7150	47.9500		7587.6
4	53.25	18	0.3750		45.9075	57.0900		11025.9
							A572-65	25044.3



ALL REACTIONS ARE FACTORED

AXIAL 55485 lb

SHEAR 5885 lb

MOMENT 667761 lb-ft

TORQUE 113 lb-ft
50 mph WIND - 1.2750 in ICE

AXIAL 37464 lb

SHEAR 25325 lb

MOMENT 2924789 lb-ft

TORQUE 607 lb-ft
REACTIONS - 132 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Angle Platform w/ Handrails	176	B2/B66A 8843	176
P90-15-XLH-RR	176	B2/B66A 8843	176
P90-15-XLH-RR	176	B5/B12 4449	176
P90-15-XLH-RR	176	B5/B12 4449	176
(2) DMP65R-BU8DA	176	B5/B12 4449	176
(2) DMP65R-BU8DA	176	RRUS 4478 B14	176
(2) DMP65R-BU8DA	176	RRUS 4478 B14	176
TT08-19DB111-001	176	RRUS 4478 B14	176
TT08-19DB111-001	176	DC6-48-60-18-8F	176
TT08-19DB111-001	176	DC6-48-60-18-8F	176
B2/B66A 8843	176		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 132 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.27 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 65.8%

Infinigy Engineering PLLC
1517 Old Apex Rd
Cary, NC 27513
Phone: (518) 690 0790
FAX:

Job: ***CTL01281_10128116***			
Project: ***Structural Analysis***			
Client: Smartlink	Drawn by: mashouri	App'd:	
Code: TIA-222-H	Date: 09/17/19	Scale: NTS	
Path: C:\Users\mashouri\Desktop\week ending 9-21-2019\CTL01281-10128116\Tower\CTL01281_10128116.eri		Dwg No. E-1	

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in New London County, Connecticut.
Tower base elevation above sea level: 157.00 ft.
Basic wind speed of 132 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height 0.00 ft.
Nominal ice thickness of 1.2750 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r	√	All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys	√	Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice		Bypass Mast Stability Checks		Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients	√	Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
√	Include Bolts In Member Capacity	√	Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
√	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
√	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component		Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)	√	Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	179.00-144.00	35.00	4.00	18	21.0000	28.3500	0.1875	0.7500	A572-65 (65 ksi)
L2	144.00-94.50	53.50	5.50	18	27.1350	38.3700	0.2500	1.0000	A572-65 (65 ksi)
L3	94.50-46.50	53.50	6.75	18	36.7150	47.9500	0.3125	1.2500	A572-65 (65 ksi)
L4	46.50-0.00	53.25		18	45.9075	57.0900	0.3750	1.5000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	21.2950	12.3860	677.8263	7.3884	10.6680	63.5383	1356.5444	6.1942	3.3660	17.952
	28.7584	16.7602	1679.4198	9.9977	14.4018	116.6118	3361.0493	8.3817	4.6596	24.851
L2	28.3680	21.3332	1948.1146	9.5442	13.7846	141.3256	3898.7926	10.6687	4.3358	17.343
	38.9234	30.2482	5553.1967	13.5326	19.4920	284.8968	11113.7004	15.1270	6.3131	25.252
L3	38.4060	36.1067	6044.8848	12.9229	18.6512	324.1013	12097.7235	18.0568	5.9118	18.918
	48.6415	47.2504	13546.9423	16.9113	24.3586	556.1462	27111.7099	23.6297	7.8892	25.245
L4	47.9972	54.1951	14195.1547	16.1640	23.3210	608.6852	28408.9877	27.1027	7.4197	19.786
	57.9129	67.5050	27432.7566	20.1338	29.0017	945.9010	54901.6099	33.7589	9.3878	25.034

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 179.00-144.00				1	1	1			
L2 144.00-94.50				1	1	1			
L3 94.50-46.50				1	1	1			
L4 46.50-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
***											

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C_AA_A ft^2/ft	Weight plf
***								

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8	C	No	No	Inside Pole	176.00 - 0.00	12	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
							2" Ice	0.00	1.04
1/2	C	No	No	Inside Pole	176.00 - 0.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
							2" Ice	0.00	0.25
7/8	C	No	No	Inside Pole	176.00 - 0.00	2	No Ice	0.00	0.54
							1/2" Ice	0.00	0.54
							1" Ice	0.00	0.54
							2" Ice	0.00	0.54
***									
1/2	C	No	No	Inside Pole	176.00 - 0.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
							2" Ice	0.00	0.25
7/8	C	No	No	Inside Pole	176.00 - 0.00	2	No Ice	0.00	0.54
							1/2" Ice	0.00	0.54
							1" Ice	0.00	0.54
							2" Ice	0.00	0.54
***									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	179.00-144.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	484.48
L2	144.00-94.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	749.43
L3	94.50-46.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	726.72
L4	46.50-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	704.01

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	179.00-144.00	A	1.494	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	484.48
L2	144.00-94.50	A	1.449	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
		C		0.000	0.000	0.000	0.000	749.43
L3	94.50-46.50	A	1.375	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	726.72
L4	46.50-0.00	A	1.229	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	704.01

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
***									
Angle Platform w/ Handrails	C	None		0.0000	176.00	No Ice	42.40	42.40	2000.00
						1/2" Ice	48.40	48.40	2450.00
						1" Ice	54.40	54.40	2900.00
						2" Ice	66.40	66.40	3800.00
P90-15-XLH-RR	A	From Leg	4.00 0.00 0.00	0.0000	176.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.13 8.59 9.05 10.00	4.70 5.15 5.60 6.53	64.00 111.28 164.59 290.07
P90-15-XLH-RR	B	From Leg	4.00 0.00 0.00	0.0000	176.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.13 8.59 9.05 10.00	4.70 5.15 5.60 6.53	64.00 111.28 164.59 290.07
P90-15-XLH-RR	C	From Leg	4.00 0.00 0.00	0.0000	176.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.13 8.59 9.05 10.00	4.70 5.15 5.60 6.53	64.00 111.28 164.59 290.07
(2) DMP65R-BU8DA	A	From Leg	4.00 0.00 0.00	0.0000	176.00	No Ice 1/2" Ice 1" Ice 2" Ice	17.87 18.50 19.14 20.44	8.12 8.72 9.32 10.54	95.70 193.28 299.13 536.36
(2) DMP65R-BU8DA	B	From Leg	4.00 0.00 0.00	0.0000	176.00	No Ice 1/2" Ice 1" Ice 2" Ice	17.87 18.50 19.14 20.44	8.12 8.72 9.32 10.54	95.70 193.28 299.13 536.36
(2) DMP65R-BU8DA	C	From Leg	4.00 0.00 0.00	0.0000	176.00	No Ice 1/2" Ice 1" Ice 2" Ice	17.87 18.50 19.14 20.44	8.12 8.72 9.32 10.54	95.70 193.28 299.13 536.36
TT08-19DB111-001	A	From Leg	4.00 0.00 0.00	0.0000	176.00	No Ice 1/2" Ice 1" Ice	0.79 0.91 1.04	0.64 0.75 0.87	22.00 29.63 39.15

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						2" Ice	1.32	1.13	64.67
TT08-19DB111-001	B	From Leg	4.00	0.0000	176.00	No Ice	0.79	0.64	22.00
			0.00			1/2" Ice	0.91	0.75	29.63
			0.00			1" Ice	1.04	0.87	39.15
						2" Ice	1.32	1.13	64.67
TT08-19DB111-001	C	From Leg	4.00	0.0000	176.00	No Ice	0.79	0.64	22.00
			0.00			1/2" Ice	0.91	0.75	29.63
			0.00			1" Ice	1.04	0.87	39.15
						2" Ice	1.32	1.13	64.67
B2/B66A 8843	A	From Leg	4.00	0.0000	176.00	No Ice	1.98	1.70	75.00
			0.00			1/2" Ice	2.16	1.86	95.54
			0.00			1" Ice	2.34	2.04	119.02
						2" Ice	2.73	2.41	175.61
B2/B66A 8843	B	From Leg	4.00	0.0000	176.00	No Ice	1.98	1.70	75.00
			0.00			1/2" Ice	2.16	1.86	95.54
			0.00			1" Ice	2.34	2.04	119.02
						2" Ice	2.73	2.41	175.61
B2/B66A 8843	C	From Leg	4.00	0.0000	176.00	No Ice	1.98	1.70	75.00
			0.00			1/2" Ice	2.16	1.86	95.54
			0.00			1" Ice	2.34	2.04	119.02
						2" Ice	2.73	2.41	175.61
B5/B12 4449	A	From Leg	4.00	0.0000	176.00	No Ice	1.98	1.41	70.00
			0.00			1/2" Ice	2.16	1.57	88.55
			0.00			1" Ice	2.34	1.73	109.93
						2" Ice	2.73	2.08	161.94
B5/B12 4449	B	From Leg	4.00	0.0000	176.00	No Ice	1.98	1.41	70.00
			0.00			1/2" Ice	2.16	1.57	88.55
			0.00			1" Ice	2.34	1.73	109.93
						2" Ice	2.73	2.08	161.94
B5/B12 4449	C	From Leg	4.00	0.0000	176.00	No Ice	1.98	1.41	70.00
			0.00			1/2" Ice	2.16	1.57	88.55
			0.00			1" Ice	2.34	1.73	109.93
						2" Ice	2.73	2.08	161.94
RRUS 4478 B14	A	From Leg	4.00	0.0000	176.00	No Ice	2.02	1.25	59.40
			0.00			1/2" Ice	2.20	1.40	77.01
			0.00			1" Ice	2.39	1.55	97.40
						2" Ice	2.78	1.89	147.26
RRUS 4478 B14	B	From Leg	4.00	0.0000	176.00	No Ice	2.02	1.25	59.40
			0.00			1/2" Ice	2.20	1.40	77.01
			0.00			1" Ice	2.39	1.55	97.40
						2" Ice	2.78	1.89	147.26
RRUS 4478 B14	C	From Leg	4.00	0.0000	176.00	No Ice	2.02	1.25	59.40
			0.00			1/2" Ice	2.20	1.40	77.01
			0.00			1" Ice	2.39	1.55	97.40
						2" Ice	2.78	1.89	147.26
DC6-48-60-18-8F	A	From Leg	4.00	0.0000	176.00	No Ice	2.90	2.90	32.80
			0.00			1/2" Ice	3.13	3.13	60.76
			0.00			1" Ice	3.37	3.37	92.36
						2" Ice	3.86	3.86	167.29
DC6-48-60-18-8F	B	From Leg	4.00	0.0000	176.00	No Ice	2.90	2.90	32.80
			0.00			1/2" Ice	3.13	3.13	60.76
			0.00			1" Ice	3.37	3.37	92.36
						2" Ice	3.86	3.86	167.29
***									

Tower Pressures - No Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	160.76	1.132	48	72.995	A	0.000	72.995	72.995	100.00	0.000	0.000
179.00-144.00					B	0.000	72.995		100.00	0.000	0.000
					C	0.000	72.995		100.00	0.000	0.000
L2	118.32	1.037	44	138.788	A	0.000	138.788	138.788	100.00	0.000	0.000
144.00-94.50					B	0.000	138.788		100.00	0.000	0.000
					C	0.000	138.788		100.00	0.000	0.000
L3 94.50-46.50	70.15	0.893	37	174.095	A	0.000	174.095	174.095	100.00	0.000	0.000
					B	0.000	174.095		100.00	0.000	0.000
					C	0.000	174.095		100.00	0.000	0.000
L4 46.50-0.00	22.77	0.7	30	205.201	A	0.000	205.201	205.201	100.00	0.000	0.000
					B	0.000	205.201		100.00	0.000	0.000
					C	0.000	205.201		100.00	0.000	0.000

Tower Pressure - With Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	160.76	1.132	7	1.4937	81.708	A	0.000	81.708	81.708	100.00	0.000	0.000
179.00-144.00						B	0.000	81.708		100.00	0.000	0.000
						C	0.000	81.708		100.00	0.000	0.000
L2 144.00-94.50	118.32	1.037	6	1.4487	151.112	A	0.000	151.112	151.112	100.00	0.000	0.000
						B	0.000	151.112		100.00	0.000	0.000
						C	0.000	151.112		100.00	0.000	0.000
L3 94.50-46.50	70.15	0.893	5	1.3749	185.684	A	0.000	185.684	185.684	100.00	0.000	0.000
						B	0.000	185.684		100.00	0.000	0.000
						C	0.000	185.684		100.00	0.000	0.000
L4 46.50-0.00	22.77	0.7	4	1.2286	215.856	A	0.000	215.856	215.856	100.00	0.000	0.000
						B	0.000	215.856		100.00	0.000	0.000
						C	0.000	215.856		100.00	0.000	0.000

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	160.76	1.132	9	72.995	A	0.000	72.995	72.995	100.00	0.000	0.000
179.00-144.00					B	0.000	72.995		100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
					C	0.000	72.995		100.00	0.000	0.000
L2	118.32	1.037	8	138.788	A	0.000	138.788	138.788	100.00	0.000	0.000
144.00-94.50					B	0.000	138.788		100.00	0.000	0.000
					C	0.000	138.788		100.00	0.000	0.000
L3 94.50-46.50	70.15	0.893	7	174.095	A	0.000	174.095	174.095	100.00	0.000	0.000
					B	0.000	174.095		100.00	0.000	0.000
					C	0.000	174.095		100.00	0.000	0.000
L4 46.50-0.00	22.77	0.7	6	205.201	A	0.000	205.201	205.201	100.00	0.000	0.000
					B	0.000	205.201		100.00	0.000	0.000
					C	0.000	205.201		100.00	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	484.48	1735.63	A	1	0.73	48	1	1	72.995	2793.74	79.82	C
179.00-144.00			B	1	0.73		1	1	72.995			
			C	1	0.73		1	1	72.995			
L2	749.43	4695.19	A	1	0.73	44	1	1	138.788	4859.38	98.17	C
144.00-94.50			B	1	0.73		1	1	138.788			
			C	1	0.73		1	1	138.788			
L3	726.72	7587.56	A	1	0.73	37	1	1	174.095	5231.77	109.00	C
94.50-46.50			B	1	0.73		1	1	174.095			
			C	1	0.73		1	1	174.095			
L4 46.50-0.00	704.01	11025.95	A	1	0.73	30	1	1	205.201	4960.08	106.67	C
			B	1	0.73		1	1	205.201			
			C	1	0.73		1	1	205.201			
Sum Weight:	2664.64	25044.32						OTM	1504048.72 lb-ft	17844.98		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	484.48	1735.63	A	1	0.73	48	1	1	72.995	2793.74	79.82	C
179.00-144.00			B	1	0.73		1	1	72.995			
			C	1	0.73		1	1	72.995			
L2	749.43	4695.19	A	1	0.73	44	1	1	138.788	4859.38	98.17	C
144.00-94.50			B	1	0.73		1	1	138.788			
			C	1	0.73		1	1	138.788			
L3	726.72	7587.56	A	1	0.73	37	1	1	174.095	5231.77	109.00	C
94.50-46.50			B	1	0.73		1	1	174.095			
			C	1	0.73		1	1	174.095			
L4 46.50-0.00	704.01	11025.95	A	1	0.73	30	1	1	205.201	4960.08	106.67	C
			B	1	0.73		1	1	205.201			
			C	1	0.73		1	1	205.201			
Sum Weight:	2664.64	25044.32						OTM	1504048.7	17844.98		

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
									2 lb-ft			

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
L1	484.48	1735.63	A	1	0.73	48	1	1	72.995	2793.74	79.82	C
179.00-144.00			B	1	0.73		1	1	72.995			
			C	1	0.73		1	1	72.995			
L2	749.43	4695.19	A	1	0.73	44	1	1	138.788	4859.38	98.17	C
144.00-94.50			B	1	0.73		1	1	138.788			
			C	1	0.73		1	1	138.788			
L3	726.72	7587.56	A	1	0.73	37	1	1	174.095	5231.77	109.00	C
94.50-46.50			B	1	0.73		1	1	174.095			
			C	1	0.73		1	1	174.095			
L4 46.50-0.00	704.01	11025.95	A	1	0.73	30	1	1	205.201	4960.08	106.67	C
			B	1	0.73		1	1	205.201			
			C	1	0.73		1	1	205.201			
Sum Weight:	2664.64	25044.32						OTM	1504048.7 2 lb-ft	17844.98		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
L1	484.48	3424.36	A	1	1.2	7	1	1	81.708	737.58	21.07	C
179.00-144.00			B	1	1.2		1	1	81.708			
			C	1	1.2		1	1	81.708			
L2	749.43	7759.58	A	1	1.2	6	1	1	151.112	1247.89	25.21	C
144.00-94.50			B	1	1.2		1	1	151.112			
			C	1	1.2		1	1	151.112			
L3	726.72	11194.92	A	1	1.2	5	1	1	185.684	1316.10	27.42	C
94.50-46.50			B	1	1.2		1	1	185.684			
			C	1	1.2		1	1	185.684			
L4 46.50-0.00	704.01	14793.98	A	1	1.2	4	1	1	215.856	1230.62	26.46	C
			B	1	1.2		1	1	215.856			
			C	1	1.2		1	1	215.856			
Sum Weight:	2664.64	37172.84						OTM	386573.98 lb-ft	4532.19		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
L1	484.48	3424.36	A	1	1.2	7	1	1	81.708	737.58	21.07	C
179.00-144.00			B	1	1.2		1	1	81.708			
			C	1	1.2		1	1	81.708			
L2	749.43	7759.58	A	1	1.2	6	1	1	151.112	1247.89	25.21	C
144.00-94.50			B	1	1.2		1	1	151.112			
			C	1	1.2		1	1	151.112			
L3	726.72	11194.92	A	1	1.2	5	1	1	185.684	1316.10	27.42	C
94.50-46.50			B	1	1.2		1	1	185.684			
			C	1	1.2		1	1	185.684			
L4 46.50-0.00	704.01	14793.98	A	1	1.2	4	1	1	215.856	1230.62	26.46	C
			B	1	1.2		1	1	215.856			
			C	1	1.2		1	1	215.856			
Sum Weight:	2664.64	37172.84						OTM	386573.98 lb-ft	4532.19		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
L1	484.48	3424.36	A	1	1.2	7	1	1	81.708	737.58	21.07	C
179.00-144.00			B	1	1.2		1	1	81.708			
			C	1	1.2		1	1	81.708			
L2	749.43	7759.58	A	1	1.2	6	1	1	151.112	1247.89	25.21	C
144.00-94.50			B	1	1.2		1	1	151.112			
			C	1	1.2		1	1	151.112			
L3	726.72	11194.92	A	1	1.2	5	1	1	185.684	1316.10	27.42	C
94.50-46.50			B	1	1.2		1	1	185.684			
			C	1	1.2		1	1	185.684			
L4 46.50-0.00	704.01	14793.98	A	1	1.2	4	1	1	215.856	1230.62	26.46	C
			B	1	1.2		1	1	215.856			
			C	1	1.2		1	1	215.856			
Sum Weight:	2664.64	37172.84						OTM	386573.98 lb-ft	4532.19		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
L1	484.48	1735.63	A	1	0.73	9	1	1	72.995	516.46	14.76	C
179.00-144.00			B	1	0.73		1	1	72.995			
			C	1	0.73		1	1	72.995			
L2	749.43	4695.19	A	1	0.73	8	1	1	138.788	898.32	18.15	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
144.00-94.50			B	1	0.73		1	1	138.788			
			C	1	0.73		1	1	138.788			
L3	726.72	7587.56	A	1	0.73	7	1	1	174.095	967.16	20.15	C
94.50-46.50			B	1	0.73		1	1	174.095			
			C	1	0.73		1	1	174.095			
L4 46.50-0.00	704.01	11025.95	A	1	0.73	6	1	1	205.201	916.93	19.72	C
			B	1	0.73		1	1	205.201			
			C	1	0.73		1	1	205.201			
Sum Weight:	2664.64	25044.32						OTM	278042.93 lb-ft	3298.88		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	484.48	1735.63	A	1	0.73	9	1	1	72.995	516.46	14.76	C
179.00-144.00			B	1	0.73		1	1	72.995			
			C	1	0.73		1	1	72.995			
L2	749.43	4695.19	A	1	0.73	8	1	1	138.788	898.32	18.15	C
144.00-94.50			B	1	0.73		1	1	138.788			
			C	1	0.73		1	1	138.788			
L3	726.72	7587.56	A	1	0.73	7	1	1	174.095	967.16	20.15	C
94.50-46.50			B	1	0.73		1	1	174.095			
			C	1	0.73		1	1	174.095			
L4 46.50-0.00	704.01	11025.95	A	1	0.73	6	1	1	205.201	916.93	19.72	C
			B	1	0.73		1	1	205.201			
			C	1	0.73		1	1	205.201			
Sum Weight:	2664.64	25044.32						OTM	278042.93 lb-ft	3298.88		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	484.48	1735.63	A	1	0.73	9	1	1	72.995	516.46	14.76	C
179.00-144.00			B	1	0.73		1	1	72.995			
			C	1	0.73		1	1	72.995			
L2	749.43	4695.19	A	1	0.73	8	1	1	138.788	898.32	18.15	C
144.00-94.50			B	1	0.73		1	1	138.788			
			C	1	0.73		1	1	138.788			
L3	726.72	7587.56	A	1	0.73	7	1	1	174.095	967.16	20.15	C
94.50-46.50			B	1	0.73		1	1	174.095			
			C	1	0.73		1	1	174.095			
L4 46.50-0.00	704.01	11025.95	A	1	0.73	6	1	1	205.201	916.93	19.72	C
			B	1	0.73		1	1	205.201			

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
Sum Weight:	2664.64	25044.32	C	1	0.73		1	1 OTM	205.201 278042.93 lb-ft	3298.88		

Force Totals

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x lb-ft	Sum of Overturning Moments, M_z lb-ft	Sum of Torques lb-ft
Leg Weight	25044.32					
Bracing Weight	0.00					
Total Member Self-Weight	25044.32			-80.38	-139.22	
Total Weight	31219.96			-80.38	-139.22	
Wind 0 deg - No Ice		0.00	-25324.70	-2820560.34	-139.22	530.25
Wind 30 deg - No Ice		12662.35	-21931.83	-2442687.67	-1410379.20	306.14
Wind 60 deg - No Ice		21931.83	-12662.35	-1410320.36	-2442746.52	0.00
Wind 90 deg - No Ice		25324.70	0.00	-80.38	-2820619.18	-306.14
Wind 120 deg - No Ice		21931.83	12662.35	1410159.60	-2442746.52	-530.25
Wind 150 deg - No Ice		12662.35	21931.83	2442526.91	-1410379.20	-612.28
Wind 180 deg - No Ice		0.00	25324.70	2820399.58	-139.22	-530.25
Wind 210 deg - No Ice		-12662.35	21931.83	2442526.91	1410100.76	-306.14
Wind 240 deg - No Ice		-21931.83	12662.35	1410159.60	2442468.07	0.00
Wind 270 deg - No Ice		-25324.70	0.00	-80.38	2820340.73	306.14
Wind 300 deg - No Ice		-21931.83	-12662.35	-1410320.36	2442468.07	530.25
Wind 330 deg - No Ice		-12662.35	-21931.83	-2442687.67	1410100.76	612.28
Member Ice	12128.52					
Total Weight Ice	48033.04			-319.51	-553.40	
Wind 0 deg - Ice		0.00	-5885.57	-625088.49	-553.40	94.90
Wind 30 deg - Ice		2942.79	-5097.06	-541385.32	-312937.89	54.79
Wind 60 deg - Ice		5097.06	-2942.79	-312704.00	-541619.21	0.00
Wind 90 deg - Ice		5885.57	0.00	-319.51	-625322.39	-54.79
Wind 120 deg - Ice		5097.06	2942.79	312064.99	-541619.21	-94.90
Wind 150 deg - Ice		2942.79	5097.06	540746.31	-312937.89	-109.58
Wind 180 deg - Ice		0.00	5885.57	624449.48	-553.40	-94.90
Wind 210 deg - Ice		-2942.79	5097.06	540746.31	311831.09	-54.79
Wind 240 deg - Ice		-5097.06	2942.79	312064.99	540512.41	0.00
Wind 270 deg - Ice		-5885.57	0.00	-319.51	624215.58	54.79
Wind 300 deg - Ice		-5097.06	-2942.79	-312704.00	540512.41	94.90
Wind 330 deg - Ice		-2942.79	-5097.06	-541385.32	311831.09	109.58
Total Weight	31219.96			-80.38	-139.22	
Wind 0 deg - Service		0.00	-4681.60	-521482.72	-139.22	98.02
Wind 30 deg - Service		2340.80	-4054.38	-451628.05	-260840.39	56.59
Wind 60 deg - Service		4054.38	-2340.80	-260781.55	-451686.90	0.00
Wind 90 deg - Service		4681.60	0.00	-80.38	-521541.56	-56.59
Wind 120 deg - Service		4054.38	2340.80	260620.79	-451686.90	-98.02
Wind 150 deg - Service		2340.80	4054.38	451467.29	-260840.39	-113.19
Wind 180 deg - Service		0.00	4681.60	521321.96	-139.22	-98.02
Wind 210 deg - Service		-2340.80	4054.38	451467.29	260561.95	-56.59
Wind 240 deg - Service		-4054.38	2340.80	260620.79	451408.45	0.00
Wind 270 deg - Service		-4681.60	0.00	-80.38	521263.12	56.59
Wind 300 deg - Service		-4054.38	-2340.80	-260781.55	451408.45	98.02
Wind 330 deg - Service		-2340.80	-4054.38	-451628.05	260561.95	113.19

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L1	179 - 144	Pole	Max Tension	8	0.08	0.00	-1.10
			Max. Compression	26	-12721.50	-600.02	346.42
			Max. Mx	8	-5544.82	-260643.86	80.05
			Max. My	2	-5544.91	-138.64	260572.10
			Max. Vy	8	10506.01	-260643.86	80.05
			Max. Vx	2	-10505.97	-138.64	260572.10
			Max. Torque	24			-612.51
L2	144 - 94.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21986.73	-591.70	341.62
			Max. Mx	8	-11739.57	-877331.81	94.31
			Max. My	2	-11739.62	-163.35	877258.07
			Max. Vy	8	15273.38	-877331.81	94.31
			Max. Vx	2	-15273.35	-163.35	877258.07
			Max. Torque	12			611.39
L3	94.5 - 46.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-35181.14	-581.90	335.96
			Max. Mx	8	-21405.73	-1708302.21	100.44
			Max. My	2	-21405.75	-173.96	1708227.12
			Max. Vy	8	20225.49	-1708302.21	100.44
			Max. Vx	2	-20225.47	-173.96	1708227.12
			Max. Torque	12			608.73
L4	46.5 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-55484.98	-570.21	329.21
			Max. Mx	8	-37447.19	-2924132.54	101.33
			Max. My	2	-37447.19	-175.52	2924056.83
			Max. Vy	8	25344.88	-2924132.54	101.33
			Max. Vx	2	-25344.88	-175.52	2924056.83
			Max. Torque	12			607.22

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	26	55484.98	0.22	-0.12
	Max. H_x	21	28097.79	25321.78	0.00
	Max. H_z	3	28097.79	-0.00	25321.78
	Max. M_x	2	2924056.83	-0.00	25320.46
	Max. M_z	8	2924132.54	-25320.46	0.00
	Max. Torsion	12	606.78	-12662.28	-21931.71
	Min. Vert	9	28097.79	-25321.78	0.00
	Min. H_x	9	28097.79	-25321.78	0.00
	Min. H_z	15	28097.79	-0.00	-25321.78
	Min. M_x	14	-2923849.98	-0.00	-25320.46
	Min. M_z	20	-2923774.26	25320.46	0.00
	Min. Torsion	24	-606.74	12662.28	21931.71

Tower Mast Reaction Summary

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead Only	31219.96	0.00	-0.00	-80.38	-139.23	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	37463.70	0.00	-25320.46	-2924056.83	-175.41	525.49
0.9 Dead+1.0 Wind 0 deg - No Ice	28097.79	0.00	-25321.78	-2896256.96	-128.93	524.82
1.2 Dead+1.0 Wind 30 deg - No Ice	37463.94	12662.28	-21931.71	-2532866.59	-1462468.27	303.39
0.9 Dead+1.0 Wind 30 deg - No Ice	28097.95	12662.26	-21931.67	-2508598.51	-1448426.32	303.02
1.2 Dead+1.0 Wind 60 deg - No Ice	37463.94	21931.71	-12662.28	-1462394.70	-2532941.08	-0.02
0.9 Dead+1.0 Wind 60 deg - No Ice	28097.95	21931.67	-12662.26	-1448372.27	-2508653.23	-0.03
1.2 Dead+1.0 Wind 90 deg - No Ice	37463.70	25320.46	-0.00	-101.27	-2924132.54	-303.39
0.9 Dead+1.0 Wind 90 deg - No Ice	28097.79	25321.78	-0.00	-74.44	-2896312.57	-303.00
1.2 Dead+1.0 Wind 120 deg - No Ice	37463.94	21931.71	12662.28	1462191.52	-2532938.91	-525.44
0.9 Dead+1.0 Wind 120 deg - No Ice	28097.95	21931.67	12662.26	1448223.02	-2508651.64	-524.77
1.2 Dead+1.0 Wind 150 deg - No Ice	37463.94	12662.28	21931.71	2532660.90	-1462466.09	-606.78
0.9 Dead+1.0 Wind 150 deg - No Ice	28097.95	12662.26	21931.67	2508447.43	-1448424.73	-606.01
1.2 Dead+1.0 Wind 180 deg - No Ice	37463.70	0.00	25320.46	2923849.98	-175.41	-525.50
0.9 Dead+1.0 Wind 180 deg - No Ice	28097.79	0.00	25321.78	2896105.01	-128.93	-524.83
1.2 Dead+1.0 Wind 210 deg - No Ice	37463.94	-12662.28	21931.71	2532657.13	1462114.18	-303.36
0.9 Dead+1.0 Wind 210 deg - No Ice	28097.95	-12662.26	21931.67	2508444.68	1448166.23	-302.97
1.2 Dead+1.0 Wind 240 deg - No Ice	37463.94	-21931.71	12662.28	1462187.75	2532582.64	-0.02
0.9 Dead+1.0 Wind 240 deg - No Ice	28097.95	-21931.67	12662.26	1448220.27	2508389.97	-0.03
1.2 Dead+1.0 Wind 270 deg - No Ice	37463.70	-25320.46	-0.00	-101.28	2923774.26	303.40
0.9 Dead+1.0 Wind 270 deg - No Ice	28097.79	-25321.78	-0.00	-74.44	2896049.39	303.01
1.2 Dead+1.0 Wind 300 deg - No Ice	37463.94	-21931.71	-12662.28	-1462390.93	2532584.81	525.49
0.9 Dead+1.0 Wind 300 deg - No Ice	28097.95	-21931.67	-12662.26	-1448369.52	2508391.55	524.83
1.2 Dead+1.0 Wind 330 deg - No Ice	37463.94	-12662.28	-21931.71	-2532862.82	1462116.35	606.74
0.9 Dead+1.0 Wind 330 deg - No Ice	28097.95	-12662.26	-21931.67	-2508595.76	1448167.81	605.96
1.2 Dead+1.0 Ice+1.0 Temp	55484.98	-0.22	0.12	-329.21	-570.21	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	55484.97	-0.00	-5885.00	-667368.81	-678.68	97.47
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	55484.97	2942.50	-5096.56	-578010.96	-334167.30	56.27
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	55484.97	5096.56	-2942.50	-333880.47	-578297.82	-0.00
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	55484.97	5885.00	0.00	-391.83	-667655.72	-56.27
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	55484.97	5096.56	2942.50	333096.76	-578297.74	-97.46
1.2 Dead+1.0 Wind 150	55484.97	2942.50	5096.56	577227.14	-334167.22	-112.54

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	55484.97	-0.00	5885.00	666584.94	-678.68	-97.47
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	55484.97	-2942.50	5096.56	577226.99	332809.77	-56.27
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	55484.97	-5096.56	2942.50	333096.60	576940.12	-0.00
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	55484.97	-5885.00	0.00	-391.84	666298.02	56.27
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	55484.97	-5096.56	-2942.50	-333880.32	576940.21	97.47
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	55484.97	-2942.50	-5096.56	-578010.81	332809.86	112.54
Dead+Wind 0 deg - Service	31219.95	-0.00	-4680.94	-537951.59	-149.08	98.50
Dead+Wind 30 deg - Service	31219.95	2340.47	-4053.81	-465891.36	-269081.95	56.87
Dead+Wind 60 deg - Service	31219.95	4053.81	-2340.47	-269018.95	-465954.39	-0.00
Dead+Wind 90 deg - Service	31219.95	4680.94	0.00	-86.07	-538014.64	-56.87
Dead+Wind 120 deg - Service	31219.95	4053.81	2340.47	268846.77	-465954.33	-98.50
Dead+Wind 150 deg - Service	31219.95	2340.47	4053.82	465719.13	-269081.90	-113.74
Dead+Wind 180 deg - Service	31219.95	-0.00	4680.94	537779.33	-149.08	-98.50
Dead+Wind 210 deg - Service	31219.95	-2340.47	4053.82	465719.04	268783.68	-56.87
Dead+Wind 240 deg - Service	31219.95	-4053.82	2340.47	268846.68	465656.01	-0.00
Dead+Wind 270 deg - Service	31219.95	-4680.94	0.00	-86.07	537716.27	56.87
Dead+Wind 300 deg - Service	31219.95	-4053.82	-2340.47	-269018.86	465656.07	98.50
Dead+Wind 330 deg - Service	31219.95	-2340.47	-4053.81	-465891.27	268783.73	113.74

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	% Error
1	0.00	-31219.96	0.00	-0.00	31219.96	0.00	0.000%
2	0.00	-37463.95	-25324.70	-0.00	37463.70	25320.46	0.009%
3	0.00	-28097.96	-25324.70	-0.00	28097.79	25321.78	0.008%
4	12662.35	-37463.95	-21931.83	-12662.28	37463.94	21931.71	0.000%
5	12662.35	-28097.96	-21931.83	-12662.26	28097.95	21931.67	0.000%
6	21931.83	-37463.95	-12662.35	-21931.71	37463.94	12662.28	0.000%
7	21931.83	-28097.96	-12662.35	-21931.67	28097.95	12662.26	0.000%
8	25324.70	-37463.95	0.00	-25320.46	37463.70	0.00	0.009%
9	25324.70	-28097.96	0.00	-25321.78	28097.79	0.00	0.008%
10	21931.83	-37463.95	12662.35	-21931.71	37463.94	-12662.28	0.000%
11	21931.83	-28097.96	12662.35	-21931.67	28097.95	-12662.26	0.000%
12	12662.35	-37463.95	21931.83	-12662.28	37463.94	-21931.71	0.000%
13	12662.35	-28097.96	21931.83	-12662.26	28097.95	-21931.67	0.000%
14	0.00	-37463.95	25324.70	-0.00	37463.70	-25320.46	0.009%
15	0.00	-28097.96	25324.70	-0.00	28097.79	-25321.78	0.008%
16	-12662.35	-37463.95	21931.83	12662.28	37463.94	-21931.71	0.000%
17	-12662.35	-28097.96	21931.83	12662.26	28097.95	-21931.67	0.000%
18	-21931.83	-37463.95	12662.35	21931.71	37463.94	-12662.28	0.000%
19	-21931.83	-28097.96	12662.35	21931.67	28097.95	-12662.26	0.000%
20	-25324.70	-37463.95	0.00	25320.46	37463.70	0.00	0.009%
21	-25324.70	-28097.96	0.00	25321.78	28097.79	0.00	0.008%
22	-21931.83	-37463.95	-12662.35	21931.71	37463.94	12662.28	0.000%
23	-21931.83	-28097.96	-12662.35	21931.67	28097.95	12662.26	0.000%
24	-12662.35	-37463.95	-21931.83	12662.28	37463.94	21931.71	0.000%
25	-12662.35	-28097.96	-21931.83	12662.26	28097.95	21931.67	0.000%
26	0.00	-55484.98	0.00	0.22	55484.98	-0.12	0.000%
27	0.00	-55484.98	-5885.57	0.00	55484.97	5885.00	0.001%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
28	2942.79	-55484.98	-5097.06	-2942.50	55484.97	5096.56	0.001%
29	5097.06	-55484.98	-2942.79	-5096.56	55484.97	2942.50	0.001%
30	5885.57	-55484.98	0.00	-5885.00	55484.97	-0.00	0.001%
31	5097.06	-55484.98	2942.79	-5096.56	55484.97	-2942.50	0.001%
32	2942.79	-55484.98	5097.06	-2942.50	55484.97	-5096.56	0.001%
33	0.00	-55484.98	5885.57	0.00	55484.97	-5885.00	0.001%
34	-2942.79	-55484.98	5097.06	2942.50	55484.97	-5096.56	0.001%
35	-5097.06	-55484.98	2942.79	5096.56	55484.97	-2942.50	0.001%
36	-5885.57	-55484.98	0.00	5885.00	55484.97	-0.00	0.001%
37	-5097.06	-55484.98	-2942.79	5096.56	55484.97	2942.50	0.001%
38	-2942.79	-55484.98	-5097.06	2942.50	55484.97	5096.56	0.001%
39	0.00	-31219.96	-4681.60	0.00	31219.95	4680.94	0.002%
40	2340.80	-31219.96	-4054.38	-2340.47	31219.95	4053.81	0.002%
41	4054.38	-31219.96	-2340.80	-4053.81	31219.95	2340.47	0.002%
42	4681.60	-31219.96	0.00	-4680.94	31219.95	-0.00	0.002%
43	4054.38	-31219.96	2340.80	-4053.81	31219.95	-2340.47	0.002%
44	2340.80	-31219.96	4054.38	-2340.47	31219.95	-4053.82	0.002%
45	0.00	-31219.96	4681.60	0.00	31219.95	-4680.94	0.002%
46	-2340.80	-31219.96	4054.38	2340.47	31219.95	-4053.82	0.002%
47	-4054.38	-31219.96	2340.80	4053.82	31219.95	-2340.47	0.002%
48	-4681.60	-31219.96	0.00	4680.94	31219.95	-0.00	0.002%
49	-4054.38	-31219.96	-2340.80	4053.82	31219.95	2340.47	0.002%
50	-2340.80	-31219.96	-4054.38	2340.47	31219.95	4053.81	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	16	0.00011321	0.00012964
3	Yes	16	0.00007788	0.00010612
4	Yes	21	0.00000001	0.00008523
5	Yes	20	0.00000001	0.00012376
6	Yes	21	0.00000001	0.00008465
7	Yes	20	0.00000001	0.00012288
8	Yes	16	0.00011321	0.00012423
9	Yes	16	0.00007788	0.00010179
10	Yes	21	0.00000001	0.00008362
11	Yes	20	0.00000001	0.00012135
12	Yes	21	0.00000001	0.00008579
13	Yes	20	0.00000001	0.00012462
14	Yes	16	0.00011321	0.00012962
15	Yes	16	0.00007788	0.00010610
16	Yes	21	0.00000001	0.00008396
17	Yes	20	0.00000001	0.00012189
18	Yes	21	0.00000001	0.00008453
19	Yes	20	0.00000001	0.00012275
20	Yes	16	0.00011321	0.00012420
21	Yes	16	0.00007788	0.00010177
22	Yes	21	0.00000001	0.00008560
23	Yes	20	0.00000001	0.00012434
24	Yes	21	0.00000001	0.00008344
25	Yes	20	0.00000001	0.00012109
26	Yes	6	0.00000001	0.00000308
27	Yes	18	0.00000001	0.00002567
28	Yes	18	0.00000001	0.00003617

29	Yes	18	0.00000001	0.00003604
30	Yes	18	0.00000001	0.00002568
31	Yes	18	0.00000001	0.00003569
32	Yes	18	0.00000001	0.00003615
33	Yes	18	0.00000001	0.00002558
34	Yes	18	0.00000001	0.00003551
35	Yes	18	0.00000001	0.00003563
36	Yes	18	0.00000001	0.00002554
37	Yes	18	0.00000001	0.00003600
38	Yes	18	0.00000001	0.00003555
39	Yes	16	0.00000001	0.00002952
40	Yes	16	0.00000001	0.00002641
41	Yes	16	0.00000001	0.00002602
42	Yes	16	0.00000001	0.00002948
43	Yes	16	0.00000001	0.00002543
44	Yes	16	0.00000001	0.00002682
45	Yes	16	0.00000001	0.00002949
46	Yes	16	0.00000001	0.00002561
47	Yes	16	0.00000001	0.00002595
48	Yes	16	0.00000001	0.00002944
49	Yes	16	0.00000001	0.00002668
50	Yes	16	0.00000001	0.00002534

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	179 - 144	21.993	41	1.1726	0.0020
L2	148 - 94.5	14.711	41	1.0200	0.0009
L3	100 - 46.5	6.301	41	0.6262	0.0003
L4	53.25 - 0	1.715	41	0.2967	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
176.00	Angle Platform w/ Handrails	41	21.261	1.1601	0.0019	41737

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	179 - 144	119.482	8	6.3728	0.0108
L2	148 - 94.5	79.965	8	5.5484	0.0049
L3	100 - 46.5	34.268	8	3.4075	0.0017
L4	53.25 - 0	9.328	6	1.6140	0.0006

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
176.00	Angle Platform w/ Handrails	8	115.510	6.3052	0.0101	7872

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	179 - 144 (1)	TP28.35x21x0.1875	35.00	179.00	221.5	16.2603	-5544.43	74902.70	0.074
L2	144 - 94.5 (2)	TP38.37x27.135x0.25	53.50	179.00	163.7	29.3317	-11739.30	247313.00	0.047
L3	94.5 - 46.5 (3)	TP47.95x36.715x0.3125	53.50	179.00	130.9	45.8445	-21405.60	604331.00	0.035
L4	46.5 - 0 (4)	TP57.09x45.9075x0.375	53.25	179.00	106.7	67.5050	-37447.40	1339860.00	0.028

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	179 - 144 (1)	TP28.35x21x0.1875	260718.33	593103.33	0.440	0.00	593103.33	0.000
L2	144 - 94.5 (2)	TP38.37x27.135x0.25	877566.67	1438716.67	0.610	0.00	1438716.67	0.000
L3	94.5 - 46.5 (3)	TP47.95x36.715x0.3125	1708733.33	2811308.33	0.608	0.00	2811308.33	0.000
L4	46.5 - 0 (4)	TP57.09x45.9075x0.375	2924791.67	5031325.00	0.581	0.00	5031325.00	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	179 - 144 (1)	TP28.35x21x0.1875	10511.80	285368.00	0.037	0.00	673480.83	0.000
L2	144 - 94.5 (2)	TP38.37x27.135x0.25	15278.30	514772.00	0.030	0.01	1643958.33	0.000
L3	94.5 - 46.5 (3)	TP47.95x36.715x0.3125	20229.70	804570.00	0.025	0.02	3212783.33	0.000
L4	46.5 - 0 (4)	TP57.09x45.9075x0.375	25349.00	1184710.00	0.021	0.02	5806691.33	0.000

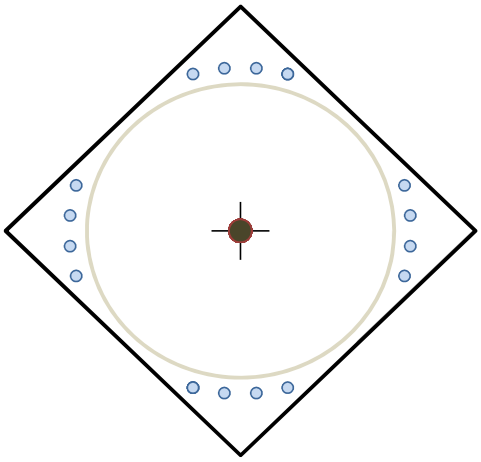
Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	179 - 144 (1)	0.074	0.440	0.000	0.037	0.000	0.515 ✔	1.000	4.8.2 ✔
L2	144 - 94.5 (2)	0.047	0.610	0.000	0.030	0.000	0.658 ✔	1.000	4.8.2 ✔
L3	94.5 - 46.5 (3)	0.035	0.608	0.000	0.025	0.000	0.644 ✔	1.000	4.8.2 ✔
L4	46.5 - 0 (4)	0.028	0.581	0.000	0.021	0.000	0.610 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	179 - 144	Pole	TP28.35x21x0.1875	1	-5544.43	74902.70	51.5	Pass
L2	144 - 94.5	Pole	TP38.37x27.135x0.25	2	-11739.30	247313.00	65.8	Pass
L3	94.5 - 46.5	Pole	TP47.95x36.715x0.3125	3	-21405.60	604331.00	64.4	Pass
L4	46.5 - 0	Pole	TP57.09x45.9075x0.375	4	-37447.40	1339860.00	61.0	Pass
							Summary	
							Pole (L2)	65.8	Pass
							RATING =	**65.8**	**Pass**

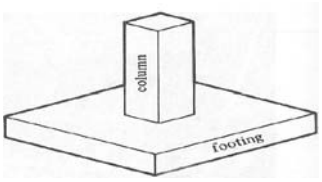
Date:	9/17/2019
Customer:	Smartlink
Engineer:	Morteza Ashouri
Job #:	1106-A0001-B
Baseplate/Flange:	Base Plate
Plate Shape:	Square
Use Addendum 3:	Yes



Loading Data		
TIA Code Revision:	Rev-G	
Axial:	37.5	kips
Moment:	2924.8	k-ft
Plate Data		
Pole Base Diameter:	57.09	in
Pole Base Shape:	18 Sided	
Pole thickness:	0.375	in
Pole Fy:	65	ksi
Base Weld Size:	0.25	in
Plate Width	61.75	in
Plate Thickness:	3	in
Plate Steel Grade:	A572 Gr. 50	ksi
Internal/External:	External	ksi
Anchor Bolt Data		
Bolt Diameter:	2.25	in
Bolt Hole Diameter:	2.5	in
Bolt Quantity:	16	
Bolt Grade:	A615 Gr. 75	psi
Bolt Circle:	63.5	in
Bolt Spacing:	6	in
Fully Developed:	Unknown	
Additional Bolt Data		
Bolt Diameter:		in
Bolt Quantity:		
Bolt Grade:		psi
Bolt Circle:		in
Angle:		deg
Stiffener Data		
Stiffener Quantity:		
Stiffener Height:		in
Stiffener Width:		in
Stiffener Thickness:		in
Stifferner Steel Grade:		
Vertical Weld Size:		in
Horizontal Weld Size:		in
Stiffener Notch width:		in

Plate Ratio:	43.68	%
Bolt Ratio:	75.64	%
Additional Bolt Ratio:	-	%
Vertical Weld Ratio:	-	%
Horizontal Weld Ratio:	-	%
Stiffener Ratio:	-	

Date:	9/17/2019
Site Name:	Id Lyme-Beaver Brook Road
Client:	Smartlink
Infinigy Job #:	1106-A0001-B
Analysis/Design:	Analysis
Column Shape:	Circle
Footing Shape:	Square
Tower Type:	Monopole



Infinigy Engineering PLLC
Pad + Pier Calculations
ACI 318-11

Loading Data		
TIA Code Revision:	ANSI/TIA-222-G	
Uplift:	0.0	kips
Axial:	37.5	kips
Shear:	25.3	kips
Moment:	2924.8	k-ft

Soil Data		
Soil Type:	Sand	
Water Table Depth:	99	ft
Soil Dry Unit Weight:	110.0	pcf
ø Angle:	30	deg
Cohesion:	0	psf
Ultimate Skin Friction:	0	psf
Friction Coefficient:	0.3	
Ultimate Bearing Pressure:	12000	psf

Column Data		
Concrete Strength:	4000	psi
Column Diameter:	7	ft
Column Total Length:	4.5	ft
Column Height above ground:	1	ft
Vertical Rebar Strength:	60000	psi
Vertical Rebar Size:	#8	(#10) max.
Vertical Rebar Quantity:	38	(4) min.
Tie Rebar Strength:	60000	psi
Tie Rebar Size:	#4	(#3) max.
Tie Rebar Spacing:	12	in
Rebar Clear Distance:	3	in

Footing Data		
Concrete Strength:	4000	psi
Footing Length:	25.5	ft
Footing Width:	25.5	ft
Footing Thickness:	2.000	ft
Horizontal Rebar Strength:	60000	psi
Horizontal Rebar Size:	#8	
Horizontal Rebar Quantity:	38	
Rebar Clear Distance:	3	in
Dowel Strength:		psi
Dowel Size:		(#11) max.
Dowel Development Length:		in
Dowel Quantity:		

Concrete Strength Check		
Footing One-Way Shear Ratio:	35.64	%
Footing Two-Way Shear Ratio:	2.52	%
Footing Moment Ratio:	50.2	%

Soil Stability Check		
ϕs Bearing:	0.75	
ϕs Uplift:	0.75	
Uplift Ratio:	0.00	%
Bearing Ratio:	33.44	%
Sliding Ratio:	19.66	%
Toe Pressure Ratio:	16.57	%
Overturning Ratio:	55.19	%

INFINIGY
FROM ZERO TO INFINIGY
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1033 WATERVLIET SHAKER RD, ALBANY, NY 12205

Mount Analysis Report

December 9, 2019

Site Name	Old Lyme-Beaver Brook Road
Site Number	CTL01281
FA Number	10128116
PACE Number	MRCTB041381 / MRCTB041505 / MRCTB041576 MRCTB041497 / MRCTB041708
PTN Number	2051A0Q923 / 2051A0QAJ6 / 2051A0Q7GG 2051A0Q8CD / 2051A0Q8YP
Infinigy Job Number	1106-A0001-B
Client	Smartlink
Carrier	AT&T Mobility
Site Location	322 Beaver Brook Road Old Lyme, CT 06371 New London County 41.4105 N NAD83 72.2889 W NAD83
Mount Centerline EL.	176.0 ft
Mount Type	Platform
Structural Usage Ratio	**56.3%**
Overall Result	**Pass**
Note	**SitePro1 RMQP-496-HK with 2.5" STD Mount Pipes to be installed prior to installation of proposed appurtenances.**

Upon reviewing the results of this analysis, it is our opinion that the proposed mount meets the specified TIA code requirements. The mounts and connections for the proposed carrier are therefore deemed adequate to support the final loading configuration as listed in this report.

Thomas Marr
Project Engineer I

Contents

Introduction

Infinigy Engineering has been requested to perform a mount analysis on the proposed AT&T Mobility mounts. All referenced supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using RISA-3D Version 17.0.4 analysis software.

Supporting Documentation

RFDS	RFDS ID #3161837, dated July 31, 2019
Construction Drawings	Infinigy Engineering, PLLC. Job #499-006, dated November 27, 2019
Site Photos	Smartlink Provided, dated June 25, 2019
Mount Specifications	SitePro1 P/N: RMQP-496-HK, dated July 14, 2014

Analysis Code Requirements

Wind Speed	135 mph (3-Second Gust)
Wind Speed w/ Ice	50 mph (3 Second Gust) w/ 1" Ice
TIA Revision	ANSI/TIA-222-H
Adopted IBC	2018 IBC / 2018 Connecticut State Building Code
Structure Class	II
Exposure Category	B
Topographic Category	1
Spectral Response	S_s = 0.205 g, S_1 = 0.054 g
Site Class	D - Stiff Soil
HMSL	131 ft.

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the proposed mount meets the specified TIA code requirements. The mount and connections are therefore deemed adequate to support the existing and proposed loading as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

Thomas Marr
Project Engineer I | **INFINIGY**
1033 Watervilet Shaker Road, Albany, NY 12205
(O) (518) 690-0802
tmarr@infinigy.com | www.infinigy.com

Final Configuration Loading

Mount CL (ft)	Vert. O/S (ft)	Rad. HT (ft)	Horiz. O/S (ft) (1)	Qty	Appurtenance (2)	Carrier
176.0	0.0	176.0	11.8	3	POWERWAVE P90-15-XLH-RR	AT&T
			1.8, 5.1	6	CCI DMP65R-BU8DA	
			5.1	3	ERICSSON B14 4478	
			1.8	3	ERICSSON 4449 B5/B12	
			1.8	3	ERICSSON 8843 B2/B66A	
			11.8	3	POWERWAVE TT08-19DB111-001	
			--	1	RAYCAP DC9-48-60-24-8C-EV	
			--	1	RAYCAP DC6-48-60-18-8F	

(1) Horizontal Offset is defined as the distance from the left most edge of the mount face horizontal when viewed facing the tower
(2) Raycap assumed to be installed directly on tower

Mount Usages

Horizontals	56.3%	Pass
Standoffs	27.1%	Pass
Mount Pipes	52.2%	Pass
Bracing	53.4%	Pass
Bolts	9.5%	Pass
Max Usage	**56.3%**	**Pass**

Mount Connection Usages

Reaction Data	Design Capacity*	Analysis Reactions	Results
Max Tension (lbs.)	20340.15	1934.5	9.5%
Max Shear (lbs.)	12425.25	89.33	0.7%
Unity Check	-	-	0.9%

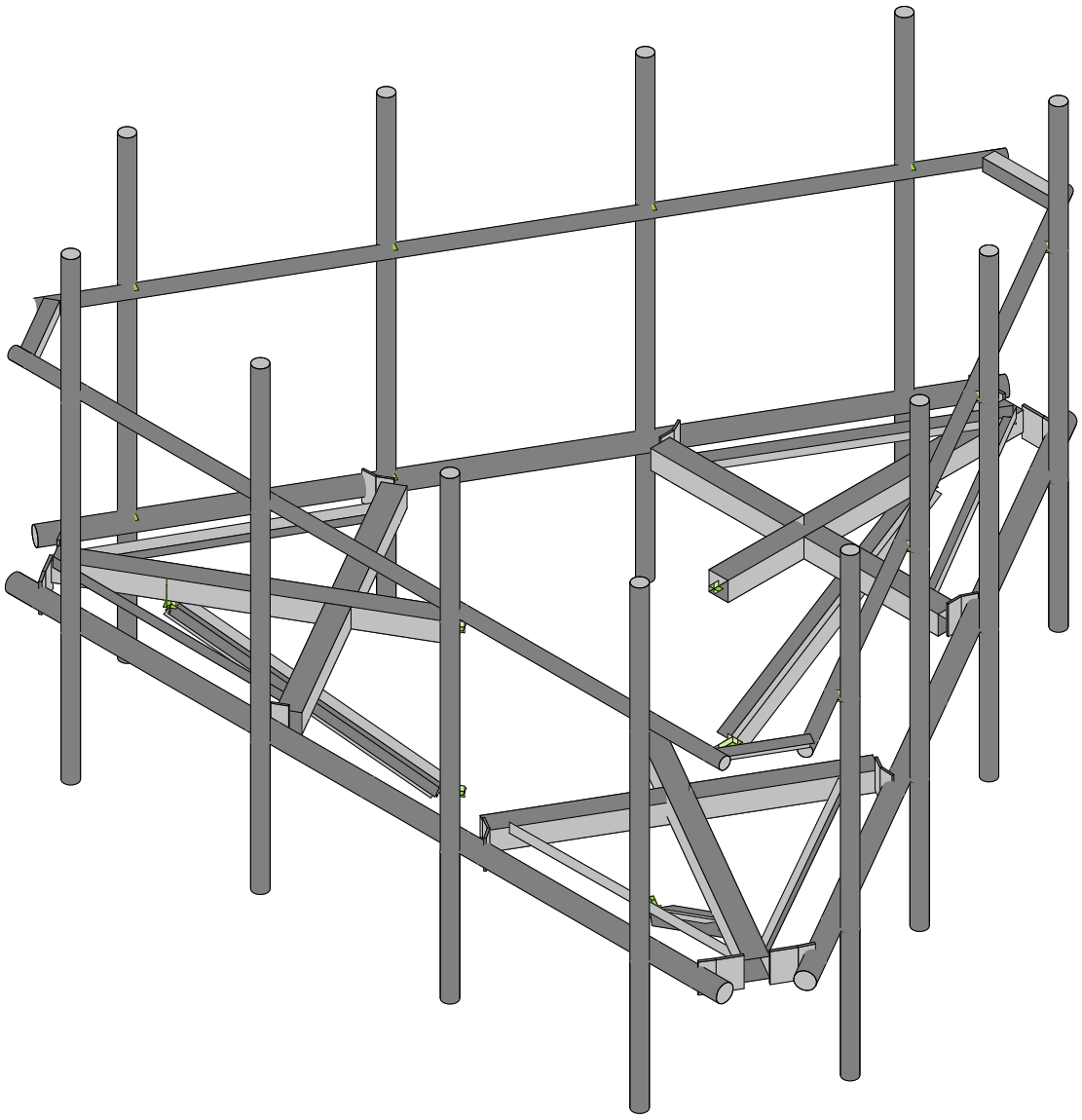
***Assumed (1) 0.625" A325 Bolts, Total (4) per Connection. Contractor to field verify prior to proposed installation.**

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of "like new" and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the proposed carriers mount structure only and does not reflect adequacy of the existing tower, other mounts, or coax mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.



Envelope Only Solution

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Proposed Configuration
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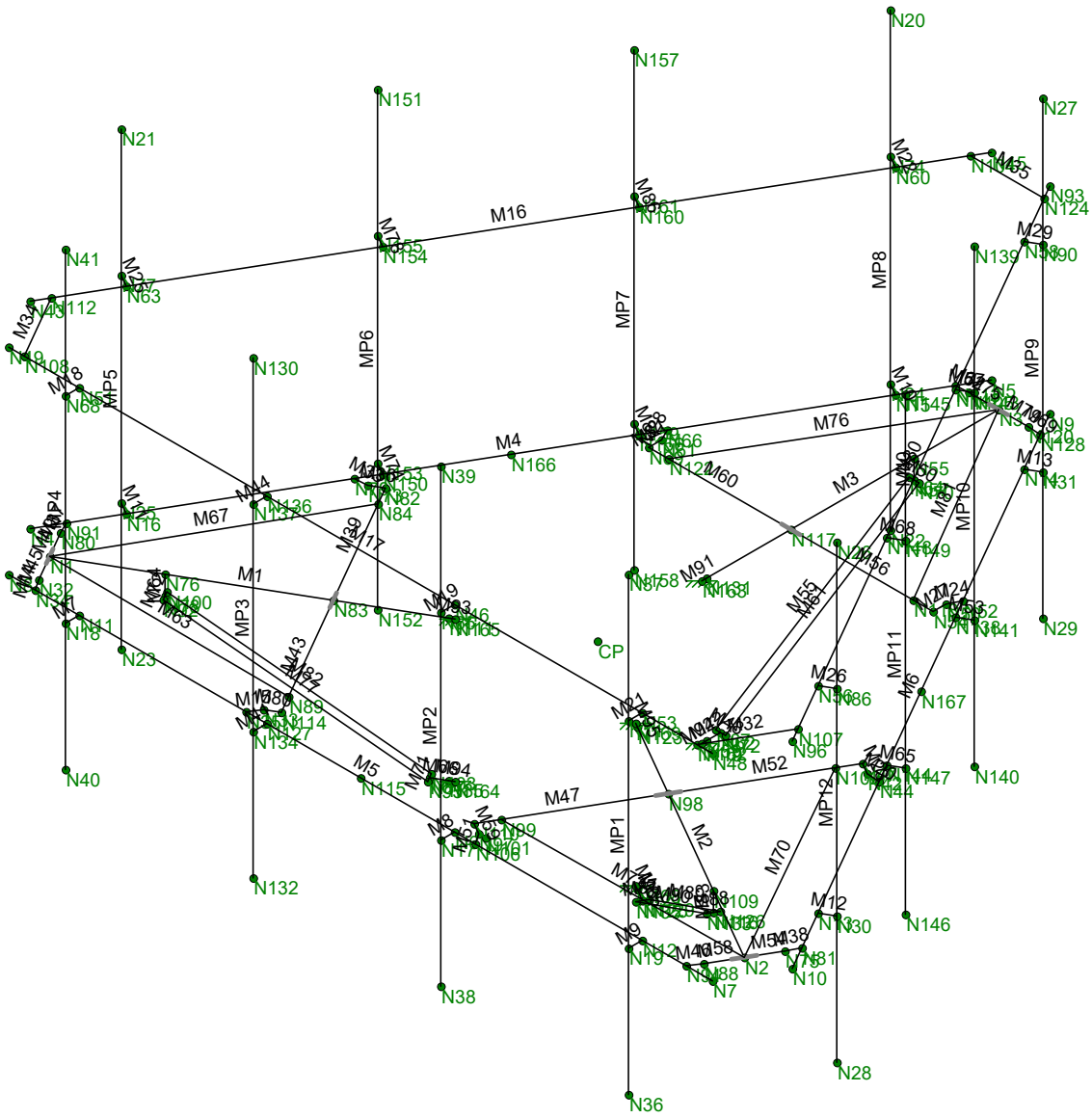
1106-A0001-B		RMQP-496-HK_loaded.r3d



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Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Wire Frame
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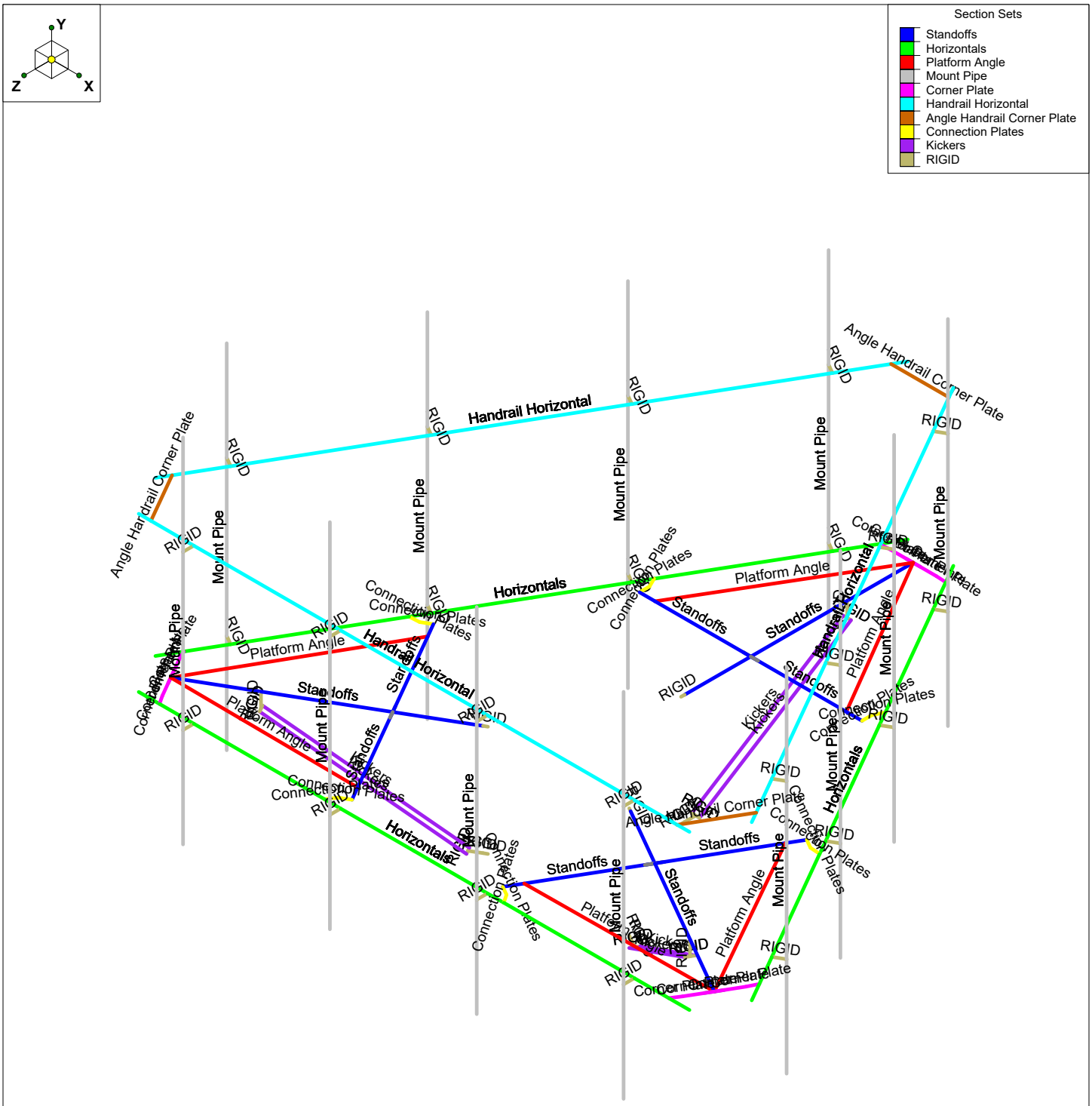

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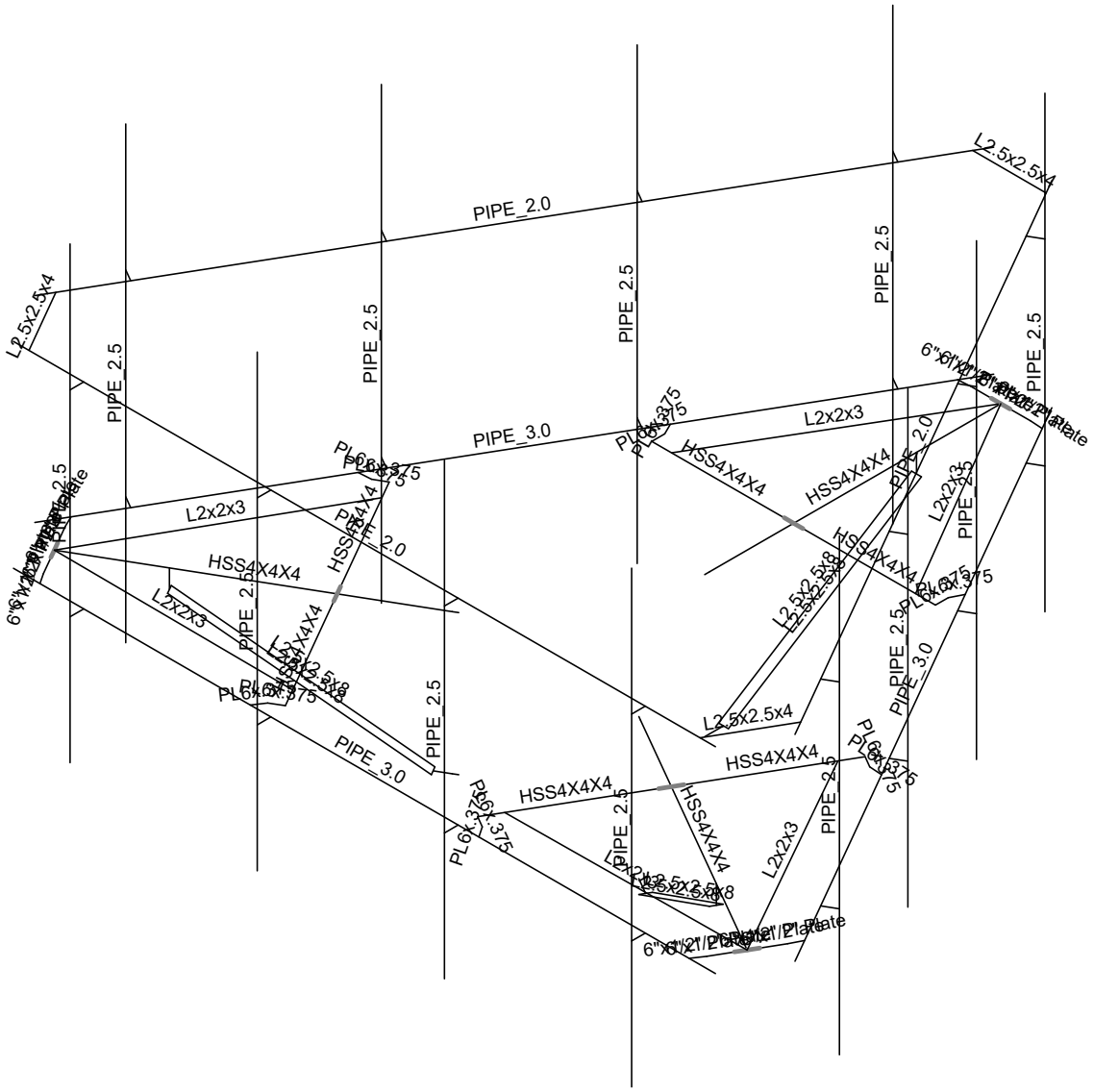

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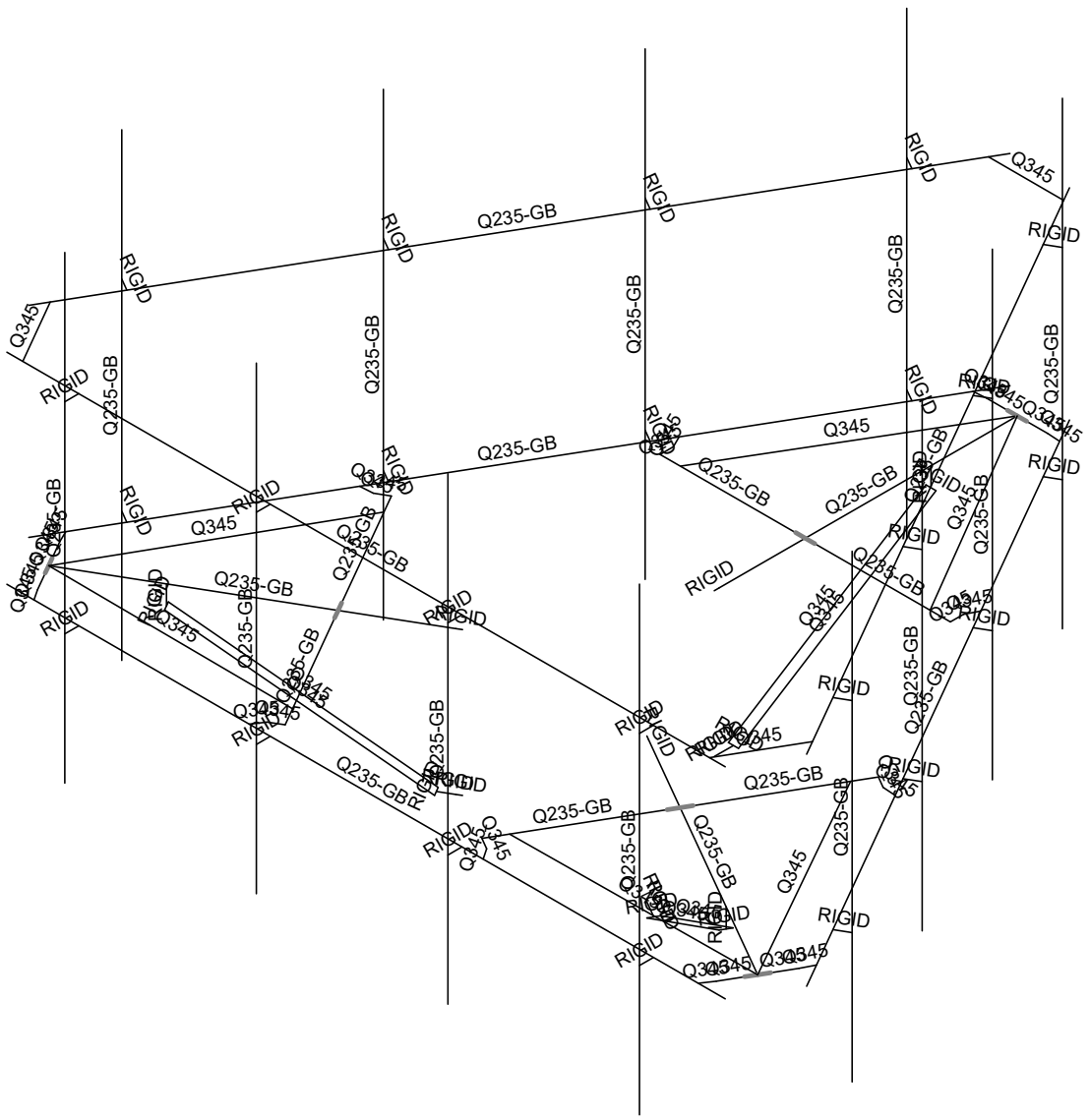

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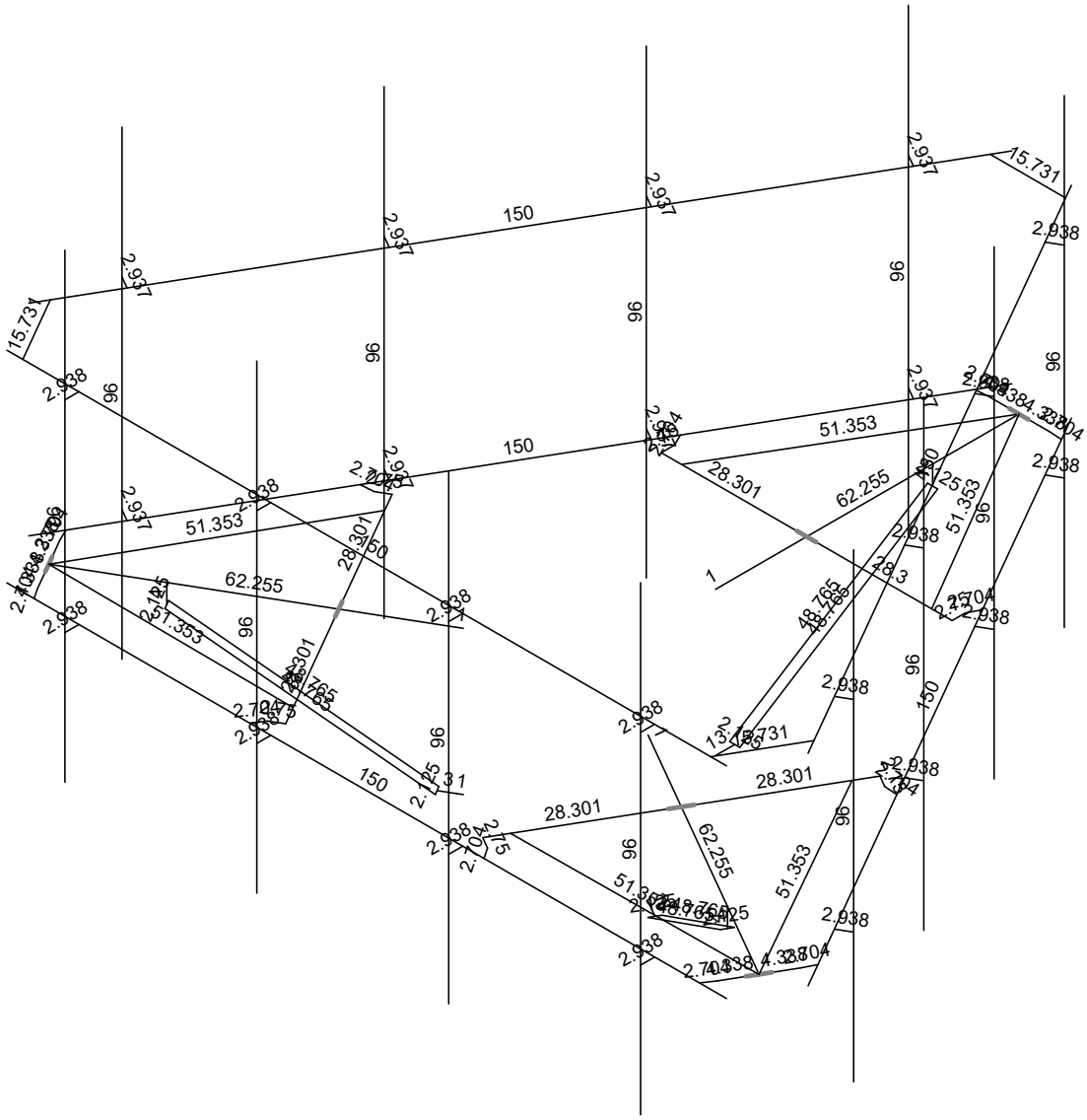

Member Length (in) Displayed
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Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Member Length
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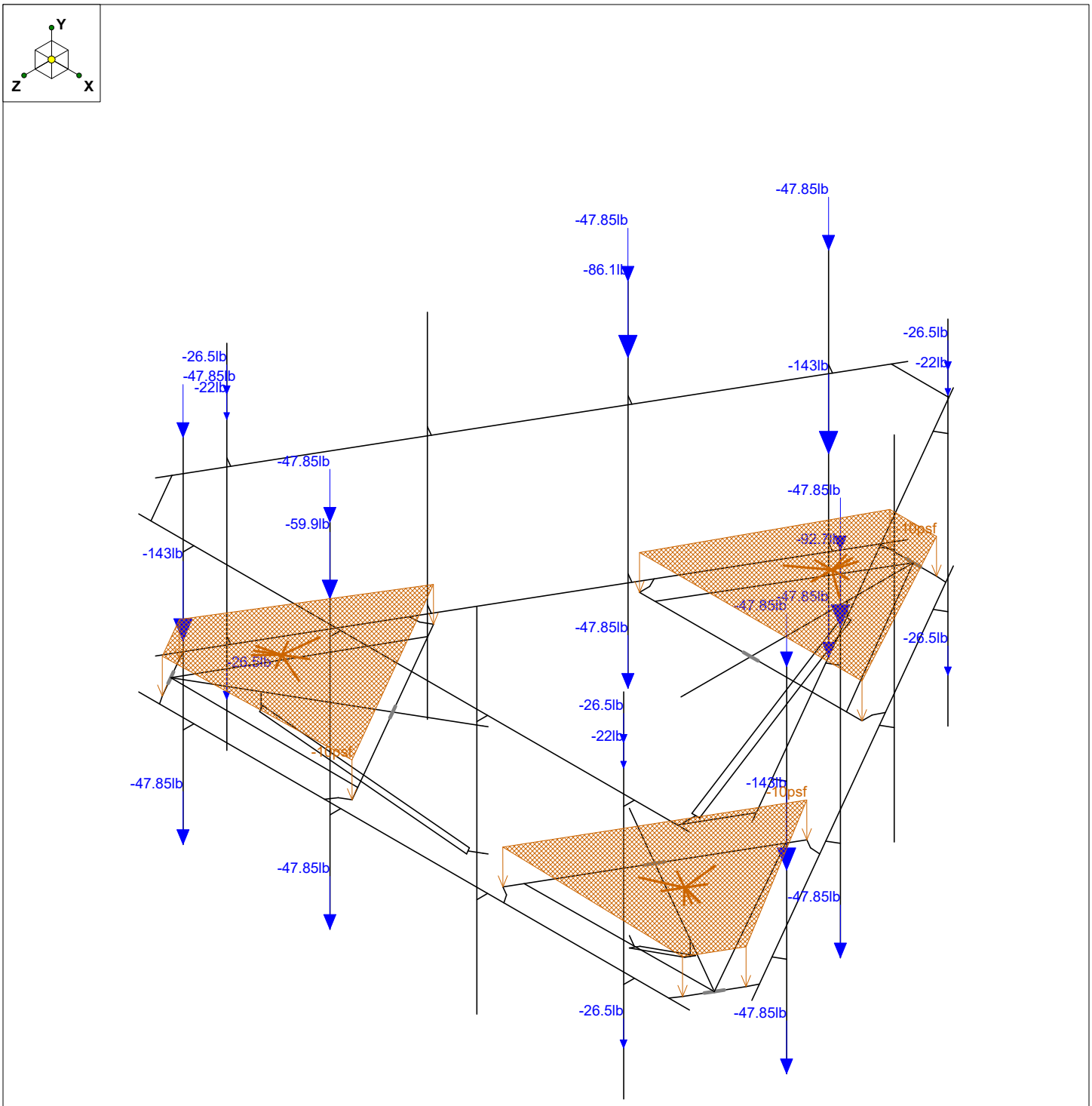

Loads: BLC 1, Self Weight

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Self Weight
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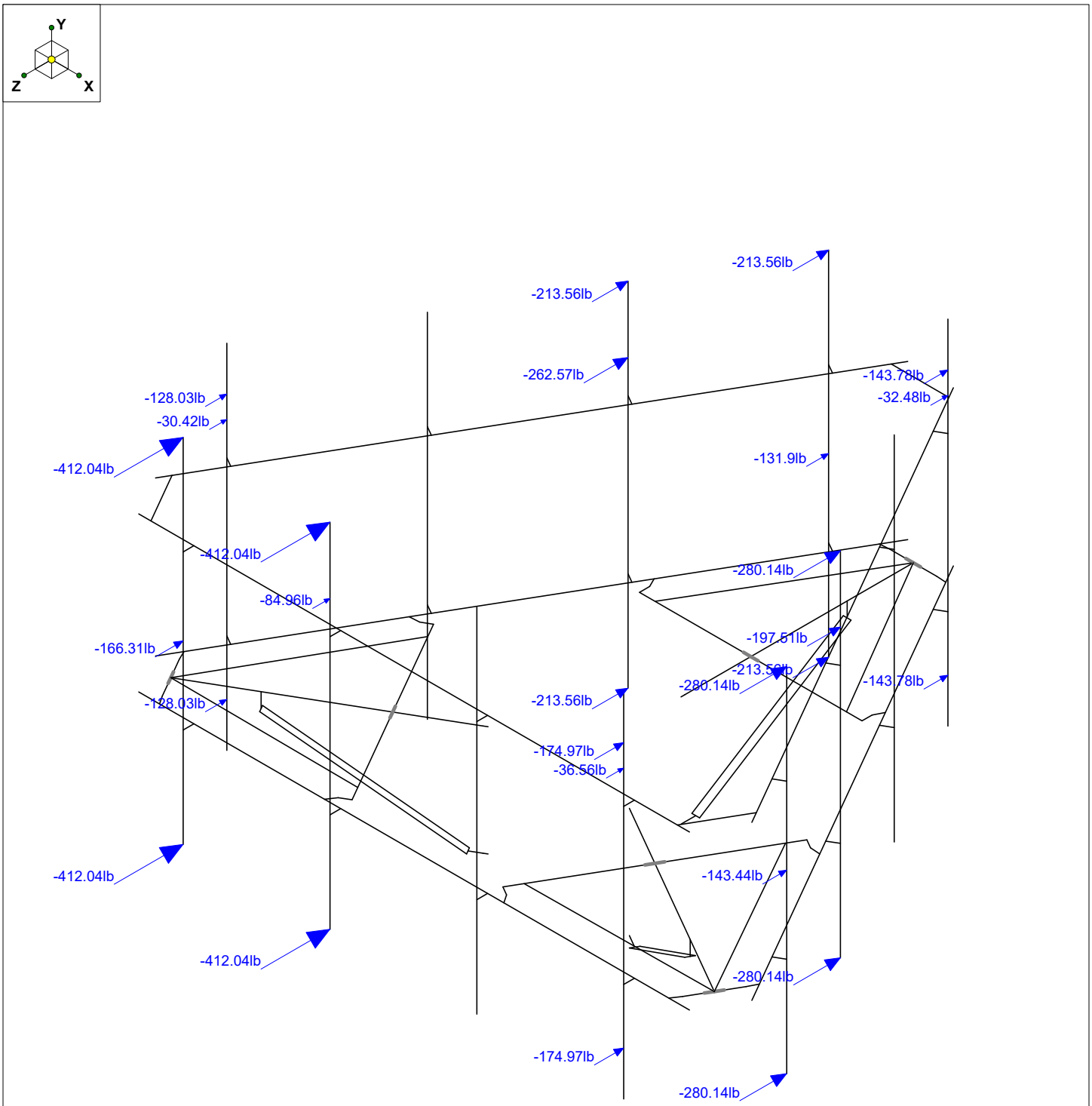
1106-A0001-B		RMQP-496-HK_loaded.r3d



Loads: BLC 2, Wind Load AZI 0

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Wind Load AZI 000
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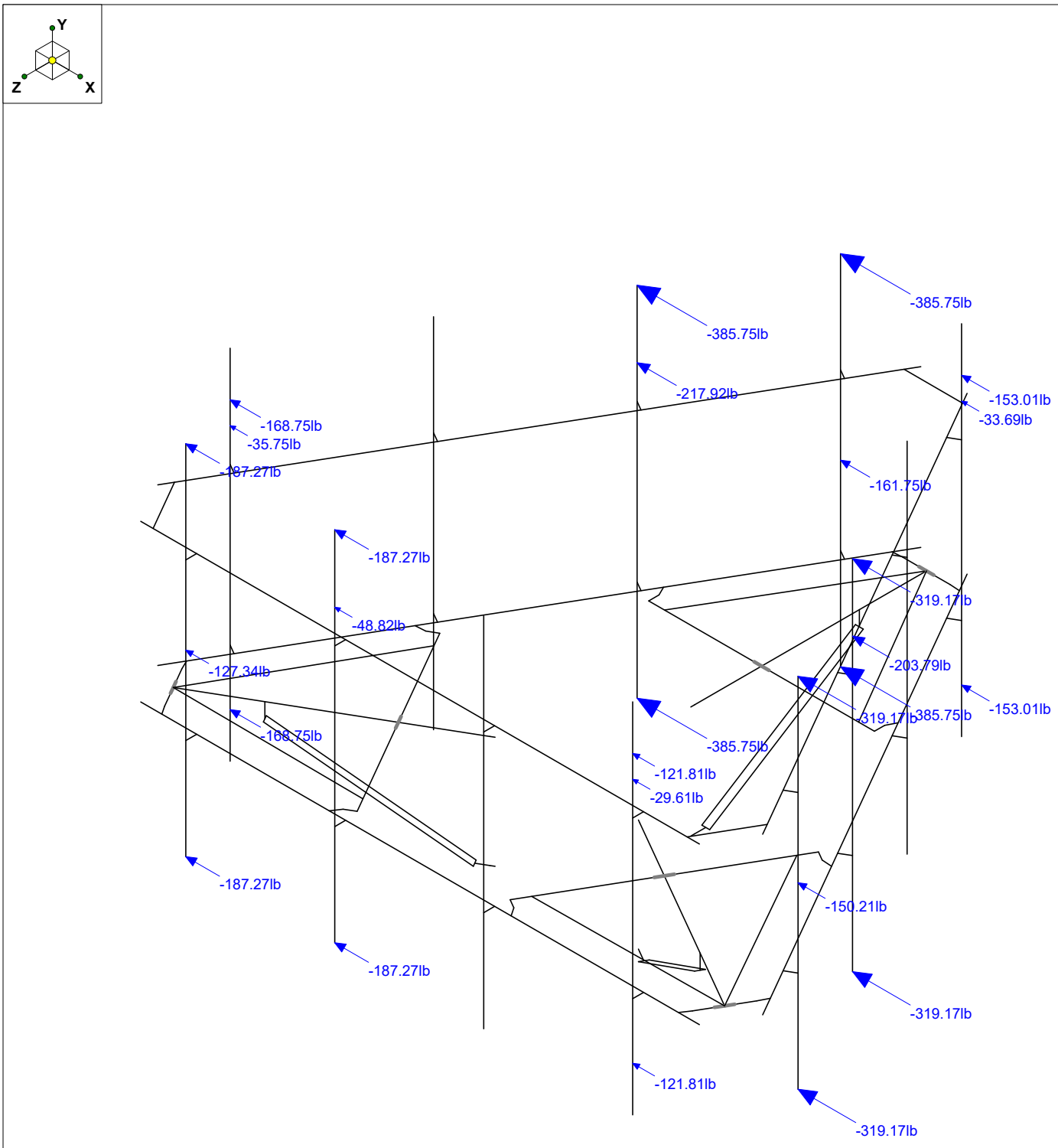

Loads: BLC 5, Wind Load AZI 90

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Wind Load AZI 090
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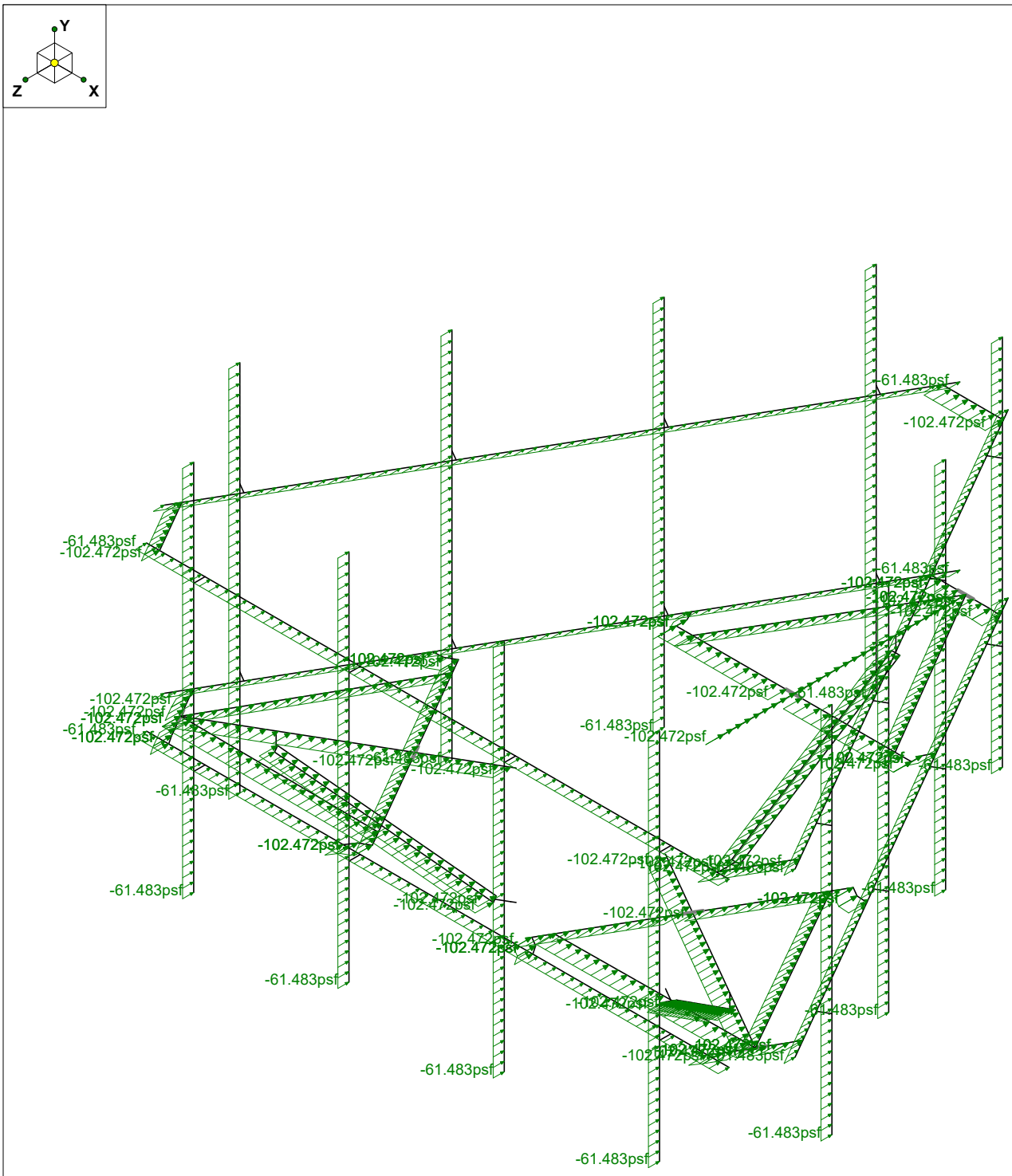

Loads: BLC 14, Distr. Wind Load Z

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Distr Wind Load AZI 000
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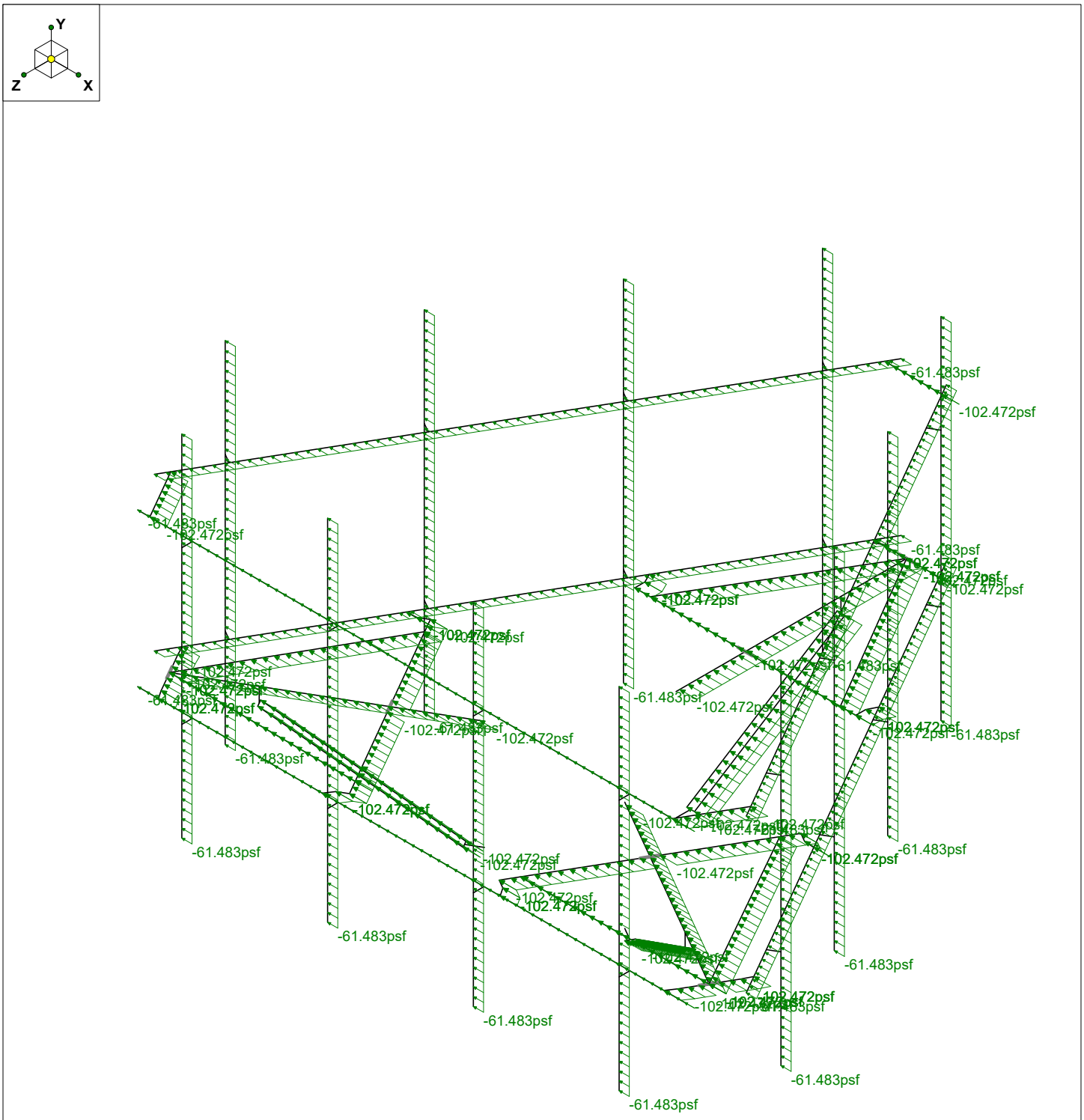

Loads: BLC 15, Distr. Wind Load X

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Distr Wind Load AZI 090
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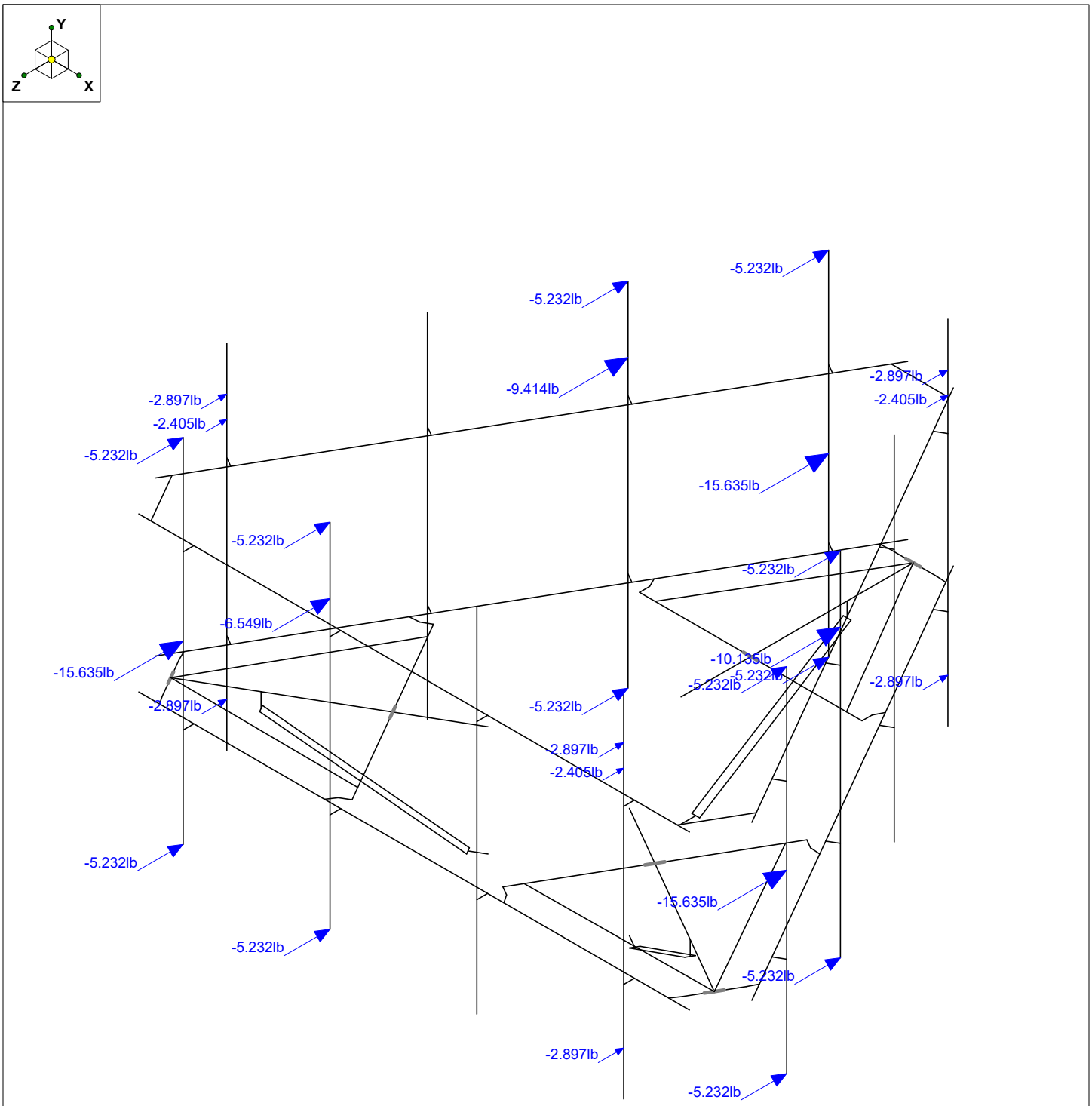

Loads: BLC 31, Seismic Load Z

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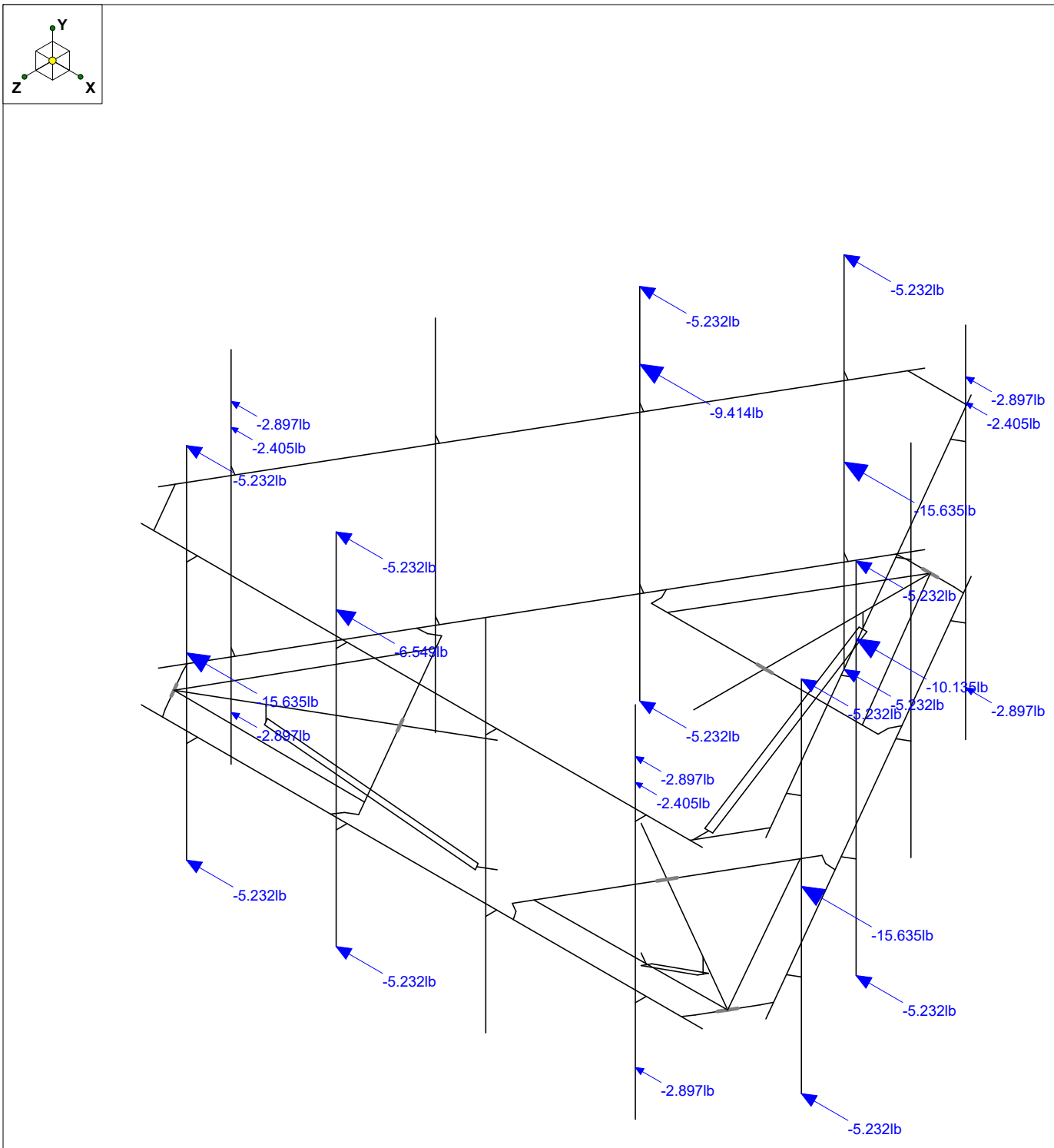
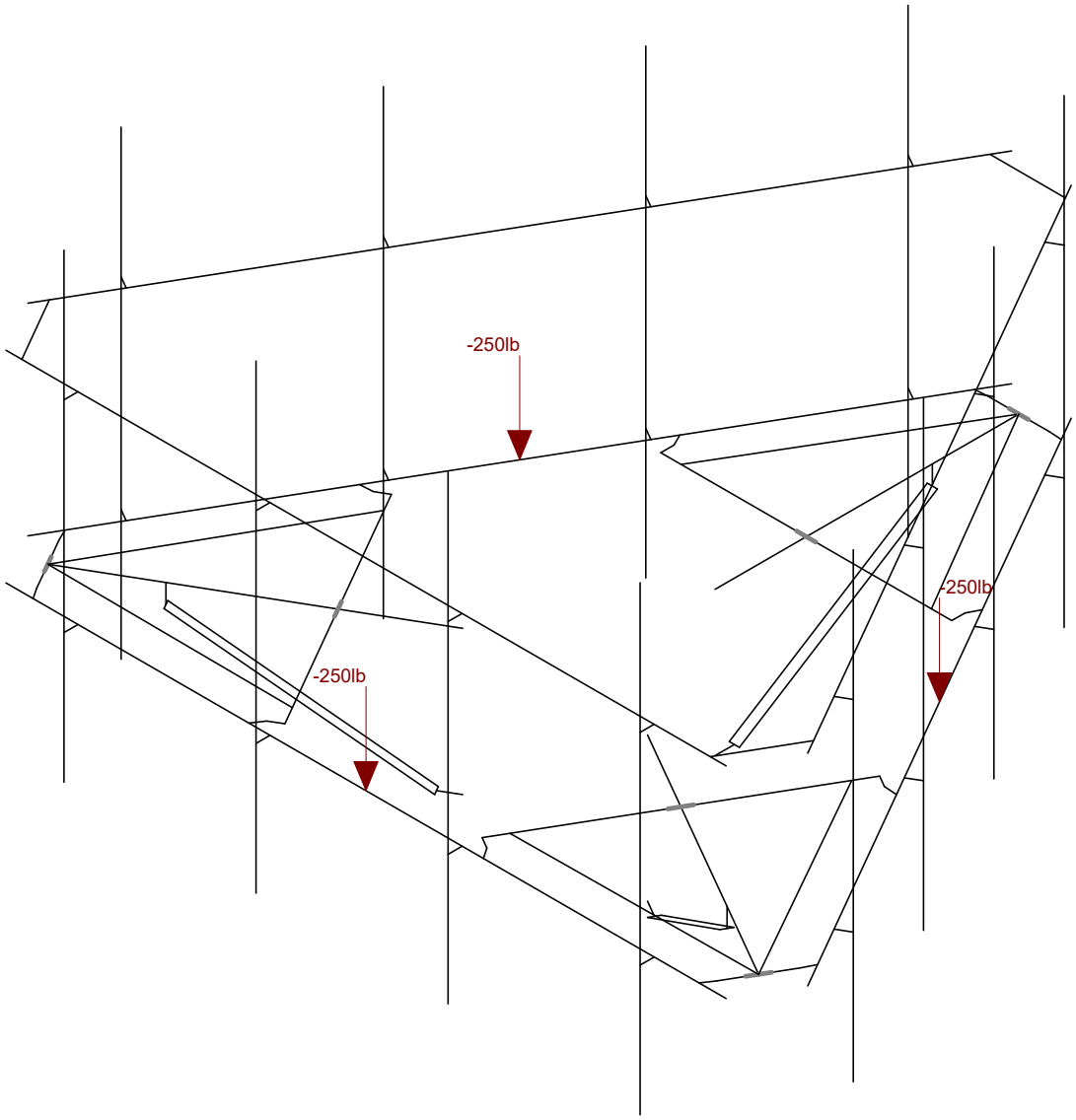
TM		Dec 9, 2019 at 3:24 PM
1106-A0001-B		RMQP-496-HK_loaded.r3d



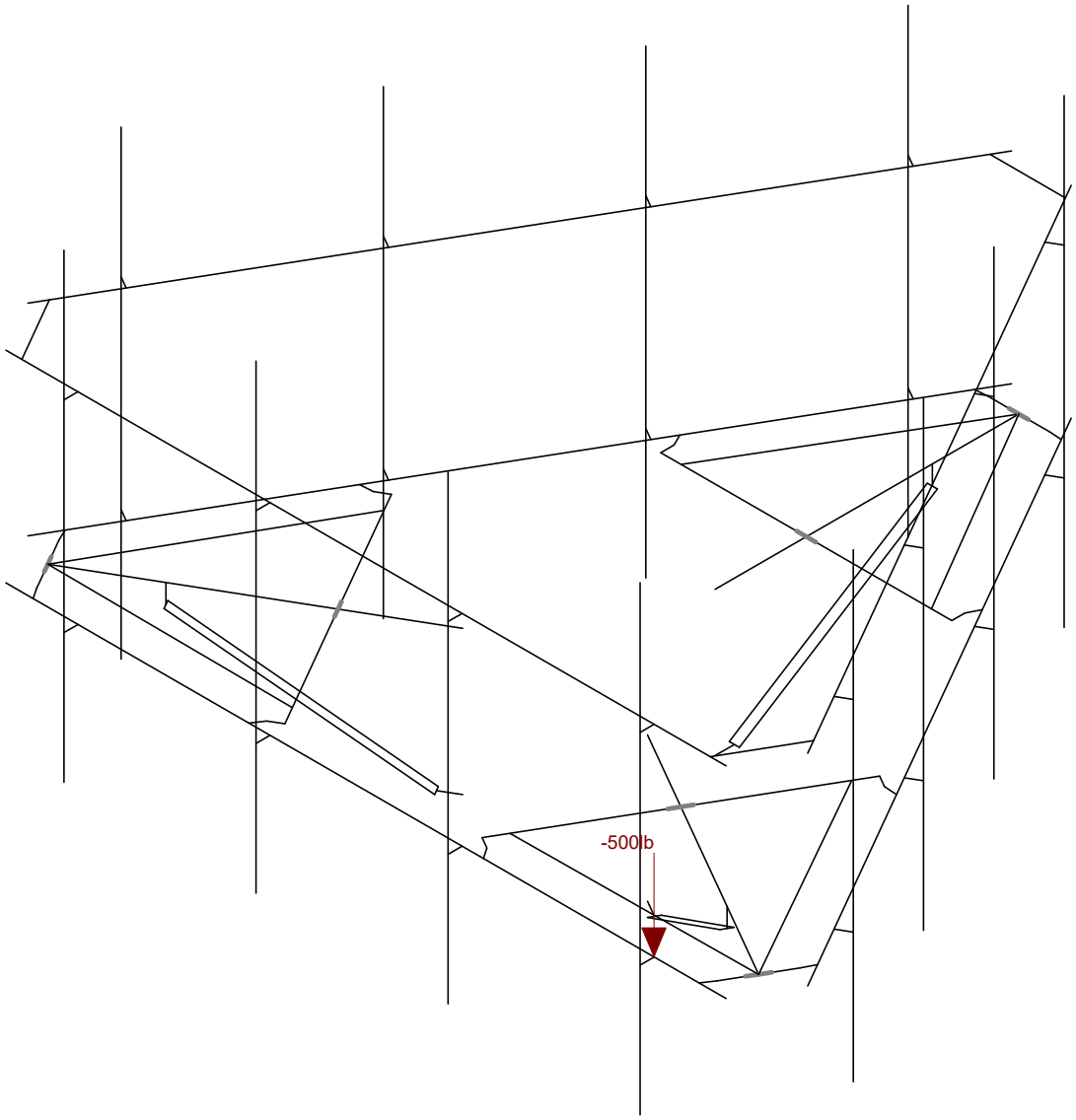
Loads: BLC 32, Seismic Load X

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Seismic Load AZI 090
TM		Dec 9, 2019 at 3:24 PM
1106-A0001-B		RMQP-496-HK_loaded.r3d



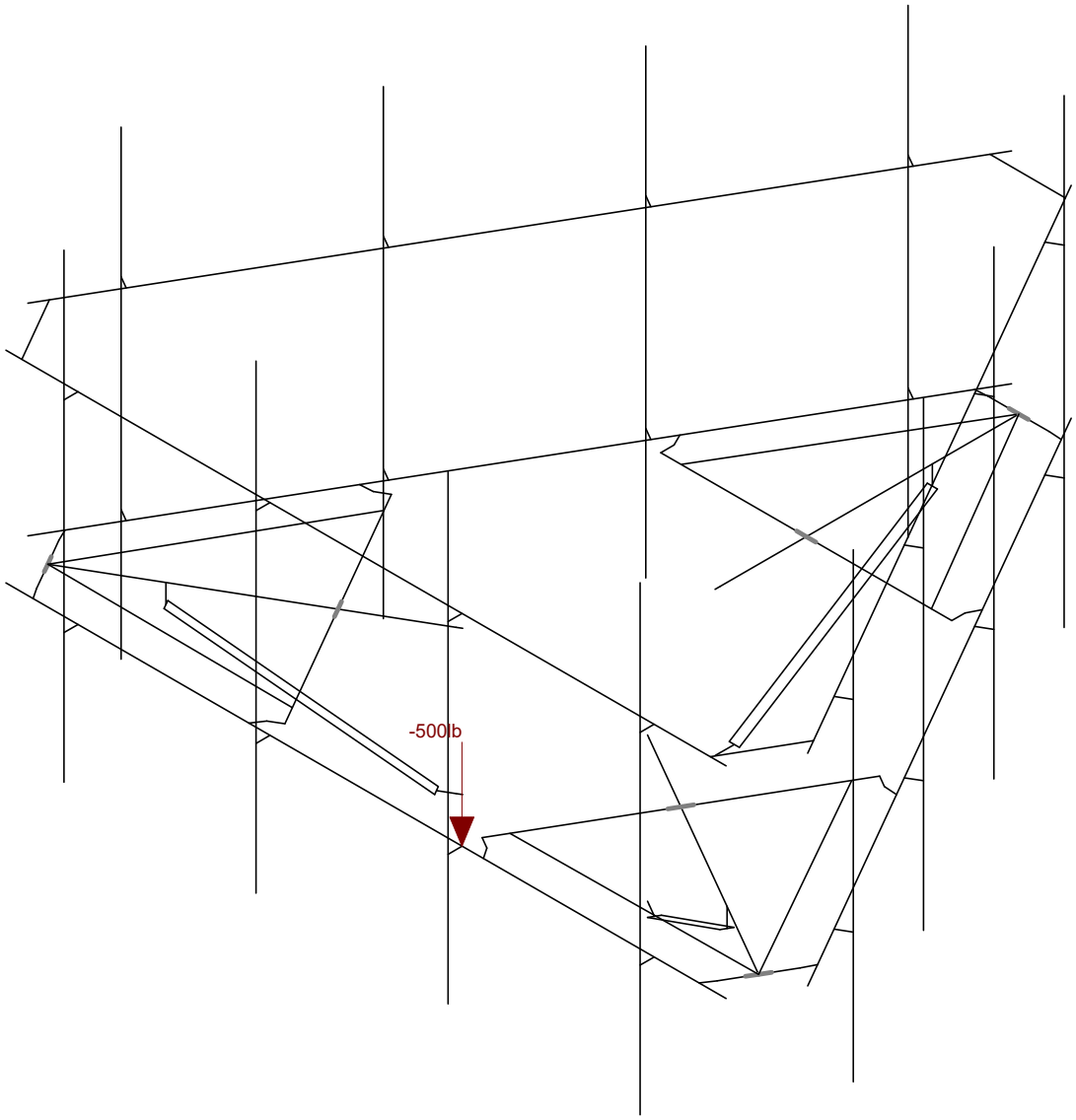
Loads: BLC 33, Service Live Loads
Envelope Only Solution

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Service Load
TM		Dec 4, 2019 at 9:17 AM
1106-A0001-B		RMQP-496-HK_loaded.r3d



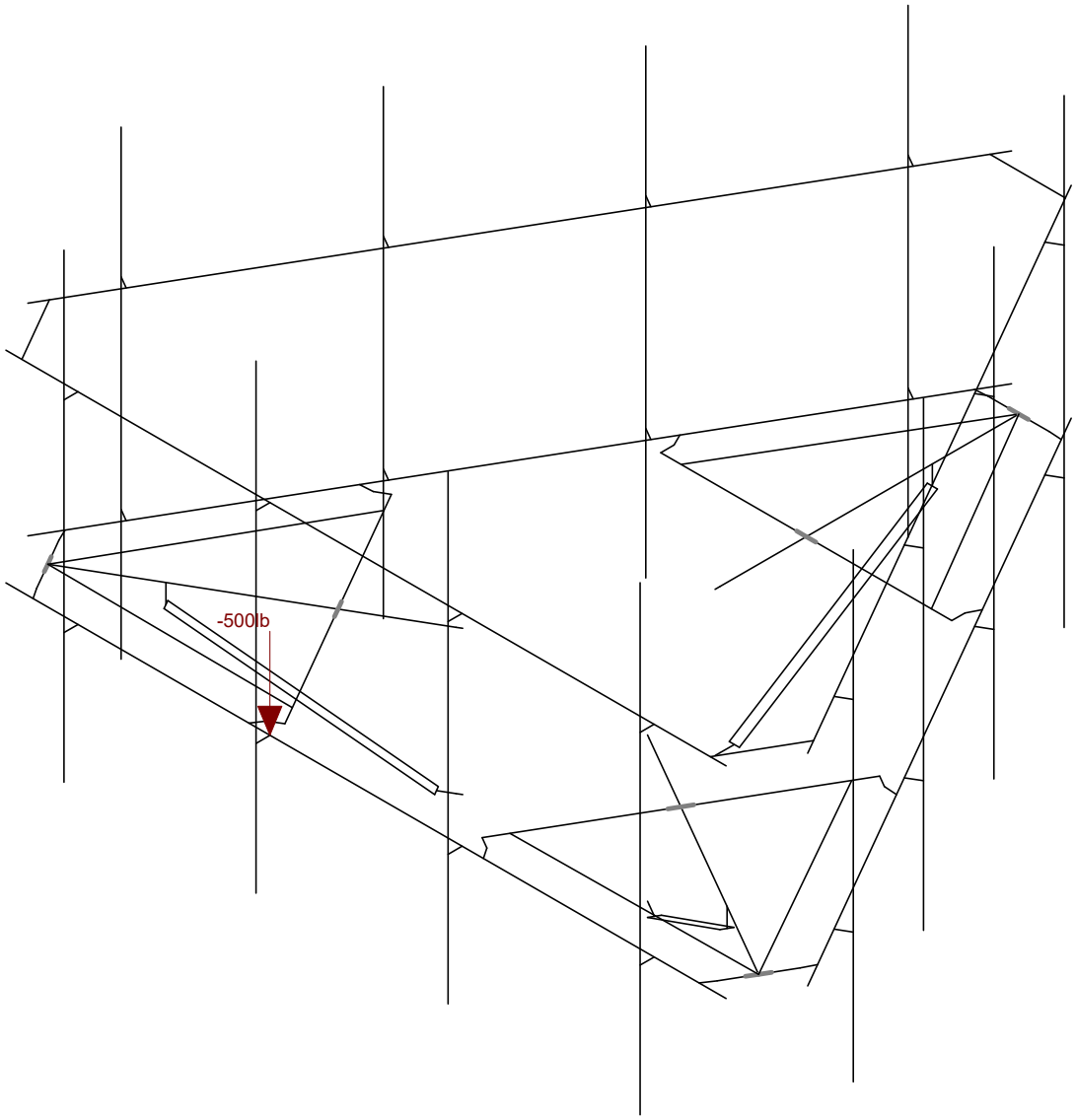
Loads: BLC 34, Maintenance Load 1
Envelope Only Solution

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Maintenance Load 1
TM		Dec 4, 2019 at 9:17 AM
1106-A0001-B		RMQP-496-HK_loaded.r3d



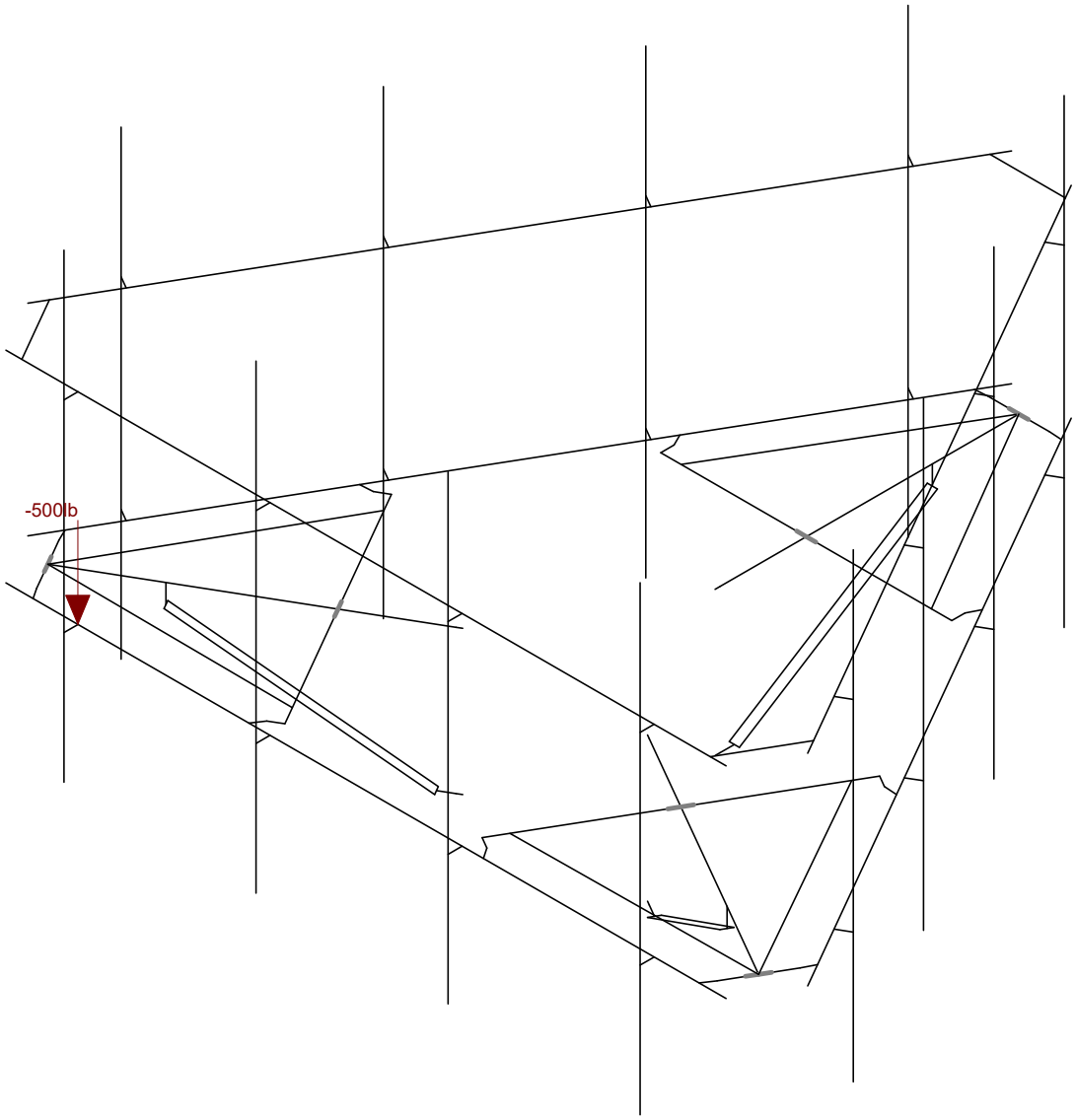
Loads: BLC 35, Maintenance Load 2
Envelope Only Solution

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Maintenance Load 2
TM		Dec 4, 2019 at 9:18 AM
1106-A0001-B		RMQP-496-HK_loaded.r3d



Loads: BLC 36, Maintenance Load 3
Envelope Only Solution

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Maintenance Load 3
TM		Dec 4, 2019 at 9:18 AM
1106-A0001-B		RMQP-496-HK_loaded.r3d



Loads: BLC 37, Maintenance Load 4
Envelope Only Solution

Infinigy Engineering, PLLC	Old Lyme-Beaver Road	Maintenance Load 4
TM		Dec 4, 2019 at 9:18 AM
1106-A0001-B		RMQP-496-HK_loaded.r3d

Program Inputs

PROJECT INFORMATION	
Client:	Smartlink
Carrier:	AT&T Mobility
Engineer:	Thomas Marr

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	B	
Topo Category:	1	
Site Class:	D - Stiff Soil	
Ground Elevation:	131	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	176.0	ft
Tower Height AGL:	180.0	ft

TOPOGRAPHIC DATA		
Topo Feature:	N/A	
Crest Height:	N/A	ft
Slope Distance:	N/A	ft
Crest Distance:	N/A	ft

FACTORS		
Directionality Fact. (K_d):	0.95	
Ground Ele. Factor (K_e):	1.00	*Rev H Only
Rooftop Speed-Up (K_s):	1.00	*Rev H Only
Topographic Factor (K_{zt}):	1.00	
Gust Effect Factor (G_h):	1.0	

CODE STANDARDS		
Building Code:	2018 IBC	
TIA Standard:	TIA-222-H	
ASCE Standard:	ASCE 7-16	

WIND AND ICE DATA		
Ultimate Wind (V_{ult}):	135	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1	in
Flat Pressure:	102.47	psf
Round Pressure:	61.48	psf
Ice Wind Pressure:	8.43	psf

SEISMIC DATA		
Short-Period Accel. (S_s):	0.21	g
1-Second Accel. (S_1):	0.05	g
Short-Period Design (S_{DS}):	0.22	
1-Second Design (S_{D1}):	0.09	
Short-Period Coeff. (F_a):	1.60	
1-Second Coeff. (F_v):	2.40	
Amplification Factor (a_p):	1.00	
Response Mod. (R_p):	2.50	
Overstrength (Ω_o):	1.00	

INFINIGY

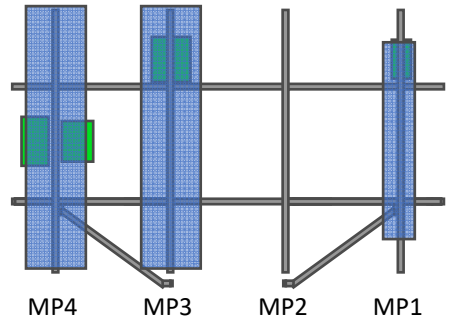
FROM ZERO TO INFINIGY

the solutions are endless

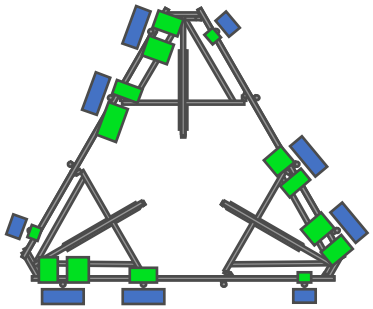
Infinigy Wind Load Calculator V2.1.3

Program Inputs

ELEVATION VIEW



PLAN VIEW



INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

Infinigy Wind Load Calculator V2.1.3

APPURTENANCE INFORMATION

Appurtenance Name	Elevation	Qty.	K_a	q_z (psf)	EPA_N (ft^2)	EPA_T (ft^2)	Wind F_z (lbs)	Wind F_x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)
POWERWAVE P90-15-XLH-RR	176.0	3	0.90	51.24	7.59	5.28	349.94	243.63	53.00	5.79	MP1
CCI DMP65R-BU8D	176.0	3	0.90	51.24	17.87	8.12	824.08	374.54	95.70	10.46	MP3
CCI DMP65R-BU8D	176.0	3	0.90	51.24	17.87	8.12	824.08	374.54	95.70	10.46	MP4
ERICSSON B14 4478	176.0	3	0.90	51.24	1.84	1.06	84.96	48.82	59.90	6.55	MP3
ERICSSON 4449 B5/B12	176.0	3	0.90	51.24	1.97	1.41	90.73	64.93	71.00	7.76	MP4
ERICSSON 8843 B2/B66A	176.0	3	0.90	51.24	1.64	1.35	75.58	62.41	72.00	7.87	MP4
POWERWAVE TT08-19DB111-001	176.0	3	0.90	51.24	0.79	0.64	36.56	29.61	22.00	2.41	MP1
RAYCAP DC9-48-60-24-8C-EV	176.0	1	0.90	51.24	2.74	4.78	126.15	220.57	26.20	2.86	Leg/Flush
RAYCAP DC6-48-60-18-8F	176.0	1	0.90	51.24	2.90	2.90	133.76	133.76	32.80	3.59	Leg/Flush

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N111	N1			Standoffs	Beam	None	Q235-GB	Typical
2	M2	N123	N2			Standoffs	Beam	None	Q235-GB	Typical
3	M3	N131	N3			Standoffs	Beam	None	Q235-GB	Typical
4	M4	N5	N4			Horizontals	Beam	None	Q235-GB	Typical
5	M5	N8	N7			Horizontals	Beam	None	Q235-GB	Typical
6	M6	N10	N9			Horizontals	Beam	None	Q235-GB	Typical
7	M7	N11	N18			RIGID	None	None	RIGID	Typical
8	M8	N6	N17			RIGID	None	None	RIGID	Typical
9	M9	N12	N19			RIGID	None	None	RIGID	Typical
10	M10	N15	N24			RIGID	None	None	RIGID	Typical
11	M11	N16	N25			RIGID	None	None	RIGID	Typical
12	M12	N13	N30			RIGID	None	None	RIGID	Typical
13	M13	N14	N31			RIGID	None	None	RIGID	Typical
14	M14	N32	N34			Corner Plate	Beam	None	Q345	Typical
15	M15	N33	N35			Connection Plates	Beam	None	Q345	Typical
16	M16	N45	N43			Handrail Horizont...	Beam	None	Q235-GB	Typical
17	M17	N49	N48			Handrail Horizont...	Beam	None	Q235-GB	Typical
18	M18	N51	N68			RIGID	None	None	RIGID	Typical
19	M19	N46	N65			RIGID	None	None	RIGID	Typical
20	M20	N42	N44			Connection Plates	Beam	None	Q345	Typical
21	M21	N53	N71			RIGID	None	None	RIGID	Typical
22	M22	N60	N74			RIGID	None	None	RIGID	Typical
23	M23	N42	N47			Connection Plates	Beam	None	Q345	Typical
24	M24	N50	N52			Connection Plates	Beam	None	Q345	Typical
25	M25	N63	N77			RIGID	None	None	RIGID	Typical
26	M26	N56	N86			RIGID	None	None	RIGID	Typical
27	M27	N50	N54			Connection Plates	Beam	None	Q345	Typical
28	M28	N61	N66			Connection Plates	Beam	None	Q345	Typical
29	M29	N58	N90			RIGID	None	None	RIGID	Typical
30	M30	N96	N93			Handrail Horizont...	Beam	None	Q235-GB	Typical
31	M31	N61	N69			Connection Plates	Beam	None	Q345	Typical
32	M32	N107	N119		180	Angle Handrail C...	Beam	None	Q345	Typical
33	M33	N73	N79			Connection Plates	Beam	None	Q345	Typical
34	M34	N108	N112		180	Angle Handrail C...	Beam	None	Q345	Typical
35	M35	N124	N104		90	Angle Handrail C...	Beam	None	Q345	Typical
36	M36	N73	N82			Connection Plates	Beam	None	Q345	Typical
37	M37	N80	N91			Corner Plate	Beam	None	Q345	Typical
38	M38	N75	N81			Corner Plate	Beam	None	Q345	Typical
39	M39	N82	N83			Standoffs	Beam	None	Q235-GB	Typical
40	M40	N55	N57			RIGID	None	None	RIGID	Typical
41	M41	N127	N134			RIGID	None	None	RIGID	Typical
42	M42	N59	N62			RIGID	None	None	RIGID	Typical
43	M43	N83	N114			Standoffs	Beam	None	Q235-GB	Typical
44	M44	N136	N137			RIGID	None	None	RIGID	Typical
45	M45	N32	N1			Corner Plate	Beam	None	Q345	Typical
46	M46	N88	N94			Corner Plate	Beam	None	Q345	Typical
47	M47	N110	N98			Standoffs	Beam	None	Q235-GB	Typical
48	M48	N67	N72			RIGID	None	None	RIGID	Typical
49	M49	N1	N80			Corner Plate	Beam	None	Q345	Typical
50	M50	N64	N70			RIGID	None	None	RIGID	Typical
51	M51	N97	N106			Connection Plates	Beam	None	Q345	Typical
52	M52	N98	N47			Standoffs	Beam	None	Q235-GB	Typical
53	M53	N138	N141			RIGID	None	None	RIGID	Typical
54	M54	N75	N2			Corner Plate	Beam	None	Q345	Typical
55	M55	N67	N64		180	Kickers	Beam	None	Q345	Typical
56	M56	N54	N117			Standoffs	Beam	None	Q235-GB	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rules
57	M57	N142	N143			RIGID	None	None	RIGID	Typical
58	M58	N2	N88			Corner Plate	Beam	None	Q345	Typical
59	M59	N97	N110			Connection Plates	Beam	None	Q345	Typical
60	M60	N117	N69			Standoffs	Beam	None	Q235-GB	Typical
61	M61	N72	N70		90	Kickers	Beam	None	Q345	Typical
62	M62	N105	N113			Corner Plate	Beam	None	Q345	Typical
63	M63	N1	N89		270	Platform Angle	Beam	None	Q345	Typical
64	M64	N76	N78			RIGID	None	None	RIGID	Typical
65	M65	N144	N147			RIGID	None	None	RIGID	Typical
66	M66	N85	N87			RIGID	None	None	RIGID	Typical
67	M67	N1	N84			Platform Angle	Beam	None	Q345	Typical
68	M68	N148	N149			RIGID	None	None	RIGID	Typical
69	M69	N120	N128			Corner Plate	Beam	None	Q345	Typical
70	M70	N2	N102		270	Platform Angle	Beam	None	Q345	Typical
71	M71	N95	N103			RIGID	None	None	RIGID	Typical
72	M72	N92	N100			RIGID	None	None	RIGID	Typical
73	M73	N2	N99			Platform Angle	Beam	None	Q345	Typical
74	M74	N150	N153			RIGID	None	None	RIGID	Typical
75	M75	N105	N3			Corner Plate	Beam	None	Q345	Typical
76	M76	N3	N122		270	Platform Angle	Beam	None	Q345	Typical
77	M77	N95	N92		180	Kickers	Beam	None	Q345	Typical
78	M78	N154	N155			RIGID	None	None	RIGID	Typical
79	M79	N3	N120			Corner Plate	Beam	None	Q345	Typical
80	M80	N33	N114			Connection Plates	Beam	None	Q345	Typical
81	M81	N3	N118			Platform Angle	Beam	None	Q345	Typical
82	M82	N103	N100		90	Kickers	Beam	None	Q345	Typical
83	M83	N109	N116			RIGID	None	None	RIGID	Typical
84	M84	N156	N159			RIGID	None	None	RIGID	Typical
85	M85	N121	N125			RIGID	None	None	RIGID	Typical
86	M86	N160	N161			RIGID	None	None	RIGID	Typical
87	M87	N129	N135			RIGID	None	None	RIGID	Typical
88	M88	N126	N133			RIGID	None	None	RIGID	Typical
89	M89	N129	N126		180	Kickers	Beam	None	Q345	Typical
90	M90	N135	N133		90	Kickers	Beam	None	Q345	Typical
91	M91	N163	N131			RIGID	None	None	RIGID	Typical
92	M92	N162	N59			RIGID	None	None	RIGID	Typical
93	M93	N165	N111			RIGID	None	None	RIGID	Typical
94	M94	N164	N85			RIGID	None	None	RIGID	Typical
95	M95	N169	N123			RIGID	None	None	RIGID	Typical
96	M96	N168	N121			RIGID	None	None	RIGID	Typical
97	MP1	N36	N37			Mount Pipe	Column	None	Q235-GB	Typical
98	MP2	N38	N39			Mount Pipe	Column	None	Q235-GB	Typical
99	MP3	N132	N130			Mount Pipe	Column	None	Q235-GB	Typical
100	MP4	N40	N41			Mount Pipe	Column	None	Q235-GB	Typical
101	MP5	N23	N21			Mount Pipe	Column	None	Q235-GB	Typical
102	MP6	N152	N151			Mount Pipe	Column	None	Q235-GB	Typical
103	MP7	N158	N157			Mount Pipe	Column	None	Q235-GB	Typical
104	MP8	N22	N20			Mount Pipe	Column	None	Q235-GB	Typical
105	MP9	N29	N27			Mount Pipe	Column	None	Q235-GB	Typical
106	MP10	N140	N139			Mount Pipe	Column	None	Q235-GB	Typical
107	MP11	N146	N145			Mount Pipe	Column	None	Q235-GB	Typical
108	MP12	N28	N26			Mount Pipe	Column	None	Q235-GB	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		42	110.3	0
3	Total General		42	110.3	0
4					
5	Hot Rolled Steel				
6	Q235-GB	HSS4X4X4	9	356.6	.341
7	Q235-GB	PIPE_2.0	3	450	.13
8	Q235-GB	PIPE_2.5	12	1152	.526
9	Q235-GB	PIPE_3.0	3	450	.264
10	Q345	6"x1/2" Plate	12	42.3	.036
11	Q345	L2.5x2.5x4	3	47.2	.016
12	Q345	L2.5x2.5x8	6	292.6	.188
13	Q345	L2x2x3	6	308.1	.063
14	Q345	PL6x.375	12	32.7	.021
15	Total HR Steel		66	3131.4	1.584

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Self Weight	DL		-1			32		3	
2	Wind Load AZI 0	WLZ					64			
3	Wind Load AZI 30	None					64			
4	Wind Load AZI 60	None					64			
5	Wind Load AZI 90	WLX					64			
6	Wind Load AZI 120	None					64			
7	Wind Load AZI 150	None					64			
8	Wind Load AZI 180	None					64			
9	Wind Load AZI 210	None					64			
10	Wind Load AZI 240	None					64			
11	Wind Load AZI 270	None					64			
12	Wind Load AZI 300	None					64			
13	Wind Load AZI 330	None					64			
14	Distr. Wind Load Z	WLZ						108		
15	Distr. Wind Load X	WLX						108		
16	Ice Weight	OL1					32	108	3	
17	Ice Wind Load AZI 0	OL2					64			
18	Ice Wind Load AZI 30	None					64			
19	Ice Wind Load AZI 60	None					64			
20	Ice Wind Load AZI 90	OL3					64			
21	Ice Wind Load AZI 120	None					64			
22	Ice Wind Load AZI 150	None					64			
23	Ice Wind Load AZI 180	None					64			
24	Ice Wind Load AZI 210	None					64			
25	Ice Wind Load AZI 240	None					64			
26	Ice Wind Load AZI 270	None					64			
27	Ice Wind Load AZI 300	None					64			
28	Ice Wind Load AZI 330	None					64			
29	Distr. Ice Wind Load Z	OL2						108		
30	Distr. Ice Wind Load X	OL3						108		
31	Seismic Load Z	ELZ			-.109		32			
32	Seismic Load X	ELX	-.109				32			
33	Service Live Loads	LL				3				
34	Maintenance Load 1	LL				1				
35	Maintenance Load 2	LL				1				
36	Maintenance Load 3	LL				1				

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
37	Maintenance Load 4	LL				1				
38	Maintenance Load 5	LL				1				
39	Maintenance Load 6	LL				1				
40	Maintenance Load 7	LL				1				
41	Maintenance Load 8	LL				1				
42	Maintenance Load 9	LL				1				
43	Maintenance Load 10	LL				1				
44	Maintenance Load 11	LL				1				
45	Maintenance Load 12	LL				1				
46	BLC 1 Transient Area Loads	None						120		
47	BLC 16 Transient Area Loads	None						120		

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.4DL	Yes	Y		1	1.4																		
2	1.2DL + 1WL AZI 0	Yes	Y		1	1.2	2	1	14	1	15													
3	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	3	1	14	.866	15	.5												
4	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	4	1	14	.5	15	.866												
5	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	5	1	14		15	1												
6	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	6	1	14	-.5	15	.866												
7	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	7	1	14	-.866	15	.5												
8	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	8	1	14	-1	15													
9	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	9	1	14	-.866	15	-.5												
10	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	10	1	14	-.5	15	-.866												
11	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	11	1	14		15	-1												
12	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	12	1	14	.5	15	-.866												
13	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	13	1	14	.866	15	-.5												
14	0.9DL + 1WL AZI 0	Yes	Y		1	.9	2	1	14	1	15													
15	0.9DL + 1WL AZI ...	Yes	Y		1	.9	3	1	14	.866	15	.5												
16	0.9DL + 1WL AZI ...	Yes	Y		1	.9	4	1	14	.5	15	.866												
17	0.9DL + 1WL AZI ...	Yes	Y		1	.9	5	1	14		15	1												
18	0.9DL + 1WL AZI ...	Yes	Y		1	.9	6	1	14	-.5	15	.866												
19	0.9DL + 1WL AZI ...	Yes	Y		1	.9	7	1	14	-.866	15	.5												
20	0.9DL + 1WL AZI ...	Yes	Y		1	.9	8	1	14	-1	15													
21	0.9DL + 1WL AZI ...	Yes	Y		1	.9	9	1	14	-.866	15	-.5												
22	0.9DL + 1WL AZI ...	Yes	Y		1	.9	10	1	14	-.5	15	-.866												
23	0.9DL + 1WL AZI ...	Yes	Y		1	.9	11	1	14		15	-1												
24	0.9DL + 1WL AZI ...	Yes	Y		1	.9	12	1	14	.5	15	-.866												
25	0.9DL + 1WL AZI ...	Yes	Y		1	.9	13	1	14	.866	15	-.5												
26	1.2D + 1.0Di	Yes	Y		1	1.2	16	1																
27	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	17	1	29	1	30											
28	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	18	1	29	.866	30	.5										
29	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	19	1	29	.5	30	.866										
30	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	20	1	29		30	1										
31	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	21	1	29	-.5	30	.866										
32	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	22	1	29	-.866	30	.5										
33	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	23	1	29	-1	30											
34	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	24	1	29	-.866	30	-.5										
35	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	25	1	29	-.5	30	-.866										
36	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	26	1	29		30	-1										
37	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	27	1	29	.5	30	-.866										
38	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	28	1	29	.866	30	-.5										
39	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	1	32															
40	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	.866	32	.5														
41	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	.5	32	.866														

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
42	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31		32	1														
43	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	-.5	32	.866														
44	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	-.866	32	.5														
45	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	-1	32															
46	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	-.866	32	-.5														
47	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	-.5	32	-.866														
48	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31		32	-1														
49	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	.5	32	-.866														
50	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.244	31	.866	32	-.5														
51	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	1	32															
52	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	.866	32	.5														
53	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	.5	32	.866														
54	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31		32	1														
55	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	-.5	32	.866														
56	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	-.866	32	.5														
57	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	-1	32															
58	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	-.866	32	-.5														
59	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	-.5	32	-.866														
60	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31		32	-1														
61	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	.5	32	-.866														
62	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.856	31	.866	32	-.5														
63	1.0DL + 1.5LL + 1...	Yes	Y		1	1	2	.198	14	.198	15		33	1.5										
64	1.0DL + 1.5LL + 1...	Yes	Y		1	1	3	.198	14	.171	15	.099	33	1.5										
65	1.0DL + 1.5LL + 1...	Yes	Y		1	1	4	.198	14	.099	15	.171	33	1.5										
66	1.0DL + 1.5LL + 1...	Yes	Y		1	1	5	.198	14		15	.198	33	1.5										
67	1.0DL + 1.5LL + 1...	Yes	Y		1	1	6	.198	14	-.099	15	.171	33	1.5										
68	1.0DL + 1.5LL + 1...	Yes	Y		1	1	7	.198	14	-.171	15	.099	33	1.5										
69	1.0DL + 1.5LL + 1...	Yes	Y		1	1	8	.198	14	-.198	15		33	1.5										
70	1.0DL + 1.5LL + 1...	Yes	Y		1	1	9	.198	14	-.171	15	-.099	33	1.5										
71	1.0DL + 1.5LL + 1...	Yes	Y		1	1	10	.198	14	-.099	15	-.171	33	1.5										
72	1.0DL + 1.5LL + 1...	Yes	Y		1	1	11	.198	14		15	-.198	33	1.5										
73	1.0DL + 1.5LL + 1...	Yes	Y		1	1	12	.198	14	.099	15	-.171	33	1.5										
74	1.0DL + 1.5LL + 1...	Yes	Y		1	1	13	.198	14	.171	15	-.099	33	1.5										
75	1.2DL + 1.5LL	Yes	Y		1	1.2	33	1.5																
76	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	2	.049	14	.049	15											
77	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	3	.049	14	.043	15	.025										
78	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	4	.049	14	.025	15	.043										
79	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	5	.049	14		15	.049										
80	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	6	.049	14	-.025	15	.043										
81	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	7	.049	14	-.043	15	.025										
82	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	8	.049	14	-.049	15											
83	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	9	.049	14	-.043	15	-.025										
84	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	10	.049	14	-.025	15	-.043										
85	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	11	.049	14		15	-.049										
86	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	12	.049	14	.025	15	-.043										
87	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	13	.049	14	.043	15	-.025										
88	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	2	.049	14	.049	15											
89	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	3	.049	14	.043	15	.025										
90	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	4	.049	14	.025	15	.043										
91	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	5	.049	14		15	.049										
92	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	6	.049	14	-.025	15	.043										
93	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	7	.049	14	-.043	15	.025										
94	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	8	.049	14	-.049	15											
95	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	9	.049	14	-.043	15	-.025										
96	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	10	.049	14	-.025	15	-.043										
97	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	11	.049	14		15	-.049										
98	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	12	.049	14	.025	15	-.043										

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
99	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	13	.049	14	.043	15	-.025										
100	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	2	.049	14	.049	15											
101	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	3	.049	14	.043	15	.025										
102	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	4	.049	14	.025	15	.043										
103	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	5	.049	14		15	.049										
104	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	6	.049	14	-.025	15	.043										
105	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	7	.049	14	-.043	15	.025										
106	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	8	.049	14	-.049	15											
107	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	9	.049	14	-.043	15	-.025										
108	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	10	.049	14	-.025	15	-.043										
109	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	11	.049	14		15	-.049										
110	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	12	.049	14	.025	15	-.043										
111	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	13	.049	14	.043	15	-.025										
112	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	2	.049	14	.049	15											
113	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	3	.049	14	.043	15	.025										
114	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	4	.049	14	.025	15	.043										
115	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	5	.049	14		15	.049										
116	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	6	.049	14	-.025	15	.043										
117	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	7	.049	14	-.043	15	.025										
118	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	8	.049	14	-.049	15											
119	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	9	.049	14	-.043	15	-.025										
120	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	10	.049	14	-.025	15	-.043										
121	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	11	.049	14		15	-.049										
122	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	12	.049	14	.025	15	-.043										
123	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	13	.049	14	.043	15	-.025										
124	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	2	.049	14	.049	15											
125	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	3	.049	14	.043	15	.025										
126	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	4	.049	14	.025	15	.043										
127	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	5	.049	14		15	.049										
128	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	6	.049	14	-.025	15	.043										
129	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	7	.049	14	-.043	15	.025										
130	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	8	.049	14	-.049	15											
131	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	9	.049	14	-.043	15	-.025										
132	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	10	.049	14	-.025	15	-.043										
133	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	11	.049	14		15	-.049										
134	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	12	.049	14	.025	15	-.043										
135	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	13	.049	14	.043	15	-.025										
136	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	2	.049	14	.049	15											
137	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	3	.049	14	.043	15	.025										
138	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	4	.049	14	.025	15	.043										
139	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	5	.049	14		15	.049										
140	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	6	.049	14	-.025	15	.043										
141	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	7	.049	14	-.043	15	.025										
142	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	8	.049	14	-.049	15											
143	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	9	.049	14	-.043	15	-.025										
144	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	10	.049	14	-.025	15	-.043										
145	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	11	.049	14		15	-.049										
146	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	12	.049	14	.025	15	-.043										
147	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	13	.049	14	.043	15	-.025										
148	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	2	.049	14	.049	15											
149	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	3	.049	14	.043	15	.025										
150	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	4	.049	14	.025	15	.043										
151	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	5	.049	14		15	.049										
152	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	6	.049	14	-.025	15	.043										
153	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	7	.049	14	-.043	15	.025										
154	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	8	.049	14	-.049	15											
155	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	9	.049	14	-.043	15	-.025										

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
156	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	10	.049	14	-.025	15	-.043										
157	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	11	.049	14		15	-.049										
158	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	12	.049	14	.025	15	-.043										
159	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	13	.049	14	.043	15	-.025										
160	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	2	.049	14	.049	15											
161	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	3	.049	14	.043	15	.025										
162	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	4	.049	14	.025	15	.043										
163	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	5	.049	14		15	.049										
164	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	6	.049	14	-.025	15	.043										
165	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	7	.049	14	-.043	15	.025										
166	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	8	.049	14	-.049	15											
167	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	9	.049	14	-.043	15	-.025										
168	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	10	.049	14	-.025	15	-.043										
169	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	11	.049	14		15	-.049										
170	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	12	.049	14	.025	15	-.043										
171	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	13	.049	14	.043	15	-.025										
172	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	2	.049	14	.049	15											
173	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	3	.049	14	.043	15	.025										
174	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	4	.049	14	.025	15	.043										
175	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	5	.049	14		15	.049										
176	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	6	.049	14	-.025	15	.043										
177	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	7	.049	14	-.043	15	.025										
178	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	8	.049	14	-.049	15											
179	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	9	.049	14	-.043	15	-.025										
180	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	10	.049	14	-.025	15	-.043										
181	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	11	.049	14		15	-.049										
182	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	12	.049	14	.025	15	-.043										
183	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	13	.049	14	.043	15	-.025										
184	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	2	.049	14	.049	15											
185	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	3	.049	14	.043	15	.025										
186	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	4	.049	14	.025	15	.043										
187	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	5	.049	14		15	.049										
188	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	6	.049	14	-.025	15	.043										
189	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	7	.049	14	-.043	15	.025										
190	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	8	.049	14	-.049	15											
191	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	9	.049	14	-.043	15	-.025										
192	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	10	.049	14	-.025	15	-.043										
193	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	11	.049	14		15	-.049										
194	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	12	.049	14	.025	15	-.043										
195	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	43	1.5	13	.049	14	.043	15	-.025										
196	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	2	.049	14	.049	15											
197	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	3	.049	14	.043	15	.025										
198	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	4	.049	14	.025	15	.043										
199	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	5	.049	14		15	.049										
200	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	6	.049	14	-.025	15	.043										
201	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	7	.049	14	-.043	15	.025										
202	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	8	.049	14	-.049	15											
203	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	9	.049	14	-.043	15	-.025										
204	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	10	.049	14	-.025	15	-.043										
205	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	11	.049	14		15	-.049										
206	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	12	.049	14	.025	15	-.043										
207	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	44	1.5	13	.049	14	.043	15	-.025										
208	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	2	.049	14	.049	15											
209	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	3	.049	14	.043	15	.025										
210	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	4	.049	14	.025	15	.043										
211	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	5	.049	14		15	.049										
212	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	6	.049	14	-.025	15	.043										

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
213	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	7	.049	14	-.043	15	.025										
214	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	8	.049	14	-.049	15											
215	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	9	.049	14	-.043	15	-.025										
216	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	10	.049	14	-.025	15	-.043										
217	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	11	.049	14		15	-.049										
218	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	45	1.5	12	.049	14	.025	15	-.043										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N163	max	2549.114	5	833.337	33	7735.447	2	.874	28	3.048	23	.705	23
2		min	-2519.283	23	143.619	25	-5343.047	20	.225	21	-3.088	5	-.888	5
3	N162	max	67.112	21	2452.59	2	1186.337	20	.856	2	.418	11	.285	11
4		min	-99.553	3	-717.882	20	-3830.745	2	-.221	20	-.398	17	-.284	17
5	N164	max	940.03	24	2382.705	6	1840.13	6	.177	23	.259	3	.176	24
6		min	-3175.919	6	-678.383	24	-515.316	24	-.488	5	-.242	21	-.716	6
7	N165	max	6492.165	6	769.087	37	3411.594	25	.465	14	2.442	15	.148	21
8		min	-4474.029	24	149.561	17	-4605.346	7	-.926	8	-2.478	9	-.862	137
9	N168	max	3131.906	10	2320.331	10	1713.884	10	.174	17	.283	7	.697	35
10		min	-834.213	16	-593.518	16	-427.439	16	-.492	11	-.26	25	-.135	16
11	N169	max	4366.384	16	788.253	29	2652.306	15	.603	25	2.63	19	.978	206
12		min	-6442.987	10	169.11	21	-3814.256	9	-.767	7	-2.673	13	-.127	18
13	Totals:	max	9168.183	17	8631.786	38	9439.345	14						
14		min	-9168.186	11	2901.899	56	-9439.348	8						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Ch...	Loc[in]	LC	Shear C...	Loc.....		LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
1	M16	PIPE_2.0	.563	14.062	11	.297	4.6...		11	25978...	32130	1.872	1.872	1	H3-6
2	M30	PIPE_2.0	.563	14.063	7	.296	4.6...		7	25978...	32130	1.872	1.872	1	H3-6
3	M32	L2.5x2.5x4	.534	15.731	12	.173	15....	y	7	36453...	38556	1.114	2.537	...	H2-1
4	MP11	PIPE_2.5	.522	27	6	.077	27		4	30038...	50715	3.596	3.596	...	H1-1b
5	MP7	PIPE_2.5	.521	27	10	.075	27		8	30038...	50715	3.596	3.596	...	H1-1b
6	M35	L2.5x2.5x4	.505	0	4	.175	0	z	11	36453...	38556	1.114	2.537	...	H2-1
7	MP3	PIPE_2.5	.485	27	2	.071	27		12	30038...	50715	3.596	3.596	...	H1-1b
8	M34	L2.5x2.5x4	.468	15.731	8	.163	15....	z	2	36453...	38556	1.114	2.537	...	H2-1
9	M17	PIPE_2.0	.454	14.062	2	.282	4.6...		2	25978...	32130	1.872	1.872	1	H1-1b
10	MP6	PIPE_2.5	.357	27	7	.130	27		5	30038...	50715	3.596	3.596	...	H1-1b
11	M31	PL6x.375	.355	2.75	5	.637	2.75	y	10	70465...	72900	.57	9.113	...	H1-1b
12	MP10	PIPE_2.5	.345	27	4	.125	27		13	30038...	50715	3.596	3.596	...	H1-1b
13	MP2	PIPE_2.5	.334	27	12	.106	27		9	30038...	50715	3.596	3.596	...	H1-1b
14	M33	PL6x.375	.330	2.704	11	.227	0	y	10	70544.2	72900	.57	9.113	...	H1-1b
15	MP8	PIPE_2.5	.321	69	11	.234	69		4	30038...	50715	3.596	3.596	...	H1-1b
16	M63	L2x2x3	.320	51.353	7	.012	51....	y	8	9346....	23392.8	.558	1.23	...	H2-1
17	M23	PL6x.375	.312	2.75	13	.646	2.75	y	6	70464...	72900	.57	9.113	...	H1-1b
18	MP12	PIPE_2.5	.311	27	8	.238	69		12	30038...	50715	3.596	3.596	...	H1-1b
19	M24	PL6x.375	.310	2.704	7	.247	0	y	6	70544.2	72900	.57	9.113	...	H1-1b
20	M79	6"x1/2" Plate	.305	0	2	.132	0	y	4	92687...	97200	1.012	12.15	...	H1-1b
21	M70	L2x2x3	.299	51.353	11	.010	51....	y	6	9346....	23392.8	.558	1.223	...	H2-1
22	M49	6"x1/2" Plate	.298	0	6	.127	0	y	8	92686...	97200	1.012	12.15	...	H1-1b
23	M20	PL6x.375	.297	2.704	5	.251	0	y	12	70544.2	72900	.57	9.113	...	H1-1b
24	M75	6"x1/2" Plate	.294	4.338	2	.140	4.3...	y	12	92685...	97200	1.012	12.15	...	H1-1b
25	M76	L2x2x3	.292	51.353	4	.010	0	y	11	9346....	23392.8	.558	1.179	...	H2-1
26	MP4	PIPE_2.5	.292	69	2	.215	69		8	30038...	50715	3.596	3.596	...	H1-1b
27	M51	PL6x.375	.288	2.704	3	.228	0	y	13	70544.2	72900	.57	9.113	...	H1-1b
28	MP5	PIPE_2.5	.285	27	8	.142	69		4	30038...	50715	3.596	3.596	...	H1-1b

Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Ch...	Loc[in]	LC	Shear C...	Loc.....		LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
29	M45	6"x1/2" Plate	.283	4.338	6	.127	4.3...	y	4	92686...	97200	1.012	12.15	...	H1-1b
30	MP9	PIPE_2.5	.280	27	4	.140	69		12	30038...	50715	3.596	3.596	...	H1-1b
31	M58	6"x1/2" Plate	.280	0	9	.131	0	y	12	92686...	97200	1.012	12.15	...	H1-1b
32	M54	6"x1/2" Plate	.275	4.338	10	.133	4.3...	y	8	92686...	97200	1.012	12.15	...	H1-1b
33	MP1	PIPE_2.5	.275	27	6	.130	69		8	30038...	50715	3.596	3.596	...	H1-1b
34	M80	PL6x.375	.272	2.75	9	.579	2.75	y	2	70464...	72900	.57	9.113	...	H1-1b
35	M3	HSS4X4X4	.271	0	5	.173	0	z	5	10175...	106155	12.311	12.311	1	H1-1b
36	M15	PL6x.375	.270	2.704	13	.234	0	y	8	70544.2	72900	.57	9.105	...	H1-1b
37	M28	PL6x.375	.261	2.704	9	.250	0	y	4	70544.2	72900	.57	9.113	...	H1-1b
38	M73	L2x2x3	.261	51.353	9	.011	51....	z	2	9346....	23392.8	.558	1.234	...	H2-1
39	M67	L2x2x3	.260	0	6	.011	0	y	33	9346.21	23392.8	.558	1.214	...	H2-1
40	M81	L2x2x3	.259	0	2	.011	0	y	29	9346.27	23392.8	.558	1.228	...	H2-1
41	M69	6"x1/2" Plate	.257	2.704	2	.177	2.7...	y	5	95420...	97200	1.012	12.15	...	H1-1b
42	M27	PL6x.375	.253	2.75	11	.714	2.75	y	6	70464...	72900	.57	9.099	...	H1-1b
43	M37	6"x1/2" Plate	.248	2.704	6	.165	0	y	9	95420...	97200	1.012	12.15	...	H1-1b
44	M2	HSS4X4X4	.237	0	13	.168	0	z	13	10175...	106155	12.311	12.311	1	H1-1b
45	M46	6"x1/2" Plate	.232	2.704	10	.172	2.7...	y	13	95420...	97200	1.012	12.15	...	H1-1b
46	M62	6"x1/2" Plate	.231	2.704	8	.142	0	y	11	95420...	97200	1.012	12.15	...	H1-1b
47	M14	6"x1/2" Plate	.225	2.704	12	.127	0	y	3	95420...	97200	1.012	12.15	...	H1-1b
48	M1	HSS4X4X4	.223	0	9	.154	0	z	9	10175...	106155	12.311	12.311	1	H1-1b
49	M38	6"x1/2" Plate	.214	2.704	4	.140	0	y	7	95420...	97200	1.012	12.15	...	H1-1b
50	M59	PL6x.375	.207	2.75	7	.658	2.75	y	2	70464...	72900	.57	9.101	...	H1-1b
51	M36	PL6x.375	.205	2.75	3	.677	2.75	y	10	70464...	72900	.57	9.105	...	H1-1b
52	M55	L2.5x2.5x8	.203	48.765	5	.016	48....	z	4	42624...	73224	1.865	4.392	...	H2-1
53	M89	L2.5x2.5x8	.192	48.765	13	.018	48....	z	12	42624...	73224	1.865	4.392	...	H2-1
54	M77	L2.5x2.5x8	.185	48.765	8	.016	48....	z	8	42624...	73224	1.865	4.392	...	H2-1
55	M61	L2.5x2.5x8	.177	48.765	11	.016	48....	y	4	42624...	73224	1.865	4.392	...	H2-1
56	M52	HSS4X4X4	.173	0	11	.136	24....	z	12	10429...	106155	12.311	12.311	...	H1-1b
57	M43	HSS4X4X4	.169	0	7	.129	24....	z	8	10429...	106155	12.311	12.311	...	H1-1b
58	M60	HSS4X4X4	.167	0	3	.135	24....	z	4	10429...	106155	12.311	12.311	...	H1-1b
59	M90	L2.5x2.5x8	.165	48.765	7	.018	48....	y	12	42624...	73224	1.865	4.392	...	H2-1
60	M82	L2.5x2.5x8	.156	48.765	3	.016	48....	y	8	42624...	73224	1.865	4.392	...	H2-1
61	M6	PIPE_3.0	.145	15.625	12	.226	51....		6	59302...	65205	5.749	5.749	1	H1-1b
62	M4	PIPE_3.0	.140	93.75	8	.224	51....		10	59302...	65205	5.749	5.749	1	H1-1b
63	M5	PIPE_3.0	.140	15.625	8	.203	51....		2	59302...	65205	5.749	5.749	1	H1-1b
64	M39	HSS4X4X4	.136	28.301	5	.111	4.1...	z	4	10429...	106155	12.311	12.311	...	H1-1b
65	M56	HSS4X4X4	.134	28.3	13	.117	4.1...	z	12	10429...	106155	12.311	12.311	...	H1-1b
66	M47	HSS4X4X4	.127	28.301	9	.112	4.1...	z	8	10429...	106155	12.311	12.311	...	H1-1b

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoffs	HSS4X4X4	Beam	None	Q235-GB	Typical	3.37	7.8	7.8	12.8
2	Horizontals	PIPE_3.0	Beam	None	Q235-GB	Typical	2.07	2.85	2.85	5.69
3	Platform Angle	L2x2x3	Beam	None	Q345	Typical	.722	.271	.271	.009
4	Mount Pipe	PIPE_2.5	Column	None	Q235-GB	Typical	1.61	1.45	1.45	2.89
5	Corner Plate	6"x1/2" Plate	Beam	None	Q345	Typical	3	.063	9	.237
6	Handrail Horizont...	PIPE_2.0	Beam	None	Q235-GB	Typical	1.02	.627	.627	1.25
7	Angle Handrail C...	L2.5x2.5x4	Beam	None	Q345	Typical	1.19	.692	.692	.026
8	Platform Braces	HSS4X4X4	Beam	None	Q235-GB	Typical	3.37	7.8	7.8	12.8
9	Connection Plates	PL6x.375	Beam	None	Q345	Typical	2.25	.026	6.75	.101
10	Kickers	L2.5x2.5x8	Beam	None	Q345	Typical	2.26	1.22	1.22	.188

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5						Yes				None
6	M6						Yes				None
7	M7						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M14						Yes	Default			None
15	M15						Yes	Default			None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	Default			None
21	M21						Yes	** NA **			None
22	M22						Yes	** NA **			None
23	M23						Yes				None
24	M24						Yes	Default			None
25	M25						Yes	** NA **			None
26	M26						Yes	** NA **			None
27	M27						Yes				None
28	M28						Yes	Default			None
29	M29						Yes	** NA **			None
30	M30						Yes				None
31	M31						Yes				None
32	M32						Yes				None
33	M33						Yes	Default			None
34	M34						Yes				None
35	M35						Yes				None
36	M36						Yes	Default			None
37	M37						Yes	Default			None
38	M38						Yes	Default			None
39	M39				2		Yes	Default			None
40	M40						Yes	** NA **			None
41	M41						Yes	** NA **			None
42	M42						Yes	** NA **			None
43	M43			2			Yes	Default			None
44	M44						Yes	** NA **			None
45	M45				2		Yes				None
46	M46						Yes	Default			None
47	M47				2		Yes	Default			None
48	M48						Yes	** NA **			None
49	M49			2			Yes	Default			None
50	M50						Yes	** NA **			None
51	M51						Yes	Default			None
52	M52			2			Yes	Default			None
53	M53						Yes	** NA **			None
54	M54				2		Yes				None
55	M55						Yes				None
56	M56				2		Yes	Default			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
57	M57						Yes	** NA **			None
58	M58			2			Yes	Default			None
59	M59						Yes				None
60	M60			2			Yes	Default			None
61	M61						Yes				None
62	M62						Yes	Default			None
63	M63						Yes				None
64	M64						Yes	** NA **			None
65	M65						Yes	** NA **			None
66	M66						Yes	** NA **			None
67	M67						Yes				None
68	M68						Yes	** NA **			None
69	M69						Yes	Default			None
70	M70						Yes				None
71	M71						Yes	** NA **			None
72	M72						Yes	** NA **			None
73	M73						Yes				None
74	M74						Yes	** NA **			None
75	M75				2		Yes				None
76	M76						Yes				None
77	M77						Yes				None
78	M78						Yes	** NA **			None
79	M79			2			Yes	Default			None
80	M80						Yes				None
81	M81						Yes				None
82	M82						Yes				None
83	M83						Yes	** NA **			None
84	M84						Yes	** NA **			None
85	M85						Yes	** NA **			None
86	M86						Yes	** NA **			None
87	M87						Yes	** NA **			None
88	M88						Yes	** NA **			None
89	M89						Yes				None
90	M90						Yes				None
91	M91						Yes	** NA **			None
92	M92						Yes	** NA **			None
93	M93						Yes	** NA **			None
94	M94						Yes	** NA **			None
95	M95						Yes	** NA **			None
96	M96						Yes	** NA **			None
97	MP1						Yes	** NA **			None
98	MP2						Yes	** NA **			None
99	MP3						Yes	** NA **			None
100	MP4						Yes	** NA **			None
101	MP5						Yes	** NA **			None
102	MP6						Yes	** NA **			None
103	MP7						Yes	** NA **			None
104	MP8						Yes	** NA **			None
105	MP9						Yes	** NA **			None
106	MP10						Yes	** NA **			None
107	MP11						Yes	** NA **			None
108	MP12						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[i...	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp bot[...	L-torque[i...	Kyy	Kzz	Cb	Functi...
1	M1	Standoffs	62.255	43.75	43.75	43.75	43.75	43.75				Lateral
2	M2	Standoffs	62.255	43.75	43.75	43.75	43.75	43.75				Lateral
3	M3	Standoffs	62.255	43.75	43.75	43.75	43.75	43.75				Lateral
4	M4	Horizontals	150	50.52	50.52	50.52	50.52	50.52				Lateral
5	M5	Horizontals	150	50.52	50.52	50.52	50.52	50.52				Lateral
6	M6	Horizontals	150	50.52	50.52	50.52	50.52	50.52				Lateral
7	M14	Corner Plate	2.704			Lbyy						Lateral
8	M15	Connection Plates	2.704									Lateral
9	M16	Handrail Horizon...	150	50.52	50.52	50.52	50.52	50.52				Lateral
10	M17	Handrail Horizon...	150	50.52	50.52	50.52	50.52	50.52				Lateral
11	M20	Connection Plates	2.704									Lateral
12	M23	Connection Plates	2.75			Lbyy						Lateral
13	M24	Connection Plates	2.704									Lateral
14	M27	Connection Plates	2.75			Lbyy						Lateral
15	M28	Connection Plates	2.704									Lateral
16	M30	Handrail Horizon...	150	50.52	50.52	50.52	50.52	50.52				Lateral
17	M31	Connection Plates	2.75			Lbyy						Lateral
18	M32	Angle Handrail ...	15.731			Lbyy						Lateral
19	M33	Connection Plates	2.704									Lateral
20	M34	Angle Handrail ...	15.731			Lbyy						Lateral
21	M35	Angle Handrail ...	15.731			Lbyy						Lateral
22	M36	Connection Plates	2.75			Lbyy						Lateral
23	M37	Corner Plate	2.704			Lbyy						Lateral
24	M38	Corner Plate	2.704			Lbyy						Lateral
25	M39	Standoffs	30.301			Lbyy						Lateral
26	M43	Standoffs	30.301			Lbyy						Lateral
27	M45	Corner Plate	6.338			Lbyy						Lateral
28	M46	Corner Plate	2.704			Lbyy						Lateral
29	M47	Standoffs	30.301			Lbyy						Lateral
30	M49	Corner Plate	6.338			Lbyy						Lateral
31	M51	Connection Plates	2.704									Lateral
32	M52	Standoffs	30.301			Lbyy						Lateral
33	M54	Corner Plate	6.338			Lbyy						Lateral
34	M55	Kickers	48.765			Lbyy						Lateral
35	M56	Standoffs	30.3			Lbyy						Lateral
36	M58	Corner Plate	6.338			Lbyy						Lateral
37	M59	Connection Plates	2.75			Lbyy						Lateral
38	M60	Standoffs	30.301			Lbyy						Lateral
39	M61	Kickers	48.765			Lbyy						Lateral
40	M62	Corner Plate	2.704			Lbyy						Lateral
41	M63	Platform Angle	51.353			Lbyy						Lateral
42	M67	Platform Angle	51.353			Lbyy						Lateral
43	M69	Corner Plate	2.704			Lbyy						Lateral
44	M70	Platform Angle	51.353			Lbyy						Lateral
45	M73	Platform Angle	51.353			Lbyy						Lateral
46	M75	Corner Plate	6.338			Lbyy						Lateral
47	M76	Platform Angle	51.353			Lbyy						Lateral
48	M77	Kickers	48.765			Lbyy						Lateral
49	M79	Corner Plate	6.338			Lbyy						Lateral
50	M80	Connection Plates	2.75			Lbyy						Lateral
51	M81	Platform Angle	51.353			Lbyy						Lateral
52	M82	Kickers	48.765			Lbyy						Lateral
53	M89	Kickers	48.765			Lbyy						Lateral
54	M90	Kickers	48.765			Lbyy						Lateral
55	MP1	Mount Pipe	96			Lbyy						Lateral
56	MP2	Mount Pipe	96			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[i...	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp bot[...	L-torque[i...	Kyy	Kzz	Cb	Functi...
57	MP3	Mount Pipe	96			Lbyy						Lateral
58	MP4	Mount Pipe	96			Lbyy						Lateral
59	MP5	Mount Pipe	96			Lbyy						Lateral
60	MP6	Mount Pipe	96			Lbyy						Lateral
61	MP7	Mount Pipe	96			Lbyy						Lateral
62	MP8	Mount Pipe	96			Lbyy						Lateral
63	MP9	Mount Pipe	96			Lbyy						Lateral
64	MP10	Mount Pipe	96			Lbyy						Lateral
65	MP11	Mount Pipe	96			Lbyy						Lateral
66	MP12	Mount Pipe	96			Lbyy						Lateral

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	Y	-26.5	12
2	MP1	Y	-26.5	84
3	MP3	Y	-47.85	0
4	MP3	Y	-47.85	96
5	MP4	Y	-47.85	0
6	MP4	Y	-47.85	96
7	MP3	Y	-59.9	78
8	MP4	Y	-71	48
9	MP4	Y	-72	48
10	MP1	Y	-22	78
11	MP5	Y	-26.5	12
12	MP5	Y	-26.5	84
13	MP7	Y	-47.85	0
14	MP7	Y	-47.85	96
15	MP8	Y	-47.85	0
16	MP8	Y	-47.85	96
17	MP7	Y	-59.9	78
18	MP8	Y	-71	48
19	MP8	Y	-72	48
20	MP5	Y	-22	78
21	MP7	Y	-26.2	78
22	MP9	Y	-26.5	12
23	MP9	Y	-26.5	84
24	MP11	Y	-47.85	0
25	MP11	Y	-47.85	96
26	MP12	Y	-47.85	0
27	MP12	Y	-47.85	96
28	MP11	Y	-59.9	78
29	MP12	Y	-71	48
30	MP12	Y	-72	48
31	MP9	Y	-22	78
32	MP11	Y	-32.8	78

Member Point Loads (BLC 2 : Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	0	12
2	MP1	Z	-174.97	12
3	MP1	X	0	84
4	MP1	Z	-174.97	84
5	MP3	X	0	0
6	MP3	Z	-412.04	0
7	MP3	X	0	96

Member Point Loads (BLC 2 : Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
8	MP3	Z	-412.04	96
9	MP4	X	0	0
10	MP4	Z	-412.04	0
11	MP4	X	0	96
12	MP4	Z	-412.04	96
13	MP3	X	0	78
14	MP3	Z	-84.96	78
15	MP4	X	0	48
16	MP4	Z	-90.73	48
17	MP4	X	0	48
18	MP4	Z	-75.58	48
19	MP1	X	0	78
20	MP1	Z	-36.56	78
21	MP5	X	0	12
22	MP5	Z	-128.03	12
23	MP5	X	0	84
24	MP5	Z	-128.03	84
25	MP7	X	0	0
26	MP7	Z	-213.56	0
27	MP7	X	0	96
28	MP7	Z	-213.56	96
29	MP8	X	0	0
30	MP8	Z	-213.56	0
31	MP8	X	0	96
32	MP8	Z	-213.56	96
33	MP7	X	0	78
34	MP7	Z	-53.05	78
35	MP8	X	0	48
36	MP8	Z	-67.95	48
37	MP8	X	0	48
38	MP8	Z	-63.95	48
39	MP5	X	0	78
40	MP5	Z	-30.42	78
41	MP7	X	0	78
42	MP7	Z	-209.52	78
43	MP9	X	0	12
44	MP9	Z	-143.78	12
45	MP9	X	0	84
46	MP9	Z	-143.78	84
47	MP11	X	0	0
48	MP11	Z	-280.14	0
49	MP11	X	0	96
50	MP11	Z	-280.14	96
51	MP12	X	0	0
52	MP12	Z	-280.14	0
53	MP12	X	0	96
54	MP12	Z	-280.14	96
55	MP11	X	0	78
56	MP11	Z	-63.75	78
57	MP12	X	0	48
58	MP12	Z	-75.59	48
59	MP12	X	0	48
60	MP12	Z	-67.85	48
61	MP9	X	0	78
62	MP9	Z	-32.48	78
63	MP11	X	0	78
64	MP11	Z	-133.76	78

Member Point Loads (BLC 3 : Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-80.84	12
2	MP1	Z	-140.02	12
3	MP1	X	-80.84	84
4	MP1	Z	-140.02	84
5	MP3	X	-177.92	0
6	MP3	Z	-308.17	0
7	MP3	X	-177.92	96
8	MP3	Z	-308.17	96
9	MP4	X	-177.92	0
10	MP4	Z	-308.17	0
11	MP4	X	-177.92	96
12	MP4	Z	-308.17	96
13	MP3	X	-37.96	78
14	MP3	Z	-65.75	78
15	MP4	X	-42.14	48
16	MP4	Z	-72.99	48
17	MP4	X	-36.14	48
18	MP4	Z	-62.6	48
19	MP1	X	-17.41	78
20	MP1	Z	-30.16	78
21	MP5	X	-76.5	12
22	MP5	Z	-132.51	12
23	MP5	X	-76.5	84
24	MP5	Z	-132.51	84
25	MP7	X	-159.59	0
26	MP7	Z	-276.41	0
27	MP7	X	-159.59	96
28	MP7	Z	-276.41	96
29	MP8	X	-159.59	0
30	MP8	Z	-276.41	0
31	MP8	X	-159.59	96
32	MP8	Z	-276.41	96
33	MP7	X	-35.01	78
34	MP7	Z	-60.65	78
35	MP8	X	-40.03	48
36	MP8	Z	-69.34	48
37	MP8	X	-35.07	48
38	MP8	Z	-60.74	48
39	MP5	X	-16.84	78
40	MP5	Z	-29.17	78
41	MP7	X	-82.58	78
42	MP7	Z	-143.03	78
43	MP9	X	-61.71	12
44	MP9	Z	-106.88	12
45	MP9	X	-61.71	84
46	MP9	Z	-106.88	84
47	MP11	X	-97.02	0
48	MP11	Z	-168.05	0
49	MP11	X	-97.02	96
50	MP11	Z	-168.05	96
51	MP12	X	-97.02	0
52	MP12	Z	-168.05	0
53	MP12	X	-97.02	96
54	MP12	Z	-168.05	96
55	MP11	X	-24.96	78
56	MP11	Z	-43.22	78
57	MP12	X	-32.86	48

Member Point Loads (BLC 3 : Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
58	MP12	Z	-56.91	48
59	MP12	X	-31.4	48
60	MP12	Z	-54.39	48
61	MP9	X	-14.91	78
62	MP9	Z	-25.82	78
63	MP11	X	-66.88	78
64	MP11	Z	-115.84	78

Member Point Loads (BLC 4 : Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-117	12
2	MP1	Z	-67.55	12
3	MP1	X	-117	84
4	MP1	Z	-67.55	84
5	MP3	X	-210.84	0
6	MP3	Z	-121.73	0
7	MP3	X	-210.84	96
8	MP3	Z	-121.73	96
9	MP4	X	-210.84	0
10	MP4	Z	-121.73	0
11	MP4	X	-210.84	96
12	MP4	Z	-121.73	96
13	MP3	X	-50.11	78
14	MP3	Z	-28.93	78
15	MP4	X	-61.82	48
16	MP4	Z	-35.69	48
17	MP4	X	-56.9	48
18	MP4	Z	-32.85	48
19	MP1	X	-27.15	78
20	MP1	Z	-15.67	78
21	MP5	X	-150.14	12
22	MP5	Z	-86.68	12
23	MP5	X	-150.14	84
24	MP5	Z	-86.68	84
25	MP7	X	-350.97	0
26	MP7	Z	-202.63	0
27	MP7	X	-350.97	96
28	MP7	Z	-202.63	96
29	MP8	X	-350.97	0
30	MP8	Z	-202.63	0
31	MP8	X	-350.97	96
32	MP8	Z	-202.63	96
33	MP7	X	-72.64	78
34	MP7	Z	-41.94	78
35	MP8	X	-77.9	48
36	MP8	Z	-44.97	48
37	MP8	X	-65.11	48
38	MP8	Z	-37.59	48
39	MP5	X	-31.48	78
40	MP5	Z	-18.17	78
41	MP7	X	-111.71	78
42	MP7	Z	-64.5	78
43	MP9	X	-110.88	12
44	MP9	Z	-64.02	12
45	MP9	X	-110.88	84
46	MP9	Z	-64.02	84

Member Point Loads (BLC 4 : Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
47	MP11	X	-184.95	0
48	MP11	Z	-106.78	0
49	MP11	X	-184.95	96
50	MP11	Z	-106.78	96
51	MP12	X	-184.95	0
52	MP12	Z	-106.78	0
53	MP12	X	-184.95	96
54	MP12	Z	-106.78	96
55	MP11	X	-45.94	78
56	MP11	Z	-26.52	78
57	MP12	X	-58.85	48
58	MP12	Z	-33.97	48
59	MP12	X	-55.38	48
60	MP12	Z	-31.97	48
61	MP9	X	-26.35	78
62	MP9	Z	-15.21	78
63	MP11	X	-115.84	78
64	MP11	Z	-66.88	78

Member Point Loads (BLC 5 : Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-121.81	12
2	MP1	Z	0	12
3	MP1	X	-121.81	84
4	MP1	Z	0	84
5	MP3	X	-187.27	0
6	MP3	Z	0	0
7	MP3	X	-187.27	96
8	MP3	Z	0	96
9	MP4	X	-187.27	0
10	MP4	Z	0	0
11	MP4	X	-187.27	96
12	MP4	Z	0	96
13	MP3	X	-48.82	78
14	MP3	Z	0	78
15	MP4	X	-64.93	48
16	MP4	Z	0	48
17	MP4	X	-62.41	48
18	MP4	Z	0	48
19	MP1	X	-29.61	78
20	MP1	Z	0	78
21	MP5	X	-168.75	12
22	MP5	Z	0	12
23	MP5	X	-168.75	84
24	MP5	Z	0	84
25	MP7	X	-385.75	0
26	MP7	Z	0	0
27	MP7	X	-385.75	96
28	MP7	Z	0	96
29	MP8	X	-385.75	0
30	MP8	Z	0	0
31	MP8	X	-385.75	96
32	MP8	Z	0	96
33	MP7	X	-80.73	78
34	MP7	Z	0	78
35	MP8	X	-87.71	48

Member Point Loads (BLC 5 : Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
36	MP8	Z	0	48
37	MP8	X	-74.04	48
38	MP8	Z	0	48
39	MP5	X	-35.75	78
40	MP5	Z	0	78
41	MP7	X	-137.19	78
42	MP7	Z	0	78
43	MP9	X	-153.01	12
44	MP9	Z	0	12
45	MP9	X	-153.01	84
46	MP9	Z	0	84
47	MP11	X	-319.17	0
48	MP11	Z	0	0
49	MP11	X	-319.17	96
50	MP11	Z	0	96
51	MP12	X	-319.17	0
52	MP12	Z	0	0
53	MP12	X	-319.17	96
54	MP12	Z	0	96
55	MP11	X	-70.03	78
56	MP11	Z	0	78
57	MP12	X	-80.07	48
58	MP12	Z	0	48
59	MP12	X	-70.14	48
60	MP12	Z	0	48
61	MP9	X	-33.69	78
62	MP9	Z	0	78
63	MP11	X	-133.76	78
64	MP11	Z	0	78

Member Point Loads (BLC 6 : Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-117	12
2	MP1	Z	67.55	12
3	MP1	X	-117	84
4	MP1	Z	67.55	84
5	MP3	X	-210.84	0
6	MP3	Z	121.73	0
7	MP3	X	-210.84	96
8	MP3	Z	121.73	96
9	MP4	X	-210.84	0
10	MP4	Z	121.73	0
11	MP4	X	-210.84	96
12	MP4	Z	121.73	96
13	MP3	X	-50.11	78
14	MP3	Z	28.93	78
15	MP4	X	-61.82	48
16	MP4	Z	35.69	48
17	MP4	X	-56.9	48
18	MP4	Z	32.85	48
19	MP1	X	-27.15	78
20	MP1	Z	15.67	78
21	MP5	X	-124.51	12
22	MP5	Z	71.89	12
23	MP5	X	-124.51	84
24	MP5	Z	71.89	84

Member Point Loads (BLC 6 : Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
25	MP7	X	-242.61	0
26	MP7	Z	140.07	0
27	MP7	X	-242.61	96
28	MP7	Z	140.07	96
29	MP8	X	-242.61	0
30	MP8	Z	140.07	0
31	MP8	X	-242.61	96
32	MP8	Z	140.07	96
33	MP7	X	-55.21	78
34	MP7	Z	31.88	78
35	MP8	X	-65.46	48
36	MP8	Z	37.8	48
37	MP8	X	-58.76	48
38	MP8	Z	33.93	48
39	MP5	X	-28.13	78
40	MP5	Z	16.24	78
41	MP7	X	-157.23	78
42	MP7	Z	90.78	78
43	MP9	X	-150.14	12
44	MP9	Z	86.68	12
45	MP9	X	-150.14	84
46	MP9	Z	86.68	84
47	MP11	X	-350.97	0
48	MP11	Z	202.63	0
49	MP11	X	-350.97	96
50	MP11	Z	202.63	96
51	MP12	X	-350.97	0
52	MP12	Z	202.63	0
53	MP12	X	-350.97	96
54	MP12	Z	202.63	96
55	MP11	X	-72.64	78
56	MP11	Z	41.94	78
57	MP12	X	-77.9	48
58	MP12	Z	44.97	48
59	MP12	X	-65.11	48
60	MP12	Z	37.59	48
61	MP9	X	-31.48	78
62	MP9	Z	18.17	78
63	MP11	X	-115.84	78
64	MP11	Z	66.88	78

Member Point Loads (BLC 7 : Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-80.84	12
2	MP1	Z	140.02	12
3	MP1	X	-80.84	84
4	MP1	Z	140.02	84
5	MP3	X	-177.92	0
6	MP3	Z	308.17	0
7	MP3	X	-177.92	96
8	MP3	Z	308.17	96
9	MP4	X	-177.92	0
10	MP4	Z	308.17	0
11	MP4	X	-177.92	96
12	MP4	Z	308.17	96
13	MP3	X	-37.96	78

Member Point Loads (BLC 7 : Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
14	MP3	Z	65.75	78
15	MP4	X	-42.14	48
16	MP4	Z	72.99	48
17	MP4	X	-36.14	48
18	MP4	Z	62.6	48
19	MP1	X	-17.41	78
20	MP1	Z	30.16	78
21	MP5	X	-61.71	12
22	MP5	Z	106.88	12
23	MP5	X	-61.71	84
24	MP5	Z	106.88	84
25	MP7	X	-97.02	0
26	MP7	Z	168.05	0
27	MP7	X	-97.02	96
28	MP7	Z	168.05	96
29	MP8	X	-97.02	0
30	MP8	Z	168.05	0
31	MP8	X	-97.02	96
32	MP8	Z	168.05	96
33	MP7	X	-24.96	78
34	MP7	Z	43.22	78
35	MP8	X	-32.86	48
36	MP8	Z	56.91	48
37	MP8	X	-31.4	48
38	MP8	Z	54.39	48
39	MP5	X	-14.91	78
40	MP5	Z	25.82	78
41	MP7	X	-108.86	78
42	MP7	Z	188.55	78
43	MP9	X	-84.38	12
44	MP9	Z	146.14	12
45	MP9	X	-84.38	84
46	MP9	Z	146.14	84
47	MP11	X	-192.87	0
48	MP11	Z	334.07	0
49	MP11	X	-192.87	96
50	MP11	Z	334.07	96
51	MP12	X	-192.87	0
52	MP12	Z	334.07	0
53	MP12	X	-192.87	96
54	MP12	Z	334.07	96
55	MP11	X	-40.37	78
56	MP11	Z	69.92	78
57	MP12	X	-43.85	48
58	MP12	Z	75.96	48
59	MP12	X	-37.02	48
60	MP12	Z	64.12	48
61	MP9	X	-17.87	78
62	MP9	Z	30.96	78
63	MP11	X	-66.88	78
64	MP11	Z	115.84	78

Member Point Loads (BLC 8 : Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	0	12
2	MP1	Z	174.97	12

Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
3	MP1	X	0	84
4	MP1	Z	174.97	84
5	MP3	X	0	0
6	MP3	Z	412.04	0
7	MP3	X	0	96
8	MP3	Z	412.04	96
9	MP4	X	0	0
10	MP4	Z	412.04	0
11	MP4	X	0	96
12	MP4	Z	412.04	96
13	MP3	X	0	78
14	MP3	Z	84.96	78
15	MP4	X	0	48
16	MP4	Z	90.73	48
17	MP4	X	0	48
18	MP4	Z	75.58	48
19	MP1	X	0	78
20	MP1	Z	36.56	78
21	MP5	X	0	12
22	MP5	Z	128.03	12
23	MP5	X	0	84
24	MP5	Z	128.03	84
25	MP7	X	0	0
26	MP7	Z	213.56	0
27	MP7	X	0	96
28	MP7	Z	213.56	96
29	MP8	X	0	0
30	MP8	Z	213.56	0
31	MP8	X	0	96
32	MP8	Z	213.56	96
33	MP7	X	0	78
34	MP7	Z	53.05	78
35	MP8	X	0	48
36	MP8	Z	67.95	48
37	MP8	X	0	48
38	MP8	Z	63.95	48
39	MP5	X	0	78
40	MP5	Z	30.42	78
41	MP7	X	0	78
42	MP7	Z	209.52	78
43	MP9	X	0	12
44	MP9	Z	143.78	12
45	MP9	X	0	84
46	MP9	Z	143.78	84
47	MP11	X	0	0
48	MP11	Z	280.14	0
49	MP11	X	0	96
50	MP11	Z	280.14	96
51	MP12	X	0	0
52	MP12	Z	280.14	0
53	MP12	X	0	96
54	MP12	Z	280.14	96
55	MP11	X	0	78
56	MP11	Z	63.75	78
57	MP12	X	0	48
58	MP12	Z	75.59	48
59	MP12	X	0	48

Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
60	MP12	Z	67.85	48
61	MP9	X	0	78
62	MP9	Z	32.48	78
63	MP11	X	0	78
64	MP11	Z	133.76	78

Member Point Loads (BLC 9 : Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	80.84	12
2	MP1	Z	140.02	12
3	MP1	X	80.84	84
4	MP1	Z	140.02	84
5	MP3	X	177.92	0
6	MP3	Z	308.17	0
7	MP3	X	177.92	96
8	MP3	Z	308.17	96
9	MP4	X	177.92	0
10	MP4	Z	308.17	0
11	MP4	X	177.92	96
12	MP4	Z	308.17	96
13	MP3	X	37.96	78
14	MP3	Z	65.75	78
15	MP4	X	42.14	48
16	MP4	Z	72.99	48
17	MP4	X	36.14	48
18	MP4	Z	62.6	48
19	MP1	X	17.41	78
20	MP1	Z	30.16	78
21	MP5	X	76.5	12
22	MP5	Z	132.51	12
23	MP5	X	76.5	84
24	MP5	Z	132.51	84
25	MP7	X	159.59	0
26	MP7	Z	276.41	0
27	MP7	X	159.59	96
28	MP7	Z	276.41	96
29	MP8	X	159.59	0
30	MP8	Z	276.41	0
31	MP8	X	159.59	96
32	MP8	Z	276.41	96
33	MP7	X	35.01	78
34	MP7	Z	60.65	78
35	MP8	X	40.03	48
36	MP8	Z	69.34	48
37	MP8	X	35.07	48
38	MP8	Z	60.74	48
39	MP5	X	16.84	78
40	MP5	Z	29.17	78
41	MP7	X	82.58	78
42	MP7	Z	143.03	78
43	MP9	X	61.71	12
44	MP9	Z	106.88	12
45	MP9	X	61.71	84
46	MP9	Z	106.88	84
47	MP11	X	97.02	0
48	MP11	Z	168.05	0

Member Point Loads (BLC 9 : Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
49	MP11	X	97.02	96
50	MP11	Z	168.05	96
51	MP12	X	97.02	0
52	MP12	Z	168.05	0
53	MP12	X	97.02	96
54	MP12	Z	168.05	96
55	MP11	X	24.96	78
56	MP11	Z	43.22	78
57	MP12	X	32.86	48
58	MP12	Z	56.91	48
59	MP12	X	31.4	48
60	MP12	Z	54.39	48
61	MP9	X	14.91	78
62	MP9	Z	25.82	78
63	MP11	X	66.88	78
64	MP11	Z	115.84	78

Member Point Loads (BLC 10 : Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	117	12
2	MP1	Z	67.55	12
3	MP1	X	117	84
4	MP1	Z	67.55	84
5	MP3	X	210.84	0
6	MP3	Z	121.73	0
7	MP3	X	210.84	96
8	MP3	Z	121.73	96
9	MP4	X	210.84	0
10	MP4	Z	121.73	0
11	MP4	X	210.84	96
12	MP4	Z	121.73	96
13	MP3	X	50.11	78
14	MP3	Z	28.93	78
15	MP4	X	61.82	48
16	MP4	Z	35.69	48
17	MP4	X	56.9	48
18	MP4	Z	32.85	48
19	MP1	X	27.15	78
20	MP1	Z	15.67	78
21	MP5	X	150.14	12
22	MP5	Z	86.68	12
23	MP5	X	150.14	84
24	MP5	Z	86.68	84
25	MP7	X	350.97	0
26	MP7	Z	202.63	0
27	MP7	X	350.97	96
28	MP7	Z	202.63	96
29	MP8	X	350.97	0
30	MP8	Z	202.63	0
31	MP8	X	350.97	96
32	MP8	Z	202.63	96
33	MP7	X	72.64	78
34	MP7	Z	41.94	78
35	MP8	X	77.9	48
36	MP8	Z	44.97	48
37	MP8	X	65.11	48

Member Point Loads (BLC 10 : Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
38	MP8	Z	37.59	48
39	MP5	X	31.48	78
40	MP5	Z	18.17	78
41	MP7	X	111.71	78
42	MP7	Z	64.5	78
43	MP9	X	110.88	12
44	MP9	Z	64.02	12
45	MP9	X	110.88	84
46	MP9	Z	64.02	84
47	MP11	X	184.95	0
48	MP11	Z	106.78	0
49	MP11	X	184.95	96
50	MP11	Z	106.78	96
51	MP12	X	184.95	0
52	MP12	Z	106.78	0
53	MP12	X	184.95	96
54	MP12	Z	106.78	96
55	MP11	X	45.94	78
56	MP11	Z	26.52	78
57	MP12	X	58.85	48
58	MP12	Z	33.97	48
59	MP12	X	55.38	48
60	MP12	Z	31.97	48
61	MP9	X	26.35	78
62	MP9	Z	15.21	78
63	MP11	X	115.84	78
64	MP11	Z	66.88	78

Member Point Loads (BLC 11 : Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	121.81	12
2	MP1	Z	0	12
3	MP1	X	121.81	84
4	MP1	Z	0	84
5	MP3	X	187.27	0
6	MP3	Z	0	0
7	MP3	X	187.27	96
8	MP3	Z	0	96
9	MP4	X	187.27	0
10	MP4	Z	0	0
11	MP4	X	187.27	96
12	MP4	Z	0	96
13	MP3	X	48.82	78
14	MP3	Z	0	78
15	MP4	X	64.93	48
16	MP4	Z	0	48
17	MP4	X	62.41	48
18	MP4	Z	0	48
19	MP1	X	29.61	78
20	MP1	Z	0	78
21	MP5	X	168.75	12
22	MP5	Z	0	12
23	MP5	X	168.75	84
24	MP5	Z	0	84
25	MP7	X	385.75	0
26	MP7	Z	0	0

Member Point Loads (BLC 11 : Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
27	MP7	X	385.75	96
28	MP7	Z	0	96
29	MP8	X	385.75	0
30	MP8	Z	0	0
31	MP8	X	385.75	96
32	MP8	Z	0	96
33	MP7	X	80.73	78
34	MP7	Z	0	78
35	MP8	X	87.71	48
36	MP8	Z	0	48
37	MP8	X	74.04	48
38	MP8	Z	0	48
39	MP5	X	35.75	78
40	MP5	Z	0	78
41	MP7	X	137.19	78
42	MP7	Z	0	78
43	MP9	X	153.01	12
44	MP9	Z	0	12
45	MP9	X	153.01	84
46	MP9	Z	0	84
47	MP11	X	319.17	0
48	MP11	Z	0	0
49	MP11	X	319.17	96
50	MP11	Z	0	96
51	MP12	X	319.17	0
52	MP12	Z	0	0
53	MP12	X	319.17	96
54	MP12	Z	0	96
55	MP11	X	70.03	78
56	MP11	Z	0	78
57	MP12	X	80.07	48
58	MP12	Z	0	48
59	MP12	X	70.14	48
60	MP12	Z	0	48
61	MP9	X	33.69	78
62	MP9	Z	0	78
63	MP11	X	133.76	78
64	MP11	Z	0	78

Member Point Loads (BLC 12 : Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	117	12
2	MP1	Z	-67.55	12
3	MP1	X	117	84
4	MP1	Z	-67.55	84
5	MP3	X	210.84	0
6	MP3	Z	-121.73	0
7	MP3	X	210.84	96
8	MP3	Z	-121.73	96
9	MP4	X	210.84	0
10	MP4	Z	-121.73	0
11	MP4	X	210.84	96
12	MP4	Z	-121.73	96
13	MP3	X	50.11	78
14	MP3	Z	-28.93	78
15	MP4	X	61.82	48

Member Point Loads (BLC 12 : Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
16	MP4	Z	-35.69	48
17	MP4	X	56.9	48
18	MP4	Z	-32.85	48
19	MP1	X	27.15	78
20	MP1	Z	-15.67	78
21	MP5	X	124.51	12
22	MP5	Z	-71.89	12
23	MP5	X	124.51	84
24	MP5	Z	-71.89	84
25	MP7	X	242.61	0
26	MP7	Z	-140.07	0
27	MP7	X	242.61	96
28	MP7	Z	-140.07	96
29	MP8	X	242.61	0
30	MP8	Z	-140.07	0
31	MP8	X	242.61	96
32	MP8	Z	-140.07	96
33	MP7	X	55.21	78
34	MP7	Z	-31.88	78
35	MP8	X	65.46	48
36	MP8	Z	-37.8	48
37	MP8	X	58.76	48
38	MP8	Z	-33.93	48
39	MP5	X	28.13	78
40	MP5	Z	-16.24	78
41	MP7	X	157.23	78
42	MP7	Z	-90.78	78
43	MP9	X	150.14	12
44	MP9	Z	-86.68	12
45	MP9	X	150.14	84
46	MP9	Z	-86.68	84
47	MP11	X	350.97	0
48	MP11	Z	-202.63	0
49	MP11	X	350.97	96
50	MP11	Z	-202.63	96
51	MP12	X	350.97	0
52	MP12	Z	-202.63	0
53	MP12	X	350.97	96
54	MP12	Z	-202.63	96
55	MP11	X	72.64	78
56	MP11	Z	-41.94	78
57	MP12	X	77.9	48
58	MP12	Z	-44.97	48
59	MP12	X	65.11	48
60	MP12	Z	-37.59	48
61	MP9	X	31.48	78
62	MP9	Z	-18.17	78
63	MP11	X	115.84	78
64	MP11	Z	-66.88	78

Member Point Loads (BLC 13 : Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	80.84	12
2	MP1	Z	-140.02	12
3	MP1	X	80.84	84
4	MP1	Z	-140.02	84

Member Point Loads (BLC 13 : Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
5	MP3	X	177.92	0
6	MP3	Z	-308.17	0
7	MP3	X	177.92	96
8	MP3	Z	-308.17	96
9	MP4	X	177.92	0
10	MP4	Z	-308.17	0
11	MP4	X	177.92	96
12	MP4	Z	-308.17	96
13	MP3	X	37.96	78
14	MP3	Z	-65.75	78
15	MP4	X	42.14	48
16	MP4	Z	-72.99	48
17	MP4	X	36.14	48
18	MP4	Z	-62.6	48
19	MP1	X	17.41	78
20	MP1	Z	-30.16	78
21	MP5	X	61.71	12
22	MP5	Z	-106.88	12
23	MP5	X	61.71	84
24	MP5	Z	-106.88	84
25	MP7	X	97.02	0
26	MP7	Z	-168.05	0
27	MP7	X	97.02	96
28	MP7	Z	-168.05	96
29	MP8	X	97.02	0
30	MP8	Z	-168.05	0
31	MP8	X	97.02	96
32	MP8	Z	-168.05	96
33	MP7	X	24.96	78
34	MP7	Z	-43.22	78
35	MP8	X	32.86	48
36	MP8	Z	-56.91	48
37	MP8	X	31.4	48
38	MP8	Z	-54.39	48
39	MP5	X	14.91	78
40	MP5	Z	-25.82	78
41	MP7	X	108.86	78
42	MP7	Z	-188.55	78
43	MP9	X	84.38	12
44	MP9	Z	-146.14	12
45	MP9	X	84.38	84
46	MP9	Z	-146.14	84
47	MP11	X	192.87	0
48	MP11	Z	-334.07	0
49	MP11	X	192.87	96
50	MP11	Z	-334.07	96
51	MP12	X	192.87	0
52	MP12	Z	-334.07	0
53	MP12	X	192.87	96
54	MP12	Z	-334.07	96
55	MP11	X	40.37	78
56	MP11	Z	-69.92	78
57	MP12	X	43.85	48
58	MP12	Z	-75.96	48
59	MP12	X	37.02	48
60	MP12	Z	-64.12	48
61	MP9	X	17.87	78

Member Point Loads (BLC 13 : Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
62	MP9	Z	-30.96	78
63	MP11	X	66.88	78
64	MP11	Z	-115.84	78

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	Y	-60.971	12
2	MP1	Y	-60.971	84
3	MP3	Y	-122.046	0
4	MP3	Y	-122.046	96
5	MP4	Y	-122.046	0
6	MP4	Y	-122.046	96
7	MP3	Y	-41.824	78
8	MP4	Y	-48.352	48
9	MP4	Y	-46.035	48
10	MP1	Y	-21.131	78
11	MP5	Y	-60.971	12
12	MP5	Y	-60.971	84
13	MP7	Y	-122.046	0
14	MP7	Y	-122.046	96
15	MP8	Y	-122.046	0
16	MP8	Y	-122.046	96
17	MP7	Y	-41.824	78
18	MP8	Y	-48.352	48
19	MP8	Y	-46.035	48
20	MP5	Y	-21.131	78
21	MP7	Y	-94.248	78
22	MP9	Y	-60.971	12
23	MP9	Y	-60.971	84
24	MP11	Y	-122.046	0
25	MP11	Y	-122.046	96
26	MP12	Y	-122.046	0
27	MP12	Y	-122.046	96
28	MP11	Y	-41.824	78
29	MP12	Y	-48.352	48
30	MP12	Y	-46.035	48
31	MP9	Y	-21.131	78
32	MP11	Y	-72.028	78

Member Point Loads (BLC 17 : Ice Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	0	12
2	MP1	Z	-13.92	12
3	MP1	X	0	84
4	MP1	Z	-13.92	84
5	MP3	X	0	0
6	MP3	Z	-26.87	0
7	MP3	X	0	96
8	MP3	Z	-26.87	96
9	MP4	X	0	0
10	MP4	Z	-26.87	0
11	MP4	X	0	96
12	MP4	Z	-26.87	96
13	MP3	X	0	78
14	MP3	Z	-6.86	78
15	MP4	X	0	48

Member Point Loads (BLC 17 : Ice Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
16	MP4	Z	-7.32	48
17	MP4	X	0	48
18	MP4	Z	-6.24	48
19	MP1	X	0	78
20	MP1	Z	-4.53	78
21	MP5	X	0	12
22	MP5	Z	-12.35	12
23	MP5	X	0	84
24	MP5	Z	-12.35	84
25	MP7	X	0	0
26	MP7	Z	-18.45	0
27	MP7	X	0	96
28	MP7	Z	-18.45	96
29	MP8	X	0	0
30	MP8	Z	-18.45	0
31	MP8	X	0	96
32	MP8	Z	-18.45	96
33	MP7	X	0	78
34	MP7	Z	-5.61	78
35	MP8	X	0	48
36	MP8	Z	-6.46	48
37	MP8	X	0	48
38	MP8	Z	-5.8	48
39	MP5	X	0	78
40	MP5	Z	-4.02	78
41	MP7	X	0	78
42	MP7	Z	-14.81	78
43	MP9	X	0	12
44	MP9	Z	-12.88	12
45	MP9	X	0	84
46	MP9	Z	-12.88	84
47	MP11	X	0	0
48	MP11	Z	-21.27	0
49	MP11	X	0	96
50	MP11	Z	-21.27	96
51	MP12	X	0	0
52	MP12	Z	-21.27	0
53	MP12	X	0	96
54	MP12	Z	-21.27	96
55	MP11	X	0	78
56	MP11	Z	-6.03	78
57	MP12	X	0	48
58	MP12	Z	-6.75	48
59	MP12	X	0	48
60	MP12	Z	-5.95	48
61	MP9	X	0	78
62	MP9	Z	-4.19	78
63	MP11	X	0	78
64	MP11	Z	-11.23	78

Member Point Loads (BLC 18 : Ice Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-6.74	12
2	MP1	Z	-11.67	12
3	MP1	X	-6.74	84
4	MP1	Z	-11.67	84

Member Point Loads (BLC 18 : Ice Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
5	MP3	X	-12.24	0
6	MP3	Z	-21.2	0
7	MP3	X	-12.24	96
8	MP3	Z	-21.2	96
9	MP4	X	-12.24	0
10	MP4	Z	-21.2	0
11	MP4	X	-12.24	96
12	MP4	Z	-21.2	96
13	MP3	X	-3.25	78
14	MP3	Z	-5.63	78
15	MP4	X	-3.54	48
16	MP4	Z	-6.13	48
17	MP4	X	-3.06	48
18	MP4	Z	-5.29	48
19	MP1	X	-2.19	78
20	MP1	Z	-3.8	78
21	MP5	X	-6.59	12
22	MP5	Z	-11.42	12
23	MP5	X	-6.59	84
24	MP5	Z	-11.42	84
25	MP7	X	-11.46	0
26	MP7	Z	-19.86	0
27	MP7	X	-11.46	96
28	MP7	Z	-19.86	96
29	MP8	X	-11.46	0
30	MP8	Z	-19.86	0
31	MP8	X	-11.46	96
32	MP8	Z	-19.86	96
33	MP7	X	-3.14	78
34	MP7	Z	-5.43	78
35	MP8	X	-3.46	48
36	MP8	Z	-5.99	48
37	MP8	X	-3.02	48
38	MP8	Z	-5.22	48
39	MP5	X	-2.15	78
40	MP5	Z	-3.72	78
41	MP7	X	-6.4	78
42	MP7	Z	-11.08	78
43	MP9	X	-6.1	12
44	MP9	Z	-10.56	12
45	MP9	X	-6.1	84
46	MP9	Z	-10.56	84
47	MP11	X	-8.81	0
48	MP11	Z	-15.26	0
49	MP11	X	-8.81	96
50	MP11	Z	-15.26	96
51	MP12	X	-8.81	0
52	MP12	Z	-15.26	0
53	MP12	X	-8.81	96
54	MP12	Z	-15.26	96
55	MP11	X	-2.74	78
56	MP11	Z	-4.75	78
57	MP12	X	-3.19	48
58	MP12	Z	-5.52	48
59	MP12	X	-2.88	48
60	MP12	Z	-4.99	48
61	MP9	X	-1.99	78

Member Point Loads (BLC 18 : Ice Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
62	MP9	Z	-3.44	78
63	MP11	X	-5.62	78
64	MP11	Z	-9.73	78

Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-10.9	12
2	MP1	Z	-6.29	12
3	MP1	X	-10.9	84
4	MP1	Z	-6.29	84
5	MP3	X	-17.08	0
6	MP3	Z	-9.86	0
7	MP3	X	-17.08	96
8	MP3	Z	-9.86	96
9	MP4	X	-17.08	0
10	MP4	Z	-9.86	0
11	MP4	X	-17.08	96
12	MP4	Z	-9.86	96
13	MP3	X	-5.02	78
14	MP3	Z	-2.9	78
15	MP4	X	-5.71	48
16	MP4	Z	-3.3	48
17	MP4	X	-5.08	48
18	MP4	Z	-2.93	48
19	MP1	X	-3.55	78
20	MP1	Z	-2.05	78
21	MP5	X	-12.01	12
22	MP5	Z	-6.93	12
23	MP5	X	-12.01	84
24	MP5	Z	-6.93	84
25	MP7	X	-23.02	0
26	MP7	Z	-13.29	0
27	MP7	X	-23.02	96
28	MP7	Z	-13.29	96
29	MP8	X	-23.02	0
30	MP8	Z	-13.29	0
31	MP8	X	-23.02	96
32	MP8	Z	-13.29	96
33	MP7	X	-5.9	78
34	MP7	Z	-3.41	78
35	MP8	X	-6.31	48
36	MP8	Z	-3.64	48
37	MP8	X	-5.39	48
38	MP8	Z	-3.11	48
39	MP5	X	-3.91	78
40	MP5	Z	-2.26	78
41	MP7	X	-9.65	78
42	MP7	Z	-5.57	78
43	MP9	X	-10.7	12
44	MP9	Z	-6.18	12
45	MP9	X	-10.7	84
46	MP9	Z	-6.18	84
47	MP11	X	-15.98	0
48	MP11	Z	-9.23	0
49	MP11	X	-15.98	96
50	MP11	Z	-9.23	96

Member Point Loads (BLC 19 : Ice Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
51	MP12	X	-15.98	0
52	MP12	Z	-9.23	0
53	MP12	X	-15.98	96
54	MP12	Z	-9.23	96
55	MP11	X	-4.86	78
56	MP11	Z	-2.8	78
57	MP12	X	-5.6	48
58	MP12	Z	-3.23	48
59	MP12	X	-5.02	48
60	MP12	Z	-2.9	48
61	MP9	X	-3.48	78
62	MP9	Z	-2.01	78
63	MP11	X	-9.73	78
64	MP11	Z	-5.62	78

Member Point Loads (BLC 20 : Ice Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-12.15	12
2	MP1	Z	0	12
3	MP1	X	-12.15	84
4	MP1	Z	0	84
5	MP3	X	-17.34	0
6	MP3	Z	0	0
7	MP3	X	-17.34	96
8	MP3	Z	0	96
9	MP4	X	-17.34	0
10	MP4	Z	0	0
11	MP4	X	-17.34	96
12	MP4	Z	0	96
13	MP3	X	-5.44	78
14	MP3	Z	0	78
15	MP4	X	-6.35	48
16	MP4	Z	0	48
17	MP4	X	-5.74	48
18	MP4	Z	0	48
19	MP1	X	-3.95	78
20	MP1	Z	0	78
21	MP5	X	-13.71	12
22	MP5	Z	0	12
23	MP5	X	-13.71	84
24	MP5	Z	0	84
25	MP7	X	-25.75	0
26	MP7	Z	0	0
27	MP7	X	-25.75	96
28	MP7	Z	0	96
29	MP8	X	-25.75	0
30	MP8	Z	0	0
31	MP8	X	-25.75	96
32	MP8	Z	0	96
33	MP7	X	-6.69	78
34	MP7	Z	0	78
35	MP8	X	-7.2	48
36	MP8	Z	0	48
37	MP8	X	-6.18	48
38	MP8	Z	0	48
39	MP5	X	-4.46	78

Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
40	MP5	Z	0	78
41	MP7	X	-11.52	78
42	MP7	Z	0	78
43	MP9	X	-13.19	12
44	MP9	Z	0	12
45	MP9	X	-13.19	84
46	MP9	Z	0	84
47	MP11	X	-22.93	0
48	MP11	Z	0	0
49	MP11	X	-22.93	96
50	MP11	Z	0	96
51	MP12	X	-22.93	0
52	MP12	Z	0	0
53	MP12	X	-22.93	96
54	MP12	Z	0	96
55	MP11	X	-6.28	78
56	MP11	Z	0	78
57	MP12	X	-6.92	48
58	MP12	Z	0	48
59	MP12	X	-6.03	48
60	MP12	Z	0	48
61	MP9	X	-4.29	78
62	MP9	Z	0	78
63	MP11	X	-11.23	78
64	MP11	Z	0	78

Member Point Loads (BLC 21 : Ice Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-10.9	12
2	MP1	Z	6.29	12
3	MP1	X	-10.9	84
4	MP1	Z	6.29	84
5	MP3	X	-17.08	0
6	MP3	Z	9.86	0
7	MP3	X	-17.08	96
8	MP3	Z	9.86	96
9	MP4	X	-17.08	0
10	MP4	Z	9.86	0
11	MP4	X	-17.08	96
12	MP4	Z	9.86	96
13	MP3	X	-5.02	78
14	MP3	Z	2.9	78
15	MP4	X	-5.71	48
16	MP4	Z	3.3	48
17	MP4	X	-5.08	48
18	MP4	Z	2.93	48
19	MP1	X	-3.55	78
20	MP1	Z	2.05	78
21	MP5	X	-11.15	12
22	MP5	Z	6.44	12
23	MP5	X	-11.15	84
24	MP5	Z	6.44	84
25	MP7	X	-18.42	0
26	MP7	Z	10.64	0
27	MP7	X	-18.42	96
28	MP7	Z	10.64	96

Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
29	MP8	X	-18.42	0
30	MP8	Z	10.64	0
31	MP8	X	-18.42	96
32	MP8	Z	10.64	96
33	MP7	X	-5.22	78
34	MP7	Z	3.01	78
35	MP8	X	-5.85	48
36	MP8	Z	3.37	48
37	MP8	X	-5.15	48
38	MP8	Z	2.97	48
39	MP5	X	-3.63	78
40	MP5	Z	2.1	78
41	MP7	X	-11.72	78
42	MP7	Z	6.77	78
43	MP9	X	-12.01	12
44	MP9	Z	6.93	12
45	MP9	X	-12.01	84
46	MP9	Z	6.93	84
47	MP11	X	-23.02	0
48	MP11	Z	13.29	0
49	MP11	X	-23.02	96
50	MP11	Z	13.29	96
51	MP12	X	-23.02	0
52	MP12	Z	13.29	0
53	MP12	X	-23.02	96
54	MP12	Z	13.29	96
55	MP11	X	-5.9	78
56	MP11	Z	3.41	78
57	MP12	X	-6.31	48
58	MP12	Z	3.64	48
59	MP12	X	-5.39	48
60	MP12	Z	3.11	48
61	MP9	X	-3.91	78
62	MP9	Z	2.26	78
63	MP11	X	-9.73	78
64	MP11	Z	5.62	78

Member Point Loads (BLC 22 : Ice Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-6.74	12
2	MP1	Z	11.67	12
3	MP1	X	-6.74	84
4	MP1	Z	11.67	84
5	MP3	X	-12.24	0
6	MP3	Z	21.2	0
7	MP3	X	-12.24	96
8	MP3	Z	21.2	96
9	MP4	X	-12.24	0
10	MP4	Z	21.2	0
11	MP4	X	-12.24	96
12	MP4	Z	21.2	96
13	MP3	X	-3.25	78
14	MP3	Z	5.63	78
15	MP4	X	-3.54	48
16	MP4	Z	6.13	48
17	MP4	X	-3.06	48

Member Point Loads (BLC 22 : Ice Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
18	MP4	Z	5.29	48
19	MP1	X	-2.19	78
20	MP1	Z	3.8	78
21	MP5	X	-6.1	12
22	MP5	Z	10.56	12
23	MP5	X	-6.1	84
24	MP5	Z	10.56	84
25	MP7	X	-8.81	0
26	MP7	Z	15.26	0
27	MP7	X	-8.81	96
28	MP7	Z	15.26	96
29	MP8	X	-8.81	0
30	MP8	Z	15.26	0
31	MP8	X	-8.81	96
32	MP8	Z	15.26	96
33	MP7	X	-2.74	78
34	MP7	Z	4.75	78
35	MP8	X	-3.19	48
36	MP8	Z	5.52	48
37	MP8	X	-2.88	48
38	MP8	Z	4.99	48
39	MP5	X	-1.99	78
40	MP5	Z	3.44	78
41	MP7	X	-7.59	78
42	MP7	Z	13.15	78
43	MP9	X	-6.86	12
44	MP9	Z	11.87	12
45	MP9	X	-6.86	84
46	MP9	Z	11.87	84
47	MP11	X	-12.88	0
48	MP11	Z	22.3	0
49	MP11	X	-12.88	96
50	MP11	Z	22.3	96
51	MP12	X	-12.88	0
52	MP12	Z	22.3	0
53	MP12	X	-12.88	96
54	MP12	Z	22.3	96
55	MP11	X	-3.35	78
56	MP11	Z	5.8	78
57	MP12	X	-3.6	48
58	MP12	Z	6.24	48
59	MP12	X	-3.09	48
60	MP12	Z	5.35	48
61	MP9	X	-2.23	78
62	MP9	Z	3.86	78
63	MP11	X	-5.62	78
64	MP11	Z	9.73	78

Member Point Loads (BLC 23 : Ice Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	0	12
2	MP1	Z	13.92	12
3	MP1	X	0	84
4	MP1	Z	13.92	84
5	MP3	X	0	0
6	MP3	Z	26.87	0

Member Point Loads (BLC 23 : Ice Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
7	MP3	X	0	96
8	MP3	Z	26.87	96
9	MP4	X	0	0
10	MP4	Z	26.87	0
11	MP4	X	0	96
12	MP4	Z	26.87	96
13	MP3	X	0	78
14	MP3	Z	6.86	78
15	MP4	X	0	48
16	MP4	Z	7.32	48
17	MP4	X	0	48
18	MP4	Z	6.24	48
19	MP1	X	0	78
20	MP1	Z	4.53	78
21	MP5	X	0	12
22	MP5	Z	12.35	12
23	MP5	X	0	84
24	MP5	Z	12.35	84
25	MP7	X	0	0
26	MP7	Z	18.45	0
27	MP7	X	0	96
28	MP7	Z	18.45	96
29	MP8	X	0	0
30	MP8	Z	18.45	0
31	MP8	X	0	96
32	MP8	Z	18.45	96
33	MP7	X	0	78
34	MP7	Z	5.61	78
35	MP8	X	0	48
36	MP8	Z	6.46	48
37	MP8	X	0	48
38	MP8	Z	5.8	48
39	MP5	X	0	78
40	MP5	Z	4.02	78
41	MP7	X	0	78
42	MP7	Z	14.81	78
43	MP9	X	0	12
44	MP9	Z	12.88	12
45	MP9	X	0	84
46	MP9	Z	12.88	84
47	MP11	X	0	0
48	MP11	Z	21.27	0
49	MP11	X	0	96
50	MP11	Z	21.27	96
51	MP12	X	0	0
52	MP12	Z	21.27	0
53	MP12	X	0	96
54	MP12	Z	21.27	96
55	MP11	X	0	78
56	MP11	Z	6.03	78
57	MP12	X	0	48
58	MP12	Z	6.75	48
59	MP12	X	0	48
60	MP12	Z	5.95	48
61	MP9	X	0	78
62	MP9	Z	4.19	78
63	MP11	X	0	78

Member Point Loads (BLC 23 : Ice Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
64	MP11	Z	11.23	78

Member Point Loads (BLC 24 : Ice Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	6.74	12
2	MP1	Z	11.67	12
3	MP1	X	6.74	84
4	MP1	Z	11.67	84
5	MP3	X	12.24	0
6	MP3	Z	21.2	0
7	MP3	X	12.24	96
8	MP3	Z	21.2	96
9	MP4	X	12.24	0
10	MP4	Z	21.2	0
11	MP4	X	12.24	96
12	MP4	Z	21.2	96
13	MP3	X	3.25	78
14	MP3	Z	5.63	78
15	MP4	X	3.54	48
16	MP4	Z	6.13	48
17	MP4	X	3.06	48
18	MP4	Z	5.29	48
19	MP1	X	2.19	78
20	MP1	Z	3.8	78
21	MP5	X	6.59	12
22	MP5	Z	11.42	12
23	MP5	X	6.59	84
24	MP5	Z	11.42	84
25	MP7	X	11.46	0
26	MP7	Z	19.86	0
27	MP7	X	11.46	96
28	MP7	Z	19.86	96
29	MP8	X	11.46	0
30	MP8	Z	19.86	0
31	MP8	X	11.46	96
32	MP8	Z	19.86	96
33	MP7	X	3.14	78
34	MP7	Z	5.43	78
35	MP8	X	3.46	48
36	MP8	Z	5.99	48
37	MP8	X	3.02	48
38	MP8	Z	5.22	48
39	MP5	X	2.15	78
40	MP5	Z	3.72	78
41	MP7	X	6.4	78
42	MP7	Z	11.08	78
43	MP9	X	6.1	12
44	MP9	Z	10.56	12
45	MP9	X	6.1	84
46	MP9	Z	10.56	84
47	MP11	X	8.81	0
48	MP11	Z	15.26	0
49	MP11	X	8.81	96
50	MP11	Z	15.26	96
51	MP12	X	8.81	0
52	MP12	Z	15.26	0

Member Point Loads (BLC 24 : Ice Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
53	MP12	X	8.81	96
54	MP12	Z	15.26	96
55	MP11	X	2.74	78
56	MP11	Z	4.75	78
57	MP12	X	3.19	48
58	MP12	Z	5.52	48
59	MP12	X	2.88	48
60	MP12	Z	4.99	48
61	MP9	X	1.99	78
62	MP9	Z	3.44	78
63	MP11	X	5.62	78
64	MP11	Z	9.73	78

Member Point Loads (BLC 25 : Ice Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	10.9	12
2	MP1	Z	6.29	12
3	MP1	X	10.9	84
4	MP1	Z	6.29	84
5	MP3	X	17.08	0
6	MP3	Z	9.86	0
7	MP3	X	17.08	96
8	MP3	Z	9.86	96
9	MP4	X	17.08	0
10	MP4	Z	9.86	0
11	MP4	X	17.08	96
12	MP4	Z	9.86	96
13	MP3	X	5.02	78
14	MP3	Z	2.9	78
15	MP4	X	5.71	48
16	MP4	Z	3.3	48
17	MP4	X	5.08	48
18	MP4	Z	2.93	48
19	MP1	X	3.55	78
20	MP1	Z	2.05	78
21	MP5	X	12.01	12
22	MP5	Z	6.93	12
23	MP5	X	12.01	84
24	MP5	Z	6.93	84
25	MP7	X	23.02	0
26	MP7	Z	13.29	0
27	MP7	X	23.02	96
28	MP7	Z	13.29	96
29	MP8	X	23.02	0
30	MP8	Z	13.29	0
31	MP8	X	23.02	96
32	MP8	Z	13.29	96
33	MP7	X	5.9	78
34	MP7	Z	3.41	78
35	MP8	X	6.31	48
36	MP8	Z	3.64	48
37	MP8	X	5.39	48
38	MP8	Z	3.11	48
39	MP5	X	3.91	78
40	MP5	Z	2.26	78
41	MP7	X	9.65	78

Member Point Loads (BLC 25 : Ice Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
42	MP7	Z	5.57	78
43	MP9	X	10.7	12
44	MP9	Z	6.18	12
45	MP9	X	10.7	84
46	MP9	Z	6.18	84
47	MP11	X	15.98	0
48	MP11	Z	9.23	0
49	MP11	X	15.98	96
50	MP11	Z	9.23	96
51	MP12	X	15.98	0
52	MP12	Z	9.23	0
53	MP12	X	15.98	96
54	MP12	Z	9.23	96
55	MP11	X	4.86	78
56	MP11	Z	2.8	78
57	MP12	X	5.6	48
58	MP12	Z	3.23	48
59	MP12	X	5.02	48
60	MP12	Z	2.9	48
61	MP9	X	3.48	78
62	MP9	Z	2.01	78
63	MP11	X	9.73	78
64	MP11	Z	5.62	78

Member Point Loads (BLC 26 : Ice Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	12.15	12
2	MP1	Z	0	12
3	MP1	X	12.15	84
4	MP1	Z	0	84
5	MP3	X	17.34	0
6	MP3	Z	0	0
7	MP3	X	17.34	96
8	MP3	Z	0	96
9	MP4	X	17.34	0
10	MP4	Z	0	0
11	MP4	X	17.34	96
12	MP4	Z	0	96
13	MP3	X	5.44	78
14	MP3	Z	0	78
15	MP4	X	6.35	48
16	MP4	Z	0	48
17	MP4	X	5.74	48
18	MP4	Z	0	48
19	MP1	X	3.95	78
20	MP1	Z	0	78
21	MP5	X	13.71	12
22	MP5	Z	0	12
23	MP5	X	13.71	84
24	MP5	Z	0	84
25	MP7	X	25.75	0
26	MP7	Z	0	0
27	MP7	X	25.75	96
28	MP7	Z	0	96
29	MP8	X	25.75	0
30	MP8	Z	0	0

Member Point Loads (BLC 26 : Ice Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
31	MP8	X	25.75	96
32	MP8	Z	0	96
33	MP7	X	6.69	78
34	MP7	Z	0	78
35	MP8	X	7.2	48
36	MP8	Z	0	48
37	MP8	X	6.18	48
38	MP8	Z	0	48
39	MP5	X	4.46	78
40	MP5	Z	0	78
41	MP7	X	11.52	78
42	MP7	Z	0	78
43	MP9	X	13.19	12
44	MP9	Z	0	12
45	MP9	X	13.19	84
46	MP9	Z	0	84
47	MP11	X	22.93	0
48	MP11	Z	0	0
49	MP11	X	22.93	96
50	MP11	Z	0	96
51	MP12	X	22.93	0
52	MP12	Z	0	0
53	MP12	X	22.93	96
54	MP12	Z	0	96
55	MP11	X	6.28	78
56	MP11	Z	0	78
57	MP12	X	6.92	48
58	MP12	Z	0	48
59	MP12	X	6.03	48
60	MP12	Z	0	48
61	MP9	X	4.29	78
62	MP9	Z	0	78
63	MP11	X	11.23	78
64	MP11	Z	0	78

Member Point Loads (BLC 27 : Ice Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	10.9	12
2	MP1	Z	-6.29	12
3	MP1	X	10.9	84
4	MP1	Z	-6.29	84
5	MP3	X	17.08	0
6	MP3	Z	-9.86	0
7	MP3	X	17.08	96
8	MP3	Z	-9.86	96
9	MP4	X	17.08	0
10	MP4	Z	-9.86	0
11	MP4	X	17.08	96
12	MP4	Z	-9.86	96
13	MP3	X	5.02	78
14	MP3	Z	-2.9	78
15	MP4	X	5.71	48
16	MP4	Z	-3.3	48
17	MP4	X	5.08	48
18	MP4	Z	-2.93	48
19	MP1	X	3.55	78

Member Point Loads (BLC 27 : Ice Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
20	MP1	Z	-2.05	78
21	MP5	X	11.15	12
22	MP5	Z	-6.44	12
23	MP5	X	11.15	84
24	MP5	Z	-6.44	84
25	MP7	X	18.42	0
26	MP7	Z	-10.64	0
27	MP7	X	18.42	96
28	MP7	Z	-10.64	96
29	MP8	X	18.42	0
30	MP8	Z	-10.64	0
31	MP8	X	18.42	96
32	MP8	Z	-10.64	96
33	MP7	X	5.22	78
34	MP7	Z	-3.01	78
35	MP8	X	5.85	48
36	MP8	Z	-3.37	48
37	MP8	X	5.15	48
38	MP8	Z	-2.97	48
39	MP5	X	3.63	78
40	MP5	Z	-2.1	78
41	MP7	X	11.72	78
42	MP7	Z	-6.77	78
43	MP9	X	12.01	12
44	MP9	Z	-6.93	12
45	MP9	X	12.01	84
46	MP9	Z	-6.93	84
47	MP11	X	23.02	0
48	MP11	Z	-13.29	0
49	MP11	X	23.02	96
50	MP11	Z	-13.29	96
51	MP12	X	23.02	0
52	MP12	Z	-13.29	0
53	MP12	X	23.02	96
54	MP12	Z	-13.29	96
55	MP11	X	5.9	78
56	MP11	Z	-3.41	78
57	MP12	X	6.31	48
58	MP12	Z	-3.64	48
59	MP12	X	5.39	48
60	MP12	Z	-3.11	48
61	MP9	X	3.91	78
62	MP9	Z	-2.26	78
63	MP11	X	9.73	78
64	MP11	Z	-5.62	78

Member Point Loads (BLC 28 : Ice Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	6.74	12
2	MP1	Z	-11.67	12
3	MP1	X	6.74	84
4	MP1	Z	-11.67	84
5	MP3	X	12.24	0
6	MP3	Z	-21.2	0
7	MP3	X	12.24	96
8	MP3	Z	-21.2	96

Member Point Loads (BLC 28 : Ice Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP4	X	12.24	0
10	MP4	Z	-21.2	0
11	MP4	X	12.24	96
12	MP4	Z	-21.2	96
13	MP3	X	3.25	78
14	MP3	Z	-5.63	78
15	MP4	X	3.54	48
16	MP4	Z	-6.13	48
17	MP4	X	3.06	48
18	MP4	Z	-5.29	48
19	MP1	X	2.19	78
20	MP1	Z	-3.8	78
21	MP5	X	6.1	12
22	MP5	Z	-10.56	12
23	MP5	X	6.1	84
24	MP5	Z	-10.56	84
25	MP7	X	8.81	0
26	MP7	Z	-15.26	0
27	MP7	X	8.81	96
28	MP7	Z	-15.26	96
29	MP8	X	8.81	0
30	MP8	Z	-15.26	0
31	MP8	X	8.81	96
32	MP8	Z	-15.26	96
33	MP7	X	2.74	78
34	MP7	Z	-4.75	78
35	MP8	X	3.19	48
36	MP8	Z	-5.52	48
37	MP8	X	2.88	48
38	MP8	Z	-4.99	48
39	MP5	X	1.99	78
40	MP5	Z	-3.44	78
41	MP7	X	7.59	78
42	MP7	Z	-13.15	78
43	MP9	X	6.86	12
44	MP9	Z	-11.87	12
45	MP9	X	6.86	84
46	MP9	Z	-11.87	84
47	MP11	X	12.88	0
48	MP11	Z	-22.3	0
49	MP11	X	12.88	96
50	MP11	Z	-22.3	96
51	MP12	X	12.88	0
52	MP12	Z	-22.3	0
53	MP12	X	12.88	96
54	MP12	Z	-22.3	96
55	MP11	X	3.35	78
56	MP11	Z	-5.8	78
57	MP12	X	3.6	48
58	MP12	Z	-6.24	48
59	MP12	X	3.09	48
60	MP12	Z	-5.35	48
61	MP9	X	2.23	78
62	MP9	Z	-3.86	78
63	MP11	X	5.62	78
64	MP11	Z	-9.73	78

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	Z	-2.897	12
2	MP1	Z	-2.897	84
3	MP3	Z	-5.232	0
4	MP3	Z	-5.232	96
5	MP4	Z	-5.232	0
6	MP4	Z	-5.232	96
7	MP3	Z	-6.549	78
8	MP4	Z	-7.763	48
9	MP4	Z	-7.872	48
10	MP1	Z	-2.405	78
11	MP5	Z	-2.897	12
12	MP5	Z	-2.897	84
13	MP7	Z	-5.232	0
14	MP7	Z	-5.232	96
15	MP8	Z	-5.232	0
16	MP8	Z	-5.232	96
17	MP7	Z	-6.549	78
18	MP8	Z	-7.763	48
19	MP8	Z	-7.872	48
20	MP5	Z	-2.405	78
21	MP7	Z	-2.865	78
22	MP9	Z	-2.897	12
23	MP9	Z	-2.897	84
24	MP11	Z	-5.232	0
25	MP11	Z	-5.232	96
26	MP12	Z	-5.232	0
27	MP12	Z	-5.232	96
28	MP11	Z	-6.549	78
29	MP12	Z	-7.763	48
30	MP12	Z	-7.872	48
31	MP9	Z	-2.405	78
32	MP11	Z	-3.586	78

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP1	X	-2.897	12
2	MP1	X	-2.897	84
3	MP3	X	-5.232	0
4	MP3	X	-5.232	96
5	MP4	X	-5.232	0
6	MP4	X	-5.232	96
7	MP3	X	-6.549	78
8	MP4	X	-7.763	48
9	MP4	X	-7.872	48
10	MP1	X	-2.405	78
11	MP5	X	-2.897	12
12	MP5	X	-2.897	84
13	MP7	X	-5.232	0
14	MP7	X	-5.232	96
15	MP8	X	-5.232	0
16	MP8	X	-5.232	96
17	MP7	X	-6.549	78
18	MP8	X	-7.763	48
19	MP8	X	-7.872	48
20	MP5	X	-2.405	78
21	MP7	X	-2.865	78

Member Point Loads (BLC 32 : Seismic Load X) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
22	MP9	X	-2.897	12
23	MP9	X	-2.897	84
24	MP11	X	-5.232	0
25	MP11	X	-5.232	96
26	MP12	X	-5.232	0
27	MP12	X	-5.232	96
28	MP11	X	-6.549	78
29	MP12	X	-7.763	48
30	MP12	X	-7.872	48
31	MP9	X	-2.405	78
32	MP11	X	-3.586	78

Member Distributed Loads (BLC 14 : Distr. Wind Load Z)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SZ	-102.472	-102.472	0	%100
2	M2	SZ	-102.472	-102.472	0	%100
3	M3	SZ	-102.472	-102.472	0	%100
4	M4	SZ	-61.483	-61.483	0	%100
5	M5	SZ	-61.483	-61.483	0	%100
6	M6	SZ	-61.483	-61.483	0	%100
7	M7	SZ	0	0	0	%100
8	M8	SZ	0	0	0	%100
9	M9	SZ	0	0	0	%100
10	M10	SZ	0	0	0	%100
11	M11	SZ	0	0	0	%100
12	M12	SZ	0	0	0	%100
13	M13	SZ	0	0	0	%100
14	M14	SZ	-102.472	-102.472	0	%100
15	M15	SZ	-102.472	-102.472	0	%100
16	M16	SZ	-61.483	-61.483	0	%100
17	M17	SZ	-61.483	-61.483	0	%100
18	M18	SZ	0	0	0	%100
19	M19	SZ	0	0	0	%100
20	M20	SZ	-102.472	-102.472	0	%100
21	M21	SZ	0	0	0	%100
22	M22	SZ	0	0	0	%100
23	M23	SZ	-102.472	-102.472	0	%100
24	M24	SZ	-102.472	-102.472	0	%100
25	M25	SZ	0	0	0	%100
26	M26	SZ	0	0	0	%100
27	M27	SZ	-102.472	-102.472	0	%100
28	M28	SZ	-102.472	-102.472	0	%100
29	M29	SZ	0	0	0	%100
30	M30	SZ	-61.483	-61.483	0	%100
31	M31	SZ	-102.472	-102.472	0	%100
32	M32	SZ	-102.472	-102.472	0	%100
33	M33	SZ	-102.472	-102.472	0	%100
34	M34	SZ	-102.472	-102.472	0	%100
35	M35	SZ	-102.472	-102.472	0	%100
36	M36	SZ	-102.472	-102.472	0	%100
37	M37	SZ	-102.472	-102.472	0	%100
38	M38	SZ	-102.472	-102.472	0	%100
39	M39	SZ	-102.472	-102.472	0	%100
40	M40	SZ	0	0	0	%100
41	M41	SZ	0	0	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
42	M42	SZ	0	0	0	%100
43	M43	SZ	-102.472	-102.472	0	%100
44	M44	SZ	0	0	0	%100
45	M45	SZ	-102.472	-102.472	0	%100
46	M46	SZ	-102.472	-102.472	0	%100
47	M47	SZ	-102.472	-102.472	0	%100
48	M48	SZ	0	0	0	%100
49	M49	SZ	-102.472	-102.472	0	%100
50	M50	SZ	0	0	0	%100
51	M51	SZ	-102.472	-102.472	0	%100
52	M52	SZ	-102.472	-102.472	0	%100
53	M53	SZ	0	0	0	%100
54	M54	SZ	-102.472	-102.472	0	%100
55	M55	SZ	-102.472	-102.472	0	%100
56	M56	SZ	-102.472	-102.472	0	%100
57	M57	SZ	0	0	0	%100
58	M58	SZ	-102.472	-102.472	0	%100
59	M59	SZ	-102.472	-102.472	0	%100
60	M60	SZ	-102.472	-102.472	0	%100
61	M61	SZ	-102.472	-102.472	0	%100
62	M62	SZ	-102.472	-102.472	0	%100
63	M63	SZ	-102.472	-102.472	0	%100
64	M64	SZ	0	0	0	%100
65	M65	SZ	0	0	0	%100
66	M66	SZ	0	0	0	%100
67	M67	SZ	-102.472	-102.472	0	%100
68	M68	SZ	0	0	0	%100
69	M69	SZ	-102.472	-102.472	0	%100
70	M70	SZ	-102.472	-102.472	0	%100
71	M71	SZ	0	0	0	%100
72	M72	SZ	0	0	0	%100
73	M73	SZ	-102.472	-102.472	0	%100
74	M74	SZ	0	0	0	%100
75	M75	SZ	-102.472	-102.472	0	%100
76	M76	SZ	-102.472	-102.472	0	%100
77	M77	SZ	-102.472	-102.472	0	%100
78	M78	SZ	0	0	0	%100
79	M79	SZ	-102.472	-102.472	0	%100
80	M80	SZ	-102.472	-102.472	0	%100
81	M81	SZ	-102.472	-102.472	0	%100
82	M82	SZ	-102.472	-102.472	0	%100
83	M83	SZ	0	0	0	%100
84	M84	SZ	0	0	0	%100
85	M85	SZ	0	0	0	%100
86	M86	SZ	0	0	0	%100
87	M87	SZ	0	0	0	%100
88	M88	SZ	0	0	0	%100
89	M89	SZ	-102.472	-102.472	0	%100
90	M90	SZ	-102.472	-102.472	0	%100
91	M91	SZ	0	0	0	%100
92	M92	SZ	0	0	0	%100
93	M93	SZ	0	0	0	%100
94	M94	SZ	0	0	0	%100
95	M95	SZ	0	0	0	%100
96	M96	SZ	0	0	0	%100
97	MP1	SZ	-61.483	-61.483	0	%100
98	MP2	SZ	-61.483	-61.483	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
99	MP3	SZ	-61.483	-61.483	0	%100
100	MP4	SZ	-61.483	-61.483	0	%100
101	MP5	SZ	-61.483	-61.483	0	%100
102	MP6	SZ	-61.483	-61.483	0	%100
103	MP7	SZ	-61.483	-61.483	0	%100
104	MP8	SZ	-61.483	-61.483	0	%100
105	MP9	SZ	-61.483	-61.483	0	%100
106	MP10	SZ	-61.483	-61.483	0	%100
107	MP11	SZ	-61.483	-61.483	0	%100
108	MP12	SZ	-61.483	-61.483	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SX	-102.472	-102.472	0	%100
2	M2	SX	-102.472	-102.472	0	%100
3	M3	SX	-102.472	-102.472	0	%100
4	M4	SX	-61.483	-61.483	0	%100
5	M5	SX	-61.483	-61.483	0	%100
6	M6	SX	-61.483	-61.483	0	%100
7	M7	SX	0	0	0	%100
8	M8	SX	0	0	0	%100
9	M9	SX	0	0	0	%100
10	M10	SX	0	0	0	%100
11	M11	SX	0	0	0	%100
12	M12	SX	0	0	0	%100
13	M13	SX	0	0	0	%100
14	M14	SX	-102.472	-102.472	0	%100
15	M15	SX	-102.472	-102.472	0	%100
16	M16	SX	-61.483	-61.483	0	%100
17	M17	SX	-61.483	-61.483	0	%100
18	M18	SX	0	0	0	%100
19	M19	SX	0	0	0	%100
20	M20	SX	-102.472	-102.472	0	%100
21	M21	SX	0	0	0	%100
22	M22	SX	0	0	0	%100
23	M23	SX	-102.472	-102.472	0	%100
24	M24	SX	-102.472	-102.472	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100
27	M27	SX	-102.472	-102.472	0	%100
28	M28	SX	-102.472	-102.472	0	%100
29	M29	SX	0	0	0	%100
30	M30	SX	-61.483	-61.483	0	%100
31	M31	SX	-102.472	-102.472	0	%100
32	M32	SX	-102.472	-102.472	0	%100
33	M33	SX	-102.472	-102.472	0	%100
34	M34	SX	-102.472	-102.472	0	%100
35	M35	SX	-102.472	-102.472	0	%100
36	M36	SX	-102.472	-102.472	0	%100
37	M37	SX	-102.472	-102.472	0	%100
38	M38	SX	-102.472	-102.472	0	%100
39	M39	SX	-102.472	-102.472	0	%100
40	M40	SX	0	0	0	%100
41	M41	SX	0	0	0	%100
42	M42	SX	0	0	0	%100
43	M43	SX	-102.472	-102.472	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
44	M44	SX	0	0	0	%100
45	M45	SX	-102.472	-102.472	0	%100
46	M46	SX	-102.472	-102.472	0	%100
47	M47	SX	-102.472	-102.472	0	%100
48	M48	SX	0	0	0	%100
49	M49	SX	-102.472	-102.472	0	%100
50	M50	SX	0	0	0	%100
51	M51	SX	-102.472	-102.472	0	%100
52	M52	SX	-102.472	-102.472	0	%100
53	M53	SX	0	0	0	%100
54	M54	SX	-102.472	-102.472	0	%100
55	M55	SX	-102.472	-102.472	0	%100
56	M56	SX	-102.472	-102.472	0	%100
57	M57	SX	0	0	0	%100
58	M58	SX	-102.472	-102.472	0	%100
59	M59	SX	-102.472	-102.472	0	%100
60	M60	SX	-102.472	-102.472	0	%100
61	M61	SX	-102.472	-102.472	0	%100
62	M62	SX	-102.472	-102.472	0	%100
63	M63	SX	-102.472	-102.472	0	%100
64	M64	SX	0	0	0	%100
65	M65	SX	0	0	0	%100
66	M66	SX	0	0	0	%100
67	M67	SX	-102.472	-102.472	0	%100
68	M68	SX	0	0	0	%100
69	M69	SX	-102.472	-102.472	0	%100
70	M70	SX	-102.472	-102.472	0	%100
71	M71	SX	0	0	0	%100
72	M72	SX	0	0	0	%100
73	M73	SX	-102.472	-102.472	0	%100
74	M74	SX	0	0	0	%100
75	M75	SX	-102.472	-102.472	0	%100
76	M76	SX	-102.472	-102.472	0	%100
77	M77	SX	-102.472	-102.472	0	%100
78	M78	SX	0	0	0	%100
79	M79	SX	-102.472	-102.472	0	%100
80	M80	SX	-102.472	-102.472	0	%100
81	M81	SX	-102.472	-102.472	0	%100
82	M82	SX	-102.472	-102.472	0	%100
83	M83	SX	0	0	0	%100
84	M84	SX	0	0	0	%100
85	M85	SX	0	0	0	%100
86	M86	SX	0	0	0	%100
87	M87	SX	0	0	0	%100
88	M88	SX	0	0	0	%100
89	M89	SX	-102.472	-102.472	0	%100
90	M90	SX	-102.472	-102.472	0	%100
91	M91	SX	0	0	0	%100
92	M92	SX	0	0	0	%100
93	M93	SX	0	0	0	%100
94	M94	SX	0	0	0	%100
95	M95	SX	0	0	0	%100
96	M96	SX	0	0	0	%100
97	MP1	SX	-61.483	-61.483	0	%100
98	MP2	SX	-61.483	-61.483	0	%100
99	MP3	SX	-61.483	-61.483	0	%100
100	MP4	SX	-61.483	-61.483	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
101	MP5	SX	-61.483	-61.483	0	%100
102	MP6	SX	-61.483	-61.483	0	%100
103	MP7	SX	-61.483	-61.483	0	%100
104	MP8	SX	-61.483	-61.483	0	%100
105	MP9	SX	-61.483	-61.483	0	%100
106	MP10	SX	-61.483	-61.483	0	%100
107	MP11	SX	-61.483	-61.483	0	%100
108	MP12	SX	-61.483	-61.483	0	%100

Member Distributed Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	Y	-9.878	-9.878	0	%100
2	M2	Y	-9.878	-9.878	0	%100
3	M3	Y	-9.878	-9.878	0	%100
4	M4	Y	-6.763	-6.763	0	%100
5	M5	Y	-6.763	-6.763	0	%100
6	M6	Y	-6.763	-6.763	0	%100
7	M7	Y	-1.708	-1.708	0	%100
8	M8	Y	-1.708	-1.708	0	%100
9	M9	Y	-1.708	-1.708	0	%100
10	M10	Y	-1.708	-1.708	0	%100
11	M11	Y	-1.708	-1.708	0	%100
12	M12	Y	-1.708	-1.708	0	%100
13	M13	Y	-1.708	-1.708	0	%100
14	M14	Y	-10.404	-10.404	0	%100
15	M15	Y	-10.391	-10.391	0	%100
16	M16	Y	-5.138	-5.138	0	%100
17	M17	Y	-5.138	-5.138	0	%100
18	M18	Y	-1.708	-1.708	0	%100
19	M19	Y	-1.708	-1.708	0	%100
20	M20	Y	-10.391	-10.391	0	%100
21	M21	Y	-1.708	-1.708	0	%100
22	M22	Y	-1.708	-1.708	0	%100
23	M23	Y	-10.391	-10.391	0	%100
24	M24	Y	-10.391	-10.391	0	%100
25	M25	Y	-1.708	-1.708	0	%100
26	M26	Y	-1.708	-1.708	0	%100
27	M27	Y	-10.391	-10.391	0	%100
28	M28	Y	-10.391	-10.391	0	%100
29	M29	Y	-1.708	-1.708	0	%100
30	M30	Y	-5.138	-5.138	0	%100
31	M31	Y	-10.391	-10.391	0	%100
32	M32	Y	-6.814	-6.814	0	%100
33	M33	Y	-10.391	-10.391	0	%100
34	M34	Y	-6.814	-6.814	0	%100
35	M35	Y	-6.814	-6.814	0	%100
36	M36	Y	-10.391	-10.391	0	%100
37	M37	Y	-10.404	-10.404	0	%100
38	M38	Y	-10.404	-10.404	0	%100
39	M39	Y	-9.878	-9.878	0	%100
40	M40	Y	-1.708	-1.708	0	%100
41	M41	Y	-1.708	-1.708	0	%100
42	M42	Y	-1.708	-1.708	0	%100
43	M43	Y	-9.878	-9.878	0	%100
44	M44	Y	-1.708	-1.708	0	%100
45	M45	Y	-10.404	-10.404	0	%100

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
46	M46	Y	-10.404	-10.404	0	%100
47	M47	Y	-9.878	-9.878	0	%100
48	M48	Y	-1.708	-1.708	0	%100
49	M49	Y	-10.404	-10.404	0	%100
50	M50	Y	-1.708	-1.708	0	%100
51	M51	Y	-10.391	-10.391	0	%100
52	M52	Y	-9.878	-9.878	0	%100
53	M53	Y	-1.708	-1.708	0	%100
54	M54	Y	-10.404	-10.404	0	%100
55	M55	Y	-6.814	-6.814	0	%100
56	M56	Y	-9.878	-9.878	0	%100
57	M57	Y	-1.708	-1.708	0	%100
58	M58	Y	-10.404	-10.404	0	%100
59	M59	Y	-10.391	-10.391	0	%100
60	M60	Y	-9.878	-9.878	0	%100
61	M61	Y	-6.814	-6.814	0	%100
62	M62	Y	-10.404	-10.404	0	%100
63	M63	Y	-5.793	-5.793	0	%100
64	M64	Y	-1.708	-1.708	0	%100
65	M65	Y	-1.708	-1.708	0	%100
66	M66	Y	-1.708	-1.708	0	%100
67	M67	Y	-5.793	-5.793	0	%100
68	M68	Y	-1.708	-1.708	0	%100
69	M69	Y	-10.404	-10.404	0	%100
70	M70	Y	-5.793	-5.793	0	%100
71	M71	Y	-1.708	-1.708	0	%100
72	M72	Y	-1.708	-1.708	0	%100
73	M73	Y	-5.793	-5.793	0	%100
74	M74	Y	-1.708	-1.708	0	%100
75	M75	Y	-10.404	-10.404	0	%100
76	M76	Y	-5.793	-5.793	0	%100
77	M77	Y	-6.814	-6.814	0	%100
78	M78	Y	-1.708	-1.708	0	%100
79	M79	Y	-10.404	-10.404	0	%100
80	M80	Y	-10.391	-10.391	0	%100
81	M81	Y	-5.793	-5.793	0	%100
82	M82	Y	-6.814	-6.814	0	%100
83	M83	Y	-1.708	-1.708	0	%100
84	M84	Y	-1.708	-1.708	0	%100
85	M85	Y	-1.708	-1.708	0	%100
86	M86	Y	-1.708	-1.708	0	%100
87	M87	Y	-1.708	-1.708	0	%100
88	M88	Y	-1.708	-1.708	0	%100
89	M89	Y	-6.814	-6.814	0	%100
90	M90	Y	-6.814	-6.814	0	%100
91	M91	Y	-1.708	-1.708	0	%100
92	M92	Y	-1.708	-1.708	0	%100
93	M93	Y	-1.708	-1.708	0	%100
94	M94	Y	-1.708	-1.708	0	%100
95	M95	Y	-1.708	-1.708	0	%100
96	M96	Y	-1.708	-1.708	0	%100
97	MP1	Y	-5.86	-5.86	0	%100
98	MP2	Y	-5.86	-5.86	0	%100
99	MP3	Y	-5.86	-5.86	0	%100
100	MP4	Y	-5.86	-5.86	0	%100
101	MP5	Y	-5.86	-5.86	0	%100
102	MP6	Y	-5.86	-5.86	0	%100

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
103	MP7	Y	-5.86	-5.86	0	%100
104	MP8	Y	-5.86	-5.86	0	%100
105	MP9	Y	-5.86	-5.86	0	%100
106	MP10	Y	-5.86	-5.86	0	%100
107	MP11	Y	-5.86	-5.86	0	%100
108	MP12	Y	-5.86	-5.86	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SZ	-11.959	-11.959	0	%100
2	M2	SZ	-11.959	-11.959	0	%100
3	M3	SZ	-11.959	-11.959	0	%100
4	M4	SZ	-14.132	-14.132	0	%100
5	M5	SZ	-14.132	-14.132	0	%100
6	M6	SZ	-14.132	-14.132	0	%100
7	M7	SZ	0	0	0	%100
8	M8	SZ	0	0	0	%100
9	M9	SZ	0	0	0	%100
10	M10	SZ	0	0	0	%100
11	M11	SZ	0	0	0	%100
12	M12	SZ	0	0	0	%100
13	M13	SZ	0	0	0	%100
14	M14	SZ	-11.746	-11.746	0	%100
15	M15	SZ	-11.751	-11.751	0	%100
16	M16	SZ	-16.83	-16.83	0	%100
17	M17	SZ	-16.83	-16.83	0	%100
18	M18	SZ	0	0	0	%100
19	M19	SZ	0	0	0	%100
20	M20	SZ	-11.751	-11.751	0	%100
21	M21	SZ	0	0	0	%100
22	M22	SZ	0	0	0	%100
23	M23	SZ	-11.751	-11.751	0	%100
24	M24	SZ	-11.751	-11.751	0	%100
25	M25	SZ	0	0	0	%100
26	M26	SZ	0	0	0	%100
27	M27	SZ	-11.751	-11.751	0	%100
28	M28	SZ	-11.751	-11.751	0	%100
29	M29	SZ	0	0	0	%100
30	M30	SZ	-16.83	-16.83	0	%100
31	M31	SZ	-11.751	-11.751	0	%100
32	M32	SZ	-14.074	-14.074	0	%100
33	M33	SZ	-11.751	-11.751	0	%100
34	M34	SZ	-14.074	-14.074	0	%100
35	M35	SZ	-14.074	-14.074	0	%100
36	M36	SZ	-11.751	-11.751	0	%100
37	M37	SZ	-11.746	-11.746	0	%100
38	M38	SZ	-11.746	-11.746	0	%100
39	M39	SZ	-11.959	-11.959	0	%100
40	M40	SZ	0	0	0	%100
41	M41	SZ	0	0	0	%100
42	M42	SZ	0	0	0	%100
43	M43	SZ	-11.959	-11.959	0	%100
44	M44	SZ	0	0	0	%100
45	M45	SZ	-11.746	-11.746	0	%100
46	M46	SZ	-11.746	-11.746	0	%100
47	M47	SZ	-11.959	-11.959	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
48	M48	SZ	0	0	0	%100
49	M49	SZ	-11.746	-11.746	0	%100
50	M50	SZ	0	0	0	%100
51	M51	SZ	-11.751	-11.751	0	%100
52	M52	SZ	-11.959	-11.959	0	%100
53	M53	SZ	0	0	0	%100
54	M54	SZ	-11.746	-11.746	0	%100
55	M55	SZ	-14.074	-14.074	0	%100
56	M56	SZ	-11.959	-11.959	0	%100
57	M57	SZ	0	0	0	%100
58	M58	SZ	-11.746	-11.746	0	%100
59	M59	SZ	-11.751	-11.751	0	%100
60	M60	SZ	-11.959	-11.959	0	%100
61	M61	SZ	-14.074	-14.074	0	%100
62	M62	SZ	-11.746	-11.746	0	%100
63	M63	SZ	-15.484	-15.484	0	%100
64	M64	SZ	0	0	0	%100
65	M65	SZ	0	0	0	%100
66	M66	SZ	0	0	0	%100
67	M67	SZ	-15.484	-15.484	0	%100
68	M68	SZ	0	0	0	%100
69	M69	SZ	-11.746	-11.746	0	%100
70	M70	SZ	-15.484	-15.484	0	%100
71	M71	SZ	0	0	0	%100
72	M72	SZ	0	0	0	%100
73	M73	SZ	-15.484	-15.484	0	%100
74	M74	SZ	0	0	0	%100
75	M75	SZ	-11.746	-11.746	0	%100
76	M76	SZ	-15.484	-15.484	0	%100
77	M77	SZ	-14.074	-14.074	0	%100
78	M78	SZ	0	0	0	%100
79	M79	SZ	-11.746	-11.746	0	%100
80	M80	SZ	-11.751	-11.751	0	%100
81	M81	SZ	-15.484	-15.484	0	%100
82	M82	SZ	-14.074	-14.074	0	%100
83	M83	SZ	0	0	0	%100
84	M84	SZ	0	0	0	%100
85	M85	SZ	0	0	0	%100
86	M86	SZ	0	0	0	%100
87	M87	SZ	0	0	0	%100
88	M88	SZ	0	0	0	%100
89	M89	SZ	-14.074	-14.074	0	%100
90	M90	SZ	-14.074	-14.074	0	%100
91	M91	SZ	0	0	0	%100
92	M92	SZ	0	0	0	%100
93	M93	SZ	0	0	0	%100
94	M94	SZ	0	0	0	%100
95	M95	SZ	0	0	0	%100
96	M96	SZ	0	0	0	%100
97	MP1	SZ	-15.37	-15.37	0	%100
98	MP2	SZ	-15.37	-15.37	0	%100
99	MP3	SZ	-15.37	-15.37	0	%100
100	MP4	SZ	-15.37	-15.37	0	%100
101	MP5	SZ	-15.37	-15.37	0	%100
102	MP6	SZ	-15.37	-15.37	0	%100
103	MP7	SZ	-15.37	-15.37	0	%100
104	MP8	SZ	-15.37	-15.37	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
105	MP9	SZ	-15.37	-15.37	0	%100
106	MP10	SZ	-15.37	-15.37	0	%100
107	MP11	SZ	-15.37	-15.37	0	%100
108	MP12	SZ	-15.37	-15.37	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SX	-11.959	-11.959	0	%100
2	M2	SX	-11.959	-11.959	0	%100
3	M3	SX	-11.959	-11.959	0	%100
4	M4	SX	-14.132	-14.132	0	%100
5	M5	SX	-14.132	-14.132	0	%100
6	M6	SX	-14.132	-14.132	0	%100
7	M7	SX	0	0	0	%100
8	M8	SX	0	0	0	%100
9	M9	SX	0	0	0	%100
10	M10	SX	0	0	0	%100
11	M11	SX	0	0	0	%100
12	M12	SX	0	0	0	%100
13	M13	SX	0	0	0	%100
14	M14	SX	-11.746	-11.746	0	%100
15	M15	SX	-11.751	-11.751	0	%100
16	M16	SX	-16.83	-16.83	0	%100
17	M17	SX	-16.83	-16.83	0	%100
18	M18	SX	0	0	0	%100
19	M19	SX	0	0	0	%100
20	M20	SX	-11.751	-11.751	0	%100
21	M21	SX	0	0	0	%100
22	M22	SX	0	0	0	%100
23	M23	SX	-11.751	-11.751	0	%100
24	M24	SX	-11.751	-11.751	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100
27	M27	SX	-11.751	-11.751	0	%100
28	M28	SX	-11.751	-11.751	0	%100
29	M29	SX	0	0	0	%100
30	M30	SX	-16.83	-16.83	0	%100
31	M31	SX	-11.751	-11.751	0	%100
32	M32	SX	-14.074	-14.074	0	%100
33	M33	SX	-11.751	-11.751	0	%100
34	M34	SX	-14.074	-14.074	0	%100
35	M35	SX	-14.074	-14.074	0	%100
36	M36	SX	-11.751	-11.751	0	%100
37	M37	SX	-11.746	-11.746	0	%100
38	M38	SX	-11.746	-11.746	0	%100
39	M39	SX	-11.959	-11.959	0	%100
40	M40	SX	0	0	0	%100
41	M41	SX	0	0	0	%100
42	M42	SX	0	0	0	%100
43	M43	SX	-11.959	-11.959	0	%100
44	M44	SX	0	0	0	%100
45	M45	SX	-11.746	-11.746	0	%100
46	M46	SX	-11.746	-11.746	0	%100
47	M47	SX	-11.959	-11.959	0	%100
48	M48	SX	0	0	0	%100
49	M49	SX	-11.746	-11.746	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
50	M50	SX	0	0	0	%100
51	M51	SX	-11.751	-11.751	0	%100
52	M52	SX	-11.959	-11.959	0	%100
53	M53	SX	0	0	0	%100
54	M54	SX	-11.746	-11.746	0	%100
55	M55	SX	-14.074	-14.074	0	%100
56	M56	SX	-11.959	-11.959	0	%100
57	M57	SX	0	0	0	%100
58	M58	SX	-11.746	-11.746	0	%100
59	M59	SX	-11.751	-11.751	0	%100
60	M60	SX	-11.959	-11.959	0	%100
61	M61	SX	-14.074	-14.074	0	%100
62	M62	SX	-11.746	-11.746	0	%100
63	M63	SX	-15.484	-15.484	0	%100
64	M64	SX	0	0	0	%100
65	M65	SX	0	0	0	%100
66	M66	SX	0	0	0	%100
67	M67	SX	-15.484	-15.484	0	%100
68	M68	SX	0	0	0	%100
69	M69	SX	-11.746	-11.746	0	%100
70	M70	SX	-15.484	-15.484	0	%100
71	M71	SX	0	0	0	%100
72	M72	SX	0	0	0	%100
73	M73	SX	-15.484	-15.484	0	%100
74	M74	SX	0	0	0	%100
75	M75	SX	-11.746	-11.746	0	%100
76	M76	SX	-15.484	-15.484	0	%100
77	M77	SX	-14.074	-14.074	0	%100
78	M78	SX	0	0	0	%100
79	M79	SX	-11.746	-11.746	0	%100
80	M80	SX	-11.751	-11.751	0	%100
81	M81	SX	-15.484	-15.484	0	%100
82	M82	SX	-14.074	-14.074	0	%100
83	M83	SX	0	0	0	%100
84	M84	SX	0	0	0	%100
85	M85	SX	0	0	0	%100
86	M86	SX	0	0	0	%100
87	M87	SX	0	0	0	%100
88	M88	SX	0	0	0	%100
89	M89	SX	-14.074	-14.074	0	%100
90	M90	SX	-14.074	-14.074	0	%100
91	M91	SX	0	0	0	%100
92	M92	SX	0	0	0	%100
93	M93	SX	0	0	0	%100
94	M94	SX	0	0	0	%100
95	M95	SX	0	0	0	%100
96	M96	SX	0	0	0	%100
97	MP1	SX	-15.37	-15.37	0	%100
98	MP2	SX	-15.37	-15.37	0	%100
99	MP3	SX	-15.37	-15.37	0	%100
100	MP4	SX	-15.37	-15.37	0	%100
101	MP5	SX	-15.37	-15.37	0	%100
102	MP6	SX	-15.37	-15.37	0	%100
103	MP7	SX	-15.37	-15.37	0	%100
104	MP8	SX	-15.37	-15.37	0	%100
105	MP9	SX	-15.37	-15.37	0	%100
106	MP10	SX	-15.37	-15.37	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
107	MP11	SX	-15.37	-15.37	0	%100
108	MP12	SX	-15.37	-15.37	0	%100

Member Distributed Loads (BLC 46 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M3	Y	-.621	-10.621	12.451	22.412
2	M3	Y	-10.621	-13.661	22.412	32.373
3	M3	Y	-13.661	-9.521	32.373	42.333
4	M3	Y	-9.521	-4.747	42.333	52.294
5	M3	Y	-4.747	-.621	52.294	62.255
6	M4	Y	-.307	-.307	0	45
7	M6	Y	-1.266	-.4	120.188	123.181
8	M6	Y	-.4	.033	123.181	126.173
9	M6	Y	.033	.033	126.173	129.166
10	M6	Y	.033	.033	129.166	132.159
11	M6	Y	.033	-.926	132.159	135.152
12	M6	Y	-.926	-1.908	135.152	138.145
13	M6	Y	-1.908	-1.956	138.145	141.138
14	M24	Y	-1.006	-1.006	0	2.704
15	M27	Y	-.663	-.663	0	2.75
16	M28	Y	-1.006	-1.006	0	2.704
17	M31	Y	-.663	-.663	0	2.75
18	M56	Y	-.083	-1.697	0	5.66
19	M56	Y	-1.697	-3.74	5.66	11.32
20	M56	Y	-3.74	-4.67	11.32	16.98
21	M56	Y	-4.67	-4.338	16.98	22.64
22	M56	Y	-4.338	-4.196	22.64	28.3
23	M60	Y	-4.2	-4.323	2	7.66
24	M60	Y	-4.323	-4.654	7.66	13.32
25	M60	Y	-4.654	-3.737	13.32	18.981
26	M60	Y	-3.737	-1.697	18.981	24.641
27	M60	Y	-1.697	-.082	24.641	30.301
28	M69	Y	-2.258	-2.258	0	2.704
29	M75	Y	-2.907	-2.907	0	4.338
30	M76	Y	-3.254	-5.32	0	10.271
31	M76	Y	-5.32	-7.932	10.271	20.541
32	M76	Y	-7.932	-10.717	20.541	30.812
33	M76	Y	-10.717	-8.392	30.812	41.083
34	M76	Y	-8.392	-1.329	41.083	51.353
35	M79	Y	-2.96	-2.96	2	6.338
36	M81	Y	-1.29	-5.049	0	10.271
37	M81	Y	-5.049	-8.221	10.271	20.541
38	M81	Y	-8.221	-10.58	20.541	30.812
39	M81	Y	-10.58	-8.448	30.812	41.082
40	M81	Y	-8.448	-2.055	41.082	51.353
41	M2	Y	-.621	-10.609	12.451	22.412
42	M2	Y	-10.609	-13.652	22.412	32.373
43	M2	Y	-13.652	-9.528	32.373	42.333
44	M2	Y	-9.528	-4.759	42.333	52.294
45	M2	Y	-4.759	-.621	52.294	62.255
46	M5	Y	-1.266	-.4	120.187	123.18
47	M5	Y	-.4	.033	123.18	126.173
48	M5	Y	.033	.033	126.173	129.166
49	M5	Y	.033	.033	129.166	132.159
50	M5	Y	.033	-.925	132.159	135.152
51	M5	Y	-.925	-1.907	135.152	138.145

Member Distributed Loads (BLC 46 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
52	M5	Y	-1.907	-1.956	138.145	141.138
53	M6	Y	-.678	-.678	8.852	29.767
54	M23	Y	-1.12	-1.12	0	2.75
55	M38	Y	-2.251	-2.251	0	2.704
56	M46	Y	-2.255	-2.255	0	2.704
57	M47	Y	-.082	-1.695	0	5.66
58	M47	Y	-1.695	-3.732	5.66	11.32
59	M47	Y	-3.732	-4.648	11.32	16.98
60	M47	Y	-4.648	-4.316	16.98	22.64
61	M47	Y	-4.316	-4.193	22.64	28.301
62	M51	Y	-1.005	-1.005	0	2.704
63	M52	Y	-4.184	-4.328	2	7.66
64	M52	Y	-4.328	-4.661	7.66	13.32
65	M52	Y	-4.661	-3.733	13.32	18.981
66	M52	Y	-3.733	-1.848	18.981	24.641
67	M52	Y	-1.848	-.459	24.641	30.301
68	M54	Y	-2.957	-2.957	0	4.338
69	M58	Y	-2.96	-2.96	2	6.338
70	M59	Y	-.663	-.663	0	2.75
71	M70	Y	-1.323	-5.075	0	10.271
72	M70	Y	-5.075	-8.243	10.271	20.541
73	M70	Y	-8.243	-10.699	20.541	30.812
74	M70	Y	-10.699	-8.458	30.812	41.083
75	M70	Y	-8.458	-1.65	41.083	51.353
76	M73	Y	-1.299	-5.058	0	10.271
77	M73	Y	-5.058	-8.245	10.271	20.541
78	M73	Y	-8.245	-10.584	20.541	30.812
79	M73	Y	-10.584	-8.432	30.812	41.082
80	M73	Y	-8.432	-2.067	41.082	51.353
81	M1	Y	-.621	-10.609	12.451	22.412
82	M1	Y	-10.609	-13.652	22.412	32.373
83	M1	Y	-13.652	-9.528	32.373	42.333
84	M1	Y	-9.528	-4.759	42.333	52.294
85	M1	Y	-4.759	-.621	52.294	62.255
86	M4	Y	-1.266	-.4	120.187	123.18
87	M4	Y	-.4	.033	123.18	126.173
88	M4	Y	.033	.033	126.173	129.166
89	M4	Y	.033	.033	129.166	132.159
90	M4	Y	.033	-.925	132.159	135.152
91	M4	Y	-.925	-1.907	135.152	138.145
92	M4	Y	-1.907	-1.956	138.145	141.138
93	M5	Y	-.678	-.678	8.852	29.767
94	M14	Y	-2.251	-2.251	0	2.704
95	M33	Y	-1.005	-1.005	0	2.704
96	M36	Y	-.663	-.663	0	2.75
97	M37	Y	-2.255	-2.255	0	2.704
98	M39	Y	-.082	-1.695	0	5.66
99	M39	Y	-1.695	-3.732	5.66	11.32
100	M39	Y	-3.732	-4.648	11.32	16.98
101	M39	Y	-4.648	-4.316	16.98	22.64
102	M39	Y	-4.316	-4.193	22.64	28.301
103	M43	Y	-4.184	-4.328	2	7.66
104	M43	Y	-4.328	-4.661	7.66	13.32
105	M43	Y	-4.661	-3.733	13.32	18.981
106	M43	Y	-3.733	-1.848	18.981	24.641
107	M43	Y	-1.848	-.459	24.641	30.301
108	M45	Y	-2.957	-2.957	0	4.338

Member Distributed Loads (BLC 46 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
109	M49	Y	-2.96	-2.96	2	6.338
110	M63	Y	-1.323	-5.075	0	10.271
111	M63	Y	-5.075	-8.243	10.271	20.541
112	M63	Y	-8.243	-10.699	20.541	30.812
113	M63	Y	-10.699	-8.458	30.812	41.083
114	M63	Y	-8.458	-1.65	41.083	51.353
115	M67	Y	-1.299	-5.058	0	10.271
116	M67	Y	-5.058	-8.245	10.271	20.541
117	M67	Y	-8.245	-10.584	20.541	30.812
118	M67	Y	-10.584	-8.432	30.812	41.082
119	M67	Y	-8.432	-2.067	41.082	51.353
120	M80	Y	-1.12	-1.12	0	2.75

Member Distributed Loads (BLC 47 : BLC 16 Transient Area Loads)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M3	Y	-.683	-11.683	12.451	22.412
2	M3	Y	-11.683	-15.027	22.412	32.373
3	M3	Y	-15.027	-10.473	32.373	42.333
4	M3	Y	-10.473	-5.222	42.333	52.294
5	M3	Y	-5.222	-.683	52.294	62.255
6	M4	Y	-.338	-.338	0	45
7	M6	Y	-1.393	-.44	120.188	123.181
8	M6	Y	-.44	.036	123.181	126.173
9	M6	Y	.036	.036	126.173	129.166
10	M6	Y	.036	.036	129.166	132.159
11	M6	Y	.036	-1.018	132.159	135.152
12	M6	Y	-1.018	-2.099	135.152	138.145
13	M6	Y	-2.099	-2.152	138.145	141.138
14	M24	Y	-1.106	-1.106	0	2.704
15	M27	Y	-.729	-.729	0	2.75
16	M28	Y	-1.106	-1.106	0	2.704
17	M31	Y	-.73	-.73	0	2.75
18	M56	Y	-.092	-1.866	0	5.66
19	M56	Y	-1.866	-4.114	5.66	11.32
20	M56	Y	-4.114	-5.137	11.32	16.98
21	M56	Y	-5.137	-4.772	16.98	22.64
22	M56	Y	-4.772	-4.615	22.64	28.3
23	M60	Y	-4.62	-4.755	2	7.66
24	M60	Y	-4.755	-5.12	7.66	13.32
25	M60	Y	-5.12	-4.111	13.32	18.981
26	M60	Y	-4.111	-1.867	18.981	24.641
27	M60	Y	-1.867	-.09	24.641	30.301
28	M69	Y	-2.484	-2.484	0	2.704
29	M75	Y	-3.198	-3.198	0	4.338
30	M76	Y	-3.579	-5.852	0	10.271
31	M76	Y	-5.852	-8.725	10.271	20.541
32	M76	Y	-8.725	-11.789	20.541	30.812
33	M76	Y	-11.789	-9.231	30.812	41.083
34	M76	Y	-9.231	-1.462	41.083	51.353
35	M79	Y	-3.256	-3.256	2	6.338
36	M81	Y	-1.419	-5.554	0	10.271
37	M81	Y	-5.554	-9.044	10.271	20.541
38	M81	Y	-9.044	-11.638	20.541	30.812
39	M81	Y	-11.638	-9.293	30.812	41.082
40	M81	Y	-9.293	-2.26	41.082	51.353
41	M2	Y	-.683	-11.67	12.451	22.412

Member Distributed Loads (BLC 47 : BLC 16 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
42	M2	Y	-11.67	-15.018	22.412	32.373
43	M2	Y	-15.018	-10.48	32.373	42.333
44	M2	Y	-10.48	-5.234	42.333	52.294
45	M2	Y	-5.234	-.683	52.294	62.255
46	M5	Y	-1.393	-.44	120.187	123.18
47	M5	Y	-.44	.036	123.18	126.173
48	M5	Y	.036	.036	126.173	129.166
49	M5	Y	.036	.036	129.166	132.159
50	M5	Y	.036	-1.018	132.159	135.152
51	M5	Y	-1.018	-2.098	135.152	138.145
52	M5	Y	-2.098	-2.151	138.145	141.138
53	M6	Y	-.746	-.746	8.852	29.767
54	M23	Y	-1.232	-1.232	0	2.75
55	M38	Y	-2.477	-2.477	0	2.704
56	M46	Y	-2.481	-2.481	0	2.704
57	M47	Y	-.09	-1.865	0	5.66
58	M47	Y	-1.865	-4.105	5.66	11.32
59	M47	Y	-4.105	-5.112	11.32	16.98
60	M47	Y	-5.112	-4.748	16.98	22.64
61	M47	Y	-4.748	-4.612	22.64	28.301
62	M51	Y	-1.106	-1.106	0	2.704
63	M52	Y	-4.602	-4.761	2	7.66
64	M52	Y	-4.761	-5.127	7.66	13.32
65	M52	Y	-5.127	-4.106	13.32	18.981
66	M52	Y	-4.106	-2.033	18.981	24.641
67	M52	Y	-2.033	-.505	24.641	30.301
68	M54	Y	-3.253	-3.253	0	4.338
69	M58	Y	-3.256	-3.256	2	6.338
70	M59	Y	-.729	-.729	0	2.75
71	M70	Y	-1.455	-5.583	0	10.271
72	M70	Y	-5.583	-9.068	10.271	20.541
73	M70	Y	-9.068	-11.768	20.541	30.812
74	M70	Y	-11.768	-9.304	30.812	41.083
75	M70	Y	-9.304	-1.815	41.083	51.353
76	M73	Y	-1.429	-5.563	0	10.271
77	M73	Y	-5.563	-9.069	10.271	20.541
78	M73	Y	-9.069	-11.642	20.541	30.812
79	M73	Y	-11.642	-9.275	30.812	41.082
80	M73	Y	-9.275	-2.274	41.082	51.353
81	M1	Y	-.683	-11.67	12.451	22.412
82	M1	Y	-11.67	-15.018	22.412	32.373
83	M1	Y	-15.018	-10.48	32.373	42.333
84	M1	Y	-10.48	-5.234	42.333	52.294
85	M1	Y	-5.234	-.683	52.294	62.255
86	M4	Y	-1.393	-.44	120.187	123.18
87	M4	Y	-.44	.036	123.18	126.173
88	M4	Y	.036	.036	126.173	129.166
89	M4	Y	.036	.036	129.166	132.159
90	M4	Y	.036	-1.018	132.159	135.152
91	M4	Y	-1.018	-2.098	135.152	138.145
92	M4	Y	-2.098	-2.151	138.145	141.138
93	M5	Y	-.746	-.746	8.852	29.767
94	M14	Y	-2.477	-2.477	0	2.704
95	M33	Y	-1.106	-1.106	0	2.704
96	M36	Y	-.729	-.729	0	2.75
97	M37	Y	-2.481	-2.481	0	2.704
98	M39	Y	-.09	-1.865	0	5.66

Member Distributed Loads (BLC 47 : BLC 16 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
99	M39	Y	-1.865	-4.105	5.66	11.32
100	M39	Y	-4.105	-5.112	11.32	16.98
101	M39	Y	-5.112	-4.748	16.98	22.64
102	M39	Y	-4.748	-4.612	22.64	28.301
103	M43	Y	-4.602	-4.761	2	7.66
104	M43	Y	-4.761	-5.127	7.66	13.32
105	M43	Y	-5.127	-4.106	13.32	18.981
106	M43	Y	-4.106	-2.033	18.981	24.641
107	M43	Y	-2.033	-.505	24.641	30.301
108	M45	Y	-3.253	-3.253	0	4.338
109	M49	Y	-3.256	-3.256	2	6.338
110	M63	Y	-1.455	-5.583	0	10.271
111	M63	Y	-5.583	-9.068	10.271	20.541
112	M63	Y	-9.068	-11.768	20.541	30.812
113	M63	Y	-11.768	-9.304	30.812	41.083
114	M63	Y	-9.304	-1.815	41.083	51.353
115	M67	Y	-1.429	-5.563	0	10.271
116	M67	Y	-5.563	-9.069	10.271	20.541
117	M67	Y	-9.069	-11.642	20.541	30.812
118	M67	Y	-11.642	-9.275	30.812	41.082
119	M67	Y	-9.275	-2.274	41.082	51.353
120	M80	Y	-1.232	-1.232	0	2.75

Member Area Loads (BLC 1 : Self Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N120	N105	N69	N54	Y	Two Way	-10
2	N47	N75	N88	N110	Y	Two Way	-10
3	N114	N32	N80	N82	Y	Two Way	-10

Member Area Loads (BLC 16 : Ice Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N120	N105	N69	N54	Y	Two Way	-11
2	N47	N75	N88	N110	Y	Two Way	-11
3	N114	N32	N80	N82	Y	Two Way	-11

Plate Surface Loads

Plate Label	Direction	Magnitude[psf,F]
No Data to Print ...		

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

Input Forces

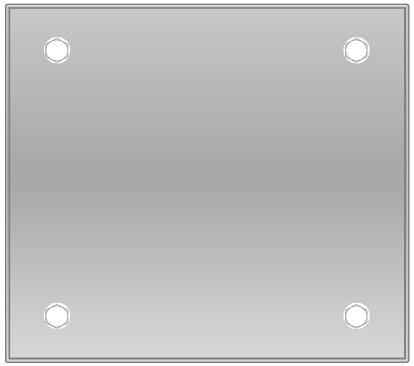
Bolt Calculation Tool, V1.0

PROJECT DATA	
Site Name:	Old Lyme-Beaver Road
Site Number:	CTL01281
Job Code:	1106-A0001-B

APPLIED LOADS		
Bolt Tension:	1934.54	lbs
Bolt Shear:	89.33	lbs

BOLT PROPERTIES		
Bolt Type:	Bolt	-
Bolt Diameter:	0.625	in
Bolt Grade:	A325	-
# of Bolts:	4	-
Threads Excluded?	No	-

BOLT CHECK	
Tensile Strength	20340.15
Shear Strength	12425.24
Tensile Usage	9.5%
Shear Usage	0.7%
Combined Shear and Tension	0.9%
Result	Pass



Mount Analysis and Mapping Checklist

Mount Detail	Both
Mount Type	Platform
Mount Model Number	SitePro1 RMQP-496-HK
If RT, then how is it attached	
If WT, then how is it attached	
Result of previous mount analysis or PE opinion letter	Pass

Inspector (Mapping)
(Vendor name)
(Inspector name)
(Contact phone)
(Contact email)

Mount Mapping Detail	Both
Material condition (discoloration, cracks, pitting)	Good
Mfg. drawing, cutsheet, spec. available?	No
Date of previous mount mapping	
Searched prior OEM for material?	Yes
Photos of installation available?	Yes
Original tower drawings show mounts?	No
Searched for previous mapping?	Yes
Is latest mod design (dwgs) available?	No
Is the latest structural analysis available?	No

Project Detail	Both
Market	New England
PACE Project ID	MRCTB041381 / MRCTB041505 / MRCTB041576 / MRCTB041497 / MRCTB041708
Site Name	Lyme CT Beaver Brook Road
City, State	Old Lyme, CT
RFDS Version Number	2
Initiative (list mult., if applicable)	
Tower Owner	Smartlink
SA Vendor	
A&E firm (for structural analysis)	Infinigy
A&E firm (for mapping, if different)	
Last amendment date or last site visit	

Site Information	Both
Original Lease Date	
FA Code	
Tower Type	Monopole
Tower Height (Ft)	180
AT&T Rad Center # 1	176
AT&T Rad Center # 2	

Note: For each table in this form, note whether the information applies to "Mapping" only, or "Both" mount analysis and mapping. Equipment detail is for "Mapping" but is not labeled. Sketches are only required for mapping.

Measurements and Deliverables on sketches	Mapping
Pipe / Angle dimenions and lengths	
bolt diameters and lengths	
U-Bolt diameters and lengths	
Steel Grade if indicated	
welds :length and sizes	
appurtenance relative locations	
Grounding Condition	

Equipment Detail Alpha Sector	Model Number for Ant, MW, RRU, TMA, Squid / Size of Coax, DC-Fiber Trunks & Jumpers	Height / COAX-DC-Fiber Trunk & Jumper Lengths in feet	Approx Az	mount position location
Antennas	0	0	0	0
MW	0	0	0	0
RRU	0	0	0	0
TMA	0	0	0	0
Coax	0	0	0	0
RET (not imbedded in antenna)	0	0	0	0
DC Cable	0	0	0	0
Fiber Cable	0	0	0	0
Squid	0	0	0	0
Equipment Detail Beta Sector				
Antennas	0	0	0	0
MW	0	0	0	0
RRU	0	0	0	0
TMA	0	0	0	0
Coax	0	0	0	0
RET (not imbedded in antenna)	0	0	0	0
DC Cable	0	0	0	0
Fiber Cable	0	0	0	0
Squid	0	0	0	0
Equipment Detail Gamma Sector				
Antennas	0	0	0	0
MW	0	0	0	0
RRU	0	0	0	0
TMA	0	0	0	0
Coax	0	0	0	0
RET (not imbedded in antenna)	0	0	0	0
DC Cable	0	0	0	0
Fiber Cable	0	0	0	0
Squid	0	0	0	0

Comments

INFINIGY

THE SOLUTIONS ARE ENDLESS

Non-Ionizing Radiation Report

Compiled For: Smartlink on behalf of AT&T

Site Name: Lyme CT Beaver Brook Road

Site FA: 10128116

Site ID: CTL01281

322 Beaver Brook Road, Old Lyme, CT 06371

Latitude: 41.4105 Longitude: -72.28894

Structure Type: Monopole

Report Date: October 6, 2019

Status: AT&T will be compliant with FCC rules on RF Exposure with the signage recommendation in section 4 of this report.

Table of Contents

1. Executive Summary:

Smartlink on behalf of AT&T has contracted Infinigy Solutions, LLC to determine whether the site Lyme CT Beaver Brook Road located at 322 Beaver Brook Road in Old Lyme, CT Will Be Compliant with all Federal Communications Commission (FCC) rules and regulations for radio frequency (RF) exposure as indicated in **47CFR§1.1310**.

The report incorporates a theoretical RF field analysis in accordance with the FCC Rules and Regulations for all individuals classified as "Occupational or Controlled" and "General Public or Uncontrolled" (see Appendix A and B).

This document and the conclusions herein are based on information provided by Smartlink on behalf of AT&T.

As a result of the analysis, **AT&T Will Be Compliant with FCC rules with the installation of signage recommended in section 4.**

Engineering assumptions were made regarding the collation operator(s). The assumptions were made based upon typical deployment configurations and practices of the operator(s).

AT&T – Sole Carriers, All Bands Cumulative Exposure %		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0080
	% Exposure	0.94%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0080
	% Exposure	0.20%

2. Site Summary:

Site Information	
Site Name: Lyme CT Beaver Brook Road	
Site Address: 322 Beaver Brook Road, Old Lyme, CT 06371	
Site Type: Monopole	
Compliance Status	Will Be Compliant
Mitigation Required	No
Signage Required	Yes
Barriers Required	No
Access Locked	No
Area Controlled or Uncontrolled	Uncontrolled

3. Site Compliance

This report also incorporates overview of the site information:

- Antenna Inventory Table
- Calculation Tables showing exposure for each carrier transmit frequency
- Total exposure for all carriers existing and proposed at ground level considering the centerline of all antennas and horizontal distance from the tower.
- Maximum Effective Radiated Power Assumed as Worst Case for Calculations used in this study
- Calculations based on flat ground around base of the structure

4. Site Compliance Recommendations

Infinigy recommends the following upon the installation of antennas at the site:

Base of tower

Caution 2 sign.

Note: The above signage recommendation is moot if there is an existing caution 2 sign at the base of the tower.

5. Antenna Inventory Table

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
1	Alpha	AT&T	Powerwave	P90-15-XLH-RR	850	176	1000
2a	Alpha	AT&T	CCI	DMP65R-BU8D	700	176	2951
2a	Alpha	AT&T	CCI	DMP65R-BU8D	700	176	2951
2b	Alpha	AT&T	CCI	DMP65R-BU8D	1900	176	3664
3a	Alpha	AT&T	CCI	DMP65R-BU8D	700	176	1475
3b	Alpha	AT&T	CCI	DMP65R-BU8D	850	176	1000
3c	Alpha	AT&T	CCI	DMP65R-BU8D	2100	176	3837
3d	Alpha	AT&T	CCI	DMP65R-BU8D	850	176	1000
4	Beta	AT&T	Powerwave	P90-15-XLH-RR	850	176	1000
5a	Beta	AT&T	CCI	DMP65R-BU8D	700	176	2951
5b	Beta	AT&T	CCI	DMP65R-BU8D	1900	176	3664
6a	Beta	AT&T	CCI	DMP65R-BU8D	700	176	1475
6b	Beta	AT&T	CCI	DMP65R-BU8D	850	176	1000
6c	Beta	AT&T	CCI	DMP65R-BU8D	2100	176	3837
6d	Beta	AT&T	CCI	DMP65R-BU8D	850	176	1000
7	Gamma	AT&T	Powerwave	P90-15-XLH-RR	850	176	1000
8a	Gamma	AT&T	CCI	DMP65R-BU8D	700	176	2951
8b	Gamma	AT&T	CCI	DMP65R-BU8D	1900	176	3664
9a	Gamma	AT&T	CCI	DMP65R-BU8D	700	176	1475
9b	Gamma	AT&T	CCI	DMP65R-BU8D	850	176	1000
9c	Gamma	AT&T	CCI	DMP65R-BU8D	2100	176	3837
9d	Gamma	AT&T	CCI	DMP65R-BU8D	850	176	1000

6. RF Guidelines

To ensure safety of company workers, the following points need to be taken into consideration and implemented at wireless sites in accordance with the Carriers policies:

a) Worksite: Any employee at the site should avoid working directly in front of the antenna or in areas predicted to exceed general population exposure limits by 100%. Workers should insist that the transmitters be switched off during the work period.

b) RF Safety Training and Awareness: All employees working in areas exceeding the general population limits should have a basic awareness of RF safety measures. Videos, classroom lectures and online courses are all appropriate training methods on these topics.

c) Site Access: Restricting access to transmitting antenna locations is one of the most important elements of RF safety. This can be done with:
   - Locked doors/gates/ladder access
   - Alarmed doors
   - Restrictive barriers

d) Three-foot Buffer: There is an inverse relationship between the strength of the field and the distance from the antenna. The RF field diminishes with distance from the antenna. Workers should maintain a three-foot distance from the antennas.

e) Antennas: Workers should always assume that the antenna is transmitting and should never stop right in front of the antenna. If someone must pass by an antenna, he/she should move quickly, thus reducing RF exposure.

Attachment 1: AT&T Exposure Analysis

AT&T 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.5**
	Exposure values at the site (mW/cm^2)	**0.0024**
	% Exposure	**0.48%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.3**
	Exposure values at the site (mW/cm^2)	**0.0024**
	% Exposure	**0.10%**

AT&T 850 MHz UMTS		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.09%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.02%**

AT&T 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.09%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.02%**

AT&T 850 MHz 5G		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.09%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.02%**

AT&T 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0020**
	% Exposure	**0.20%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0020**
	% Exposure	**0.04%**

AT&T 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0021**
	% Exposure	**0.21%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0021**
	% Exposure	**0.04%**

7. Appendix A: FCC Guidelines

FCC Policies

The Federal Communications Commission (FCC) in 1996 implemented regulations and policies for analysis of RF propagation to evaluate RF emissions. All the analysis and results of this report are compared with FCC's (Federal Communications Commission) rules to determine whether a site is compliant for Occupational/Controlled or General Public/Uncontrolled exposure. All the analysis of RF propagation is done in terms of a percentage. The limits primarily indicate the power density and are generally expressed in terms of milliwatts per centimeter square, mW/cm^2.

FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the scenario/ situation in which that exposure takes place or the status of the individuals who are subjected to that exposure. The decision as to which tier is applied to a scenario is based on the following definitions:

Occupational / Controlled

These limits apply in situations when someone is exposed to RF energy through his/her occupation, is fully aware of the harmful effects of the RF exposure and has an ability to exercise control over this exposure. Occupational / controlled exposure limits also apply when exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. limits for Occupational/Controlled exposure can be found on Table 1(A).

General Population / Uncontrolled

These limits apply to situations in which the general public may be exposed or in which persons who are exposed because of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure to RF. Therefore, members of the general public would always be considered under this category, for example, in the case of a telecommunications tower that exposes people in a nearby residential area. Exposure limits for General Population/Uncontrolled can be found on Table 1(B).

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

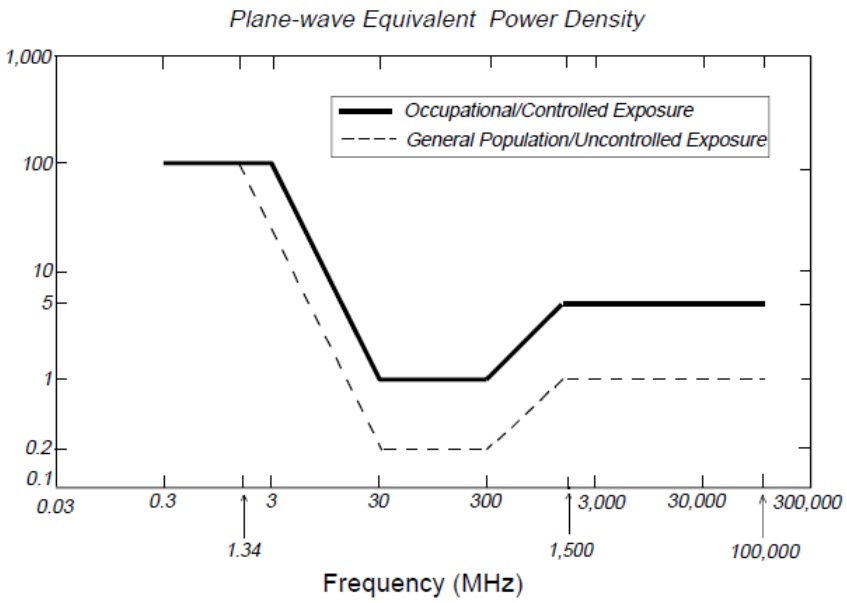
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	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

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



OSHA Statement:

The objective of the OSHA Act is to ensure the safety and health of the working men and women by enforcing certain standards. The act also assists and encourages the states in their efforts to ensure safe and healthy working conditions through means of research, information, education and training in the field of occupational safety and health and for other purposes.

According to OSHA Act section 5, important duties to be considered are:

(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 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.

8. Appendix B: Preparer Certification

I, Tim Harris, preparer of this report, certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commission and the Occupational Safety and Heath Administration regarding Human Exposure to Radio Frequency Radiation. In addition, I have been trained in 1) RF safety and 2) RF modeling using RoofView modeling software.

I certify that the information contained in this report is true and correct to the best of my knowledge.

Timothy A. Harris *10/6/2019*

Signature Date

10/07/2019

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Town of Lyme

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Details

Print

Property

Address	322 BEAVER BROOK RD
ID	52/11

Ownership

Name	YOUNG RUTH E
Address	322 BEAVER BROOK RD RD 3 LYME, CT 06371

Valuation

Total	$139,360
Land	$78,160
Last Sale	$0 on 1950-06-26
Book/Page	55/372

Land

Zoning	RU80
Land Use Code	0101