October 28, 2020

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

Regarding: Notice of Exempt Modification – New Cingular Wireless PCS, LLC ("AT&T")
Property Address: 1662 Route 184 Gold Star Highway, Groton, CT 06340
AT&T Site: CTL02383 / FA: 10087528

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 on an existing 150 ft Monopole tower at the above-referenced address. SBA Communications Corp. owns said tower facility.

AT&T now intends to modify its exiting telecommunications facility by swapping six (6) panel antennas and six (6) RRUs. In addition, AT&T plans to install one (1) additional DC/Fiber surge, remove six (6) coax lines and install DC/Fiber cables in its place as well as a handrail kit to reinforce the existing platform mounting system.

This modification/proposal includes B2, B5, and B12 hardware that is both 4G(LTE) and 5GNR capable through remote software configuration and either or both services may be turned on or off at various times.

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 Patrice Granatosky, Mayor, and Jon Reiner, Planning and Development Director. A copy of this letter is also being sent to SBA Communications Corporation, Tower Owner and Chester G. Crouch, Property Owner.

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 128-foot level of the 150-foot monopole.
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.
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).

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,

85 Rangeway Road
Bldg. 3, Suite 102
Billerica, MA 01862

Sharon R. Keefe
Project Manager – AT&T New England
sharon.Keefe@smartlinkgroup.com
c. 978-930-3918
www.smartlinkgroup.com

Enclosures:

1. Field Card and GIS Map
2. Construction Drawings
3. Structural Analysis
4. Mount Analysis
5. RF Emissions Analysis Report

With Copies To:

John Burt, Town Manager
Office of the Town Manager
Town Hall
45 Fort Hill Road
Groton, CT 06340
860-441-6630

Jon Reiner, Planning and Development Director
Town Hall
45 Fort Hill Road
Groton, CT 06340
860-446-5995

SBA Communications Corporation, Tower Owner
8051 Congress Ave.
Boca Raton, FL 33487
800-487-7483

Chester G. Crouch Jr., Property Owner
603 Princeton St.
Brandon, FL 33511

Farm Property Card

Print Date: 11/5/2020

Card 1 Of 1

Account	Location	Grand List Code	Zoning	Acres
270013126797	1662 GOLD STAR HWY	FARM	RU-40	32.248

District	Neighborhood	Deed Book/Page	Use Code
CENTER GROTON	1010	1100/751	PA FOREST

Current Owner

CROUCH CHESTER G JR
603 PRINCETON ST
BRANDON FL 33511

Residential Building Information

Style:	RAISED RANCH
Exterior:	FRAME
Attic:	NONE
Stories:	1
Basement:	FULL
Year Built:	1957
Tot Living Area:	1614 SqFt.
Fuel:	OIL
Heating:	BASIC
System:	HOT WATER
Bedrooms:	4
Full Baths:	2
Half Baths:	

Valuation

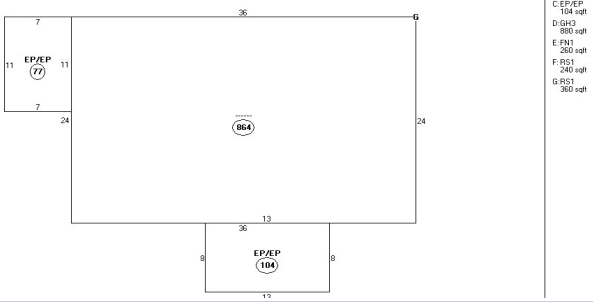
Land:	$148,400
Building:	$119,300
Total:	$267,700
Assessed Value:	$187,360

Recent Sales

Book/Page	Date	Price
1100/751	9/26/2012	$0
1013/844	7/10/2008	$0

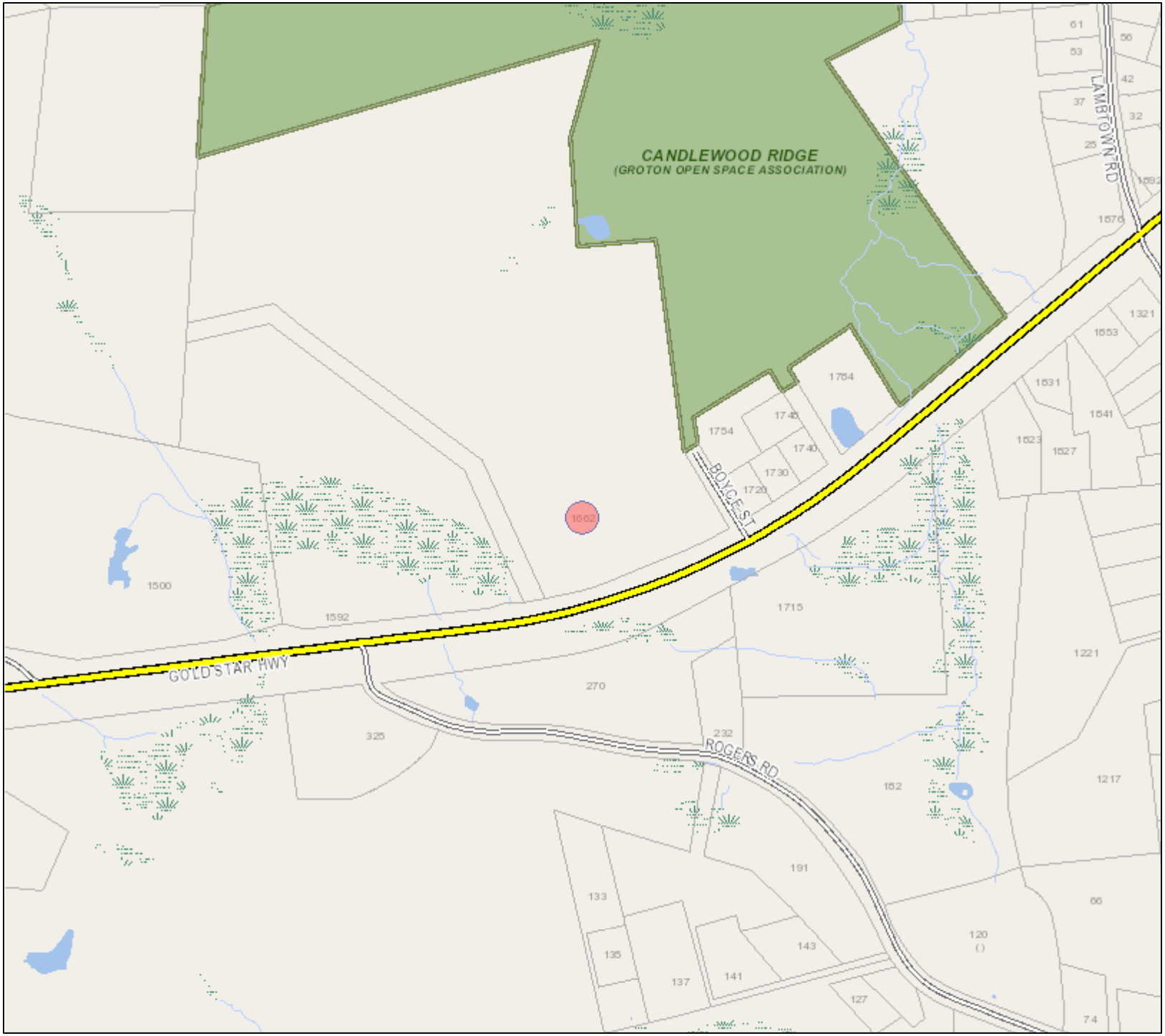
Property Picture

Building Sketch



Sketch Legend

----	Main Living Area	1SMA	Masonry	GRHS	Attached Greenhouse
1FR	Frame	OMP	Open Masonry Porch	CAT	Cathedral Ceiling
OFP	Open Frame Porch	EMP	Enclosed Msry Porch	SOP	Screen Open Frame Prch
EFP	Enclosed Frame Porch	MUB	Masonry Utility	SMP	Screen Open Msnry Prch
FUB	Frame Utility Building	MB	Masonry Bay	CPAT	Concrete Patio
FB	Frame Bay	MOH	Masonry Overhang	B	Basement
FG	Frame Garage	.5MA	1/2 Story Masonry		
FOH	Frame Overhang	MP	Masonry Patio		
.5FR	1/2 Story Frame	WD	Wood Deck		
A(U)	Attic (Unfinished)	CPY	Canopy		
A(F)	Attic (Finished)				



Town of Groton

GIS Map

Disclaimer:

The planimetric and topographic information depicted on this map was compiled by The Sanborn Map Company based on an aerial flight performed in April 2009. The parcel and property line information depicted on this map has been compiled from recorded deeds, maps, assessor records, and other sources of information in the Town of Groton. The intent of this map is to depict graphical representation of real property information relative to the planimetric features for the Town of Groton and is subject to change as a more accurate survey may disclose. The Town of Groton and the mapping companies assume no legal responsibility for the information contained in this data.
THIS MAP IS NOT TO BE USED FOR THE TRANSFER OF PROPERTY.

Horizontal Datum:
Connecticut State Plane Coordinates, North American Datum of 1983 (NAD83 Feet).

Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)

N
W E
S

1 inch = 417 feet

Date: November 05, 2020

Map Created using the Town of Groton, Connecticut GIS Web Application

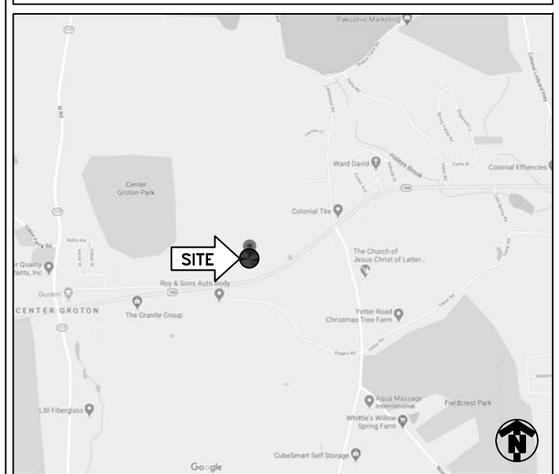
SHEET INDEX

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I-90 WEST/MASSACHUETTS TURNPIKE. HEAD NORTHWEST 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 GRISWOLD EXPY IN GRISWOLD. TAKE EXIT 22 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 22 FOR CT-138 TOWARD CT-164/JEWETT CITY/GRISWOLD. TAKE CT-164 SOUTH AND CT-117 SOUTH TO CT-184 EAST IN GROTON. CONTINUE STRAIGHT ONTO GRISWOLD EXPY. TURN LEFT ONTO CT-164 SOUTH. TURN RIGHT ONTO CT-2 WEST. TURN LEFT ONTO MATHEWSON MILL ROAD. CONTINUE ONTO CHURCH HILL ROAD. TURNLEFT ONTO CT-117 SOUTH. TURN LEFT ONTO CT-184 EAST.

LOCATION MAP



PROJECT

LTE 2C/3C/5G NR/RETROFIT

SITE NAME

GROTON NORTH ROUTE 184

CELL SITE ID

CTL02383

FA SITE NUMBER

10087528

PACE ID

MRCTB047225/MRCTB047208/MRCTB047262
MRCTB048182/MRCTB048181

SITE ADDRESS

1662 ROUTE 184 DUP 1
GROTON, CT 06340

STRUCTURE TYPE

MONOPLE

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 10/05/2020 V5.00):

- 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
- REMOVE (6) COAX CABLES
- INSTALL (1) DC/FIBER 'SQUID' WITH (1) FIBER AND (2) DC CABLES
- INSTALL NEW HANDRAIL KIT

GROUND

- ADD 6630
- ADD IDLe CABLE
- ADD UMTS HOME RUN

PROJECT SUMMARY

SITE NAME:	GROTON NORTH ROUTE 184	
CELL SITE ID:	CTL02383	
FA SITE #:	10087528	
SITE ADDRESS:	1662 ROUTE 184 DUP 1 GROTON, CT 06340	
COUNTY:	NEW LONDON	
SITE COORDINATES: LATITUDE:	41.3856944° N	(NAD 83)
LONGITUDE:	72.0133056° W	(NAD 83)
RAD CENTER	±128'	(AGL)
LANDLORD:	SBA	
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:	SHARON KEEFE (978) 930-3918	
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 — 24705 — LICENSED PROFESSIONAL ENGINEER — 10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

Project Title:
GROTON NORTH ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/27/20

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

at&t

STATE OF CONNECTICUT
THOMAS STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

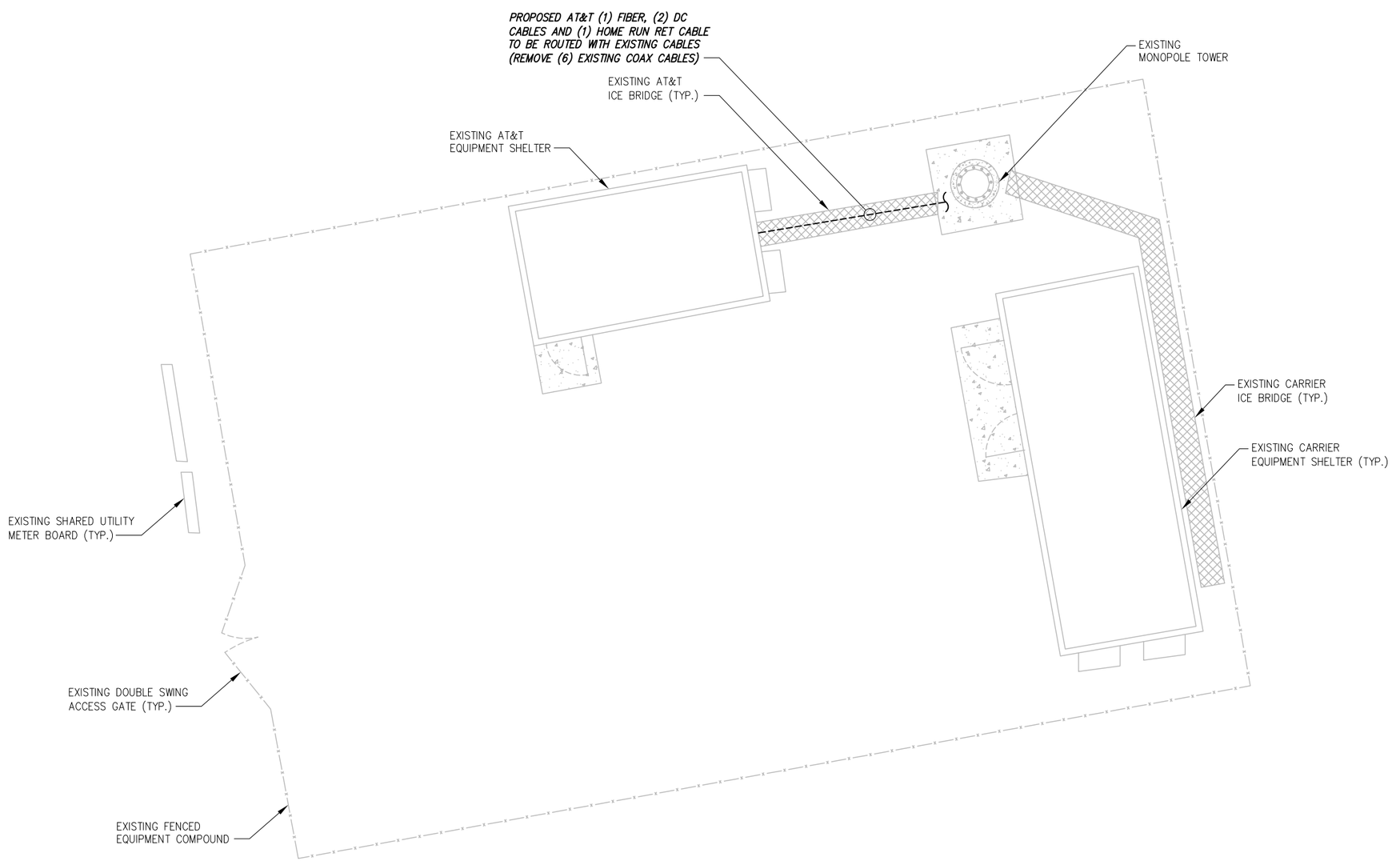
Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/27/20
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

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

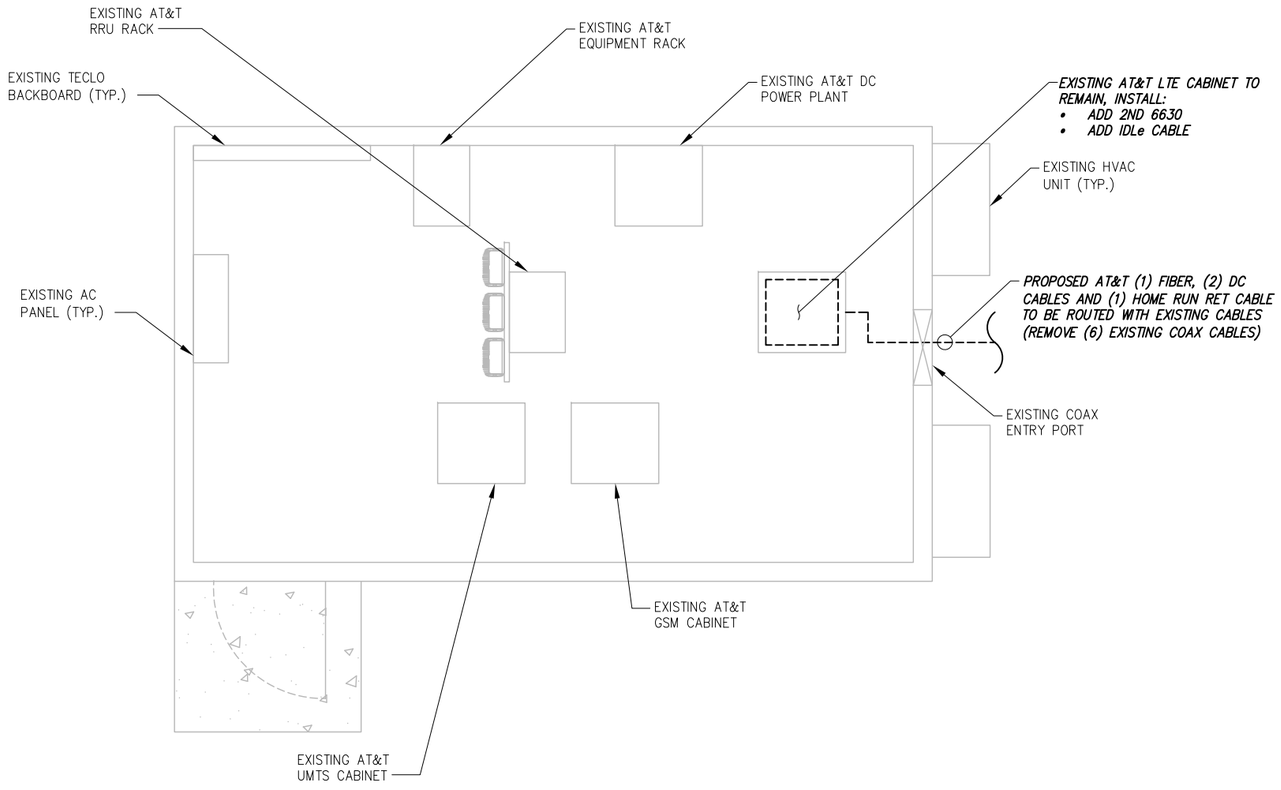
Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/27/20
CD

Drawing Title
OVERALL SITE PLAN

Drawing Number
C2



1 — ENLARGED SITE PLAN
SCALE: AS NOTED

TRUE NORTH

GRAPHIC SCALE:
4' 2' 0 2' 4'
SCALE (11x17): 1" = 4'-0"
SCALE (22x34): 1" = 2'-0"

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
24705
LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

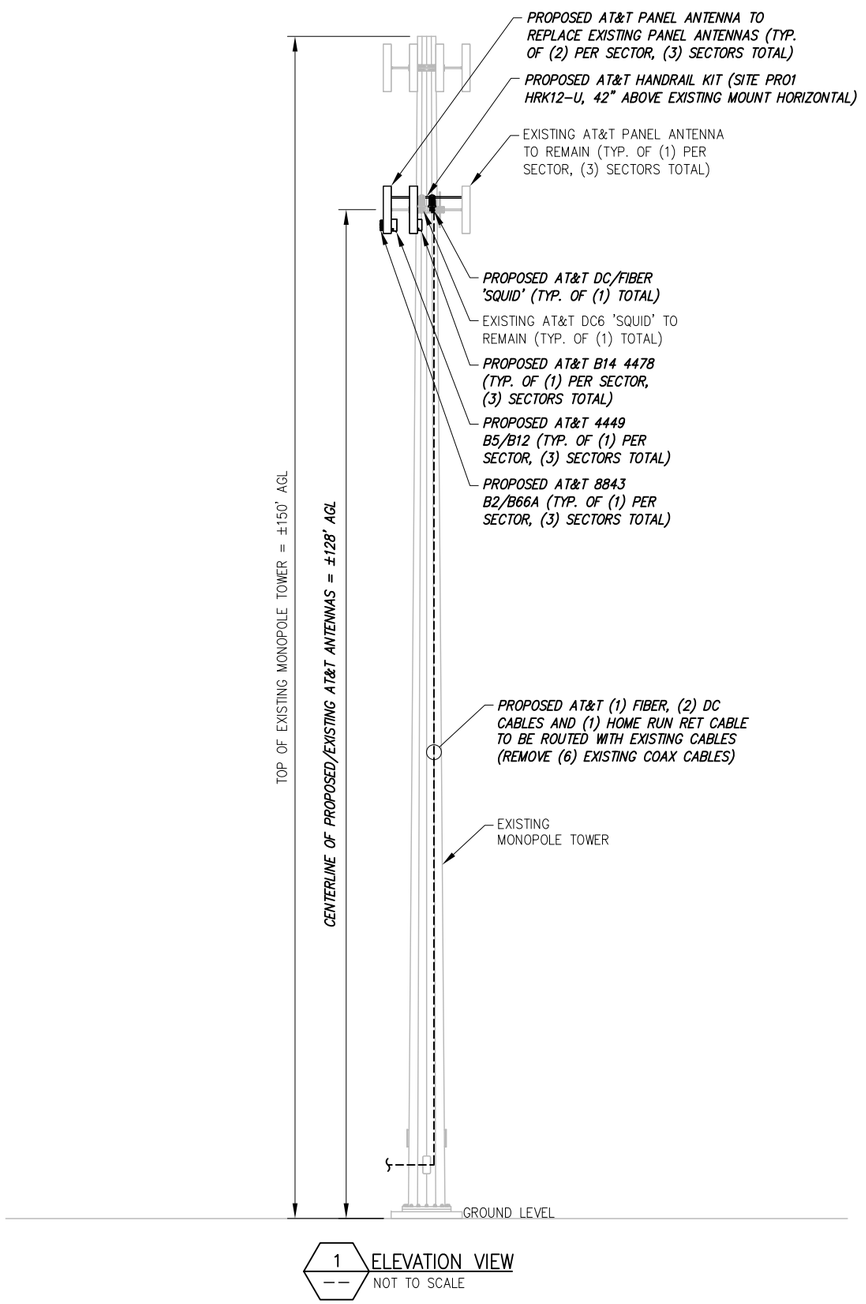
Drawing Scale: AS NOTED
Date: 10/27/20
CD

Drawing Title
ENLARGED SITE PLAN

Drawing Number
C2A

NOTE:
- *INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.*
- *FOR STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE 'MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 10/23/20. INSTALL SITE PRO1 HRK12-U HANDRAIL KIT, 42" ABOVE EXISTING MOUNT HORIZONTAL.*

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 10/05/20, V 5.00

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 7770	(2) (E) LGP21401	--	0°	±128'	(2) (E) 1-5/8 COAX CABLES	±150'	(1) (E) DC6 'SQUID' (1) (P) DC/FIBER 'SQUID'
	A-2	--	--	--	--	--	--	--	--	
	A-3	(P) LTE 700/1900	CCI HPA-65R-BU4AA	--	(1) (P) B14 4478	0°	±128'	(2) (P) DC CABLES (1) (P) FIBER CABLE	--	
	A-4	(P) LTE 700/850/ AWS/5G 850	CCI DMP65R-BU4DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	0°	±128'	SEE A-3 FOR CABLE INFORMATION	--	
BETA	B-1	(P) LTE 700/850/ AWS/5G 850	CCI DMP65R-BU8DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	110°	±128'	SEE A-3 FOR CABLE INFORMATION	--	
	B-2	(P) LTE 700/1900	CCI HPA-65R-BU8AA	--	(1) (P) B14 4478	110°	±128'	SEE A-3 FOR CABLE INFORMATION	--	
	B-3	--	--	--	--	--	--	--	--	
	B-4	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	120°	±128'	(2) (E) 1-5/8 COAX CABLES	±150'	
GAMMA	G-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	240°	±128'	(2) (E) 1-5/8 COAX CABLES	±150'	
	G-2	--	--	--	--	--	--	--	--	
	G-3	(P) LTE 700/1900	CCI HPA-65R-BU8AA	--	(1) (P) B14 4478	240°	±128'	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	240°	±128'	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

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

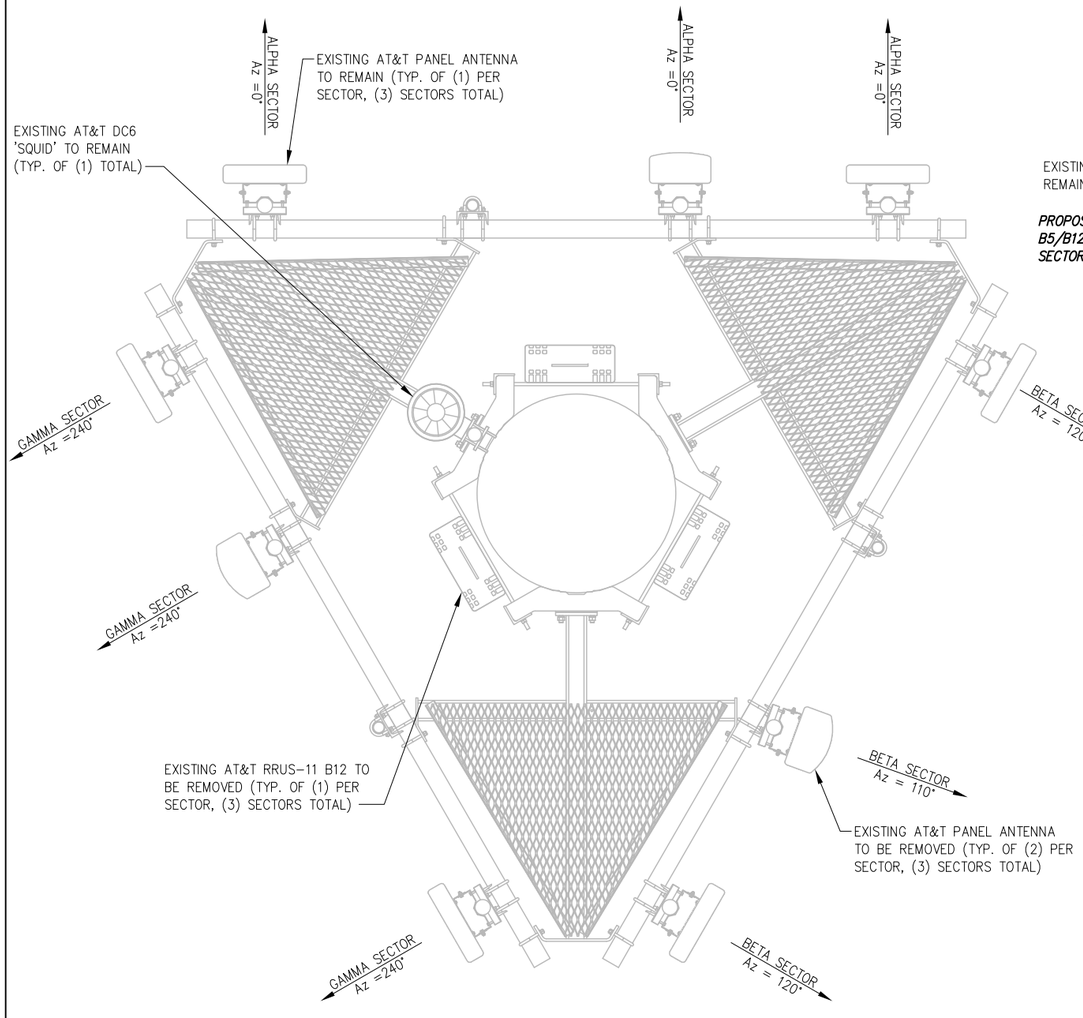
Drawing Scale: AS NOTED
Date: 10/27/20
CD

Drawing Title
ELEVATION VIEW

Drawing Number
C3

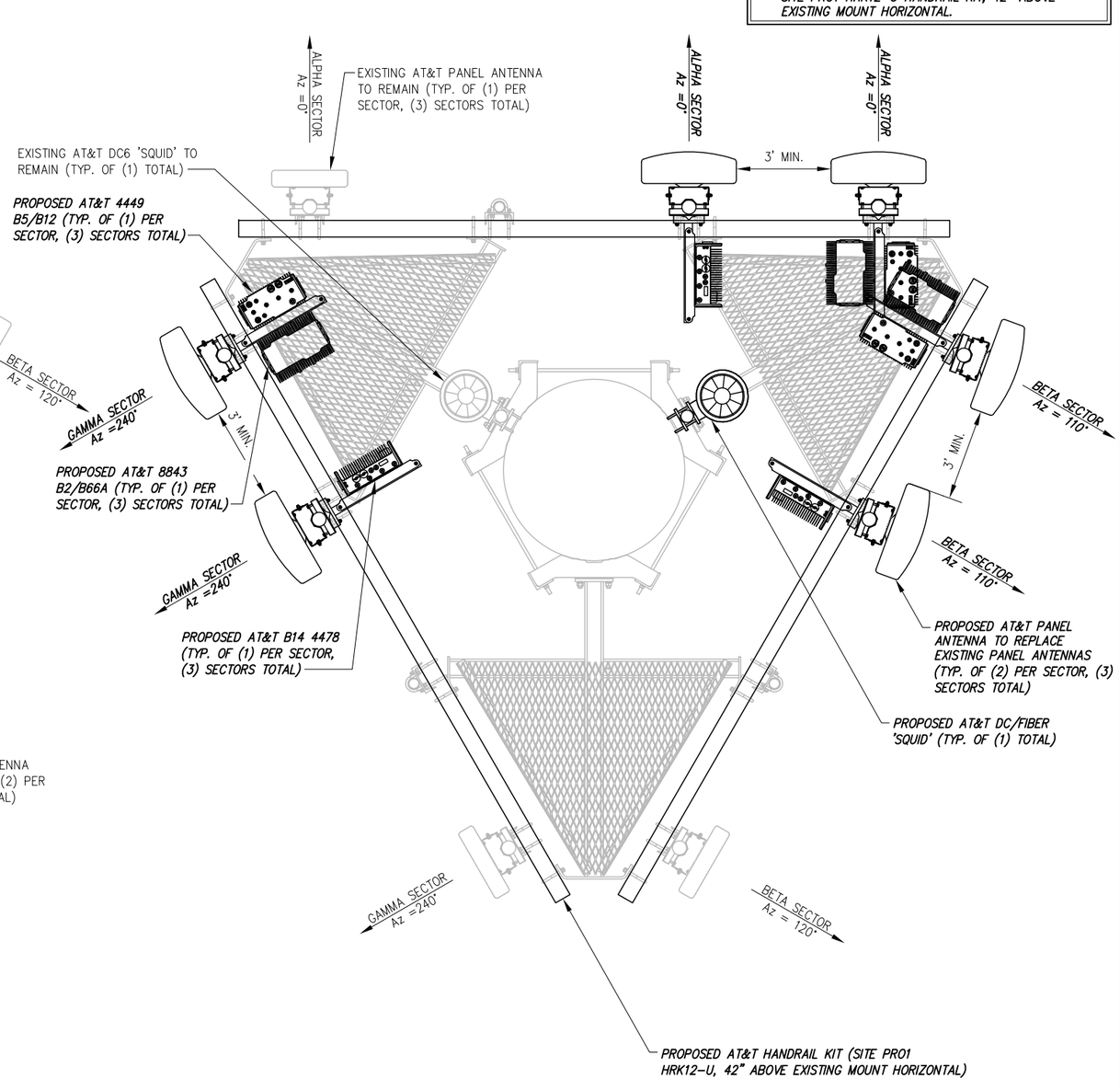
NOTE:
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:
- *INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.*
- *FOR STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE 'MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 10/23/20. INSTALL SITE PRO1 HRK12-U HANDRAIL KIT, 42" ABOVE EXISTING MOUNT HORIZONTAL.*



TRUE NORTH

1 EXISTING ANTENNA ORIENTATION PLAN
NOT TO SCALE



TRUE NORTH

2 PROPOSED ANTENNA ORIENTATION PLAN
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 24705 LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

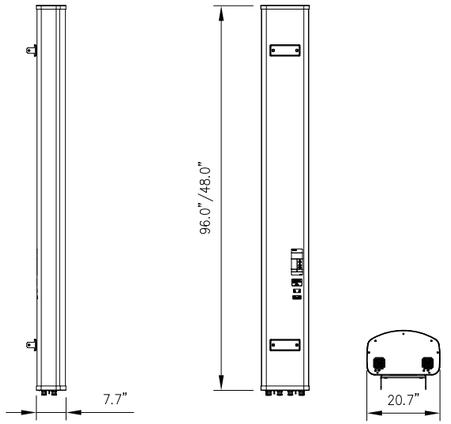
Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/27/20
CD

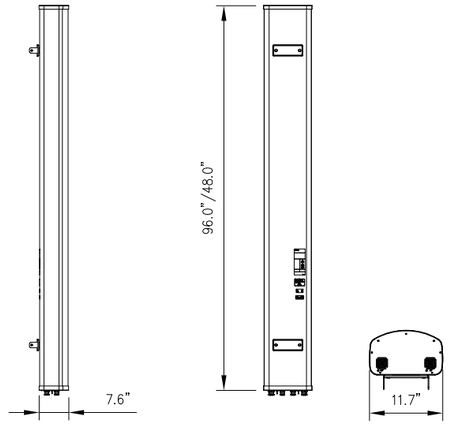
Drawing Title
ANTENNA ORIENTATION PLAN

Drawing Number
C4



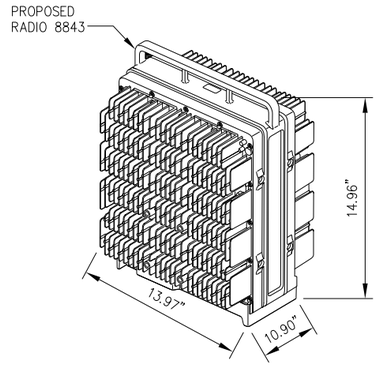
CCI MODEL NO.:	DMP65R-BU8DA/DMP65R-BU4DA
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	96.0"x20.7"x7.7"/48.0"x20.7"x7.7"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	95.7 LBS/67.9 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
NOT TO SCALE



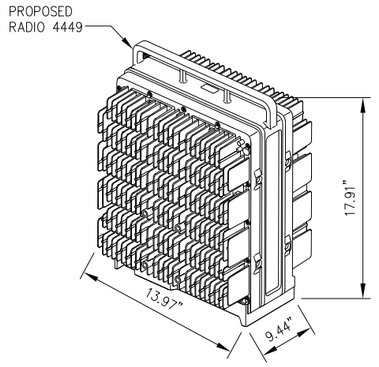
CCI MODEL NO.:	HPA-65R-BU8AA/HPA-65R-BU4AA
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	96.0"x11.7"x7.6"/48.0"x11.7"x7.6"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	54.0 LBS/28.7 LBS
CONNECTOR:	7-16 DIN FEMALE

2 ANTENNA DETAIL
NOT TO SCALE



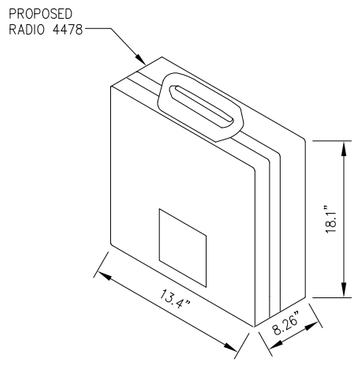
RADIO 8843 SPECIFICATIONS
- HxWxD, (INCHES) : 14.96"x13.97"x10.90"
- WEIGHT (LBS) : 71.87
- COLOR : GRAY

3 ERICSSON RADIO 8843 DETAIL
NOT TO SCALE



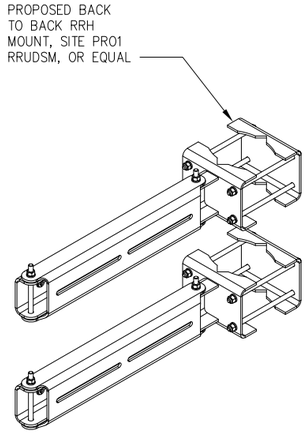
RADIO 4449 SPECIFICATIONS
- HxWxD, (INCHES) : 17.91"x13.97"x9.44"
- WEIGHT (LBS) : 70.54
- COLOR : GRAY

4 ERICSSON RADIO 4449 DETAIL
NOT TO SCALE

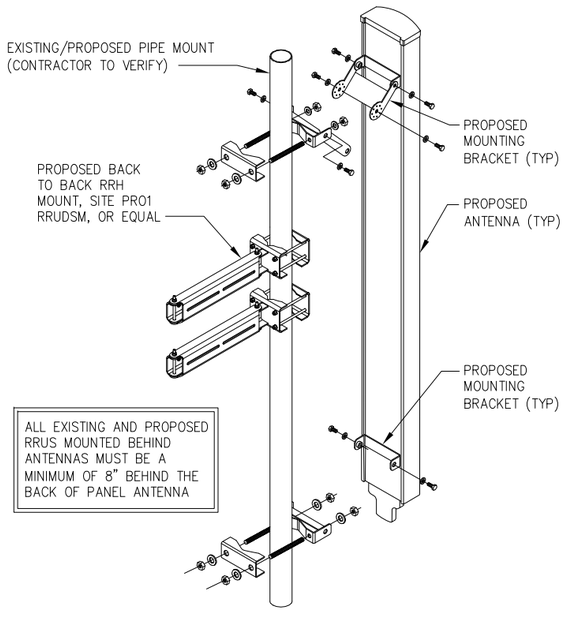


RADIO 4478-B14 SPECIFICATIONS
- HxWxD, (INCHES) : 18.1"x13.4"x8.26"
- WEIGHT (LBS) : 59.5
- COLOR : GRAY
- MOUNTING BRACKET: SXK1250244/1

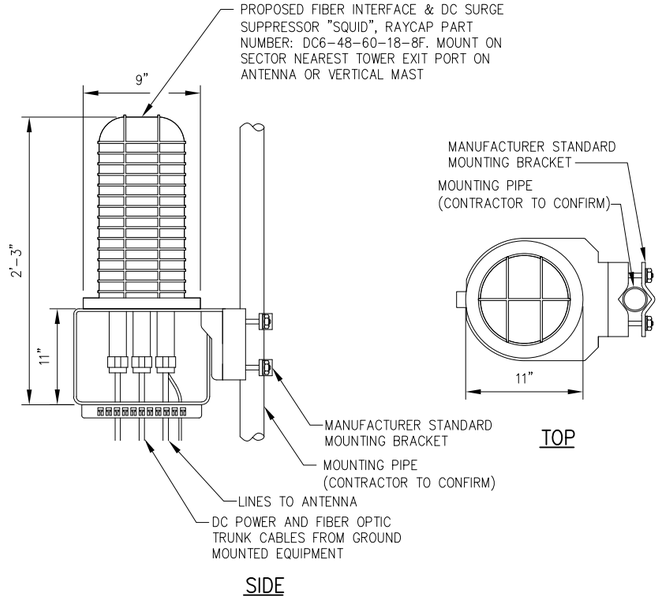
5 ERICSSON RADIO 4478-B14 DETAIL
NOT TO SCALE



6 BACK TO BACK PIPE MOUNT DETAIL
NOT TO SCALE



7 ANTENNA MOUNTING DETAIL
NOT TO SCALE



8 SQUID DETAIL
NOT TO SCALE

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
24705
LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

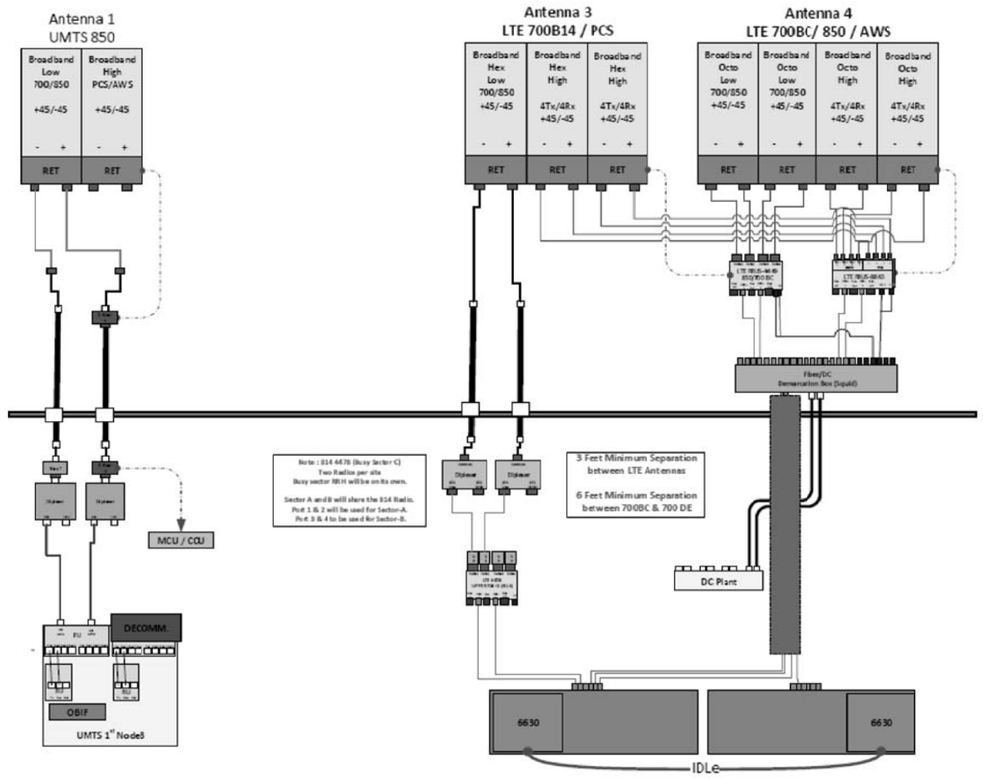
Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

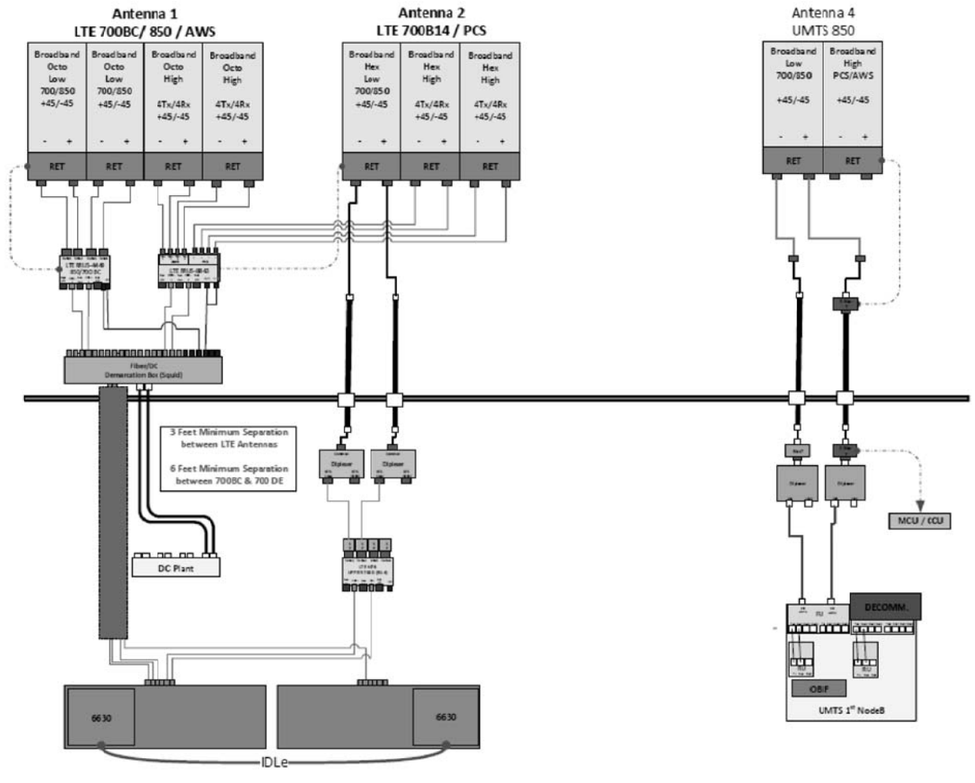
Drawing Scale: AS NOTED
Date: 10/27/20
CD

Drawing Title
EQUIPMENT DETAILS

Drawing Number
C5



ALPHA AND GAMMA SECTOR



BETA SECTOR

ALPHA/BETA/GAMMA

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)
NOT TO SCALE

*BASED ON LTE RFDS, DATED 10/05/2020, V5.00

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

at&t

STATE OF CONNECTICUT
BRIAN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

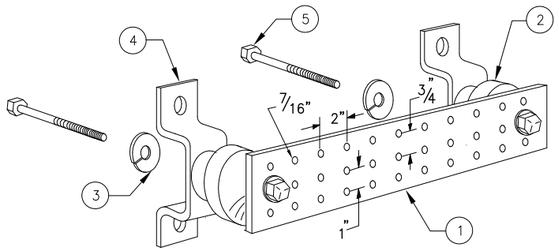
Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/27/20
CD

Drawing Title
PLUMBING DIAGRAM

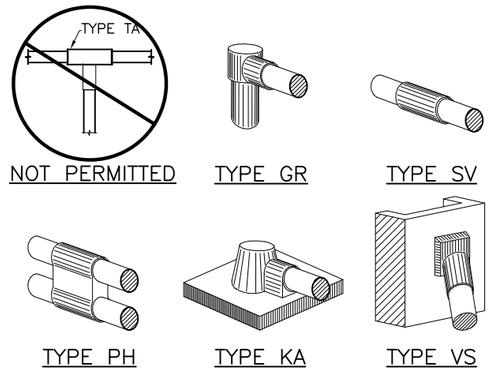
Drawing Number
C6



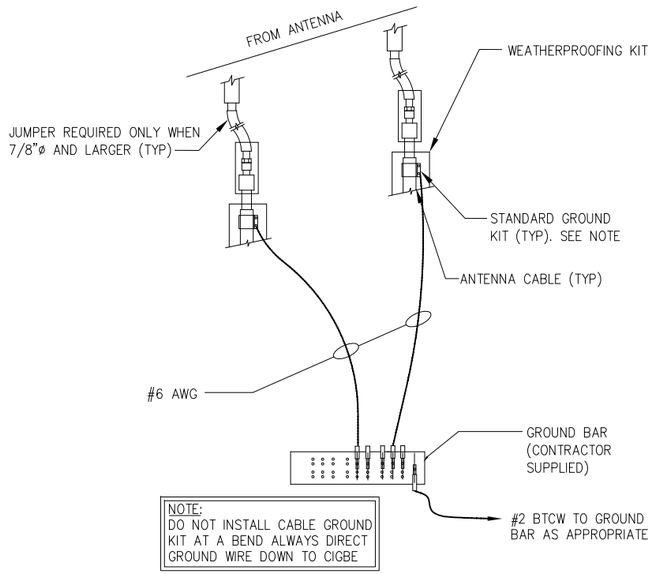
LEGEND

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"

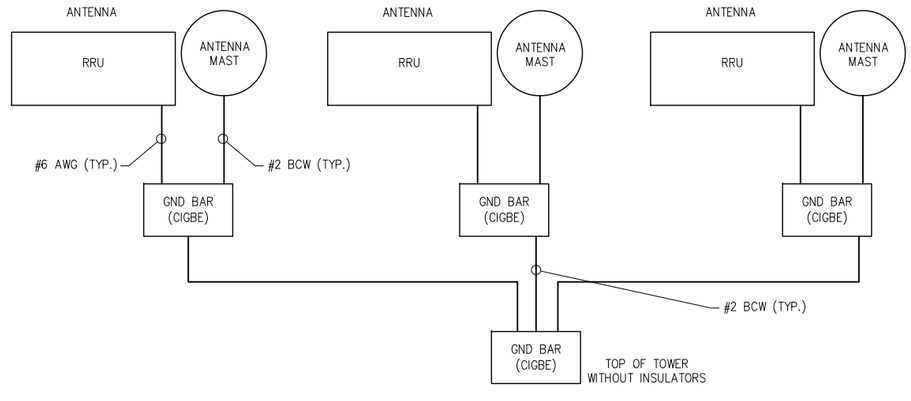
1 GROUND BAR
NOT TO SCALE



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
24705
LICENSED PROFESSIONAL ENGINEER
10-27-2020

No.	Submittal / Revision	App'd	Date
3	REVISED FOR PERMIT	BMM	10/27/20
2	REVISED FOR PERMIT	BMM	10/08/20
1	ISSUED FOR PERMIT	BMM	09/02/20
0	ISSUED FOR REVIEW	BMM	07/29/20

Drawn: BMM Date: 07/29/20
Designed: ASW Date: 07/29/20
Checked: ASW Date: 07/29/20

Project Number: 499-006

Project Title:
GROTON NORTH
ROUTE 184
CTL02384
FA# 10087528
1662 ROUTE 184 DUP 1
GROTON, CT 06340

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 10/27/20
CD

Drawing Title
GROUNDING DETAILS

Drawing Number
C7

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
F + 561 995 7626

sbasite.com

Structural Analysis Report

Client: AT&T

Client Site ID / Name: CTL02383 / Groton North RT184
Application #: 135031, v2

SBA Site ID / Name: CT13073-A / Groton North

150 ft Monopole

1662 Route 184
Groton, Connecticut 06340
Lat: 41.385667, Long: -72.013306

Project number: CT13073-ATT-102020

Analysis Results

Tower	67.0%	Pass
Foundation	61.0%	Pass

Change in tower stress due to mount modification / replacement	N/A

Prepared by:

Anwar Yasin, E.I.
Structural Engineer I
561-981-9964
Ayasin@sbasite.com

Reviewed by:

Nitesh Ahuja, P.E.
Director of Engineering
561-226-9452
nahuja@sbasite.com

STATE OF CONNECTICUT
NITESH AHUJA
No. 27942
LICENSED
PROFESSIONAL ENGINEER

10/26/2020

October 20, 2020

Table of Contents

Introduction

The purpose of this report is to summarize the analysis results on the 150 ft Monopole to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Radian, File # 060-3663, 57974EH, dated March 16, 2007
Foundation drawings	Radian, File # 060-3663, 57974EH, dated March 16, 2007
Geotechnical report	Gemini Geotechnical Associates, Inc., Project No. 07022CT, dated March 13, 2007
Latest SA	TES, Project # 70399 Rev1, dated February 27, 2019

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut / New London / Groton
Governing Codes	ANSI/TIA/EIA 222-G, 2015 IBC, 2018 CT Building Code
Basic Wind Speed (3-Sec gust)	105.0 mph (Ultimate Wind Speed: 135 mph)
Wind Speed with Ice (3-Sec gust)	50 mph
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	0.75”
Structural Class *	II
Exposure Category	B
Topographic Category	1
Crest Height	0 ft
Ground Elevation	242.31 ft.
Seismic Parameter S_s**	0.161
Seismic Parameter S_1	0.058

*This structural analysis is based upon the tower being classified as a structural class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

**Earthquake effects were ignored as per section 2.7.3 of the TIA-222-G code provisions for $S_s < 1.0$.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	149.0	3	Amphenol Antel - BXA-70063-6CF - Panel	Low Profile Platform	(13) 1 5/8"	Verizon
2		3	Andrew - HBXX-6517DS-VTM - Panel			
3		3	Andrew - HBXX-6516DS-VTM - Panel			
4		3	Andrew - LNX-6512DS-A1M - Panel			
5		1	DB-T1-6Z-8AB-0Z			
6		3	ALU RRH 2x60 AWS			
7		6	RFS FD9R6004/2C-3L Diplexer			
8	137.0	3	Ericsson - Air 3246 B66 - Panel	Low Profile Platform [Site Pro1 RMQP-4096-HK]	(3) 1 5/8" Fiber	T-Mobile
9		3	RFS - APXVAARR24_43-U-NA2 - Panel			
10		3	RFS - APX16DWV-16DWV-S-E-A20 - Panel			
11		3	Ericsson Radio 4449 B71+B12			
12		3	Ericsson Radio 2217 B2			
13		4	Ericsson Radio 4415 B25			
14	128.0	6	Powerwave 7770 - Panel	Low Profile Platform	(12) 1 5/8" (2) 3/4" DC (1) 5/16" Fiber	AT&T
15		2	Andrew - SBNH-1D6565C - Panel			
16		1	KMW - AM-X-CD-14-65-00T-RET - Panel			
17		6	Powerwave LGP21401 TMA			
18		1	Raycap DC6-48-60-18-8F			
19		6	RRUS-11			
20		6	Powerwave LGP21903 Diplexer			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 135031, v2 from AT&T and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	128.0	3	Powerwave 7770 - Panel	Low Profile Platform	(6) 1 5/8" (4) 3/4" DC (2) 5/16" Fiber	AT&T
2		1	CCI HPA-65R-BU4AA - Panel			
3		1	CCI DMP65R-BU4DA - Panel			
4		2	CCI HPA-65R-BU8AA - Panel			
5		2	CCI DMP65R-BU8DA - Panel			
6		3	Ericsson 4449 B5/B12 RRU			
7		3	Ericsson 8843 B2/B66A RRU			
8		2	Raycap DC6-48-60-18-8F			

Note: AT&T loading includes FirstNET equipment

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

	Pole shafts	Anchor Bolts	Base Plate	Flange Plate
Max. Usage:	40.6%	52.7%	67.0%	49.7%
Pass/Fail	Pass	Pass	Pass	Pass

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	61.0%	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be ***sufficient*** to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

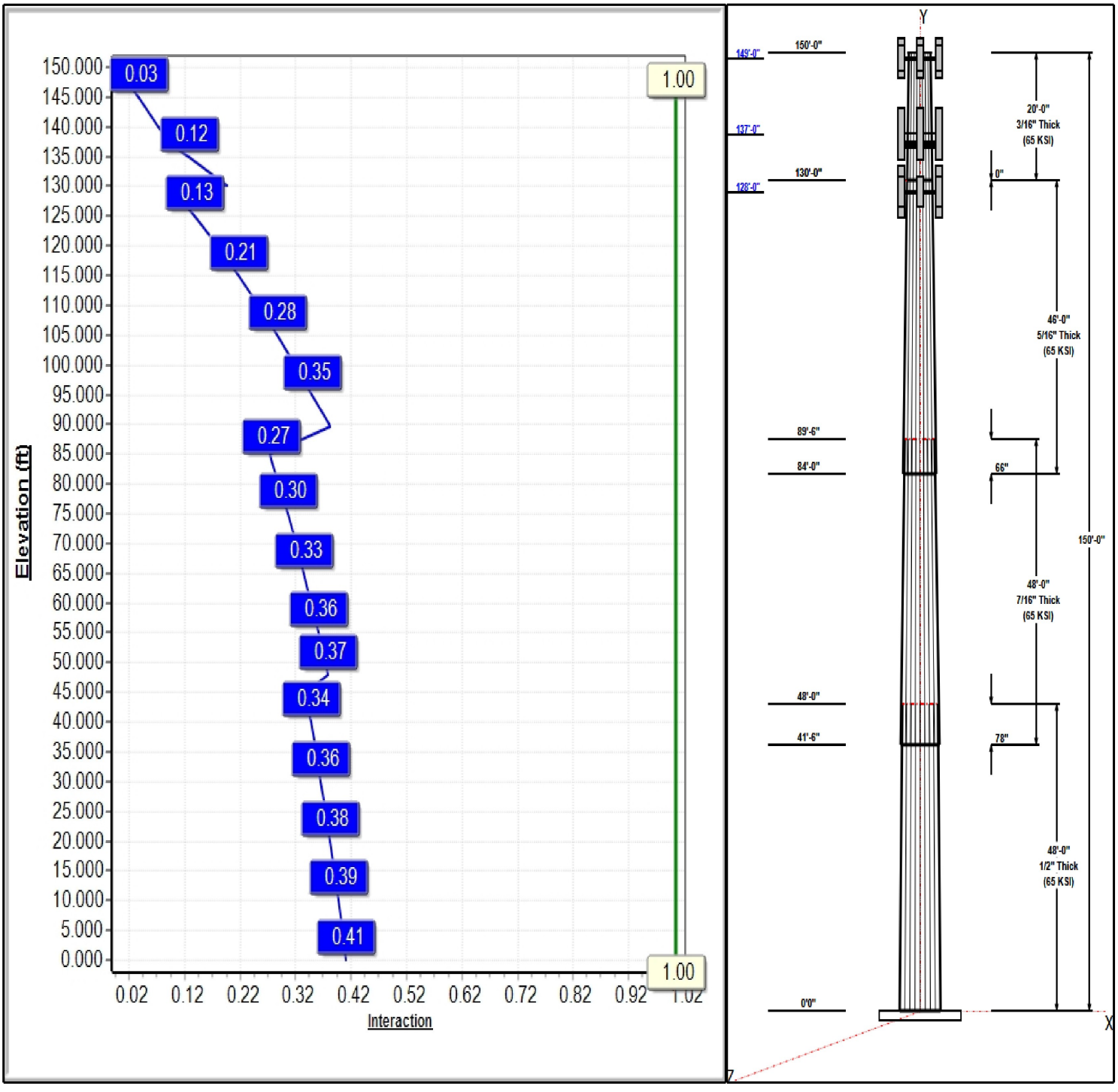
Appendix

Usage Diagram - Max Ratio 40.58% at 0.0ft

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North	**Exposure:**	B	
Height:	150.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

Dead Load Factor:	1.20	**Iterations:**	21
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 105 mph Wind



Structure: CT13073-A

Type: Custom
Site Name: Groton North
Height: 150.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.20967

10/20/2020

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	49.82	60.00	0.500		0.20967	65
2	48.00	42.05	52.23	0.438	Slip	0.20967	65
3	46.00	34.24	44.00	0.313	Slip	0.20967	65
4	20.00	30.00	34.24	0.188	Butt	0.21215	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
149.00	149.00	3	BXA-70063-6CF	Verizon
149.00	149.00	3	HBXX-6517DS-VTM	Verizon
149.00	149.00	3	HBXX-6516DS-VTM	Verizon
149.00	149.00	3	LNX-6512DS-A1M	Verizon
149.00	149.00	1	DB-T1-6Z-8AB-0Z	Verizon
149.00	149.00	3	ALU RRH 2x60 AWS	Verizon
149.00	149.00	6	RFS FD9R6004/2C-3L	Verizon
149.00	149.00	1	Low Profile Platform	Verizon
137.00	137.00	3	Air 3246 B66	T-Mobile
137.00	137.00	3	APXVAARR24_43-U-NA2	T-Mobile
137.00	137.00	3	APX16DWV-16DWV-S-E-	T-Mobile
137.00	137.00	1	RMQP-4096-HK	T-Mobile
137.00	137.00	3	Ericsson Radio 4449	T-Mobile
137.00	137.00	3	Ericsson Radio 2217 B2	T-Mobile
137.00	137.00	4	Ericsson Radio 4415 B25	T-Mobile
128.00	128.00	1	CCI DMP65R-BU4DA	AT&T
128.00	128.00	2	CCI DMP65R-BU8DA	AT&T
128.00	128.00	3	Ericsson 4449 B5/B12	AT&T
128.00	128.00	3	Ericsson 8843 B2/B66A	AT&T
128.00	128.00	1	CCI HPA-65R-BU4AA	AT&T
128.00	128.00	2	CCI HPA-65R-BU8AA	AT&T
128.00	128.00	1	Platform	AT&T
128.00	128.00	3	Powerwave 7770	AT&T
128.00	128.00	2	Raycap DC6-48-60-18-8F	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	149.00	Inside	1 5/8" Coax	Verizon
0.00	137.00	Inside	1 5/8" Fiber	T-Mobile
0.00	128.00	Inside	1 5/8" Coax	AT&T
0.00	128.00	Inside	3/4" DC	AT&T
0.00	128.00	Inside	5/16" Fiber	AT&T

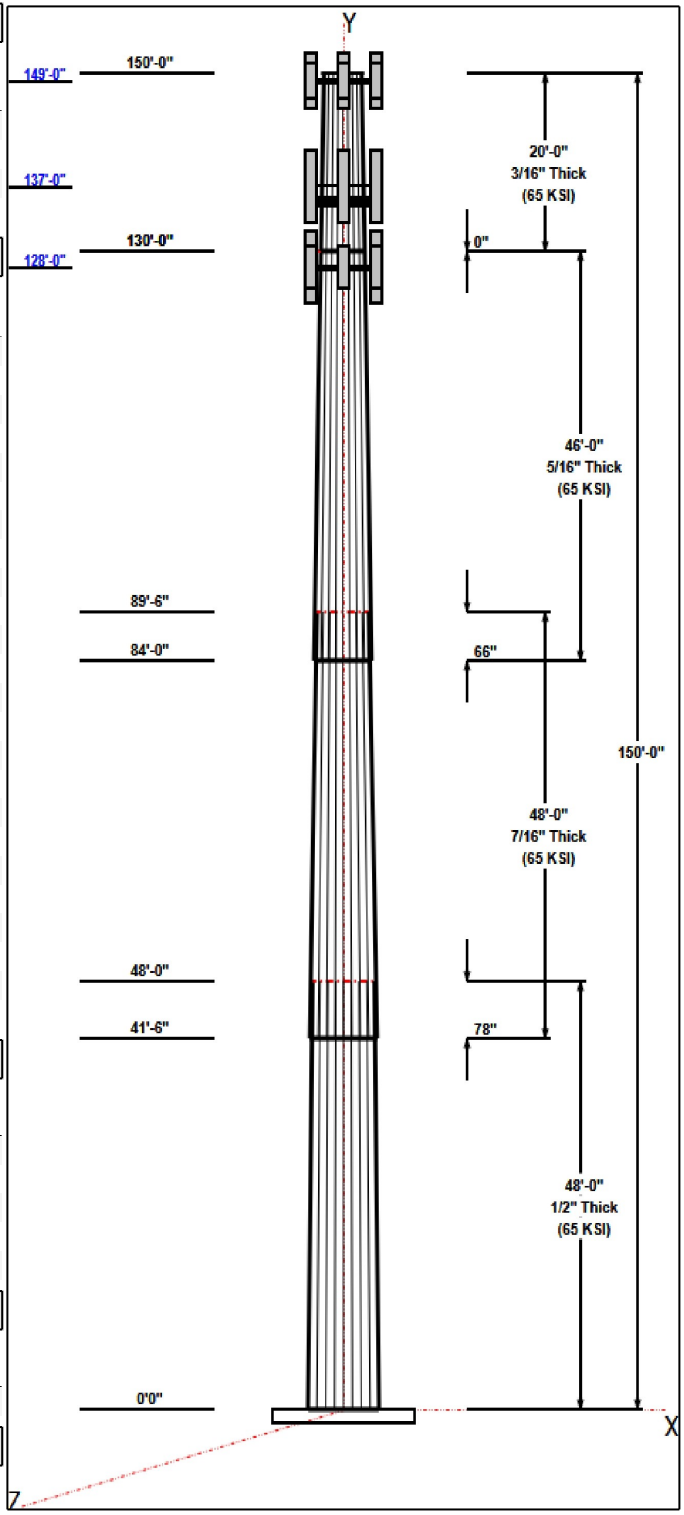
Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
34	1.5" F1554 105	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.7500	69.5	50.0	Round

Reactions

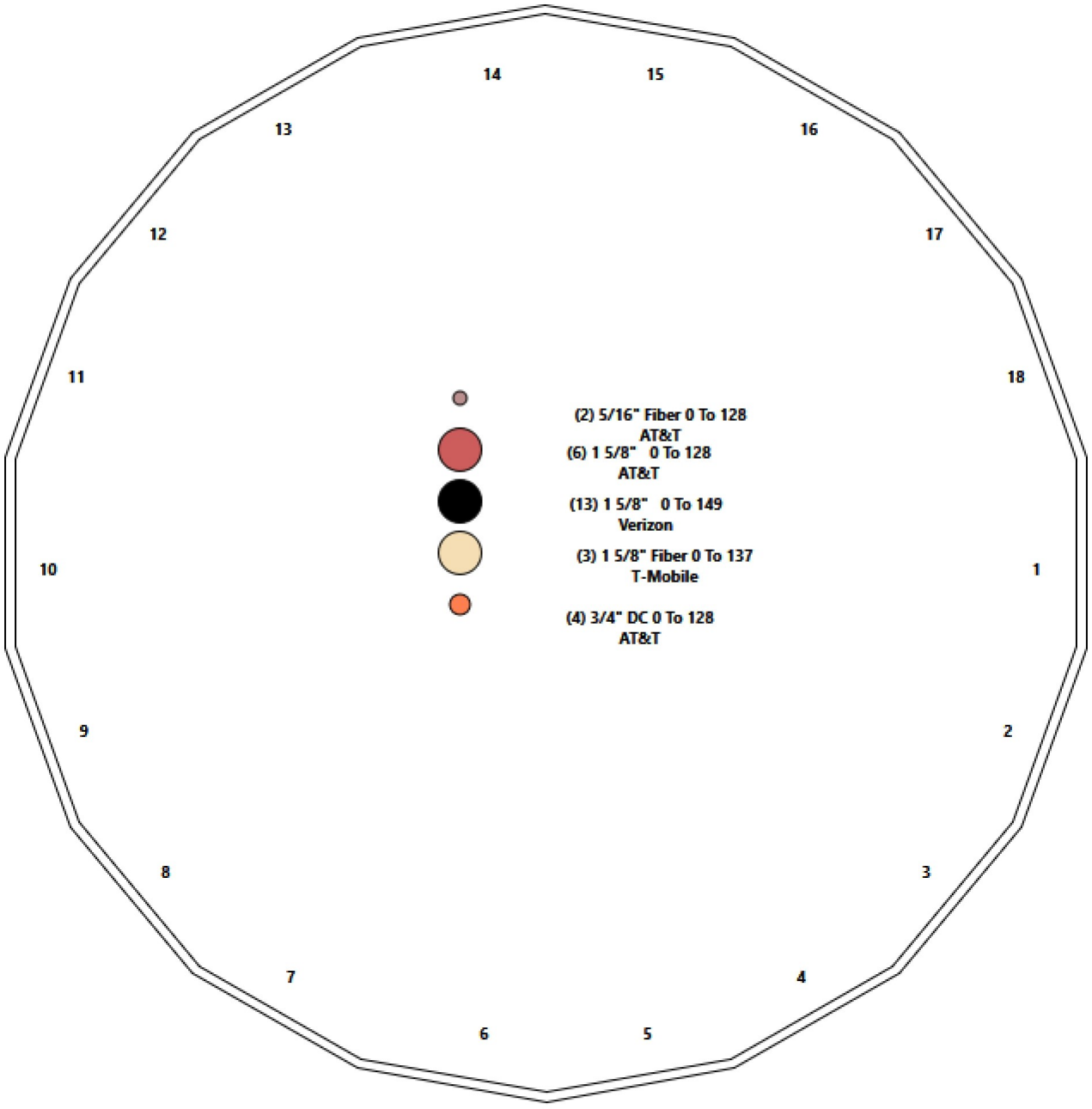


Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 105 mph Wind	3232.9	29.8	53.0
0.9D + 1.6W 105 mph Wind	3212.7	29.8	39.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind	756.7	7.2	78.1
1.2D + 1.0E	205.2	1.8	53.1
0.9D + 1.0E	203.9	1.8	39.8
1.0D + 1.0W 60 mph Wind	657.2	6.1	44.2

Structure: CT13073-A - Coax Line Placement

Type: Monopole
Site Name: Groton North
Height: 150.00 (ft)

10/20/2020



Shaft Properties

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.5000	65		0.00	14,118
2	18	48.000	0.4375	65	Slip	78.00	10,605
3	18	46.000	0.3125	65	Slip	66.00	6,034
4	18	20.000	0.1875	65	Flange	0.00	1,293
					Total Shaft Weight:		**32,051**

	Bottom						Top						
Sec. No.	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Taper**
1	60.00	0.00	94.42	42234.30	19.75	120.00	49.82	48.00	78.45	24223.7	16.20	99.64	0.209669
2	52.23	41.50	71.92	24373.79	19.64	119.38	42.05	89.50	57.94	12747.2	15.58	96.11	0.209669
3	44.00	84.00	43.33	10448.79	23.42	140.80	34.24	130.00	33.76	4943.87	17.97	109.5	0.209669
4	34.24	130.0	20.27	2969.66	30.79	182.63	30.00	150.00	17.74	1992.24	26.80	160.0	0.212150

Load Summary

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 6

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	149.00	BXA-70063-6CF	3	17.00	7.57	0.73	165.20	10.332	0.73	0.00	0.00
2	149.00	HBXX-6517DS-VTM	3	40.70	8.55	0.77	216.82	11.467	0.77	0.00	0.00
3	149.00	HBXX-6516DS-VTM	3	30.60	5.43	0.77	153.82	7.411	0.77	0.00	0.00
4	149.00	LNX-6512DS-A1M	3	28.00	5.09	0.80	149.46	6.979	0.80	0.00	0.00
5	149.00	DB-T1-6Z-8AB-0Z	1	18.90	4.80	1.00	162.51	5.673	1.00	0.00	0.00
6	149.00	ALU RRH 2x60 AWS	3	55.00	3.50	0.67	134.96	4.289	0.67	0.00	0.00
7	149.00	RFS FD9R6004/2C-3L Diplexer	6	3.10	0.36	1.00	11.12	0.803	1.00	0.00	0.00
8	149.00	Low Profile Platform	1	1500.00	22.00	1.00	2808.04	39.650	1.00	0.00	0.00
9	137.00	Air 3246 B66	3	180.00	7.94	0.83	379.73	9.110	0.83	0.00	0.00
10	137.00	APXVAARR24_43-U-NA2	3	128.00	20.24	0.70	541.69	22.122	0.70	0.00	0.00
11	137.00	APX16DWV-16DWV-S-E-A20	3	40.70	6.46	0.62	176.17	7.563	0.62	0.00	0.00
12	137.00	RMQP-4096-HK	1	2645.00	43.01	1.00	5389.66	74.549	1.00	0.00	0.00
13	137.00	Ericsson Radio 4449 B71+B12	3	70.00	1.65	0.67	137.47	2.182	0.67	0.00	0.00
14	137.00	Ericsson Radio 2217 B2	3	27.00	1.35	0.67	61.01	1.821	0.67	0.00	0.00
15	137.00	Ericsson Radio 4415 B25	4	46.00	1.64	0.67	86.73	2.151	0.67	0.00	0.00
16	128.00	CCI DMP65R-BU4DA	1	67.90	8.28	0.71	261.70	9.463	0.72	0.00	0.00
17	128.00	CCI DMP65R-BU8DA	2	95.70	17.87	0.73	483.26	19.626	0.74	0.00	0.00
18	128.00	Ericsson 4449 B5/B12 RRU	3	71.00	1.97	0.86	124.91	2.524	0.87	0.00	0.00
19	128.00	Ericsson 8843 B2/B66A RRU	3	72.00	1.64	0.91	119.20	2.143	0.92	0.00	0.00
20	128.00	CCI HPA-65R-BU4AA	1	28.70	4.92	0.85	153.51	5.850	0.86	0.00	0.00
21	128.00	CCI HPA-65R-BU8AA	2	54.00	11.23	0.86	305.04	12.866	0.87	0.00	0.00
22	128.00	Platform	1	1500.00	22.00	1.00	2788.32	39.384	1.00	0.00	0.00
23	128.00	Powerwave 7770	3	35.00	5.50	0.73	167.57	6.547	0.73	0.00	0.00
24	128.00	Raycap DC6-48-60-18-8F	2	32.80	0.92	1.00	95.57	1.351	1.00	0.00	0.00
		Totals:	**61**	**8,713.10**			**21,329.14**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	149.00	(13) 1 5/8" Coax	0.00	Inside
0.00	137.00	(3) 1 5/8" Fiber	0.00	Inside
0.00	128.00	(6) 1 5/8" Coax	0.00	Inside
0.00	128.00	(4) 3/4" DC	0.00	Inside
0.00	128.00	(2) 5/16" Fiber	0.00	Inside

Shaft Section Properties

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.5000	60.000	94.423	42234.3	19.75	120.00	78.2	1386.	0.0
5.00		0.5000	58.952	92.759	40041.0	19.38	117.90	78.6	1337.	1592.4
10.00		0.5000	57.903	91.096	37925.0	19.01	115.81	79.0	1290.	1564.0
15.00		0.5000	56.855	89.432	35884.8	18.64	113.71	79.5	1243.	1535.7
20.00		0.5000	55.807	87.768	33919.2	18.27	111.61	79.9	1197.	1507.4
25.00		0.5000	54.758	86.105	32026.7	17.90	109.52	80.3	1152.	1479.1
30.00		0.5000	53.710	84.441	30205.9	17.53	107.42	80.8	1107.	1450.8
35.00		0.5000	52.662	82.777	28455.5	17.16	105.32	81.2	1064.	1422.5
40.00		0.5000	51.613	81.114	26774.1	16.79	103.23	81.7	1021.	1394.2
41.50	Bot - Section 2	0.5000	51.299	80.615	26282.9	16.68	102.60	81.8	1009.	412.7
45.00		0.5000	50.565	79.450	25160.2	16.42	101.13	82.1	980.0	1803.6
48.00	Top - Section 1	0.4375	50.867	70.025	22499.9	19.09	116.27	0.0	0.0	1525.3
50.00		0.4375	50.448	69.443	21943.3	18.92	115.31	79.1	856.7	474.6
55.00		0.4375	49.399	67.987	20592.0	18.50	112.91	79.6	821.0	1169.1
60.00		0.4375	48.351	66.532	19297.4	18.08	110.52	80.1	786.1	1144.3
65.00		0.4375	47.303	65.076	18058.3	17.65	108.12	80.6	751.9	1119.6
70.00		0.4375	46.254	63.620	16873.3	17.23	105.72	81.1	718.5	1094.8
75.00		0.4375	45.206	62.165	15741.4	16.81	103.33	81.6	685.8	1070.0
80.00		0.4375	44.158	60.709	14661.2	16.39	100.93	82.1	654.0	1045.3
84.00	Bot - Section 3	0.4375	43.319	59.544	13833.6	16.05	99.01	82.5	629.0	818.4
85.00		0.4375	43.109	59.253	13631.6	15.96	98.54	82.5	622.8	349.2
89.50	Top - Section 2	0.3125	42.847	42.187	9643.0	22.77	137.11	0.0	0.0	1550.4
90.00		0.3125	42.742	42.083	9571.9	22.71	136.77	74.7	441.1	71.7
95.00		0.3125	41.694	41.043	8879.8	22.11	133.42	75.4	419.5	707.2
100.00		0.3125	40.645	40.004	8221.8	21.52	130.06	76.1	398.4	689.5
105.00		0.3125	39.597	38.964	7597.2	20.93	126.71	76.8	377.9	671.8
110.00		0.3125	38.549	37.924	7005.1	20.34	123.36	77.5	357.9	654.1
115.00		0.3125	37.500	36.884	6444.6	19.75	120.00	78.2	338.5	636.4
120.00		0.3125	36.452	35.844	5914.8	19.16	116.65	78.9	319.6	618.7
125.00		0.3125	35.404	34.805	5414.8	18.57	113.29	79.6	301.2	601.0
128.00		0.3125	34.775	34.181	5128.8	18.21	111.28	80.0	290.5	352.1
130.00	Top - Section 3	0.3125	34.355	33.765	4943.9	17.97	109.94	80.3	283.4	231.2
130.00	Bot - Section 4	0.1875	34.243	20.267	2969.7	29.96	183.23	65.2	170.8	
135.00		0.1875	33.182	19.635	2700.7	29.79	176.97	66.4	160.3	339.4
137.00		0.1875	32.758	19.383	2597.9	29.40	174.71	66.8	156.2	132.8
140.00		0.1875	32.122	19.004	2448.5	28.80	171.31	67.5	150.1	195.9
145.00		0.1875	31.061	18.373	2212.5	27.80	165.66	68.7	140.3	318.0
149.00		0.1875	30.212	17.868	2035.1	27.00	161.13	69.6	132.7	246.6
150.00		0.1875	30.000	17.742	1992.2	26.80	160.00	69.9	130.8	60.6
										32050.6

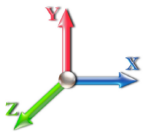
Wind Loading - Shaft

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 21

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	18.769	20.65	446.02	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	18.769	20.65	438.23	0.650	0.000	5.00	25.164	16.36	540.3	0.0	1910.8
10.00		1.00	0.70	18.769	20.65	430.44	0.650	0.000	5.00	24.720	16.07	530.8	0.0	1876.9
15.00		1.00	0.70	18.769	20.65	422.64	0.650	0.000	5.00	24.277	15.78	521.3	0.0	1842.9
20.00		1.00	0.70	18.769	20.65	414.85	0.650	0.000	5.00	23.833	15.49	511.7	0.0	1808.9
25.00		1.00	0.70	18.769	20.65	407.06	0.650	0.000	5.00	23.390	15.20	502.2	0.0	1775.0
30.00		1.00	0.70	18.785	20.66	399.43	0.650	0.000	5.00	22.946	14.91	493.1	0.0	1741.0
35.00		1.00	0.73	19.631	21.59	400.36	0.650	0.000	5.00	22.503	14.63	505.4	0.0	1707.0
40.00		1.00	0.76	20.394	22.43	399.94	0.650	0.000	5.00	22.059	14.34	514.7	0.0	1673.1
41.50	Bot - Section 2	1.00	0.77	20.610	22.67	399.60	0.650	0.000	1.50	6.531	4.25	154.0	0.0	495.3
45.00		1.00	0.79	21.092	23.20	398.47	0.650	0.000	3.50	15.360	9.98	370.6	0.0	2164.3
48.00	Top - Section 1	1.00	0.80	21.485	23.63	397.16	0.650	0.000	3.00	12.993	8.45	319.3	0.0	1830.3
50.00		1.00	0.81	21.737	23.91	403.57	0.650	0.000	2.00	8.573	5.57	213.2	0.0	569.5
55.00		1.00	0.83	22.337	24.57	400.61	0.650	0.000	5.00	21.122	13.73	539.7	0.0	1402.9
60.00		1.00	0.85	22.899	25.19	397.01	0.650	0.000	5.00	20.679	13.44	541.7	0.0	1373.2
65.00		1.00	0.87	23.429	25.77	392.87	0.650	0.000	5.00	20.235	13.15	542.4	0.0	1343.5
70.00		1.00	0.89	23.930	26.32	388.25	0.650	0.000	5.00	19.792	12.86	541.8	0.0	1313.8
75.00		1.00	0.91	24.406	26.85	383.21	0.650	0.000	5.00	19.348	12.58	540.2	0.0	1284.1
80.00		1.00	0.93	24.861	27.35	377.79	0.650	0.000	5.00	18.905	12.29	537.7	0.0	1254.3
84.00	Bot - Section 3	1.00	0.94	25.210	27.73	373.21	0.650	0.000	4.00	14.804	9.62	427.0	0.0	982.1
85.00		1.00	0.94	25.295	27.82	372.03	0.650	0.000	1.00	3.714	2.41	107.5	0.0	419.1
89.50	Top - Section 2	1.00	0.96	25.671	28.24	366.58	0.650	0.000	4.50	16.495	10.72	484.4	0.0	1860.5
90.00		1.00	0.96	25.711	28.28	371.88	0.650	0.000	0.50	1.811	1.18	53.3	0.0	86.0
95.00		1.00	0.97	26.112	28.72	365.57	0.650	0.000	5.00	17.862	11.61	533.6	0.0	848.6
100.00		1.00	0.99	26.497	29.15	359.00	0.650	0.000	5.00	17.419	11.32	528.0	0.0	827.4
105.00		1.00	1.00	26.869	29.56	352.19	0.650	0.000	5.00	16.975	11.03	521.8	0.0	806.1
110.00		1.00	1.02	27.229	29.95	345.15	0.650	0.000	5.00	16.531	10.75	514.9	0.0	784.9
115.00		1.00	1.03	27.577	30.33	337.90	0.650	0.000	5.00	16.088	10.46	507.5	0.0	763.7
120.00		1.00	1.04	27.914	30.71	330.46	0.650	0.000	5.00	15.644	10.17	499.6	0.0	742.4
125.00		1.00	1.05	28.242	31.07	322.83	0.650	0.000	5.00	15.201	9.88	491.1	0.0	721.2
128.00	Appurtenance(s)	1.00	1.06	28.434	31.28	318.17	0.650	0.000	3.00	8.908	5.79	289.7	0.0	422.5
130.00	Top - Section 3	1.00	1.07	28.560	31.42	315.03	0.650	0.000	2.00	5.850	3.80	191.1	0.0	277.4
135.00		1.00	1.08	28.869	31.76	305.92	0.650	0.000	5.00	14.264	9.27	471.1	0.0	407.3
137.00	Appurtenance(s)	1.00	1.08	28.991	31.89	302.65	0.650	0.000	2.00	5.580	3.63	185.1	0.0	159.3
140.00		1.00	1.09	29.171	32.09	297.69	0.650	0.000	3.00	8.235	5.35	274.8	0.0	235.1
145.00		1.00	1.10	29.465	32.41	289.30	0.650	0.000	5.00	13.366	8.69	450.5	0.0	381.6
149.00	Appurtenance(s)	1.00	1.11	29.695	32.66	282.49	0.650	0.000	4.00	10.370	6.74	352.3	0.0	296.0
150.00		1.00	1.11	29.752	32.73	280.78	0.650	0.000	1.00	2.548	1.66	86.7	0.0	72.7
								Totals:	**150.00**			**15,390.1**		**38,460.7**

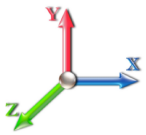
Discrete Appurtenance Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 21

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	LNX-6512DS-A1M	3	29.695	32.664	0.72	0.90	10.99	100.80	0.000	0.000	574.60	0.00	0.00
2	149.00	BXA-70063-6CF	3	29.695	32.664	0.66	0.90	14.92	61.20	0.000	0.000	779.79	0.00	0.00
3	149.00	HBXX-6517DS-VTM	3	29.695	32.664	0.69	0.90	17.78	146.52	0.000	0.000	929.00	0.00	0.00
4	149.00	HBXX-6516DS-VTM	3	29.695	32.664	0.69	0.90	11.29	110.16	0.000	0.000	590.00	0.00	0.00
5	149.00	Low Profile Platform	1	29.695	32.664	1.00	1.00	22.00	1800.00	0.000	0.000	1149.79	0.00	0.00
6	149.00	DB-T1-6Z-8AB-0Z	1	29.695	32.664	0.90	0.90	4.32	22.68	0.000	0.000	225.78	0.00	0.00
7	149.00	ALU RRH 2x60 AWS	3	29.695	32.664	0.60	0.90	6.33	198.00	0.000	0.000	330.90	0.00	0.00
8	149.00	RFS FD9R6004/2C-3L	6	29.695	32.664	0.90	0.90	1.94	22.32	0.000	0.000	101.60	0.00	0.00
9	137.00	Ericsson Radio 4415 B25	4	28.991	31.890	0.50	0.75	3.30	220.80	0.000	0.000	168.20	0.00	0.00
10	137.00	Ericsson Radio 2217 B2	3	28.991	31.890	0.50	0.75	2.04	97.20	0.000	0.000	103.84	0.00	0.00
11	137.00	Ericsson Radio 4449	3	28.991	31.890	0.50	0.75	2.49	252.00	0.000	0.000	126.92	0.00	0.00
12	137.00	RMQP-4096-HK	1	28.991	31.890	1.00	1.00	43.01	3174.00	0.000	0.000	2194.55	0.00	0.00
13	137.00	APX16DWV-16DWV-S-E-	3	28.991	31.890	0.46	0.75	9.01	146.52	0.000	0.000	459.82	0.00	0.00
14	137.00	Air 3246 B66	3	28.991	31.890	0.62	0.75	14.83	648.00	0.000	0.000	756.58	0.00	0.00
15	137.00	APXVAARR24_43-U-NA2	3	28.991	31.890	0.52	0.75	31.88	460.80	0.000	0.000	1626.55	0.00	0.00
16	128.00	Ericsson 8843 B2/B66A	3	28.434	31.277	0.73	0.80	3.58	259.20	0.000	0.000	179.24	0.00	0.00
17	128.00	CCI DMP65R-BU4DA	1	28.434	31.277	0.57	0.80	4.70	81.48	0.000	0.000	235.36	0.00	0.00
18	128.00	CCI DMP65R-BU8DA	2	28.434	31.277	0.58	0.80	20.87	229.68	0.000	0.000	1044.51	0.00	0.00
19	128.00	Ericsson 4449 B5/B12	3	28.434	31.277	0.69	0.80	4.07	255.60	0.000	0.000	203.48	0.00	0.00
20	128.00	CCI HPA-65R-BU8AA	2	28.434	31.277	0.69	0.80	15.45	129.60	0.000	0.000	773.29	0.00	0.00
21	128.00	CCI HPA-65R-BU4AA	1	28.434	31.277	0.68	0.80	3.35	34.44	0.000	0.000	167.42	0.00	0.00
22	128.00	Platform	1	28.434	31.277	1.00	1.00	22.00	1800.00	0.000	0.000	1100.95	0.00	0.00
23	128.00	Powerwave 7770	3	28.434	31.277	0.58	0.80	9.64	126.00	0.000	0.000	482.22	0.00	0.00
24	128.00	Raycap DC6-48-60-18-8F	2	28.434	31.277	0.80	0.80	1.47	78.72	0.000	0.000	73.66	0.00	0.00
							Totals:		**10,455.72**			**14,378.04**		

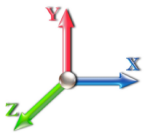
Total Applied Force Summary

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 21

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		540.31	2058.30	0.00	0.00
10.00		530.79	2024.34	0.00	0.00
15.00		521.26	1990.37	0.00	0.00
20.00		511.74	1956.40	0.00	0.00
25.00		502.22	1922.44	0.00	0.00
30.00		493.11	1888.47	0.00	0.00
35.00		505.35	1854.50	0.00	0.00
40.00		514.66	1820.54	0.00	0.00
41.50		153.99	539.54	0.00	0.00
45.00		370.63	2267.58	0.00	0.00
48.00		319.34	1918.80	0.00	0.00
50.00		213.19	628.49	0.00	0.00
55.00		539.74	1550.42	0.00	0.00
60.00		541.71	1520.69	0.00	0.00
65.00		542.35	1490.97	0.00	0.00
70.00		541.82	1461.25	0.00	0.00
75.00		540.22	1431.53	0.00	0.00
80.00		537.66	1401.81	0.00	0.00
84.00		426.96	1100.05	0.00	0.00
85.00		107.48	448.55	0.00	0.00
89.50		484.41	1993.26	0.00	0.00
90.00		53.26	100.77	0.00	0.00
95.00		533.57	996.06	0.00	0.00
100.00		528.01	974.84	0.00	0.00
105.00		521.78	953.61	0.00	0.00
110.00		514.95	932.38	0.00	0.00
115.00		507.54	911.15	0.00	0.00
120.00		499.58	889.92	0.00	0.00
125.00		491.11	868.69	0.00	0.00
128.00	(18) attachments	4549.88	3505.74	0.00	0.00
130.00		191.12	317.38	0.00	0.00
135.00		471.08	507.17	0.00	0.00
137.00	(20) attachments	5621.51	5198.58	0.00	0.00
140.00		274.82	283.79	0.00	0.00
145.00		450.54	462.68	0.00	0.00
149.00	(23) attachments	5033.73	2822.54	0.00	0.00
150.00		86.71	72.70	0.00	0.00
	Totals:	**29,768.13**	**53,066.30**	**0.00**	**0.00**

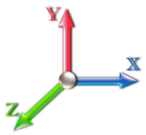
Calculated Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 21

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-53.04	-29.82	0.00	-3232.9	0.00	3232.91	6643.18	3321.59	16232.9	8128.53	0.00	0.000	0.000	0.406
5.00	-50.93	-29.37	0.00	-3083.8	0.00	3083.82	6562.43	3281.22	15750.7	7887.07	0.06	-0.106	0.000	0.399
10.00	-48.85	-28.93	0.00	-2936.9	0.00	2936.96	6480.38	3240.19	15272.4	7647.59	0.23	-0.213	0.000	0.392
15.00	-46.81	-28.48	0.00	-2792.3	0.00	2792.34	6397.03	3198.52	14798.3	7410.16	0.51	-0.321	0.000	0.384
20.00	-44.80	-28.04	0.00	-2649.9	0.00	2649.92	6312.38	3156.19	14328.4	7174.88	0.90	-0.429	0.000	0.377
25.00	-42.83	-27.61	0.00	-2509.7	0.00	2509.71	6226.42	3113.21	13863.0	6941.83	1.41	-0.537	0.000	0.368
30.00	-40.90	-27.17	0.00	-2371.6	0.00	2371.68	6139.16	3069.58	13402.2	6711.09	2.03	-0.645	0.000	0.360
35.00	-39.00	-26.72	0.00	-2235.8	0.00	2235.83	6050.60	3025.30	12946.2	6482.75	2.76	-0.754	0.000	0.351
40.00	-37.15	-26.22	0.00	-2102.2	0.00	2102.24	5960.74	2980.37	12495.2	6256.90	3.61	-0.862	0.000	0.342
41.50	-36.59	-26.09	0.00	-2062.9	0.00	2062.91	5933.53	2966.76	12360.9	6189.64	3.89	-0.895	0.000	0.340
45.00	-34.30	-25.73	0.00	-1971.5	0.00	1971.58	5869.58	2934.79	12049.3	6033.61	4.57	-0.972	0.000	0.333
48.00	-32.36	-25.41	0.00	-1894.3	0.00	1894.39	4975.44	2487.72	10301.6	5158.46	5.21	-1.037	0.000	0.374
50.00	-31.70	-25.23	0.00	-1843.5	0.00	1843.58	4946.50	2473.25	10155.7	5085.43	5.65	-1.081	0.000	0.369
55.00	-30.11	-24.72	0.00	-1717.4	0.00	1717.44	4873.21	2436.61	9793.75	4904.15	6.85	-1.197	0.000	0.356
60.00	-28.56	-24.20	0.00	-1593.8	0.00	1593.86	4798.63	2399.31	9435.53	4724.78	8.16	-1.311	0.000	0.343
65.00	-27.03	-23.67	0.00	-1472.8	0.00	1472.86	4722.74	2361.37	9081.29	4547.40	9.60	-1.424	0.000	0.330
70.00	-25.54	-23.14	0.00	-1354.4	0.00	1354.49	4645.55	2322.77	8731.19	4372.09	11.15	-1.535	0.000	0.315
75.00	-24.08	-22.61	0.00	-1238.7	0.00	1238.77	4567.05	2283.53	8385.41	4198.94	12.81	-1.645	0.000	0.300
80.00	-22.66	-22.07	0.00	-1125.7	0.00	1125.73	4487.26	2243.63	8044.10	4028.03	14.59	-1.752	0.000	0.285
84.00	-21.55	-21.63	0.00	-1037.4	0.00	1037.45	4422.49	2211.24	7774.40	3892.98	16.10	-1.836	0.000	0.271
85.00	-21.09	-21.53	0.00	-1015.8	0.00	1015.83	4402.21	2201.11	7700.53	3855.99	16.49	-1.857	0.000	0.268
89.50	-19.09	-20.99	0.00	-918.96	0.00	918.96	2833.37	1416.69	4954.53	2480.95	18.28	-1.948	0.000	0.377
90.00	-18.97	-20.96	0.00	-908.46	0.00	908.46	2829.03	1414.51	4934.65	2470.99	18.48	-1.958	0.000	0.375
95.00	-17.95	-20.43	0.00	-803.67	0.00	803.67	2784.83	1392.41	4736.65	2371.85	20.60	-2.085	0.000	0.345
100.00	-16.95	-19.90	0.00	-701.53	0.00	701.53	2739.32	1369.66	4540.33	2273.54	22.85	-2.206	0.000	0.315
105.00	-15.98	-19.37	0.00	-602.03	0.00	602.03	2692.52	1346.26	4345.87	2176.16	25.23	-2.318	0.000	0.283
110.00	-15.04	-18.84	0.00	-505.18	0.00	505.18	2644.41	1322.21	4153.42	2079.80	27.71	-2.422	0.000	0.249
115.00	-14.13	-18.32	0.00	-410.96	0.00	410.96	2595.00	1297.50	3963.16	1984.53	30.30	-2.515	0.000	0.213
120.00	-13.24	-17.80	0.00	-319.37	0.00	319.37	2544.29	1272.15	3775.26	1890.44	32.98	-2.596	0.000	0.174
125.00	-12.38	-17.28	0.00	-230.38	0.00	230.38	2492.28	1246.14	3589.89	1797.61	35.73	-2.662	0.000	0.133
128.00	-9.08	-12.57	0.00	-178.55	0.00	178.55	2460.45	1230.22	3479.95	1742.56	37.42	-2.694	0.000	0.106
130.00	-8.77	-12.37	0.00	-153.41	0.00	153.41	2438.97	1219.48	3407.21	1706.14	38.55	-2.712	0.000	0.094
130.00	-8.77	-12.37	0.00	-153.41	0.00	153.41	1188.95	594.48	1667.65	835.07	38.55	-2.712	0.000	0.192
135.00	-8.28	-11.88	0.00	-91.56	0.00	91.56	1172.65	586.33	1593.28	797.82	41.41	-2.748	0.000	0.122
137.00	-3.35	-6.02	0.00	-67.80	0.00	67.80	1165.76	582.88	1563.43	782.88	42.56	-2.764	0.000	0.090
140.00	-3.08	-5.73	0.00	-49.75	0.00	49.75	1155.02	577.51	1518.58	760.42	44.31	-2.784	0.000	0.068
145.00	-2.64	-5.26	0.00	-21.11	0.00	21.11	1136.06	568.03	1443.74	722.95	47.23	-2.804	0.000	0.032
149.00	-0.07	-0.09	0.00	-0.09	0.00	0.09	1119.92	559.96	1383.89	692.97	49.59	-2.810	0.000	0.000
150.00	0.00	-0.09	0.00	0.00	0.00	0.00	1115.76	557.88	1368.94	685.49	50.18	-2.810	0.000	0.000

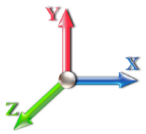
Wind Loading - Shaft

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 21

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	18.769	20.65	446.02	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	18.769	20.65	438.23	0.650	0.000	5.00	25.164	16.36	540.3	0.0	1433.1
10.00		1.00	0.70	18.769	20.65	430.44	0.650	0.000	5.00	24.720	16.07	530.8	0.0	1407.6
15.00		1.00	0.70	18.769	20.65	422.64	0.650	0.000	5.00	24.277	15.78	521.3	0.0	1382.2
20.00		1.00	0.70	18.769	20.65	414.85	0.650	0.000	5.00	23.833	15.49	511.7	0.0	1356.7
25.00		1.00	0.70	18.769	20.65	407.06	0.650	0.000	5.00	23.390	15.20	502.2	0.0	1331.2
30.00		1.00	0.70	18.785	20.66	399.43	0.650	0.000	5.00	22.946	14.91	493.1	0.0	1305.7
35.00		1.00	0.73	19.631	21.59	400.36	0.650	0.000	5.00	22.503	14.63	505.4	0.0	1280.3
40.00		1.00	0.76	20.394	22.43	399.94	0.650	0.000	5.00	22.059	14.34	514.7	0.0	1254.8
41.50	Bot - Section 2	1.00	0.77	20.610	22.67	399.60	0.650	0.000	1.50	6.531	4.25	154.0	0.0	371.5
45.00		1.00	0.79	21.092	23.20	398.47	0.650	0.000	3.50	15.360	9.98	370.6	0.0	1623.3
48.00	Top - Section 1	1.00	0.80	21.485	23.63	397.16	0.650	0.000	3.00	12.993	8.45	319.3	0.0	1372.7
50.00		1.00	0.81	21.737	23.91	403.57	0.650	0.000	2.00	8.573	5.57	213.2	0.0	427.1
55.00		1.00	0.83	22.337	24.57	400.61	0.650	0.000	5.00	21.122	13.73	539.7	0.0	1052.2
60.00		1.00	0.85	22.899	25.19	397.01	0.650	0.000	5.00	20.679	13.44	541.7	0.0	1029.9
65.00		1.00	0.87	23.429	25.77	392.87	0.650	0.000	5.00	20.235	13.15	542.4	0.0	1007.6
70.00		1.00	0.89	23.930	26.32	388.25	0.650	0.000	5.00	19.792	12.86	541.8	0.0	985.3
75.00		1.00	0.91	24.406	26.85	383.21	0.650	0.000	5.00	19.348	12.58	540.2	0.0	963.0
80.00		1.00	0.93	24.861	27.35	377.79	0.650	0.000	5.00	18.905	12.29	537.7	0.0	940.7
84.00	Bot - Section 3	1.00	0.94	25.210	27.73	373.21	0.650	0.000	4.00	14.804	9.62	427.0	0.0	736.6
85.00		1.00	0.94	25.295	27.82	372.03	0.650	0.000	1.00	3.714	2.41	107.5	0.0	314.3
89.50	Top - Section 2	1.00	0.96	25.671	28.24	366.58	0.650	0.000	4.50	16.495	10.72	484.4	0.0	1395.4
90.00		1.00	0.96	25.711	28.28	371.88	0.650	0.000	0.50	1.811	1.18	53.3	0.0	64.5
95.00		1.00	0.97	26.112	28.72	365.57	0.650	0.000	5.00	17.862	11.61	533.6	0.0	636.4
100.00		1.00	0.99	26.497	29.15	359.00	0.650	0.000	5.00	17.419	11.32	528.0	0.0	620.5
105.00		1.00	1.00	26.869	29.56	352.19	0.650	0.000	5.00	16.975	11.03	521.8	0.0	604.6
110.00		1.00	1.02	27.229	29.95	345.15	0.650	0.000	5.00	16.531	10.75	514.9	0.0	588.7
115.00		1.00	1.03	27.577	30.33	337.90	0.650	0.000	5.00	16.088	10.46	507.5	0.0	572.8
120.00		1.00	1.04	27.914	30.71	330.46	0.650	0.000	5.00	15.644	10.17	499.6	0.0	556.8
125.00		1.00	1.05	28.242	31.07	322.83	0.650	0.000	5.00	15.201	9.88	491.1	0.0	540.9
128.00	Appurtenance(s)	1.00	1.06	28.434	31.28	318.17	0.650	0.000	3.00	8.908	5.79	289.7	0.0	316.9
130.00	Top - Section 3	1.00	1.07	28.560	31.42	315.03	0.650	0.000	2.00	5.850	3.80	191.1	0.0	208.1
135.00		1.00	1.08	28.869	31.76	305.92	0.650	0.000	5.00	14.264	9.27	471.1	0.0	305.5
137.00	Appurtenance(s)	1.00	1.08	28.991	31.89	302.65	0.650	0.000	2.00	5.580	3.63	185.1	0.0	119.5
140.00		1.00	1.09	29.171	32.09	297.69	0.650	0.000	3.00	8.235	5.35	274.8	0.0	176.3
145.00		1.00	1.10	29.465	32.41	289.30	0.650	0.000	5.00	13.366	8.69	450.5	0.0	286.2
149.00	Appurtenance(s)	1.00	1.11	29.695	32.66	282.49	0.650	0.000	4.00	10.370	6.74	352.3	0.0	222.0
150.00		1.00	1.11	29.752	32.73	280.78	0.650	0.000	1.00	2.548	1.66	86.7	0.0	54.5
								Totals:	**150.00**			**15,390.1**		**28,845.5**

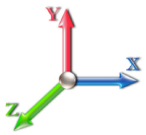
Discrete Appurtenance Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 21

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	LNX-6512DS-A1M	3	29.695	32.664	0.72	0.90	10.99	75.60	0.000	0.000	574.60	0.00	0.00
2	149.00	BXA-70063-6CF	3	29.695	32.664	0.66	0.90	14.92	45.90	0.000	0.000	779.79	0.00	0.00
3	149.00	HBXX-6517DS-VTM	3	29.695	32.664	0.69	0.90	17.78	109.89	0.000	0.000	929.00	0.00	0.00
4	149.00	HBXX-6516DS-VTM	3	29.695	32.664	0.69	0.90	11.29	82.62	0.000	0.000	590.00	0.00	0.00
5	149.00	Low Profile Platform	1	29.695	32.664	1.00	1.00	22.00	1350.00	0.000	0.000	1149.79	0.00	0.00
6	149.00	DB-T1-6Z-8AB-0Z	1	29.695	32.664	0.90	0.90	4.32	17.01	0.000	0.000	225.78	0.00	0.00
7	149.00	ALU RRH 2x60 AWS	3	29.695	32.664	0.60	0.90	6.33	148.50	0.000	0.000	330.90	0.00	0.00
8	149.00	RFS FD9R6004/2C-3L	6	29.695	32.664	0.90	0.90	1.94	16.74	0.000	0.000	101.60	0.00	0.00
9	137.00	Ericsson Radio 4415 B25	4	28.991	31.890	0.50	0.75	3.30	165.60	0.000	0.000	168.20	0.00	0.00
10	137.00	Ericsson Radio 2217 B2	3	28.991	31.890	0.50	0.75	2.04	72.90	0.000	0.000	103.84	0.00	0.00
11	137.00	Ericsson Radio 4449	3	28.991	31.890	0.50	0.75	2.49	189.00	0.000	0.000	126.92	0.00	0.00
12	137.00	RMQP-4096-HK	1	28.991	31.890	1.00	1.00	43.01	2380.50	0.000	0.000	2194.55	0.00	0.00
13	137.00	APX16DWV-16DWV-S-E-	3	28.991	31.890	0.46	0.75	9.01	109.89	0.000	0.000	459.82	0.00	0.00
14	137.00	Air 3246 B66	3	28.991	31.890	0.62	0.75	14.83	486.00	0.000	0.000	756.58	0.00	0.00
15	137.00	APXVAARR24_43-U-NA2	3	28.991	31.890	0.52	0.75	31.88	345.60	0.000	0.000	1626.55	0.00	0.00
16	128.00	Ericsson 8843 B2/B66A	3	28.434	31.277	0.73	0.80	3.58	194.40	0.000	0.000	179.24	0.00	0.00
17	128.00	CCI DMP65R-BU4DA	1	28.434	31.277	0.57	0.80	4.70	61.11	0.000	0.000	235.36	0.00	0.00
18	128.00	CCI DMP65R-BU8DA	2	28.434	31.277	0.58	0.80	20.87	172.26	0.000	0.000	1044.51	0.00	0.00
19	128.00	Ericsson 4449 B5/B12	3	28.434	31.277	0.69	0.80	4.07	191.70	0.000	0.000	203.48	0.00	0.00
20	128.00	CCI HPA-65R-BU8AA	2	28.434	31.277	0.69	0.80	15.45	97.20	0.000	0.000	773.29	0.00	0.00
21	128.00	CCI HPA-65R-BU4AA	1	28.434	31.277	0.68	0.80	3.35	25.83	0.000	0.000	167.42	0.00	0.00
22	128.00	Platform	1	28.434	31.277	1.00	1.00	22.00	1350.00	0.000	0.000	1100.95	0.00	0.00
23	128.00	Powerwave 7770	3	28.434	31.277	0.58	0.80	9.64	94.50	0.000	0.000	482.22	0.00	0.00
24	128.00	Raycap DC6-48-60-18-8F	2	28.434	31.277	0.80	0.80	1.47	59.04	0.000	0.000	73.66	0.00	0.00
							Totals:		**7,841.79**			**14,378.04**		

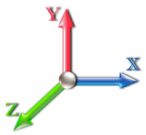
Total Applied Force Summary

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 21

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		540.31	1543.73	0.00	0.00
10.00		530.79	1518.25	0.00	0.00
15.00		521.26	1492.78	0.00	0.00
20.00		511.74	1467.30	0.00	0.00
25.00		502.22	1441.83	0.00	0.00
30.00		493.11	1416.35	0.00	0.00
35.00		505.35	1390.88	0.00	0.00
40.00		514.66	1365.40	0.00	0.00
41.50		153.99	404.65	0.00	0.00
45.00		370.63	1700.68	0.00	0.00
48.00		319.34	1439.10	0.00	0.00
50.00		213.19	471.37	0.00	0.00
55.00		539.74	1162.81	0.00	0.00
60.00		541.71	1140.52	0.00	0.00
65.00		542.35	1118.23	0.00	0.00
70.00		541.82	1095.94	0.00	0.00
75.00		540.22	1073.65	0.00	0.00
80.00		537.66	1051.36	0.00	0.00
84.00		426.96	825.04	0.00	0.00
85.00		107.48	336.41	0.00	0.00
89.50		484.41	1494.94	0.00	0.00
90.00		53.26	75.58	0.00	0.00
95.00		533.57	747.05	0.00	0.00
100.00		528.01	731.13	0.00	0.00
105.00		521.78	715.20	0.00	0.00
110.00		514.95	699.28	0.00	0.00
115.00		507.54	683.36	0.00	0.00
120.00		499.58	667.44	0.00	0.00
125.00		491.11	651.52	0.00	0.00
128.00	(18) attachments	4549.88	2629.31	0.00	0.00
130.00		191.12	238.04	0.00	0.00
135.00		471.08	380.38	0.00	0.00
137.00	(20) attachments	5621.51	3898.93	0.00	0.00
140.00		274.82	212.84	0.00	0.00
145.00		450.54	347.01	0.00	0.00
149.00	(23) attachments	5033.73	2116.91	0.00	0.00
150.00		86.71	54.53	0.00	0.00
	Totals:	**29,768.13**	**39,799.72**	**0.00**	**0.00**

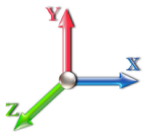
Calculated Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 21

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-39.77	-29.81	0.00	-3212.7	0.00	3212.74	6643.18	3321.59	16232.9	8128.53	0.00	0.000	0.000	0.401
5.00	-38.17	-29.33	0.00	-3063.7	0.00	3063.71	6562.43	3281.22	15750.7	7887.07	0.06	-0.106	0.000	0.394
10.00	-36.60	-28.87	0.00	-2917.0	0.00	2917.04	6480.38	3240.19	15272.4	7647.59	0.23	-0.212	0.000	0.387
15.00	-35.06	-28.40	0.00	-2772.7	0.00	2772.70	6397.03	3198.52	14798.3	7410.16	0.50	-0.319	0.000	0.380
20.00	-33.54	-27.95	0.00	-2630.6	0.00	2630.68	6312.38	3156.19	14328.4	7174.88	0.90	-0.426	0.000	0.372
25.00	-32.06	-27.49	0.00	-2490.9	0.00	2490.95	6226.42	3113.21	13863.0	6941.83	1.40	-0.533	0.000	0.364
30.00	-30.59	-27.04	0.00	-2353.4	0.00	2353.49	6139.16	3069.58	13402.2	6711.09	2.02	-0.641	0.000	0.356
35.00	-29.16	-26.57	0.00	-2218.2	0.00	2218.28	6050.60	3025.30	12946.2	6482.75	2.75	-0.748	0.000	0.347
40.00	-27.77	-26.07	0.00	-2085.4	0.00	2085.41	5960.74	2980.37	12495.2	6256.90	3.59	-0.856	0.000	0.338
41.50	-27.34	-25.94	0.00	-2046.3	0.00	2046.30	5933.53	2966.76	12360.9	6189.64	3.86	-0.889	0.000	0.335
45.00	-25.62	-25.57	0.00	-1955.5	0.00	1955.51	5869.58	2934.79	12049.3	6033.61	4.54	-0.965	0.000	0.329
48.00	-24.16	-25.25	0.00	-1878.7	0.00	1878.79	4975.44	2487.72	10301.6	5158.46	5.17	-1.030	0.000	0.369
50.00	-23.66	-25.06	0.00	-1828.2	0.00	1828.28	4946.50	2473.25	10155.7	5085.43	5.61	-1.073	0.000	0.364
55.00	-22.46	-24.55	0.00	-1702.9	0.00	1702.97	4873.21	2436.61	9793.75	4904.15	6.80	-1.188	0.000	0.352
60.00	-21.28	-24.02	0.00	-1580.2	0.00	1580.24	4798.63	2399.31	9435.53	4724.78	8.10	-1.301	0.000	0.339
65.00	-20.13	-23.49	0.00	-1460.1	0.00	1460.13	4722.74	2361.37	9081.29	4547.40	9.53	-1.413	0.000	0.325
70.00	-19.00	-22.96	0.00	-1342.6	0.00	1342.68	4645.55	2322.77	8731.19	4372.09	11.07	-1.524	0.000	0.311
75.00	-17.90	-22.42	0.00	-1227.8	0.00	1227.89	4567.05	2283.53	8385.41	4198.94	12.72	-1.632	0.000	0.296
80.00	-16.83	-21.88	0.00	-1115.7	0.00	1115.78	4487.26	2243.63	8044.10	4028.03	14.49	-1.738	0.000	0.281
84.00	-16.00	-21.44	0.00	-1028.2	0.00	1028.25	4422.49	2211.24	7774.40	3892.98	15.98	-1.821	0.000	0.268
85.00	-15.65	-21.34	0.00	-1006.8	0.00	1006.81	4402.21	2201.11	7700.53	3855.99	16.36	-1.842	0.000	0.265
89.50	-14.15	-20.82	0.00	-910.77	0.00	910.77	2833.37	1416.69	4954.53	2480.95	18.14	-1.932	0.000	0.372
90.00	-14.05	-20.78	0.00	-900.36	0.00	900.36	2829.03	1414.51	4934.65	2470.99	18.35	-1.942	0.000	0.370
95.00	-13.28	-20.25	0.00	-796.46	0.00	796.46	2784.83	1392.41	4736.65	2371.85	20.45	-2.068	0.000	0.341
100.00	-12.53	-19.72	0.00	-695.21	0.00	695.21	2739.32	1369.66	4540.33	2273.54	22.68	-2.188	0.000	0.311
105.00	-11.80	-19.19	0.00	-596.61	0.00	596.61	2692.52	1346.26	4345.87	2176.16	25.03	-2.299	0.000	0.279
110.00	-11.09	-18.67	0.00	-500.64	0.00	500.64	2644.41	1322.21	4153.42	2079.80	27.50	-2.402	0.000	0.245
115.00	-10.40	-18.15	0.00	-407.30	0.00	407.30	2595.00	1297.50	3963.16	1984.53	30.06	-2.494	0.000	0.209
120.00	-9.74	-17.63	0.00	-316.56	0.00	316.56	2544.29	1272.15	3775.26	1890.44	32.72	-2.574	0.000	0.171
125.00	-9.09	-17.12	0.00	-228.40	0.00	228.40	2492.28	1246.14	3589.89	1797.61	35.45	-2.640	0.000	0.131
128.00	-6.67	-12.46	0.00	-177.04	0.00	177.04	2460.45	1230.22	3479.95	1742.56	37.12	-2.672	0.000	0.104
130.00	-6.44	-12.26	0.00	-152.13	0.00	152.13	2438.97	1219.48	3407.21	1706.14	38.25	-2.690	0.000	0.092
130.00	-6.44	-12.26	0.00	-152.13	0.00	152.13	1188.95	594.48	1667.65	835.07	38.25	-2.690	0.000	0.188
135.00	-6.08	-11.77	0.00	-90.85	0.00	90.85	1172.65	586.33	1593.28	797.82	41.08	-2.725	0.000	0.119
137.00	-2.45	-5.97	0.00	-67.31	0.00	67.31	1165.76	582.88	1563.43	782.88	42.23	-2.742	0.000	0.088
140.00	-2.25	-5.69	0.00	-49.40	0.00	49.40	1155.02	577.51	1518.58	760.42	43.96	-2.761	0.000	0.067
145.00	-1.92	-5.22	0.00	-20.97	0.00	20.97	1136.06	568.03	1443.74	722.95	46.86	-2.781	0.000	0.031
149.00	-0.05	-0.09	0.00	-0.09	0.00	0.09	1119.92	559.96	1383.89	692.97	49.19	-2.787	0.000	0.000
150.00	0.00	-0.09	0.00	0.00	0.00	0.00	1115.76	557.88	1368.94	685.49	49.78	-2.787	0.000	0.000

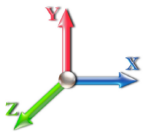
Wind Loading - Shaft

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 20

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.68	0.00	1.200	1.242	5.00	26.199	31.44	147.2	468.4	2379.2
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.331	5.00	25.830	31.00	145.1	494.0	2370.8
15.00		1.00	0.70	4.256	4.68	0.00	1.200	1.386	5.00	25.432	30.52	142.9	505.8	2348.7
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.427	5.00	25.022	30.03	140.6	511.5	2320.4
25.00		1.00	0.70	4.256	4.68	0.00	1.200	1.459	5.00	24.605	29.53	138.2	513.8	2288.7
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.486	5.00	24.184	29.02	136.0	513.7	2254.7
35.00		1.00	0.73	4.451	4.90	0.00	1.200	1.509	5.00	23.760	28.51	139.6	512.0	2219.0
40.00		1.00	0.76	4.625	5.09	0.00	1.200	1.529	5.00	23.333	28.00	142.4	509.0	2182.1
41.50	Bot - Section 2	1.00	0.77	4.673	5.14	0.00	1.200	1.535	1.50	6.915	8.30	42.7	152.4	647.7
45.00		1.00	0.79	4.783	5.26	0.00	1.200	1.547	3.50	16.263	19.52	102.7	359.9	2524.2
48.00	Top - Section 1	1.00	0.80	4.872	5.36	0.00	1.200	1.557	3.00	13.771	16.53	88.6	306.8	2137.1
50.00		1.00	0.81	4.929	5.42	0.00	1.200	1.564	2.00	9.094	10.91	59.2	203.8	773.3
55.00		1.00	0.83	5.065	5.57	0.00	1.200	1.579	5.00	22.438	26.93	150.0	504.1	1907.0
60.00		1.00	0.85	5.193	5.71	0.00	1.200	1.592	5.00	22.006	26.41	150.8	498.1	1871.4
65.00		1.00	0.87	5.313	5.84	0.00	1.200	1.605	5.00	21.573	25.89	151.3	491.7	1835.2
70.00		1.00	0.89	5.426	5.97	0.00	1.200	1.617	5.00	21.139	25.37	151.4	484.9	1798.7
75.00		1.00	0.91	5.534	6.09	0.00	1.200	1.628	5.00	20.705	24.85	151.3	477.7	1761.7
80.00		1.00	0.93	5.637	6.20	0.00	1.200	1.639	5.00	20.270	24.32	150.8	470.1	1724.4
84.00	Bot - Section 3	1.00	0.94	5.716	6.29	0.00	1.200	1.647	4.00	15.902	19.08	120.0	371.1	1353.1
85.00		1.00	0.94	5.736	6.31	0.00	1.200	1.649	1.00	3.989	4.79	30.2	93.9	512.9
89.50	Top - Section 2	1.00	0.96	5.821	6.40	0.00	1.200	1.657	4.50	17.738	21.29	136.3	415.8	2276.3
90.00		1.00	0.96	5.830	6.41	0.00	1.200	1.658	0.50	1.949	2.34	15.0	46.1	132.1
95.00		1.00	0.97	5.921	6.51	0.00	1.200	1.667	5.00	19.252	23.10	150.5	452.8	1301.4
100.00		1.00	0.99	6.008	6.61	0.00	1.200	1.676	5.00	18.815	22.58	149.2	444.2	1271.5
105.00		1.00	1.00	6.093	6.70	0.00	1.200	1.684	5.00	18.378	22.05	147.8	435.4	1241.5
110.00		1.00	1.02	6.174	6.79	0.00	1.200	1.692	5.00	17.941	21.53	146.2	426.4	1211.3
115.00		1.00	1.03	6.253	6.88	0.00	1.200	1.699	5.00	17.504	21.00	144.5	417.2	1180.9
120.00		1.00	1.04	6.330	6.96	0.00	1.200	1.707	5.00	17.067	20.48	142.6	407.8	1150.3
125.00		1.00	1.05	6.404	7.04	0.00	1.200	1.714	5.00	16.629	19.95	140.6	398.3	1119.5
128.00	Appurtenance(s)	1.00	1.06	6.448	7.09	0.00	1.200	1.718	3.00	9.766	11.72	83.1	235.5	658.1
130.00	Top - Section 3	1.00	1.07	6.476	7.12	0.00	1.200	1.720	2.00	6.423	7.71	54.9	155.5	432.9
135.00		1.00	1.08	6.546	7.20	0.00	1.200	1.727	5.00	15.703	18.84	135.7	377.5	784.8
137.00	Appurtenance(s)	1.00	1.08	6.574	7.23	0.00	1.200	1.729	2.00	6.156	7.39	53.4	149.4	308.7
140.00		1.00	1.09	6.615	7.28	0.00	1.200	1.733	3.00	9.102	10.92	79.5	220.5	455.6
145.00		1.00	1.10	6.681	7.35	0.00	1.200	1.739	5.00	14.815	17.78	130.7	357.2	738.8
149.00	Appurtenance(s)	1.00	1.11	6.734	7.41	0.00	1.200	1.744	4.00	11.532	13.84	102.5	279.2	575.1
150.00		1.00	1.11	6.746	7.42	0.00	1.200	1.745	1.00	2.838	3.41	25.3	69.4	142.1
								Totals:	**150.00**			**4,318.6**		**52,191.2**

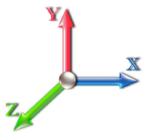
Discrete Appurtenance Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 20

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	LNX-6512DS-A1M	3	6.734	7.407	0.72	0.90	15.07	360.77	0.000	0.000	111.66	0.00	0.00
2	149.00	BXA-70063-6CF	3	6.734	7.407	0.66	0.90	20.36	378.29	0.000	0.000	150.84	0.00	0.00
3	149.00	HBXX-6517DS-VTM	3	6.734	7.407	0.69	0.90	23.84	521.29	0.000	0.000	176.58	0.00	0.00
4	149.00	HBXX-6516DS-VTM	3	6.734	7.407	0.69	0.90	15.41	373.91	0.000	0.000	114.12	0.00	0.00
5	149.00	Low Profile Platform	1	6.734	7.407	1.00	1.00	39.65	2808.04	0.000	0.000	293.68	0.00	0.00
6	149.00	DB-T1-6Z-8AB-0Z	1	6.734	7.407	0.90	0.90	5.11	166.29	0.000	0.000	37.82	0.00	0.00
7	149.00	ALU RRH 2x60 AWS	3	6.734	7.407	0.60	0.90	7.76	377.58	0.000	0.000	57.46	0.00	0.00
8	149.00	RFS FD9R6004/2C-3L	6	6.734	7.407	0.90	0.90	4.34	56.65	0.000	0.000	32.12	0.00	0.00
9	137.00	Ericsson Radio 4415 B25	4	6.574	7.231	0.50	0.75	4.32	346.13	0.000	0.000	31.26	0.00	0.00
10	137.00	Ericsson Radio 2217 B2	3	6.574	7.231	0.50	0.75	2.74	175.54	0.000	0.000	19.85	0.00	0.00
11	137.00	Ericsson Radio 4449	3	6.574	7.231	0.50	0.75	3.29	454.42	0.000	0.000	23.79	0.00	0.00
12	137.00	RMQP-4096-HK	1	6.574	7.231	1.00	1.00	74.55	5163.66	0.000	0.000	539.09	0.00	0.00
13	137.00	APX16DWV-16DWV-S-E-	3	6.574	7.231	0.46	0.75	10.55	552.93	0.000	0.000	76.30	0.00	0.00
14	137.00	Air 3246 B66	3	6.574	7.231	0.62	0.75	17.01	1101.10	0.000	0.000	123.03	0.00	0.00
15	137.00	APXVAARR24_43-U-NA2	3	6.574	7.231	0.52	0.75	34.84	1701.86	0.000	0.000	251.96	0.00	0.00
16	128.00	Ericsson 8843 B2/B66A	3	6.448	7.092	0.74	0.80	4.73	616.79	0.000	0.000	33.55	0.00	0.00
17	128.00	CCI DMP65R-BU4DA	1	6.448	7.092	0.58	0.80	5.45	343.18	0.000	0.000	38.66	0.00	0.00
18	128.00	CCI DMP65R-BU8DA	2	6.448	7.092	0.59	0.80	23.24	1196.21	0.000	0.000	164.80	0.00	0.00
19	128.00	Ericsson 4449 B5/B12	3	6.448	7.092	0.70	0.80	5.27	630.32	0.000	0.000	37.37	0.00	0.00
20	128.00	CCI HPA-65R-BU8AA	2	6.448	7.092	0.70	0.80	17.91	739.68	0.000	0.000	127.02	0.00	0.00
21	128.00	CCI HPA-65R-BU4AA	1	6.448	7.092	0.69	0.80	4.02	187.95	0.000	0.000	28.54	0.00	0.00
22	128.00	Platform	1	6.448	7.092	1.00	1.00	39.38	2788.32	0.000	0.000	279.32	0.00	0.00
23	128.00	Powerwave 7770	3	6.448	7.092	0.58	0.80	11.47	523.71	0.000	0.000	81.35	0.00	0.00
24	128.00	Raycap DC6-48-60-18-8F	2	6.448	7.092	0.80	0.80	2.16	170.85	0.000	0.000	15.33	0.00	0.00
							Totals:		**21,735.46**			**2,845.49**		

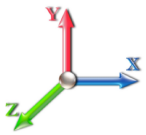
Total Applied Force Summary

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 18

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 20

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		147.18	2526.67	0.00	0.00
10.00		145.11	2518.31	0.00	0.00
15.00		142.88	2496.14	0.00	0.00
20.00		140.57	2467.92	0.00	0.00
25.00		138.23	2436.20	0.00	0.00
30.00		135.98	2402.18	0.00	0.00
35.00		139.61	2366.49	0.00	0.00
40.00		142.43	2329.55	0.00	0.00
41.50		42.66	691.91	0.00	0.00
45.00		102.67	2627.44	0.00	0.00
48.00		88.56	2225.62	0.00	0.00
50.00		59.17	832.25	0.00	0.00
55.00		150.02	2054.49	0.00	0.00
60.00		150.83	2018.84	0.00	0.00
65.00		151.28	1982.71	0.00	0.00
70.00		151.42	1946.14	0.00	0.00
75.00		151.26	1909.19	0.00	0.00
80.00		150.84	1871.90	0.00	0.00
84.00		119.99	1471.10	0.00	0.00
85.00		30.20	542.40	0.00	0.00
89.50		136.29	2409.03	0.00	0.00
90.00		15.00	146.89	0.00	0.00
95.00		150.47	1448.85	0.00	0.00
100.00		149.23	1419.03	0.00	0.00
105.00		147.81	1388.99	0.00	0.00
110.00		146.22	1358.76	0.00	0.00
115.00		144.48	1328.35	0.00	0.00
120.00		142.60	1297.76	0.00	0.00
125.00		140.57	1267.02	0.00	0.00
128.00	(18) attachments	889.07	7943.55	0.00	0.00
130.00		54.91	472.84	0.00	0.00
135.00		135.69	884.68	0.00	0.00
137.00	(20) attachments	1118.69	9844.29	0.00	0.00
140.00		79.47	504.25	0.00	0.00
145.00		130.66	819.90	0.00	0.00
149.00	(23) attachments	1076.78	5682.86	0.00	0.00
150.00		25.28	142.08	0.00	0.00
	Totals:	**7,164.11**	**78,076.59**	**0.00**	**0.00**

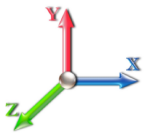
Calculated Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 20

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-78.07	-7.18	0.00	-756.68	0.00	756.68	6643.18	3321.59	16232.9	8128.53	0.00	0.000	0.000	0.105
5.00	-75.55	-7.07	0.00	-720.78	0.00	720.78	6562.43	3281.22	15750.7	7887.07	0.01	-0.025	0.000	0.103
10.00	-73.02	-6.95	0.00	-685.44	0.00	685.44	6480.38	3240.19	15272.4	7647.59	0.05	-0.050	0.000	0.101
15.00	-70.53	-6.84	0.00	-650.69	0.00	650.69	6397.03	3198.52	14798.3	7410.16	0.12	-0.075	0.000	0.099
20.00	-68.05	-6.72	0.00	-616.51	0.00	616.51	6312.38	3156.19	14328.4	7174.88	0.21	-0.100	0.000	0.097
25.00	-65.62	-6.61	0.00	-582.90	0.00	582.90	6226.42	3113.21	13863.0	6941.83	0.33	-0.125	0.000	0.095
30.00	-63.21	-6.49	0.00	-549.86	0.00	549.86	6139.16	3069.58	13402.2	6711.09	0.47	-0.150	0.000	0.092
35.00	-60.84	-6.37	0.00	-517.39	0.00	517.39	6050.60	3025.30	12946.2	6482.75	0.64	-0.175	0.000	0.090
40.00	-58.51	-6.24	0.00	-485.52	0.00	485.52	5960.74	2980.37	12495.2	6256.90	0.84	-0.201	0.000	0.087
41.50	-57.82	-6.21	0.00	-476.16	0.00	476.16	5933.53	2966.76	12360.9	6189.64	0.91	-0.208	0.000	0.087
45.00	-55.19	-6.11	0.00	-454.43	0.00	454.43	5869.58	2934.79	12049.3	6033.61	1.07	-0.226	0.000	0.085
48.00	-52.96	-6.03	0.00	-436.09	0.00	436.09	4975.44	2487.72	10301.6	5158.46	1.21	-0.241	0.000	0.095
50.00	-52.13	-5.98	0.00	-424.04	0.00	424.04	4946.50	2473.25	10155.7	5085.43	1.32	-0.251	0.000	0.094
55.00	-50.07	-5.84	0.00	-394.15	0.00	394.15	4873.21	2436.61	9793.75	4904.15	1.59	-0.278	0.000	0.091
60.00	-48.05	-5.70	0.00	-364.93	0.00	364.93	4798.63	2399.31	9435.53	4724.78	1.90	-0.304	0.000	0.087
65.00	-46.07	-5.56	0.00	-336.41	0.00	336.41	4722.74	2361.37	9081.29	4547.40	2.23	-0.330	0.000	0.084
70.00	-44.12	-5.42	0.00	-308.60	0.00	308.60	4645.55	2322.77	8731.19	4372.09	2.59	-0.355	0.000	0.080
75.00	-42.21	-5.27	0.00	-281.51	0.00	281.51	4567.05	2283.53	8385.41	4198.94	2.97	-0.380	0.000	0.076
80.00	-40.34	-5.12	0.00	-255.15	0.00	255.15	4487.26	2243.63	8044.10	4028.03	3.39	-0.404	0.000	0.072
84.00	-38.87	-5.00	0.00	-234.65	0.00	234.65	4422.49	2211.24	7774.40	3892.98	3.73	-0.423	0.000	0.069
85.00	-38.32	-4.98	0.00	-229.64	0.00	229.64	4402.21	2201.11	7700.53	3855.99	3.82	-0.428	0.000	0.068
89.50	-35.91	-4.83	0.00	-207.25	0.00	207.25	2833.37	1416.69	4954.53	2480.95	4.24	-0.448	0.000	0.096
90.00	-35.77	-4.82	0.00	-204.84	0.00	204.84	2829.03	1414.51	4934.65	2470.99	4.28	-0.451	0.000	0.096
95.00	-34.32	-4.68	0.00	-180.73	0.00	180.73	2784.83	1392.41	4736.65	2371.85	4.77	-0.479	0.000	0.089
100.00	-32.90	-4.53	0.00	-157.34	0.00	157.34	2739.32	1369.66	4540.33	2273.54	5.29	-0.506	0.000	0.081
105.00	-31.51	-4.38	0.00	-134.69	0.00	134.69	2692.52	1346.26	4345.87	2176.16	5.83	-0.532	0.000	0.074
110.00	-30.15	-4.24	0.00	-112.77	0.00	112.77	2644.41	1322.21	4153.42	2079.80	6.40	-0.555	0.000	0.066
115.00	-28.82	-4.09	0.00	-91.59	0.00	91.59	2595.00	1297.50	3963.16	1984.53	6.99	-0.576	0.000	0.057
120.00	-27.52	-3.94	0.00	-71.15	0.00	71.15	2544.29	1272.15	3775.26	1890.44	7.61	-0.594	0.000	0.048
125.00	-26.26	-3.79	0.00	-51.45	0.00	51.45	2492.28	1246.14	3589.89	1797.61	8.24	-0.608	0.000	0.039
128.00	-18.32	-2.82	0.00	-40.08	0.00	40.08	2460.45	1230.22	3479.95	1742.56	8.62	-0.616	0.000	0.030
130.00	-17.85	-2.76	0.00	-34.44	0.00	34.44	2438.97	1219.48	3407.21	1706.14	8.88	-0.620	0.000	0.028
130.00	-17.85	-2.76	0.00	-34.44	0.00	34.44	1188.95	594.48	1667.65	835.07	8.88	-0.620	0.000	0.056
135.00	-16.97	-2.62	0.00	-20.64	0.00	20.64	1172.65	586.33	1593.28	797.82	9.54	-0.628	0.000	0.040
137.00	-7.13	-1.39	0.00	-15.40	0.00	15.40	1165.76	582.88	1563.43	782.88	9.80	-0.631	0.000	0.026
140.00	-6.63	-1.31	0.00	-11.23	0.00	11.23	1155.02	577.51	1518.58	760.42	10.20	-0.636	0.000	0.021
145.00	-5.81	-1.17	0.00	-4.70	0.00	4.70	1136.06	568.03	1443.74	722.95	10.87	-0.640	0.000	0.012
149.00	-0.14	-0.03	0.00	-0.03	0.00	0.03	1119.92	559.96	1383.89	692.97	11.40	-0.642	0.000	0.000
150.00	0.00	-0.03	0.00	0.00	0.00	0.00	1115.76	557.88	1368.94	685.49	11.54	-0.642	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 20

Load Case:	1.2D + 1.0E							**Iterations**	19
Gust Response Factor	1.10				**Sds**	0.17		**Ss**	0.16
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.09		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.44		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1592.3	0.00	0.03	0.02	21.68	
10.00		1564.0	0.01	0.05	0.03	31.93	
15.00		1535.7	0.02	0.06	0.04	36.80	
20.00		1507.4	0.03	0.07	0.04	38.99	
25.00		1479.1	0.05	0.07	0.04	39.94	
30.00		1450.8	0.08	0.07	0.04	40.40	
35.00		1422.5	0.10	0.07	0.04	40.70	
40.00		1394.2	0.13	0.07	0.03	40.88	
41.50	Bot - Section 2	412.74	0.14	0.07	0.03	12.18	
45.00		1803.6	0.17	0.07	0.03	53.81	
48.00	Top - Section 1	1525.2	0.19	0.06	0.02	45.67	
50.00		474.58	0.21	0.06	0.02	14.18	
55.00		1169.1	0.25	0.05	0.02	34.00	
60.00		1144.3	0.30	0.04	0.01	30.86	
65.00		1119.5	0.35	0.03	0.01	25.89	
70.00		1094.8	0.41	0.01	0.01	18.91	
75.00		1070.0	0.47	-0.01	0.01	10.16	
80.00		1045.2	0.54	-0.03	0.01	0.46	
84.00	Bot - Section 3	818.39	0.59	-0.05	0.01	-5.67	
85.00		349.21	0.61	-0.06	0.02	-3.04	
89.50	Top - Section 2	1550.4	0.67	-0.08	0.02	-24.46	
90.00		71.69	0.68	-0.08	0.03	-1.18	
95.00		707.15	0.76	-0.10	0.04	-15.16	
100.00		689.46	0.84	-0.12	0.07	-15.65	
105.00		671.77	0.93	-0.12	0.10	-13.21	
110.00		654.08	1.02	-0.11	0.14	-7.92	
115.00		636.39	1.11	-0.06	0.19	0.05	
120.00		618.70	1.21	0.01	0.26	10.47	
125.00		601.01	1.31	0.14	0.35	23.12	
128.00	Appurtenance(s)	2847.7	1.38	0.24	0.41	152.78	
130.00	Top - Section 3	231.20	1.42	0.32	0.45	14.97	
135.00		339.44	1.53	0.58	0.58	32.51	
137.00	Appurtenance(s)	4298.8	1.58	0.71	0.64	471.02	
140.00		195.93	1.65	0.93	0.73	25.81	
145.00		317.96	1.77	1.39	0.92	54.88	
149.00	Appurtenance(s)	2298.0	1.86	1.85	1.09	480.14	
150.00		60.59	1.89	1.98	1.14	13.24	
	Totals:	**40,763.7**				**1,730.2**	**Total Wind:** **29,768.1**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Load Case: 1.2D + 1.0E

Gust Response Factor	1.10			**Sds**	0.17			**Iterations**	19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.09			**Ss**	0.16
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.44	**SA**	0.04			**S1**	0.06
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-53.07	-1.82	0.00	-205.23	0.00	205.23	6643.18	3321.59	16232.9	8128.53		0.00	0.00	0.033
5.00	-51.01	-1.80	0.00	-196.13	0.00	196.13	6562.43	3281.22	15750.7	7887.07		0.00	-0.01	0.033
10.00	-48.98	-1.78	0.00	-187.12	0.00	187.12	6480.38	3240.19	15272.4	7647.59		0.01	-0.01	0.032
15.00	-46.99	-1.75	0.00	-178.23	0.00	178.23	6397.03	3198.52	14798.3	7410.16		0.03	-0.02	0.031
20.00	-45.04	-1.71	0.00	-169.50	0.00	169.50	6312.38	3156.19	14328.4	7174.88		0.06	-0.03	0.031
25.00	-43.11	-1.68	0.00	-160.95	0.00	160.95	6226.42	3113.21	13863.0	6941.83		0.09	-0.03	0.030
30.00	-41.22	-1.64	0.00	-152.58	0.00	152.58	6139.16	3069.58	13402.2	6711.09		0.13	-0.04	0.029
35.00	-39.37	-1.60	0.00	-144.38	0.00	144.38	6050.60	3025.30	12946.2	6482.75		0.18	-0.05	0.029
40.00	-37.55	-1.56	0.00	-136.38	0.00	136.38	5960.74	2980.37	12495.2	6256.90		0.23	-0.06	0.028
41.50	-37.01	-1.55	0.00	-134.04	0.00	134.04	5933.53	2966.76	12360.9	6189.64		0.25	-0.06	0.028
45.00	-34.74	-1.50	0.00	-128.61	0.00	128.61	5869.58	2934.79	12049.3	6033.61		0.29	-0.06	0.027
48.00	-32.82	-1.45	0.00	-124.11	0.00	124.11	4975.44	2487.72	10301.6	5158.46		0.33	-0.07	0.031
50.00	-32.19	-1.44	0.00	-121.21	0.00	121.21	4946.50	2473.25	10155.7	5085.43		0.36	-0.07	0.030
55.00	-30.64	-1.41	0.00	-114.01	0.00	114.01	4873.21	2436.61	9793.75	4904.15		0.44	-0.08	0.030
60.00	-29.12	-1.38	0.00	-106.97	0.00	106.97	4798.63	2399.31	9435.53	4724.78		0.52	-0.08	0.029
65.00	-27.63	-1.35	0.00	-100.07	0.00	100.07	4722.74	2361.37	9081.29	4547.40		0.62	-0.09	0.028
70.00	-26.17	-1.34	0.00	-93.30	0.00	93.30	4645.55	2322.77	8731.19	4372.09		0.72	-0.10	0.027
75.00	-24.74	-1.33	0.00	-86.62	0.00	86.62	4567.05	2283.53	8385.41	4198.94		0.83	-0.11	0.026
80.00	-23.34	-1.33	0.00	-79.98	0.00	79.98	4487.26	2243.63	8044.10	4028.03		0.94	-0.12	0.025
84.00	-22.24	-1.33	0.00	-74.68	0.00	74.68	4422.49	2211.24	7774.40	3892.98		1.04	-0.12	0.024
85.00	-21.79	-1.33	0.00	-73.35	0.00	73.35	4402.21	2201.11	7700.53	3855.99		1.07	-0.12	0.024
89.50	-19.80	-1.32	0.00	-67.38	0.00	67.38	2833.37	1416.69	4954.53	2480.95		1.19	-0.13	0.034
90.00	-19.69	-1.33	0.00	-66.72	0.00	66.72	2829.03	1414.51	4934.65	2470.99		1.20	-0.13	0.034
95.00	-18.70	-1.33	0.00	-60.09	0.00	60.09	2784.83	1392.41	4736.65	2371.85		1.34	-0.14	0.032
100.00	-17.72	-1.33	0.00	-53.47	0.00	53.47	2739.32	1369.66	4540.33	2273.54		1.49	-0.15	0.030
105.00	-16.77	-1.33	0.00	-46.84	0.00	46.84	2692.52	1346.26	4345.87	2176.16		1.65	-0.16	0.028
110.00	-15.84	-1.33	0.00	-40.21	0.00	40.21	2644.41	1322.21	4153.42	2079.80		1.82	-0.17	0.025
115.00	-14.93	-1.32	0.00	-33.58	0.00	33.58	2595.00	1297.50	3963.16	1984.53		2.00	-0.17	0.023
120.00	-14.04	-1.31	0.00	-26.96	0.00	26.96	2544.29	1272.15	3775.26	1890.44		2.18	-0.18	0.020
125.00	-13.17	-1.29	0.00	-20.39	0.00	20.39	2492.28	1246.14	3589.89	1797.61		2.37	-0.19	0.017
128.00	-9.66	-1.12	0.00	-16.53	0.00	16.53	2460.45	1230.22	3479.95	1742.56		2.49	-0.19	0.013
130.00	-9.34	-1.11	0.00	-14.28	0.00	14.28	2438.97	1219.48	3407.21	1706.14		2.57	-0.19	0.012
130.00	-9.34	-1.11	0.00	-14.28	0.00	14.28	1188.95	594.48	1667.65	835.07		2.57	-0.19	0.025
135.00	-8.84	-1.07	0.00	-8.73	0.00	8.73	1172.65	586.33	1593.28	797.82		2.77	-0.19	0.018
137.00	-3.64	-0.59	0.00	-6.58	0.00	6.58	1165.76	582.88	1563.43	782.88		2.85	-0.19	0.012
140.00	-3.36	-0.56	0.00	-4.83	0.00	4.83	1155.02	577.51	1518.58	760.42		2.98	-0.20	0.009
145.00	-2.89	-0.50	0.00	-2.03	0.00	2.03	1136.06	568.03	1443.74	722.95		3.18	-0.20	0.005
149.00	-0.07	-0.01	0.00	-0.01	0.00	0.01	1119.92	559.96	1383.89	692.97		3.35	-0.20	0.000
150.00	0.00	-0.01	0.00	0.00	0.00	0.00	1115.76	557.88	1368.94	685.49		3.39	-0.20	0.000

Seismic Segment Forces (Factored)

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 22

Load Case:	0.9D + 1.0E							**Iterations**	19
Gust Response Factor	1.10				**Sds**	0.17		**Ss**	0.16
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.09		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.44		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1592.3	0.00	0.03	0.02	21.68	
10.00		1564.0	0.01	0.05	0.03	31.93	
15.00		1535.7	0.02	0.06	0.04	36.80	
20.00		1507.4	0.03	0.07	0.04	38.99	
25.00		1479.1	0.05	0.07	0.04	39.94	
30.00		1450.8	0.08	0.07	0.04	40.40	
35.00		1422.5	0.10	0.07	0.04	40.70	
40.00		1394.2	0.13	0.07	0.03	40.88	
41.50	Bot - Section 2	412.74	0.14	0.07	0.03	12.18	
45.00		1803.6	0.17	0.07	0.03	53.81	
48.00	Top - Section 1	1525.2	0.19	0.06	0.02	45.67	
50.00		474.58	0.21	0.06	0.02	14.18	
55.00		1169.1	0.25	0.05	0.02	34.00	
60.00		1144.3	0.30	0.04	0.01	30.86	
65.00		1119.5	0.35	0.03	0.01	25.89	
70.00		1094.8	0.41	0.01	0.01	18.91	
75.00		1070.0	0.47	-0.01	0.01	10.16	
80.00		1045.2	0.54	-0.03	0.01	0.46	
84.00	Bot - Section 3	818.39	0.59	-0.05	0.01	-5.67	
85.00		349.21	0.61	-0.06	0.02	-3.04	
89.50	Top - Section 2	1550.4	0.67	-0.08	0.02	-24.46	
90.00		71.69	0.68	-0.08	0.03	-1.18	
95.00		707.15	0.76	-0.10	0.04	-15.16	
100.00		689.46	0.84	-0.12	0.07	-15.65	
105.00		671.77	0.93	-0.12	0.10	-13.21	
110.00		654.08	1.02	-0.11	0.14	-7.92	
115.00		636.39	1.11	-0.06	0.19	0.05	
120.00		618.70	1.21	0.01	0.26	10.47	
125.00		601.01	1.31	0.14	0.35	23.12	
128.00	Appurtenance(s)	2847.7	1.38	0.24	0.41	152.78	
130.00	Top - Section 3	231.20	1.42	0.32	0.45	14.97	
135.00		339.44	1.53	0.58	0.58	32.51	
137.00	Appurtenance(s)	4298.8	1.58	0.71	0.64	471.02	
140.00		195.93	1.65	0.93	0.73	25.81	
145.00		317.96	1.77	1.39	0.92	54.88	
149.00	Appurtenance(s)	2298.0	1.86	1.85	1.09	480.14	
150.00		60.59	1.89	1.98	1.14	13.24	
	Totals:	**40,763.7**				**1,730.2**	**Total Wind:** **29,768.1**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Load Case: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.17			**Iterations**	19
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.09			**Ss**	0.16
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.44	**SA**	0.04			**S1**	0.06
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-39.80	-1.82	0.00	-203.89	0.00	203.89	6643.18	3321.59	16232.9	8128.53		0.00	0.00	0.031
5.00	-38.26	-1.80	0.00	-194.80	0.00	194.80	6562.43	3281.22	15750.7	7887.07		0.00	-0.01	0.031
10.00	-36.74	-1.77	0.00	-185.80	0.00	185.80	6480.38	3240.19	15272.4	7647.59		0.01	-0.01	0.030
15.00	-35.24	-1.74	0.00	-176.93	0.00	176.93	6397.03	3198.52	14798.3	7410.16		0.03	-0.02	0.029
20.00	-33.78	-1.70	0.00	-168.23	0.00	168.23	6312.38	3156.19	14328.4	7174.88		0.06	-0.03	0.029
25.00	-32.33	-1.67	0.00	-159.71	0.00	159.71	6226.42	3113.21	13863.0	6941.83		0.09	-0.03	0.028
30.00	-30.92	-1.63	0.00	-151.37	0.00	151.37	6139.16	3069.58	13402.2	6711.09		0.13	-0.04	0.028
35.00	-29.53	-1.59	0.00	-143.22	0.00	143.22	6050.60	3025.30	12946.2	6482.75		0.18	-0.05	0.027
40.00	-28.16	-1.55	0.00	-135.26	0.00	135.26	5960.74	2980.37	12495.2	6256.90		0.23	-0.05	0.026
41.50	-27.76	-1.54	0.00	-132.93	0.00	132.93	5933.53	2966.76	12360.9	6189.64		0.25	-0.06	0.026
45.00	-26.06	-1.49	0.00	-127.53	0.00	127.53	5869.58	2934.79	12049.3	6033.61		0.29	-0.06	0.026
48.00	-24.62	-1.44	0.00	-123.07	0.00	123.07	4975.44	2487.72	10301.6	5158.46		0.33	-0.07	0.029
50.00	-24.15	-1.43	0.00	-120.18	0.00	120.18	4946.50	2473.25	10155.7	5085.43		0.36	-0.07	0.029
55.00	-22.98	-1.40	0.00	-113.04	0.00	113.04	4873.21	2436.61	9793.75	4904.15		0.43	-0.08	0.028
60.00	-21.84	-1.37	0.00	-106.05	0.00	106.05	4798.63	2399.31	9435.53	4724.78		0.52	-0.08	0.027
65.00	-20.72	-1.34	0.00	-99.21	0.00	99.21	4722.74	2361.37	9081.29	4547.40		0.61	-0.09	0.026
70.00	-19.63	-1.32	0.00	-92.50	0.00	92.50	4645.55	2322.77	8731.19	4372.09		0.71	-0.10	0.025
75.00	-18.55	-1.31	0.00	-85.88	0.00	85.88	4567.05	2283.53	8385.41	4198.94		0.82	-0.11	0.025
80.00	-17.50	-1.31	0.00	-79.30	0.00	79.30	4487.26	2243.63	8044.10	4028.03		0.94	-0.11	0.024
84.00	-16.68	-1.31	0.00	-74.05	0.00	74.05	4422.49	2211.24	7774.40	3892.98		1.03	-0.12	0.023
85.00	-16.34	-1.31	0.00	-72.73	0.00	72.73	4402.21	2201.11	7700.53	3855.99		1.06	-0.12	0.023
89.50	-14.85	-1.31	0.00	-66.82	0.00	66.82	2833.37	1416.69	4954.53	2480.95		1.18	-0.13	0.032
90.00	-14.77	-1.31	0.00	-66.16	0.00	66.16	2829.03	1414.51	4934.65	2470.99		1.19	-0.13	0.032
95.00	-14.02	-1.31	0.00	-59.60	0.00	59.60	2784.83	1392.41	4736.65	2371.85		1.33	-0.14	0.030
100.00	-13.29	-1.31	0.00	-53.03	0.00	53.03	2739.32	1369.66	4540.33	2273.54		1.48	-0.15	0.028
105.00	-12.58	-1.31	0.00	-46.46	0.00	46.46	2692.52	1346.26	4345.87	2176.16		1.64	-0.16	0.026
110.00	-11.88	-1.31	0.00	-39.89	0.00	39.89	2644.41	1322.21	4153.42	2079.80		1.81	-0.16	0.024
115.00	-11.19	-1.31	0.00	-33.32	0.00	33.32	2595.00	1297.50	3963.16	1984.53		1.98	-0.17	0.021
120.00	-10.53	-1.30	0.00	-26.76	0.00	26.76	2544.29	1272.15	3775.26	1890.44		2.17	-0.18	0.018
125.00	-9.87	-1.28	0.00	-20.25	0.00	20.25	2492.28	1246.14	3589.89	1797.61		2.36	-0.18	0.015
128.00	-7.25	-1.12	0.00	-16.42	0.00	16.42	2460.45	1230.22	3479.95	1742.56		2.47	-0.19	0.012
130.00	-7.01	-1.10	0.00	-14.19	0.00	14.19	2438.97	1219.48	3407.21	1706.14		2.55	-0.19	0.011
130.00	-7.01	-1.10	0.00	-14.19	0.00	14.19	1188.95	594.48	1667.65	835.07		2.55	-0.19	0.023
135.00	-6.63	-1.07	0.00	-8.68	0.00	8.68	1172.65	586.33	1593.28	797.82		2.75	-0.19	0.017
137.00	-2.73	-0.58	0.00	-6.55	0.00	6.55	1165.76	582.88	1563.43	782.88		2.83	-0.19	0.011
140.00	-2.52	-0.56	0.00	-4.80	0.00	4.80	1155.02	577.51	1518.58	760.42		2.95	-0.20	0.008
145.00	-2.17	-0.50	0.00	-2.02	0.00	2.02	1136.06	568.03	1443.74	722.95		3.16	-0.20	0.005
149.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	1119.92	559.96	1383.89	692.97		3.32	-0.20	0.000
150.00	0.00	-0.01	0.00	0.00	0.00	0.00	1115.76	557.88	1368.94	685.49		3.37	-0.20	0.000

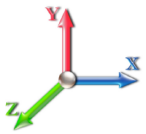
Wind Loading - Shaft

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 20

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.74	254.87	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.74	250.42	0.650	0.000	5.00	25.164	16.36	110.3	0.0	1592.4
10.00		1.00	0.70	6.129	6.74	245.96	0.650	0.000	5.00	24.720	16.07	108.3	0.0	1564.0
15.00		1.00	0.70	6.129	6.74	241.51	0.650	0.000	5.00	24.277	15.78	106.4	0.0	1535.7
20.00		1.00	0.70	6.129	6.74	237.06	0.650	0.000	5.00	23.833	15.49	104.4	0.0	1507.4
25.00		1.00	0.70	6.129	6.74	232.60	0.650	0.000	5.00	23.390	15.20	102.5	0.0	1479.1
30.00		1.00	0.70	6.134	6.75	228.25	0.650	0.000	5.00	22.946	14.91	100.6	0.0	1450.8
35.00		1.00	0.73	6.410	7.05	228.77	0.650	0.000	5.00	22.503	14.63	103.1	0.0	1422.5
40.00		1.00	0.76	6.659	7.33	228.54	0.650	0.000	5.00	22.059	14.34	105.0	0.0	1394.2
41.50	Bot - Section 2	1.00	0.77	6.730	7.40	228.34	0.650	0.000	1.50	6.531	4.25	31.4	0.0	412.7
45.00		1.00	0.79	6.887	7.58	227.70	0.650	0.000	3.50	15.360	9.98	75.6	0.0	1803.6
48.00	Top - Section 1	1.00	0.80	7.015	7.72	226.95	0.650	0.000	3.00	12.993	8.45	65.2	0.0	1525.3
50.00		1.00	0.81	7.098	7.81	230.61	0.650	0.000	2.00	8.573	5.57	43.5	0.0	474.6
55.00		1.00	0.83	7.294	8.02	228.92	0.650	0.000	5.00	21.122	13.73	110.2	0.0	1169.1
60.00		1.00	0.85	7.477	8.22	226.86	0.650	0.000	5.00	20.679	13.44	110.6	0.0	1144.3
65.00		1.00	0.87	7.650	8.42	224.50	0.650	0.000	5.00	20.235	13.15	110.7	0.0	1119.6
70.00		1.00	0.89	7.814	8.60	221.86	0.650	0.000	5.00	19.792	12.86	110.6	0.0	1094.8
75.00		1.00	0.91	7.969	8.77	218.98	0.650	0.000	5.00	19.348	12.58	110.2	0.0	1070.0
80.00		1.00	0.93	8.118	8.93	215.88	0.650	0.000	5.00	18.905	12.29	109.7	0.0	1045.3
84.00	Bot - Section 3	1.00	0.94	8.232	9.05	213.26	0.650	0.000	4.00	14.804	9.62	87.1	0.0	818.4
85.00		1.00	0.94	8.260	9.09	212.59	0.650	0.000	1.00	3.714	2.41	21.9	0.0	349.2
89.50	Top - Section 2	1.00	0.96	8.382	9.22	209.47	0.650	0.000	4.50	16.495	10.72	98.9	0.0	1550.4
90.00		1.00	0.96	8.396	9.24	212.50	0.650	0.000	0.50	1.811	1.18	10.9	0.0	71.7
95.00		1.00	0.97	8.526	9.38	208.90	0.650	0.000	5.00	17.862	11.61	108.9	0.0	707.2
100.00		1.00	0.99	8.652	9.52	205.14	0.650	0.000	5.00	17.419	11.32	107.8	0.0	689.5
105.00		1.00	1.00	8.774	9.65	201.25	0.650	0.000	5.00	16.975	11.03	106.5	0.0	671.8
110.00		1.00	1.02	8.891	9.78	197.23	0.650	0.000	5.00	16.531	10.75	105.1	0.0	654.1
115.00		1.00	1.03	9.005	9.91	193.09	0.650	0.000	5.00	16.088	10.46	103.6	0.0	636.4
120.00		1.00	1.04	9.115	10.03	188.83	0.650	0.000	5.00	15.644	10.17	102.0	0.0	618.7
125.00		1.00	1.05	9.222	10.14	184.48	0.650	0.000	5.00	15.201	9.88	100.2	0.0	601.0
128.00	Appurtenance(s)	1.00	1.06	9.284	10.21	181.81	0.650	0.000	3.00	8.908	5.79	59.1	0.0	352.1
130.00	Top - Section 3	1.00	1.07	9.326	10.26	180.02	0.650	0.000	2.00	5.850	3.80	39.0	0.0	231.2
135.00		1.00	1.08	9.427	10.37	174.81	0.650	0.000	5.00	14.264	9.27	96.1	0.0	339.4
137.00	Appurtenance(s)	1.00	1.08	9.466	10.41	172.94	0.650	0.000	2.00	5.580	3.63	37.8	0.0	132.8
140.00		1.00	1.09	9.525	10.48	170.11	0.650	0.000	3.00	8.235	5.35	56.1	0.0	195.9
145.00		1.00	1.10	9.621	10.58	165.32	0.650	0.000	5.00	13.366	8.69	91.9	0.0	318.0
149.00	Appurtenance(s)	1.00	1.11	9.696	10.67	161.42	0.650	0.000	4.00	10.370	6.74	71.9	0.0	246.6
150.00		1.00	1.11	9.715	10.69	160.44	0.650	0.000	1.00	2.548	1.66	17.7	0.0	60.6
								Totals:	**150.00**			**3,140.8**		**32,050.6**

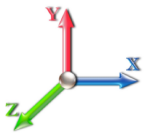
Discrete Appurtenance Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 20

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	LNX-6512DS-A1M	3	9.696	10.666	0.72	0.90	10.99	84.00	0.000	0.000	117.27	0.00	0.00
2	149.00	BXA-70063-6CF	3	9.696	10.666	0.66	0.90	14.92	51.00	0.000	0.000	159.14	0.00	0.00
3	149.00	HBXX-6517DS-VTM	3	9.696	10.666	0.69	0.90	17.78	122.10	0.000	0.000	189.59	0.00	0.00
4	149.00	HBXX-6516DS-VTM	3	9.696	10.666	0.69	0.90	11.29	91.80	0.000	0.000	120.41	0.00	0.00
5	149.00	Low Profile Platform	1	9.696	10.666	1.00	1.00	22.00	1500.00	0.000	0.000	234.65	0.00	0.00
6	149.00	DB-T1-6Z-8AB-0Z	1	9.696	10.666	0.90	0.90	4.32	18.90	0.000	0.000	46.08	0.00	0.00
7	149.00	ALU RRH 2x60 AWS	3	9.696	10.666	0.60	0.90	6.33	165.00	0.000	0.000	67.53	0.00	0.00
8	149.00	RFS FD9R6004/2C-3L	6	9.696	10.666	0.90	0.90	1.94	18.60	0.000	0.000	20.73	0.00	0.00
9	137.00	Ericsson Radio 4415 B25	4	9.466	10.413	0.50	0.75	3.30	184.00	0.000	0.000	34.33	0.00	0.00
10	137.00	Ericsson Radio 2217 B2	3	9.466	10.413	0.50	0.75	2.04	81.00	0.000	0.000	21.19	0.00	0.00
11	137.00	Ericsson Radio 4449	3	9.466	10.413	0.50	0.75	2.49	210.00	0.000	0.000	25.90	0.00	0.00
12	137.00	RMQP-4096-HK	1	9.466	10.413	1.00	1.00	43.01	2645.00	0.000	0.000	447.87	0.00	0.00
13	137.00	APX16DWV-16DWV-S-E-	3	9.466	10.413	0.46	0.75	9.01	122.10	0.000	0.000	93.84	0.00	0.00
14	137.00	Air 3246 B66	3	9.466	10.413	0.62	0.75	14.83	540.00	0.000	0.000	154.41	0.00	0.00
15	137.00	APXVAARR24_43-U-NA2	3	9.466	10.413	0.52	0.75	31.88	384.00	0.000	0.000	331.95	0.00	0.00
16	128.00	Ericsson 8843 B2/B66A	3	9.284	10.213	0.73	0.80	3.58	216.00	0.000	0.000	36.58	0.00	0.00
17	128.00	CCI DMP65R-BU4DA	1	9.284	10.213	0.57	0.80	4.70	67.90	0.000	0.000	48.03	0.00	0.00
18	128.00	CCI DMP65R-BU8DA	2	9.284	10.213	0.58	0.80	20.87	191.40	0.000	0.000	213.17	0.00	0.00
19	128.00	Ericsson 4449 B5/B12	3	9.284	10.213	0.69	0.80	4.07	213.00	0.000	0.000	41.53	0.00	0.00
20	128.00	CCI HPA-65R-BU8AA	2	9.284	10.213	0.69	0.80	15.45	108.00	0.000	0.000	157.81	0.00	0.00
21	128.00	CCI HPA-65R-BU4AA	1	9.284	10.213	0.68	0.80	3.35	28.70	0.000	0.000	34.17	0.00	0.00
22	128.00	Platform	1	9.284	10.213	1.00	1.00	22.00	1500.00	0.000	0.000	224.68	0.00	0.00
23	128.00	Powerwave 7770	3	9.284	10.213	0.58	0.80	9.64	105.00	0.000	0.000	98.41	0.00	0.00
24	128.00	Raycap DC6-48-60-18-8F	2	9.284	10.213	0.80	0.80	1.47	65.60	0.000	0.000	15.03	0.00	0.00
							Totals:		**8,713.10**			**2,934.29**		

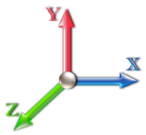
Total Applied Force Summary

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 20

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		110.27	1715.25	0.00	0.00
10.00		108.32	1686.95	0.00	0.00
15.00		106.38	1658.64	0.00	0.00
20.00		104.44	1630.34	0.00	0.00
25.00		102.49	1602.03	0.00	0.00
30.00		100.63	1573.72	0.00	0.00
35.00		103.13	1545.42	0.00	0.00
40.00		105.03	1517.11	0.00	0.00
41.50		31.43	449.61	0.00	0.00
45.00		75.64	1889.65	0.00	0.00
48.00		65.17	1599.00	0.00	0.00
50.00		43.51	523.74	0.00	0.00
55.00		110.15	1292.01	0.00	0.00
60.00		110.55	1267.25	0.00	0.00
65.00		110.68	1242.48	0.00	0.00
70.00		110.58	1217.71	0.00	0.00
75.00		110.25	1192.94	0.00	0.00
80.00		109.73	1168.18	0.00	0.00
84.00		87.13	916.71	0.00	0.00
85.00		21.94	373.79	0.00	0.00
89.50		98.86	1661.05	0.00	0.00
90.00		10.87	83.98	0.00	0.00
95.00		108.89	830.05	0.00	0.00
100.00		107.76	812.36	0.00	0.00
105.00		106.49	794.67	0.00	0.00
110.00		105.09	776.98	0.00	0.00
115.00		103.58	759.29	0.00	0.00
120.00		101.96	741.60	0.00	0.00
125.00		100.23	723.91	0.00	0.00
128.00	(18) attachments	928.55	2921.45	0.00	0.00
130.00		39.00	264.48	0.00	0.00
135.00		96.14	422.64	0.00	0.00
137.00	(20) attachments	1147.25	4332.15	0.00	0.00
140.00		56.09	236.49	0.00	0.00
145.00		91.95	385.56	0.00	0.00
149.00	(23) attachments	1027.29	2352.12	0.00	0.00
150.00		17.70	60.59	0.00	0.00
	Totals:	**6,075.13**	**44,221.91**	**0.00**	**0.00**

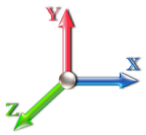
Calculated Forces

Structure:	CT13073-A	**Code:**	EIA/TIA-222-G	10/20/2020	
Site Name:	Groton North	**Exposure:**	B		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 20

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-44.22	-6.08	0.00	-657.24	0.00	657.24	6643.18	3321.59	16232.9	8128.53	0.00	0.000	0.000	0.088
5.00	-42.50	-5.99	0.00	-626.82	0.00	626.82	6562.43	3281.22	15750.7	7887.07	0.01	-0.022	0.000	0.086
10.00	-40.81	-5.90	0.00	-596.88	0.00	596.88	6480.38	3240.19	15272.4	7647.59	0.05	-0.043	0.000	0.084
15.00	-39.15	-5.80	0.00	-567.40	0.00	567.40	6397.03	3198.52	14798.3	7410.16	0.10	-0.065	0.000	0.083
20.00	-37.52	-5.71	0.00	-538.39	0.00	538.39	6312.38	3156.19	14328.4	7174.88	0.18	-0.087	0.000	0.081
25.00	-35.92	-5.62	0.00	-509.85	0.00	509.85	6226.42	3113.21	13863.0	6941.83	0.29	-0.109	0.000	0.079
30.00	-34.34	-5.53	0.00	-481.75	0.00	481.75	6139.16	3069.58	13402.2	6711.09	0.41	-0.131	0.000	0.077
35.00	-32.79	-5.43	0.00	-454.12	0.00	454.12	6050.60	3025.30	12946.2	6482.75	0.56	-0.153	0.000	0.075
40.00	-31.28	-5.33	0.00	-426.95	0.00	426.95	5960.74	2980.37	12495.2	6256.90	0.73	-0.175	0.000	0.073
41.50	-30.83	-5.30	0.00	-418.95	0.00	418.95	5933.53	2966.76	12360.9	6189.64	0.79	-0.182	0.000	0.073
45.00	-28.93	-5.23	0.00	-400.38	0.00	400.38	5869.58	2934.79	12049.3	6033.61	0.93	-0.197	0.000	0.071
48.00	-27.33	-5.16	0.00	-384.69	0.00	384.69	4975.44	2487.72	10301.6	5158.46	1.06	-0.211	0.000	0.080
50.00	-26.81	-5.13	0.00	-374.36	0.00	374.36	4946.50	2473.25	10155.7	5085.43	1.15	-0.220	0.000	0.079
55.00	-25.52	-5.02	0.00	-348.73	0.00	348.73	4873.21	2436.61	9793.75	4904.15	1.39	-0.243	0.000	0.076
60.00	-24.25	-4.92	0.00	-323.62	0.00	323.62	4798.63	2399.31	9435.53	4724.78	1.66	-0.266	0.000	0.074
65.00	-23.00	-4.81	0.00	-299.04	0.00	299.04	4722.74	2361.37	9081.29	4547.40	1.95	-0.289	0.000	0.071
70.00	-21.78	-4.70	0.00	-275.00	0.00	275.00	4645.55	2322.77	8731.19	4372.09	2.26	-0.312	0.000	0.068
75.00	-20.59	-4.59	0.00	-251.51	0.00	251.51	4567.05	2283.53	8385.41	4198.94	2.60	-0.334	0.000	0.064
80.00	-19.42	-4.48	0.00	-228.56	0.00	228.56	4487.26	2243.63	8044.10	4028.03	2.97	-0.356	0.000	0.061
84.00	-18.50	-4.39	0.00	-210.64	0.00	210.64	4422.49	2211.24	7774.40	3892.98	3.27	-0.373	0.000	0.058
85.00	-18.13	-4.37	0.00	-206.24	0.00	206.24	4402.21	2201.11	7700.53	3855.99	3.35	-0.377	0.000	0.058
89.50	-16.47	-4.26	0.00	-186.58	0.00	186.58	2833.37	1416.69	4954.53	2480.95	3.71	-0.396	0.000	0.081
90.00	-16.38	-4.26	0.00	-184.45	0.00	184.45	2829.03	1414.51	4934.65	2470.99	3.76	-0.398	0.000	0.080
95.00	-15.55	-4.15	0.00	-163.17	0.00	163.17	2784.83	1392.41	4736.65	2371.85	4.19	-0.423	0.000	0.074
100.00	-14.74	-4.04	0.00	-142.44	0.00	142.44	2739.32	1369.66	4540.33	2273.54	4.64	-0.448	0.000	0.068
105.00	-13.94	-3.93	0.00	-122.24	0.00	122.24	2692.52	1346.26	4345.87	2176.16	5.12	-0.471	0.000	0.061
110.00	-13.17	-3.83	0.00	-102.58	0.00	102.58	2644.41	1322.21	4153.42	2079.80	5.63	-0.492	0.000	0.054
115.00	-12.41	-3.72	0.00	-83.45	0.00	83.45	2595.00	1297.50	3963.16	1984.53	6.16	-0.511	0.000	0.047
120.00	-11.67	-3.61	0.00	-64.86	0.00	64.86	2544.29	1272.15	3775.26	1890.44	6.70	-0.527	0.000	0.039
125.00	-10.94	-3.51	0.00	-46.80	0.00	46.80	2492.28	1246.14	3589.89	1797.61	7.26	-0.541	0.000	0.030
128.00	-8.03	-2.55	0.00	-36.27	0.00	36.27	2460.45	1230.22	3479.95	1742.56	7.60	-0.547	0.000	0.024
130.00	-7.77	-2.51	0.00	-31.17	0.00	31.17	2438.97	1219.48	3407.21	1706.14	7.83	-0.551	0.000	0.021
130.00	-7.77	-2.51	0.00	-31.17	0.00	31.17	1188.95	594.48	1667.65	835.07	7.83	-0.551	0.000	0.044
135.00	-7.34	-2.41	0.00	-18.61	0.00	18.61	1172.65	586.33	1593.28	797.82	8.41	-0.558	0.000	0.030
137.00	-3.02	-1.22	0.00	-13.78	0.00	13.78	1165.76	582.88	1563.43	782.88	8.65	-0.561	0.000	0.020
140.00	-2.79	-1.16	0.00	-10.12	0.00	10.12	1155.02	577.51	1518.58	760.42	9.00	-0.565	0.000	0.016
145.00	-2.40	-1.07	0.00	-4.29	0.00	4.29	1136.06	568.03	1443.74	722.95	9.60	-0.570	0.000	0.008
149.00	-0.06	-0.02	0.00	-0.02	0.00	0.02	1119.92	559.96	1383.89	692.97	10.07	-0.571	0.000	0.000
150.00	0.00	-0.02	0.00	0.00	0.00	0.00	1115.76	557.88	1368.94	685.49	10.19	-0.571	0.000	0.000

Final Analysis Summary

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 28

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 105 mph Wind	29.8	0.00	53.04	0.00	0.00	3232.91
0.9D + 1.6W 105 mph Wind	29.8	0.00	39.77	0.00	0.00	3212.74
1.2D + 1.0Di + 1.0Wi 50 mph Wind	7.2	0.00	78.07	0.00	0.00	756.68
1.2D + 1.0E	1.8	0.00	53.07	0.00	0.00	205.23
0.9D + 1.0E	1.8	0.00	39.80	0.00	0.00	203.89
1.0D + 1.0W 60 mph Wind	6.1	0.00	44.22	0.00	0.00	657.24

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 105 mph Wind	-53.04	-29.82	0.00	-3232.9	0.00	-3232.9	6643.18	3321.5	16232.9	8128.53	0.00	0.406
0.9D + 1.6W 105 mph Wind	-39.77	-29.81	0.00	-3212.7	0.00	-3212.7	6643.18	3321.5	16232.9	8128.53	0.00	0.401
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-78.07	-7.18	0.00	-756.68	0.00	-756.68	6643.18	3321.5	16232.9	8128.53	0.00	0.105
1.2D + 1.0E	-19.80	-1.32	0.00	-67.38	0.00	-67.38	2833.37	1416.6	4954.53	2480.95	89.50	0.034
0.9D + 1.0E	-14.85	-1.31	0.00	-66.82	0.00	-66.82	2833.37	1416.6	4954.53	2480.95	89.50	0.032
1.0D + 1.0W 60 mph Wind	-44.22	-6.08	0.00	-657.24	0.00	-657.24	6643.18	3321.5	16232.9	8128.53	0.00	0.088

Base Plate Summary

Structure:	CT13073-A		**Code:**	EIA/TIA-222-G	10/20/2020
Site Name:	Groton North		**Exposure:**	B	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Reactions

Original Design

Moment (kip-ft):	6114.40
Axial (kip):	94.80
Shear (kip):	55.60

Analysis

Moment (kip-ft):	3232.91
Axial (kip):	53.04
Shear (kip):	29.82
Moment Design %:	52.87

Base Plate

Yield (ksi):	50.00
Width (in):	69.50
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	7.86
Moment (kip-in):	181.28
Allow Stress (ksi):	67.50
Applied Stress (ksi):	45.23
Stress Ratio:	0.67

Anchor Bolts

Bolt Circle:	65.00
Number Bolts:	34.00
Bolt Type:	1.5" F1554 105
Bolt Diameter (in):	1.50
Yield (ksi):	105.00
Ultimate (ksi):	125.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00

Compression

Force (kip):	72.51
Allowable (kip):	141.00
Ratio:	0.53

Tension

Force (kip):	67.92
Allowable (kip):	141.00
Ratio:	0.49

Stiffened or Unstiffened, Exterior Flange Plate - Any Bolt Material TIA Rev G

Reactions		
Mu	178.55	ft-kips
Axial, Pu:	9.08	kips
Shear, Vu:	12.57	kips
Elevation:	130	feet

Bolt Threads:
X-Excluded
φVn=φ(0.55*Ab*Fu)
φ=0.75, φ*Vn (kips):
38.88

Site Data

BU#:
Site Name:
App #:

Pole Manufacturer:	Other

If No stiffeners, Criteria:	TIA G	<-Only Applcable to Unstiffened Cases

Bolt Data			
Qty:	8		
Diameter (in.):	1	Bolt Fu:	120
Bolt Material:	A325	Bolt Fy:	92
N/A:		<-- Disregard	
N/A:		<-- Disregard	
Circle (in.):	38		

Plate Data		
Diam:	41.25	in
Thick, t:	1.75	in
Grade (Fy):	50	ksi
Strength, Fu:	65	ksi
Single-Rod B-eff:	8.52	in

Stiffener Data (Welding at Both Sides)		
Config:	0	*
Weld Type:		
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		<-- Disregard
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	34.24	in
Thick:	0.1875	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None

Flange Bolt Results

Bolt Tension Capacity, φ*Tn,**B1**:	54.54	kips	Rigid
Adjusted φ*Tn (due to Vu=Vu/Qty), **B**:	54.50	kips	φTn[(1-(Vu/φVn)^2]^0.5
Max Bolt directly applied Tu:	27.06	Kips	
Min. PL "tc" for **B** cap. **w/o** Pry:	0.776	in	
Min PL "treq" for actual **T w/ Pry**:	0.400	in	
Min PL "t1" for actual **T w/o Pry**:	0.547	in	
T allowable w/o Prying:	54.54	kips	α'<0 case
Prying Force, q:	0.00	kips	
Total Bolt Tension=Tu+q:	27.06	kips	
Non-Prying Bolt Stress Ratio, Tu/B:	49.7%	**Pass**	

Exterior Flange Plate Results Flexural Check

Compression Side Plate Stress:	4.4	ksi	Rigid
Allowable Plate Stress:	45.0	ksi	TIA G
Compression Plate Stress Ratio:	9.7%	**Pass**	φ*Fy
No Prying			Comp. Y.L. Length:
Tension Side Stress Ratio, (treq/t)^2:	5.2%	**Pass**	16.48

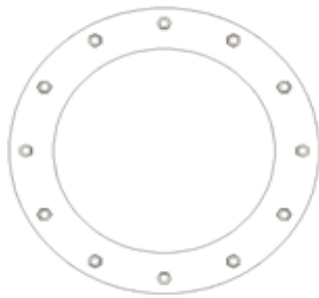
n/a

Stiffener Results

Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	n/a
Plate Comp. (AISC Bracket):	n/a

Pole Results

Pole Punching Shear Check: n/a



* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

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

Monopole Mat Foundation Design

				Date
				10/20/2020
Customer Name:		**EIA/TIA Standard:**	EIA-222-G	
Site Name:		**Structure Height (Ft.):**	150	
Site Number:	CT13073-ATT-102020	**Engineer Name:**	SBA Engineer	
Engr. Number:		**Engineer Login ID:**		

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

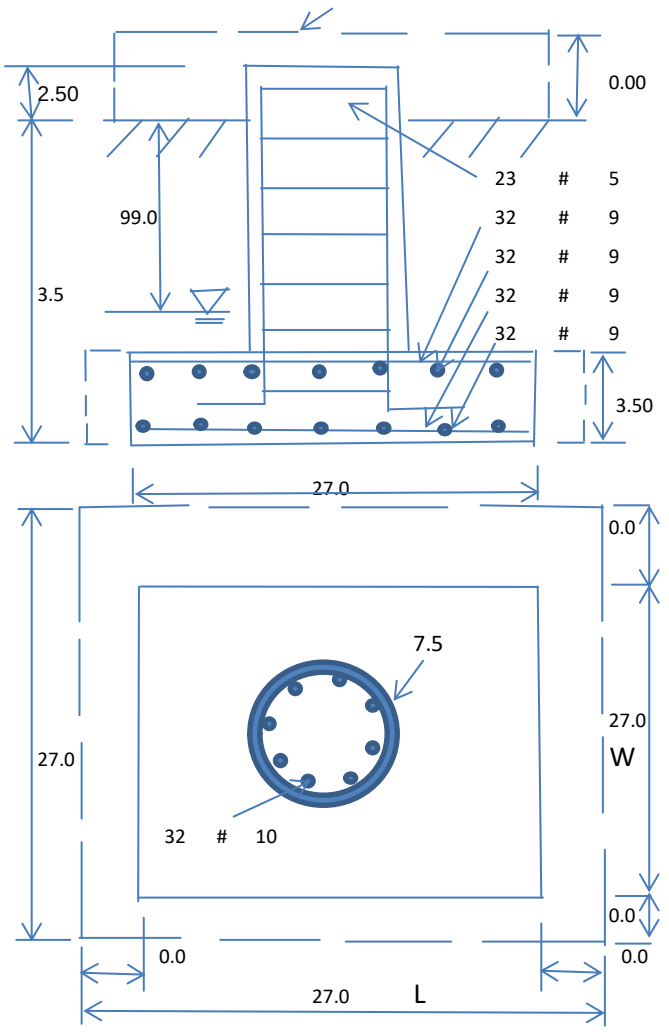
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	53.0	Shear Force (Kips):	29.8
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3232.9
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.5	Depth of Base BG (ft.):	3.5
Pier Height A. G. (ft.):	2.50	Thickness of Pad (ft):	3.50
Length of Pad (ft.):	27	Width of Pad (ft.):	27
Final Length of pad (ft)	27.0	Final width of pad (ft):	27.0



Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	10	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	32	Tie Spacing (in):	3.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	110.0	Soil Buoyant Weight:	37.6	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	20000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:			1.00	

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2661.95	Total Dry Concrete Weight (Kips):	399.29
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	399.29	Total Vertical Load on Base (Kips):	452.29

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	2031	<	Allowable Factored Soil Bearing (psf):	15000	0.14	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5566.9	>	Design Factored Momont (kips-ft):	3412	0.61	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.63	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.00		

(1) Concrete Pier:

					Load/ Capacity Ratio	
Vertical Steel Rebar Area (sq. in./each):	1.27		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	7267.6	>	Design Factored Moment (Mu, Kips-Ft	3307.4	0.46	OK!
Calculated Shear Capacity (Kips):	1496.3	>	Design Factored Shear (Kips):	29.8	0.02	OK!
Calculated Tension Capacity (Tn, Kips):	2194.6	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	11175.7	>	Design Factored Axial Load (Pu Kips):	53.0	0.00	OK!
Moment & Axial Strength Combination:	0.46	OK!	Check Tie Spacing (Design/Required):		0.25	OK!
Pier Reinforcement Ratio:	0.006		Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1181.5	>	One-Way Factored Shear (L-D. Kips):	204.9	0.17	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1181.5	>	One-Way Factored Shear (W-D., Kips):	204.9	0.17	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1062.3	>	One-Way Factored Shear (C-C, Kips):	198.8	0.19	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0026	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0026		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	5409.5	>	Moment at Bottom (L-Dir. K-Ft):	1267.2	0.23	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	5409.5	>	Moment at Bottom (W-Dir. K-Ft):	1267.2	0.23	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	7606.8	>	Moment at Bottom (C-C Dir. K-Ft):	1792.1	0.24	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0026	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0026		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	5409.5	>	Moment at the top (L-Dir K-Ft):	495.5	0.09	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	5409.5	>	Moment at the top (W-Dir K-Ft):	495.5	0.09	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	7606.8	>	Moment at the top (C-C Dir. K-Ft):	464.7	0.06	OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1293.2	k-ft.	Max. factored shear stress v_{u_CD}:	2.0	Psi
Max. factored shear stress v_{u_AB}:	7.3	Psi	Factored shear Strength ϕv_n:	189.7	Psi
Max. factored shear stress v_u:	7.3	Psi	Check Usage of Punching Shear Capacity:	0.04	OK!

INFINIGY

FROM ZERO TO INFINIGY

the solutions are endless

Mount Analysis Report

October 23, 2020

AT&T Site Name	GROTON NORTH RT 184
AT&T Site Number	CTL02383
FA Number	10087528
PTN Number	2051A0VBR6, 2051A0V9PZ, 2051A0VB5F, 2051A0WAG8, 2051A0WAHZ
PACE Number	MRCTB047225, MRCTB047208, MRCTB047262, MRCTB048182, MRCTB048181
Infinigy Job Number	1106-A0001-B
Client	Smartlink
Carrier	AT&T Mobility
Site Location	1662 Route 184 DUP 1 Groton, CT 06340 New London County 41° 23' 8.49984" N NAD83 72° 0' 47.90016" W NAD83
Mount Centerline EL.	128.0 ft
Mount Type	Platform
Structural Usage Ratio	**88.2%**

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

- See construction documents by Infinigy Engineering, Project Number: 499-006, dated September 2, 2020 for the structural modification design prior to installation of proposed appurtenances.

Ray Marshall
Senior Project Engineer

10/23/2020

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 17.04 analysis software.

Supporting Documentation

Construction Drawings	Infinigy Engineering, PLLC., Project Number: 499-006, dated September 2, 2020
Proposed Loading	AT&T, RDFS ID: 3719914, RFDS Version: 5, dated October 5, 2020
Structural Analysis	FDH Engineering, Inc., FDH Project Number: 12-09274E S1, dated September 26, 2012
Site Photos	Provided by Infinigy Engineering, PLLC., dated April 21, 2020

Analysis Code Requirements

Wind Speed	127 mph (3-Second Gust)
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 1.0” ice
Design Standard	ANSI/TIA-222-H
Risk Category	II
Exposure Category	C
Topographic Category	1
Calculated Crest Height	0 ft.
Spectral Response	S_s = .188 g / S_1 = 0.052 g
Site Class	D-Stiff Soil (Assumed)
HMSL	242 ft

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the modified mount meets the specified TIA code requirements. The mounts and connections are therefore deemed adequate to support the final loading configuration 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:

Ray Marshall
Senior Project Engineer | INFINIGY
2500 West Higgins Road, Suite 500, Hoffman Estates, IL 60169
(O) (847) 648-4068
rmarshall@infinigy.com | www.infinigy.com

Final Configuration Loading

Mount CL (ft)	Rad. HT (ft)	Vert. O/S (ft)	Horiz. O/S (ft)*	Qty	Appurtenance	Carrier
128.0	128.0	0.0	0.5	1	CCI DMP65R-BU4DA	AT&T Mobility
			12.0, 0.5	2	CCI DMP65R-BU8DA	
			4.0	1	CCI HPA-65R-BU4AA	
			9.0, 4.0	2	CCI HPA-65R-BU8AA	
			12.0, 0.5	3	Powerwave 7770	
			12.0, 0.5	3	Ericsson 4449 B5/B12	
			12.0, 0.5	3	Ericsson 8843 B2/B66A	
			--	2	Raycap DC6 Squid	

***Horizontal Offset is defined as the distance from the left most edge of the mount face horizontal when viewed facing the tower**

Structure Usages

Horizontal	38.7%	Pass
Mount Pipe	88.2%	Pass
Standoff	40.4%	Pass
Bracing	43.9%	Pass
RATING =	**88.2%**	**Pass**

Mount Connection Usages

Reaction Data	Design Capacity*	Analysis Reactions	Results
Max Tension (lbs.)	20,340.2	6,815.14	33.5%
Max Shear (lbs.)	13,805.8	1,135.48	8.2%
Unity Check	-	-	0.12

***Assumed (1) 5/8" A325 Bolt, (4) per mount to tower connection. Contractor to field verify anchor diameters prior to installation of proposed equipment.**

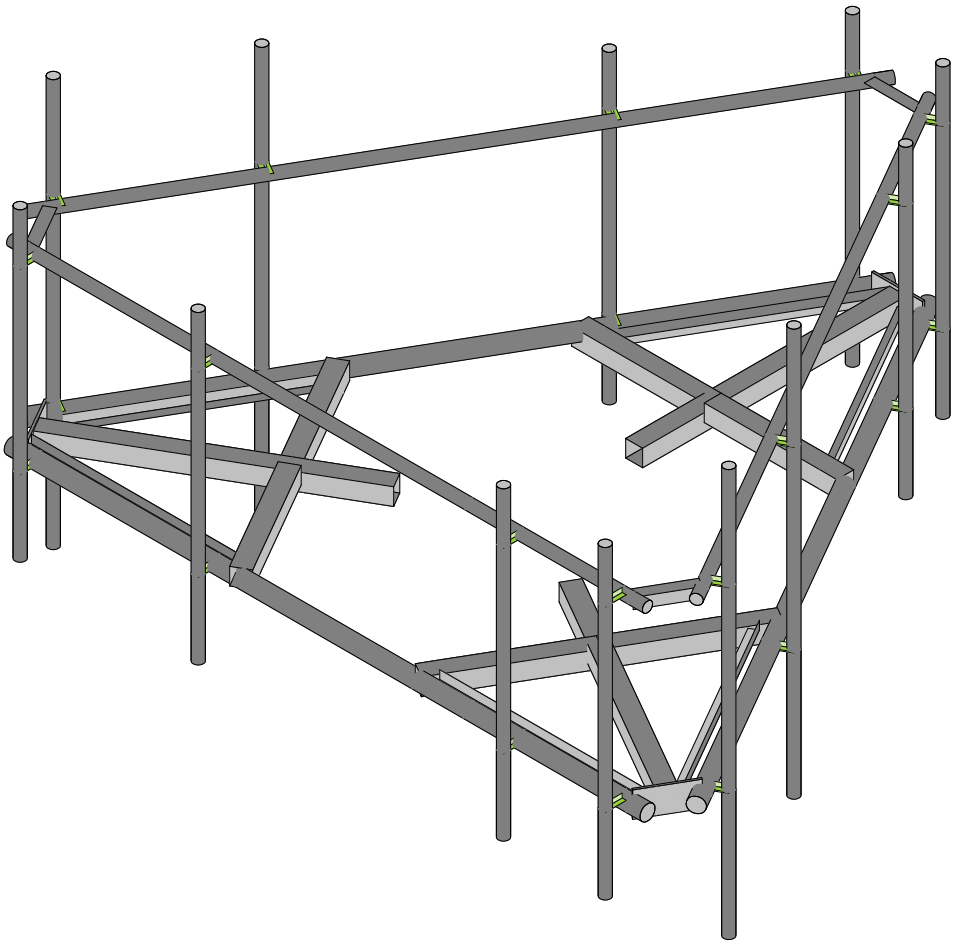
Bolt reactions are acceptable per rigorous structural analysis. Please see the calculations appended in this report for further detail.

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.

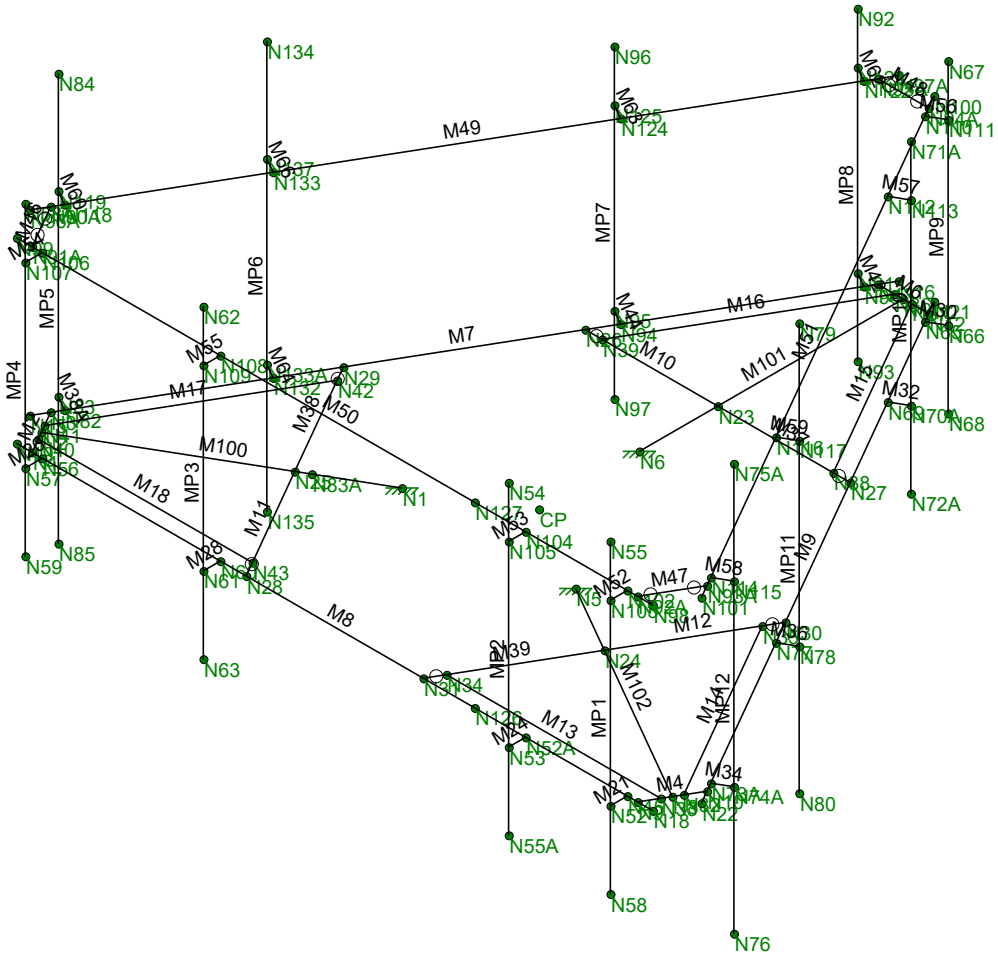
Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions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



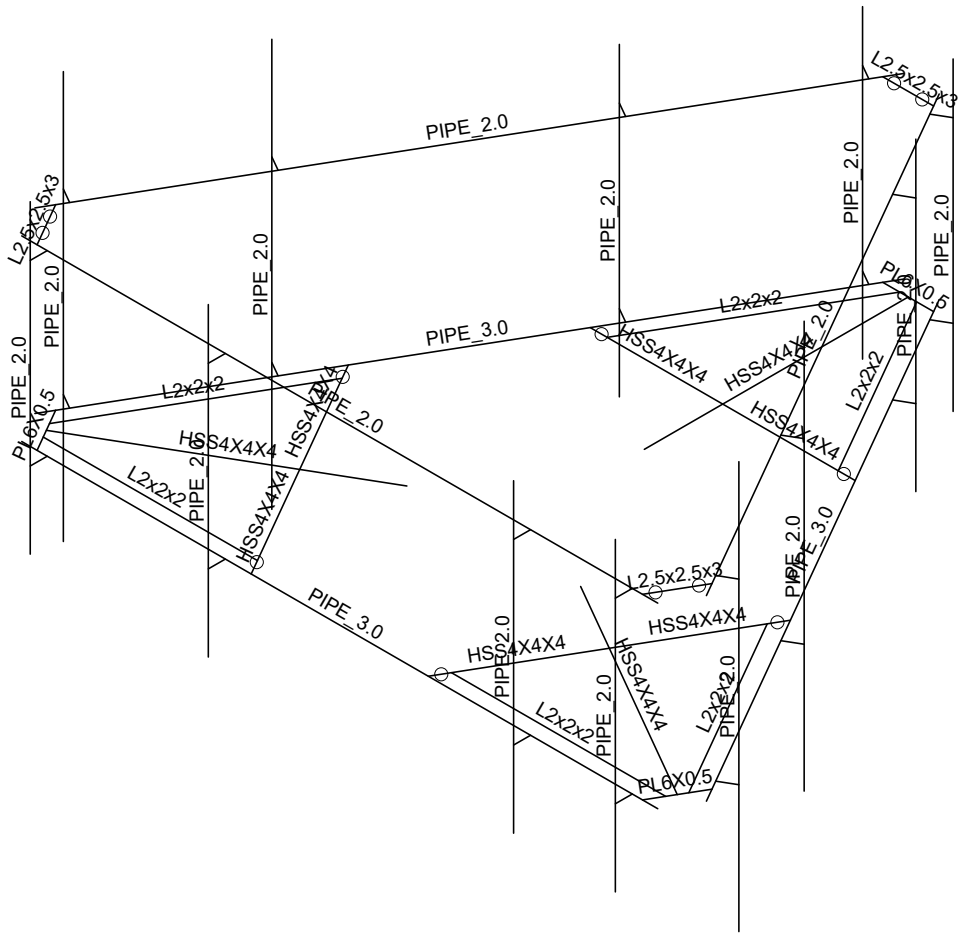
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Proposed Configuration
RAM		Oct 21, 2020 at 10:06 AM
1106-A0001-B		CTL02383_loaded.r3d



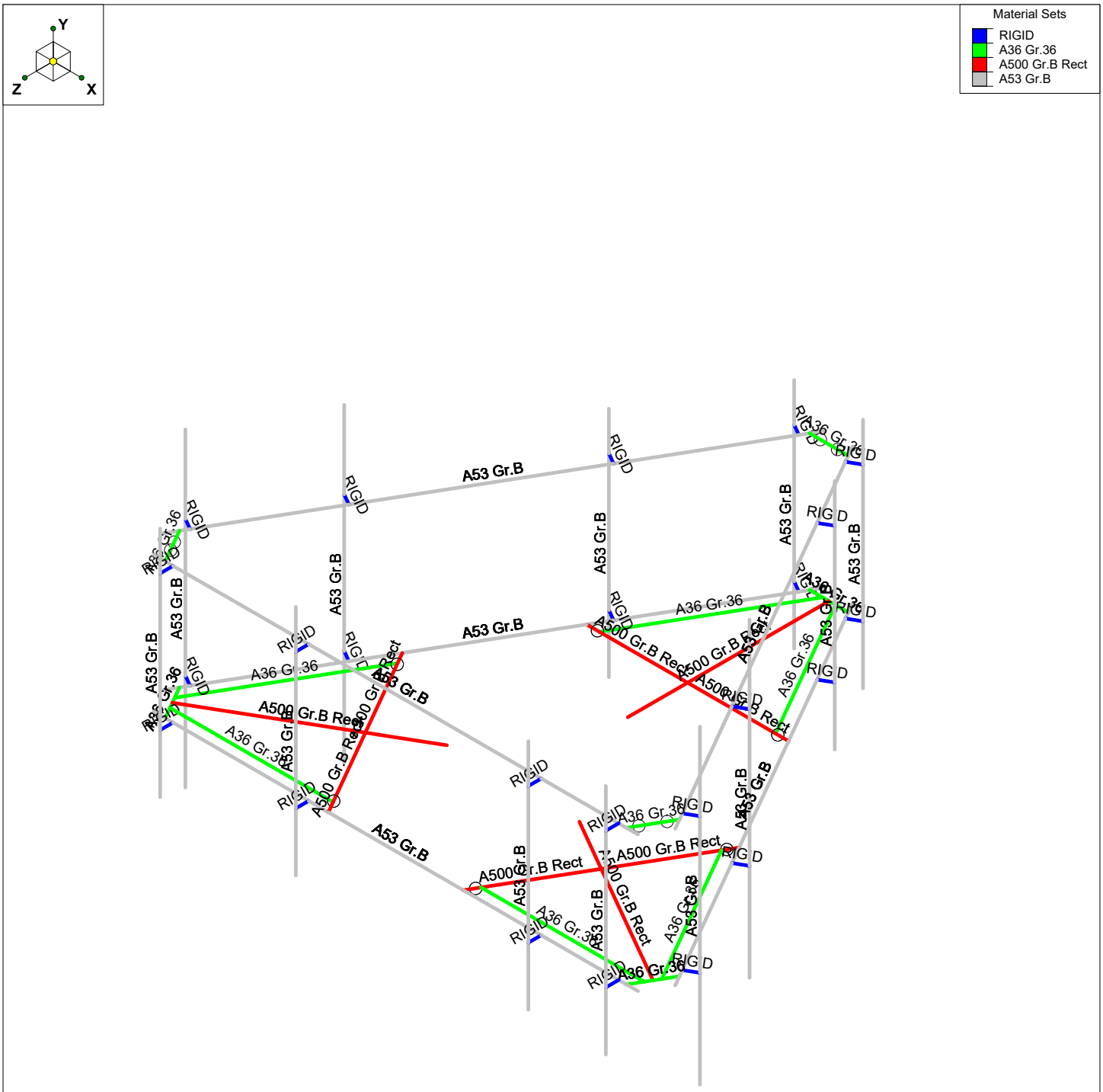
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Wireframe
RAM		Oct 21, 2020 at 9:58 AM
1106-A0001-B		CTL02383_loaded.r3d



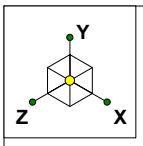
Envelope Only Solution

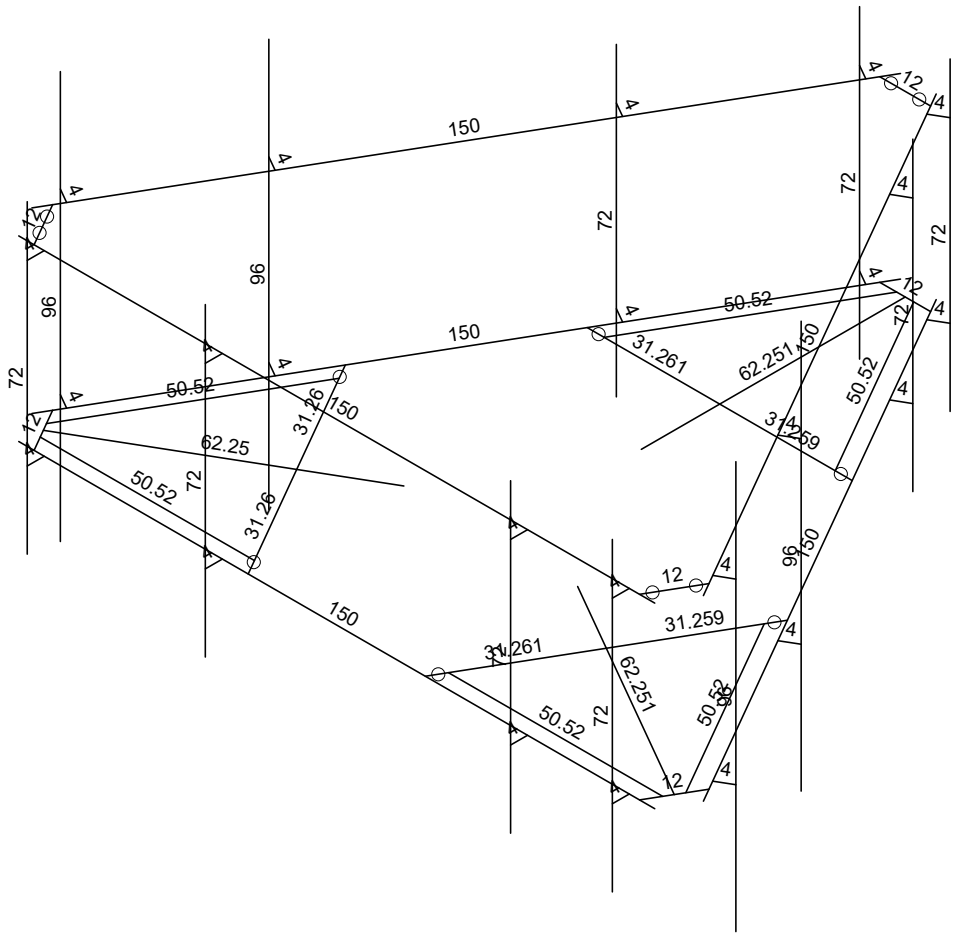
Infinigy Engineering PLLC	CTL02383	Members
RAM		Oct 21, 2020 at 10:00 AM
1106-A0001-B		CTL02383_loaded.r3d



Envelope Only Solution

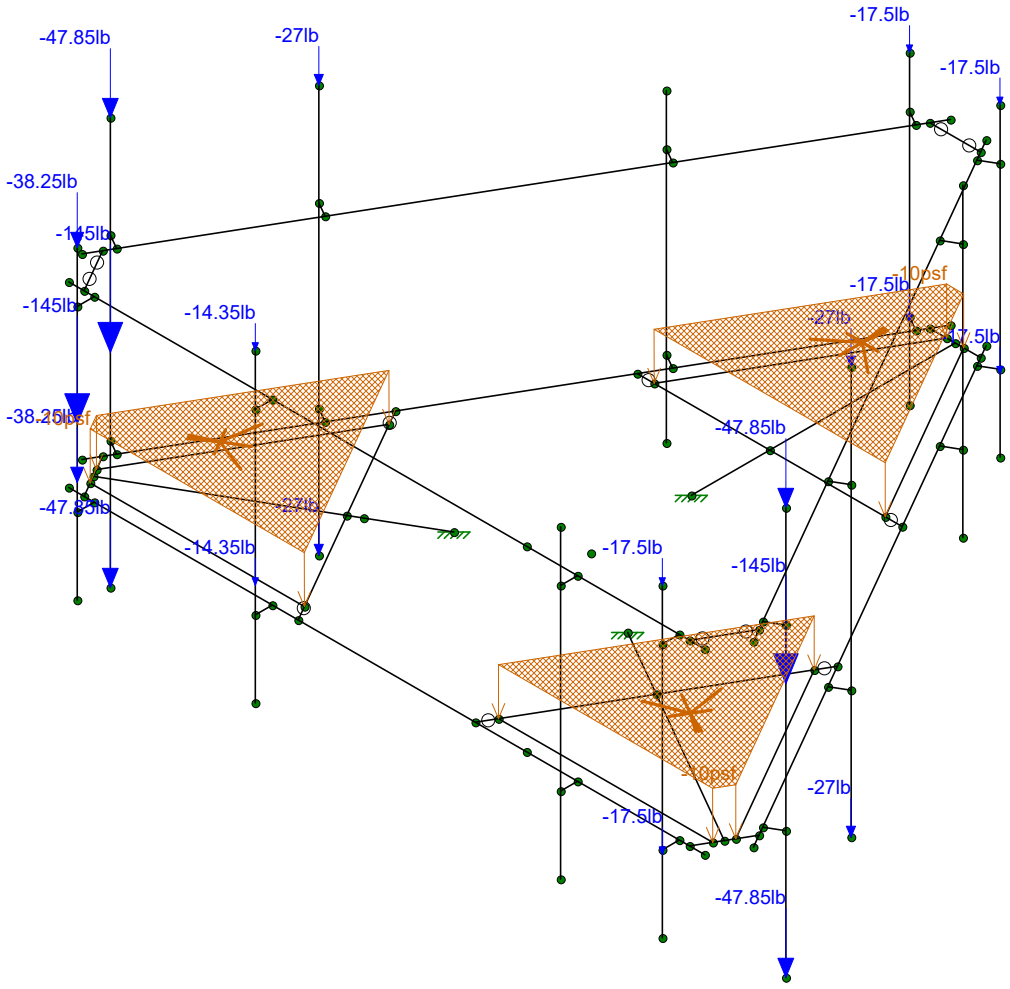
Infinigy Engineering PLLC	CTL02383	Material Set
RAM		Oct 21, 2020 at 10:01 AM
1106-A0001-B		CTL02383_loaded.r3d





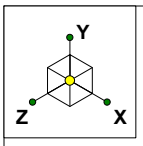
Member Length (in) Displayed
Envelope Only Solution

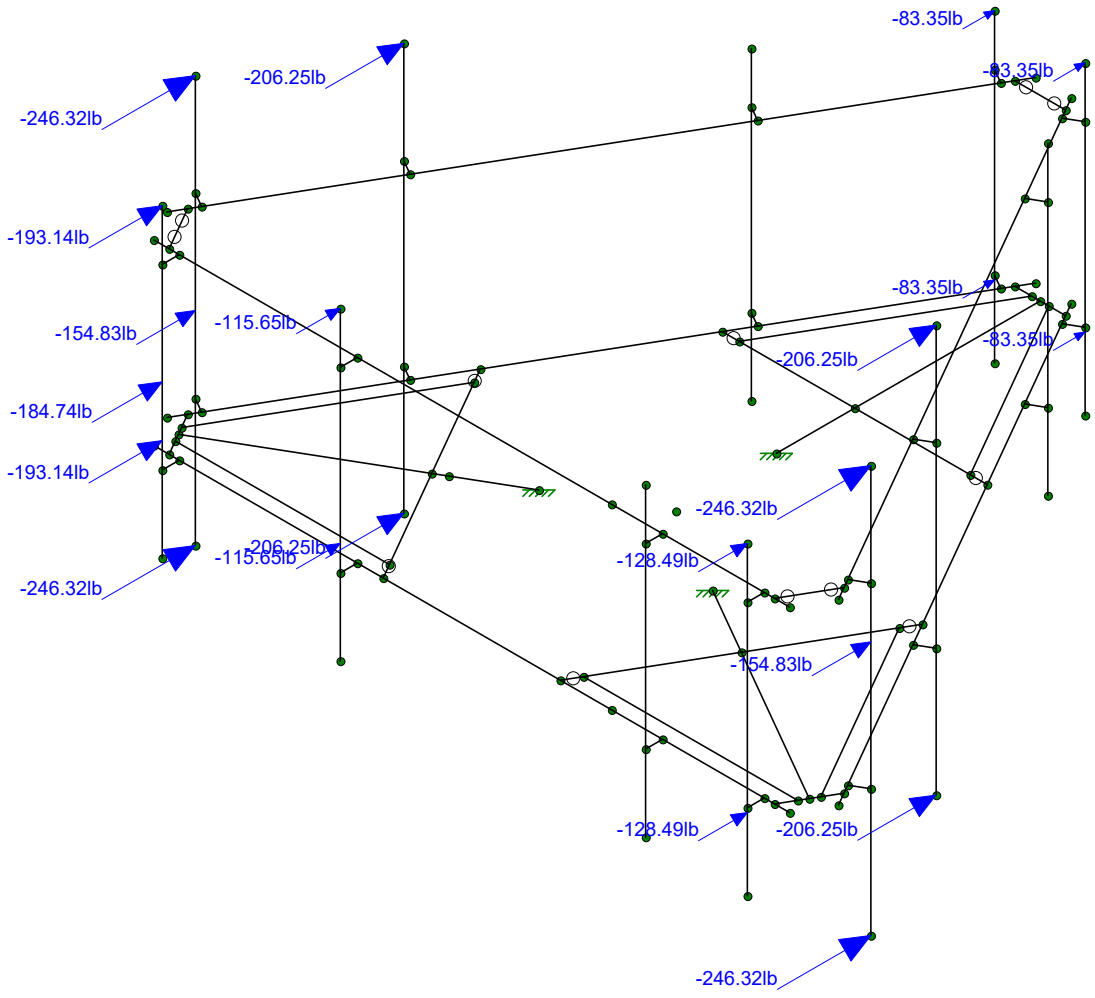
Infinigy Engineering PLLC	CTL02383	Member Lengths
RAM		Oct 21, 2020 at 9:59 AM
1106-A0001-B		CTL02383_loaded.r3d



Loads: BLC 1, Self Weight
Envelope Only Solution

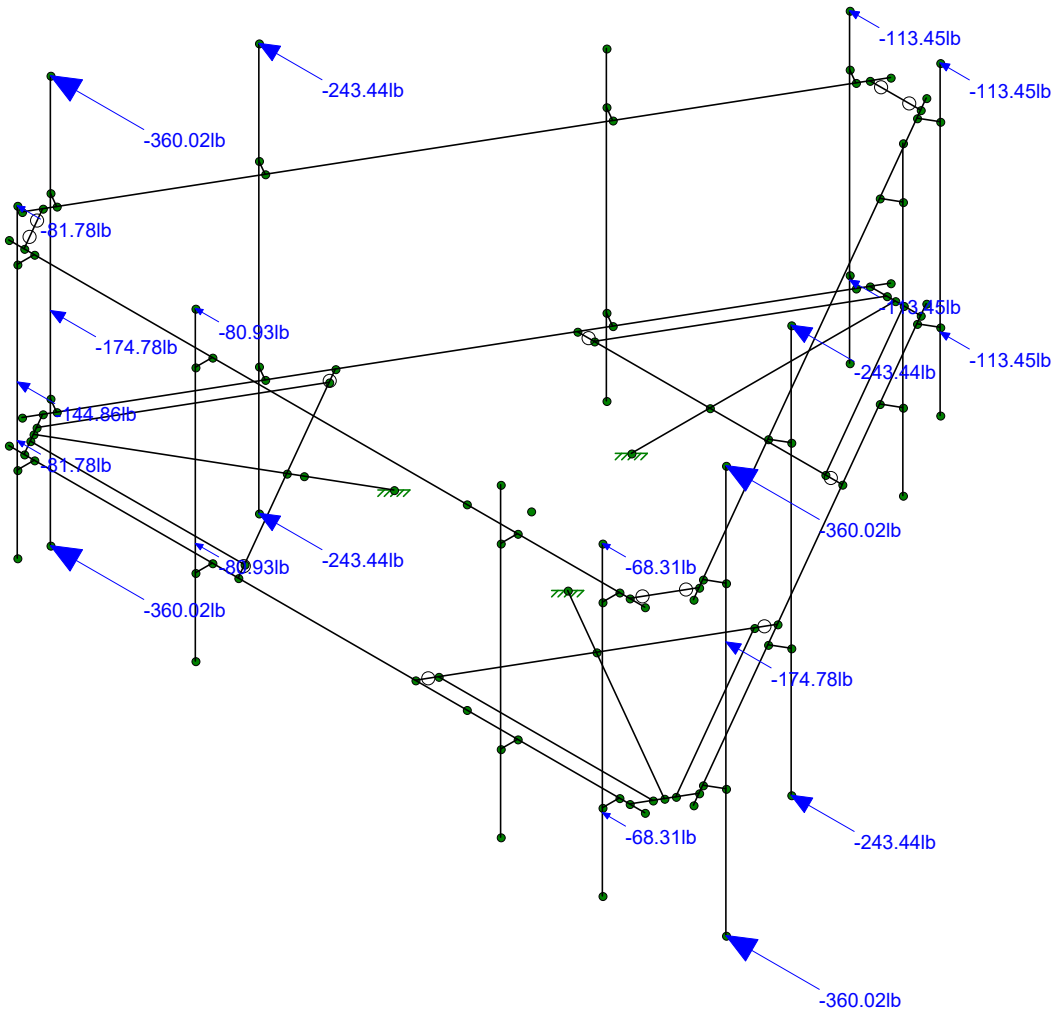
Infinigy Engineering PLLC	CTL02383	Dead Load
RAM		Oct 21, 2020 at 9:08 AM
1106-A0001-B		CTL02383_loaded.r3d





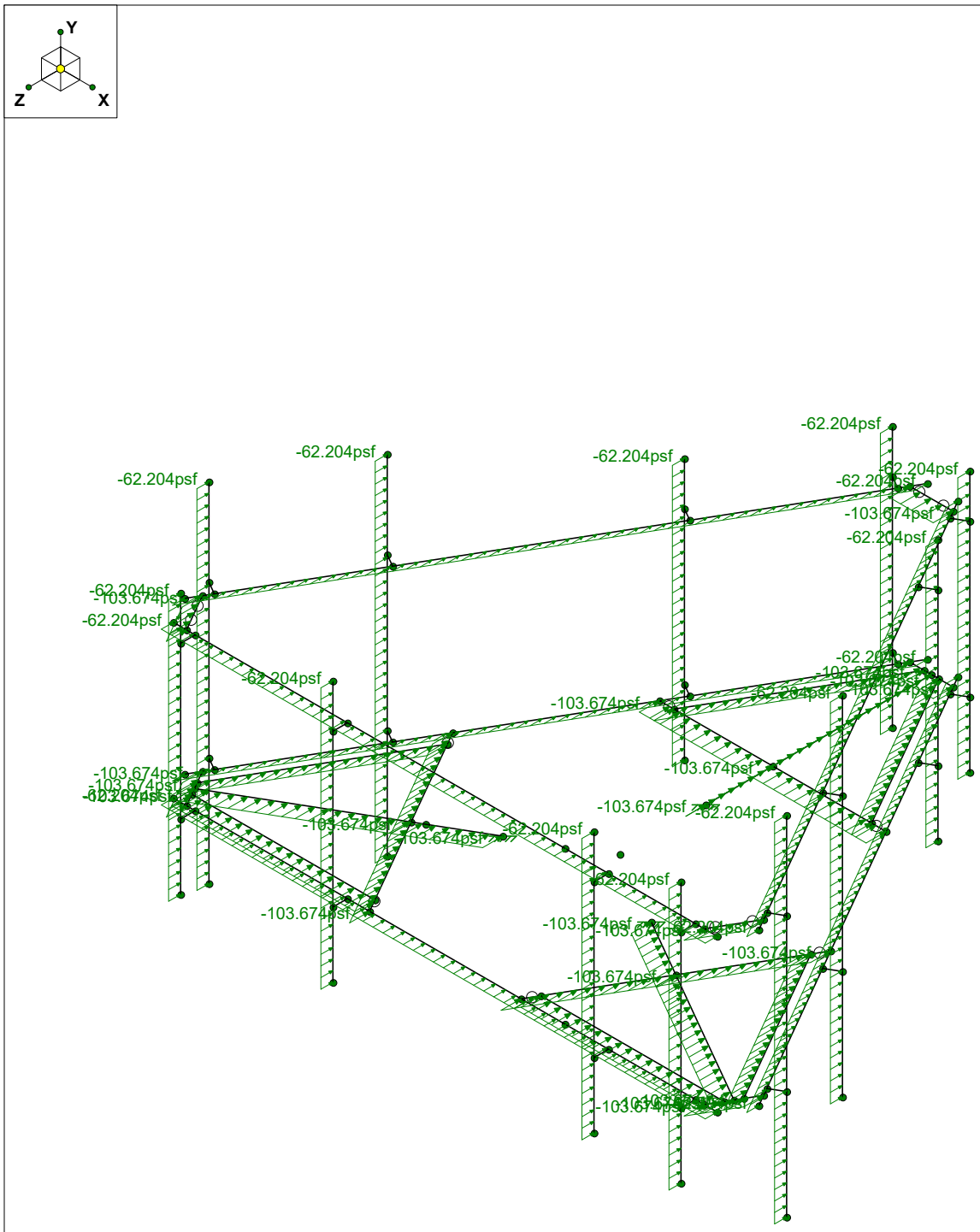
Loads: BLC 2, Wind Load AZI 0
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Wind Load 0
RAM		Oct 21, 2020 at 9:07 AM
1106-A0001-B		CTL02383_loaded.r3d



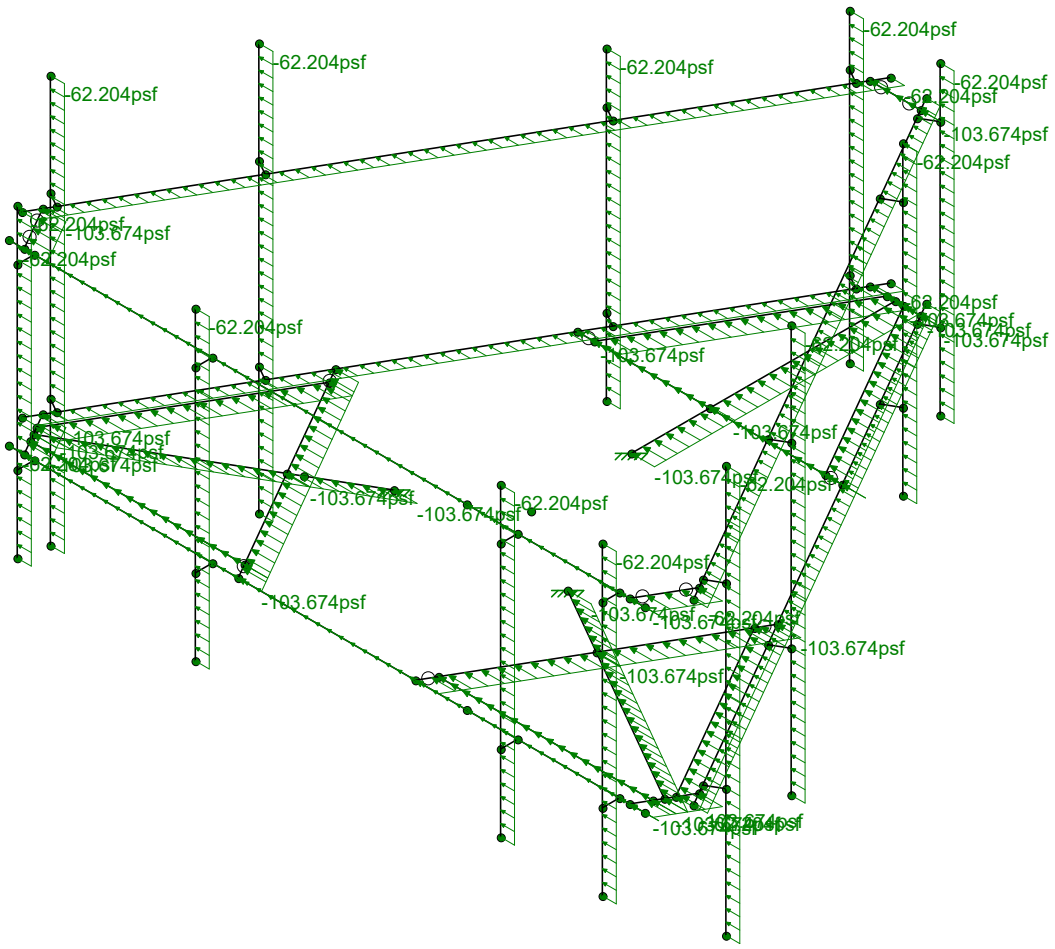
Loads: BLC 5, Wind Load AZI 90
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Wind Load 90
RAM		Oct 21, 2020 at 9:07 AM
1106-A0001-B		CTL02383_loaded.r3d



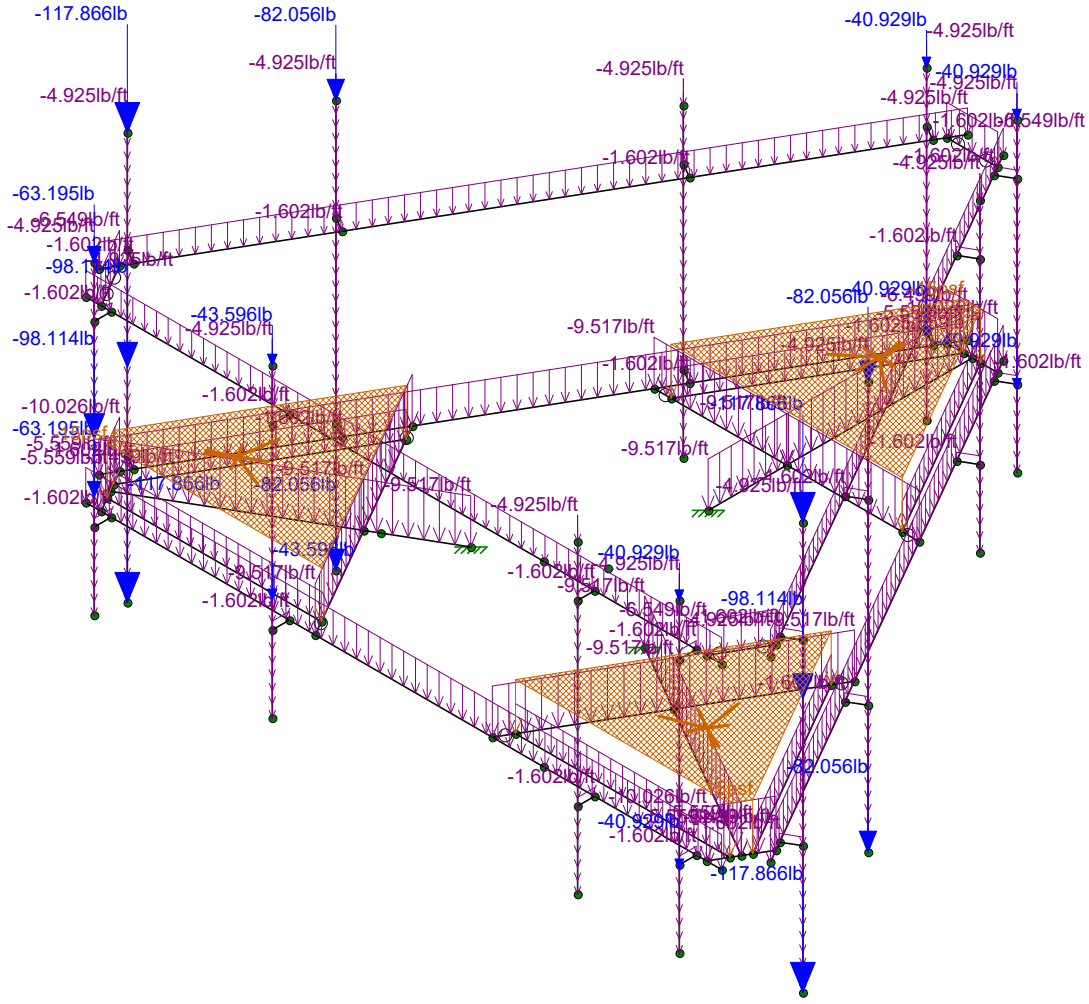
Loads: BLC 14, Distr. Wind Load Z
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Distributed Wind Load 0
RAM		Oct 21, 2020 at 9:06 AM
1106-A0001-B		CTL02383_loaded.r3d



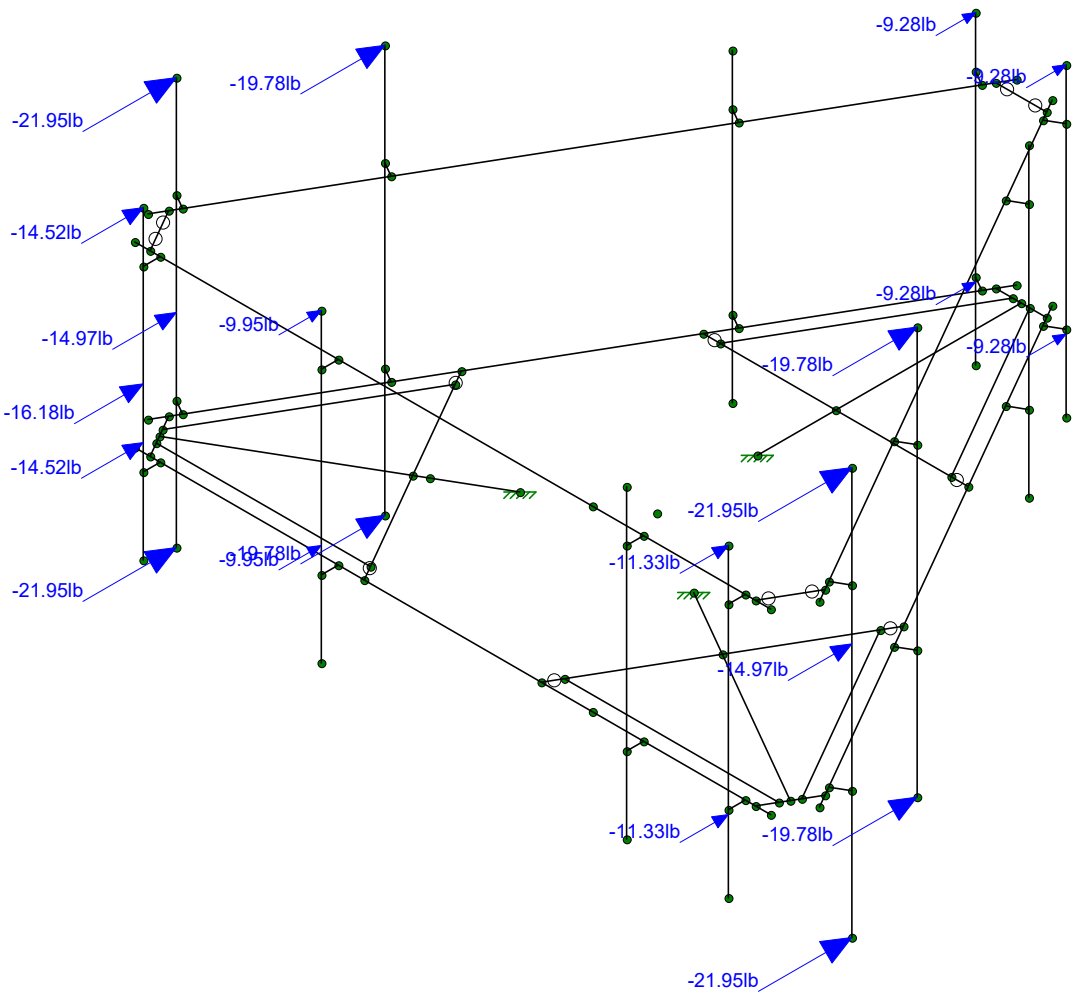
Loads: BLC 15, Distr. Wind Load X
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Distributed Wind Load 90
RAM		Oct 21, 2020 at 9:05 AM
1106-A0001-B		CTL02383_loaded.r3d



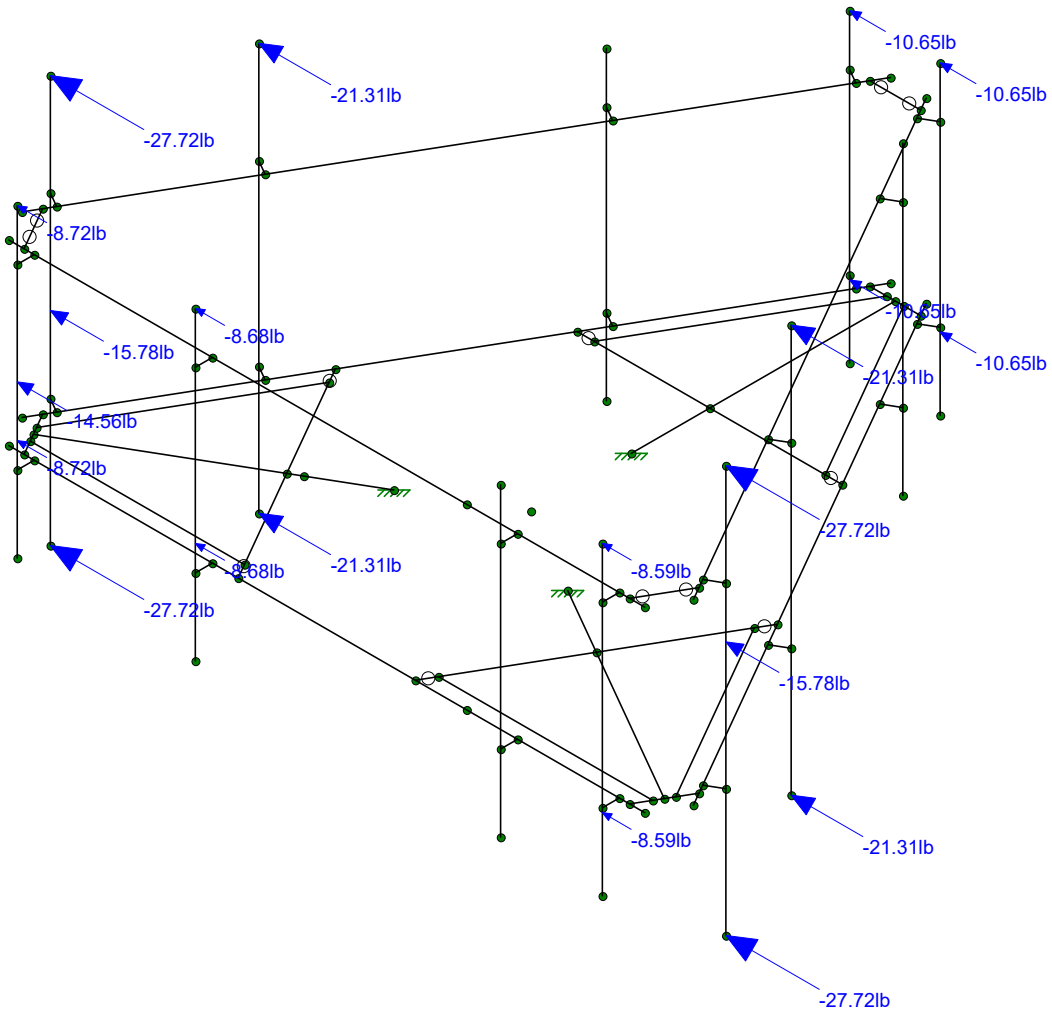
Loads: BLC 16, Ice Weight
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Ice Load
RAM		Oct 21, 2020 at 9:05 AM
1106-A0001-B		CTL02383_loaded.r3d



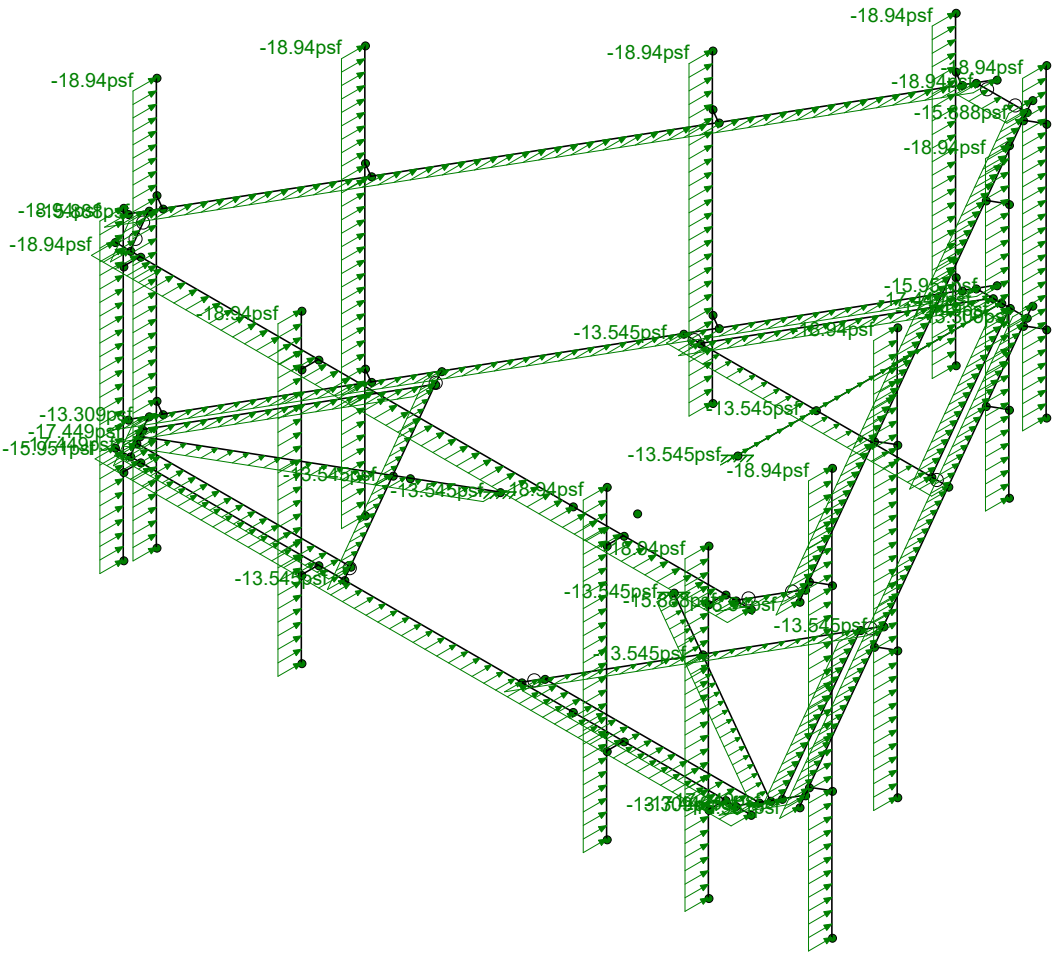
Loads: BLC 17, Ice Wind Load AZI 0
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Wind + Ice Load 0
RAM		Oct 21, 2020 at 9:04 AM
1106-A0001-B		CTL02383_loaded.r3d



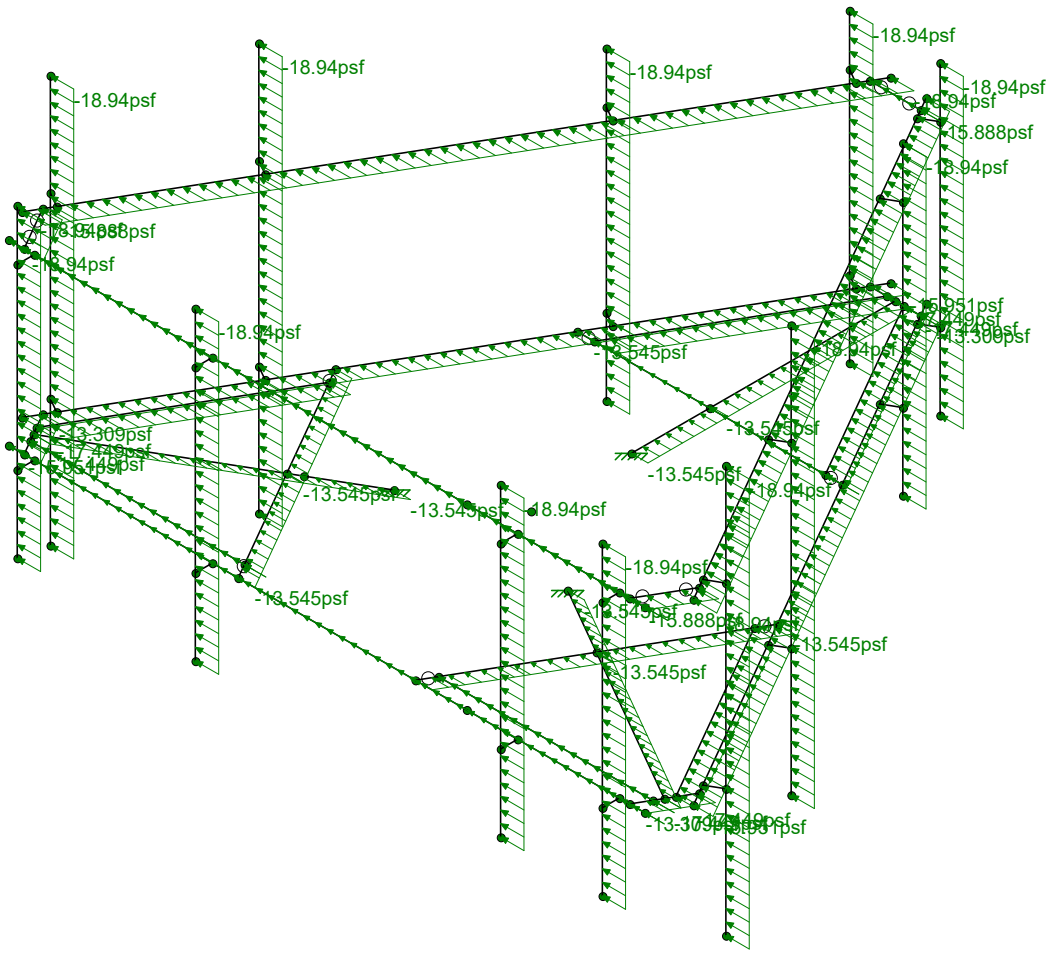
Loads: BLC 20, Ice Wind Load AZI 90
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Wind + Ice Load 90
RAM		Oct 21, 2020 at 9:04 AM
1106-A0001-B		CTL02383_loaded.r3d



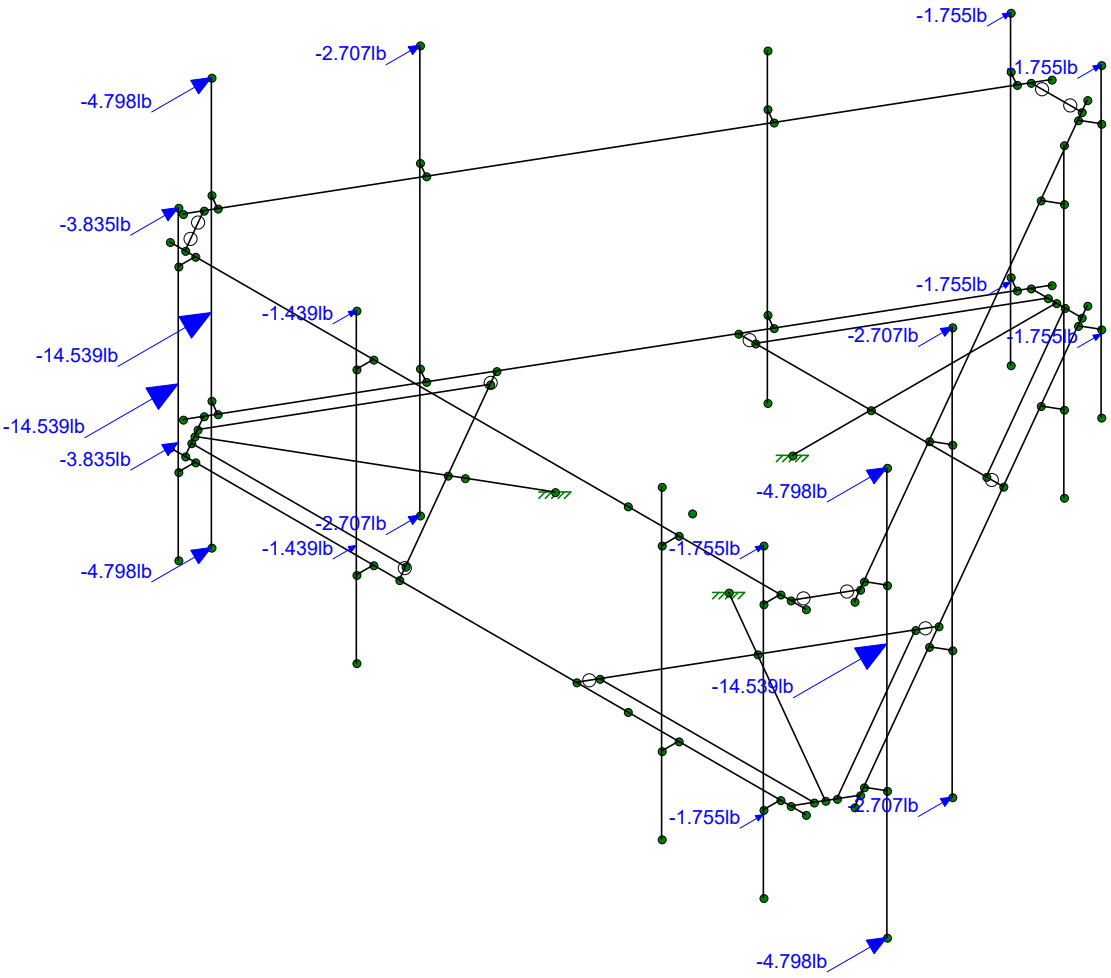
Loads: BLC 29, Distr. Ice Wind Load Z
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Distributed Wind + Ice Load 0
RAM		Oct 21, 2020 at 9:01 AM
1106-A0001-B		CTL02383_loaded.r3d



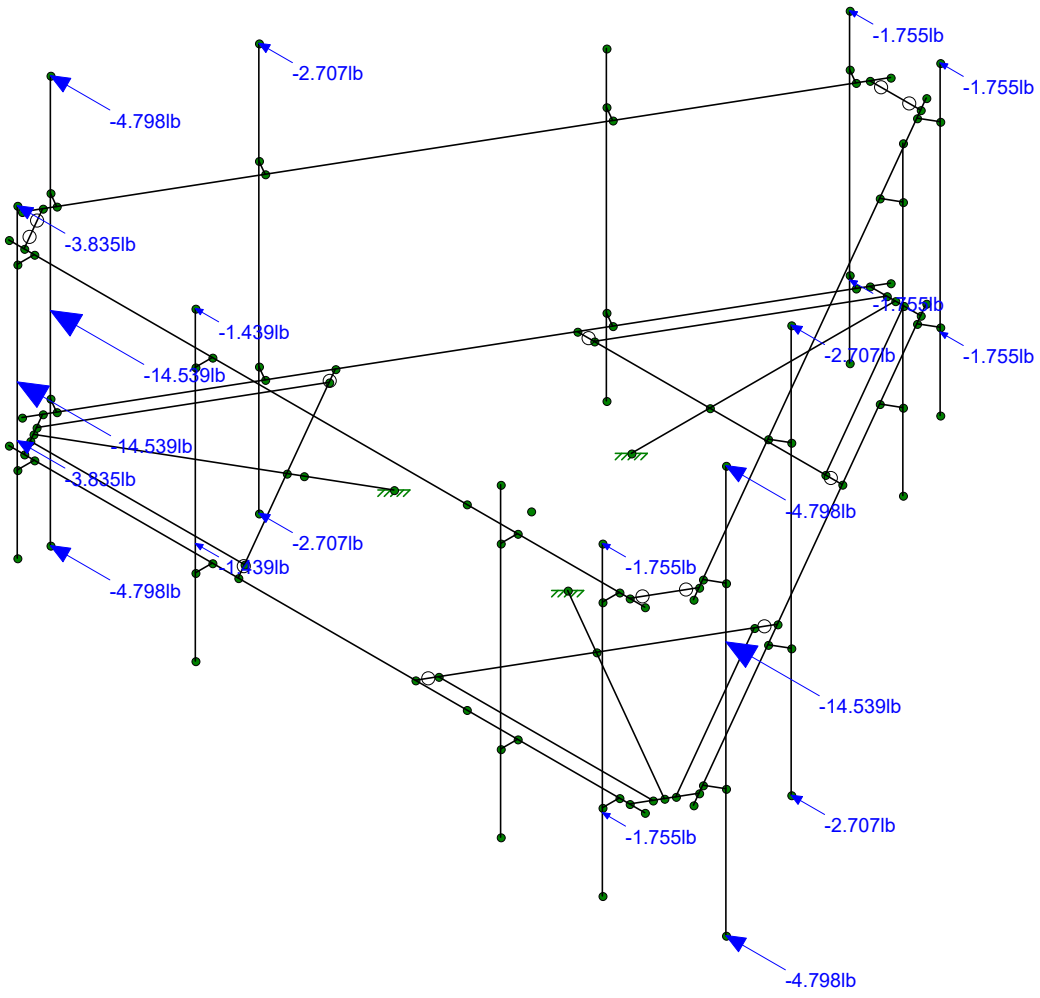
Loads: BLC 30, Distr. Ice Wind Load X
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Distributed Wind + Ice Load 90
RAM		Oct 21, 2020 at 9:03 AM
1106-A0001-B		CTL02383_loaded.r3d



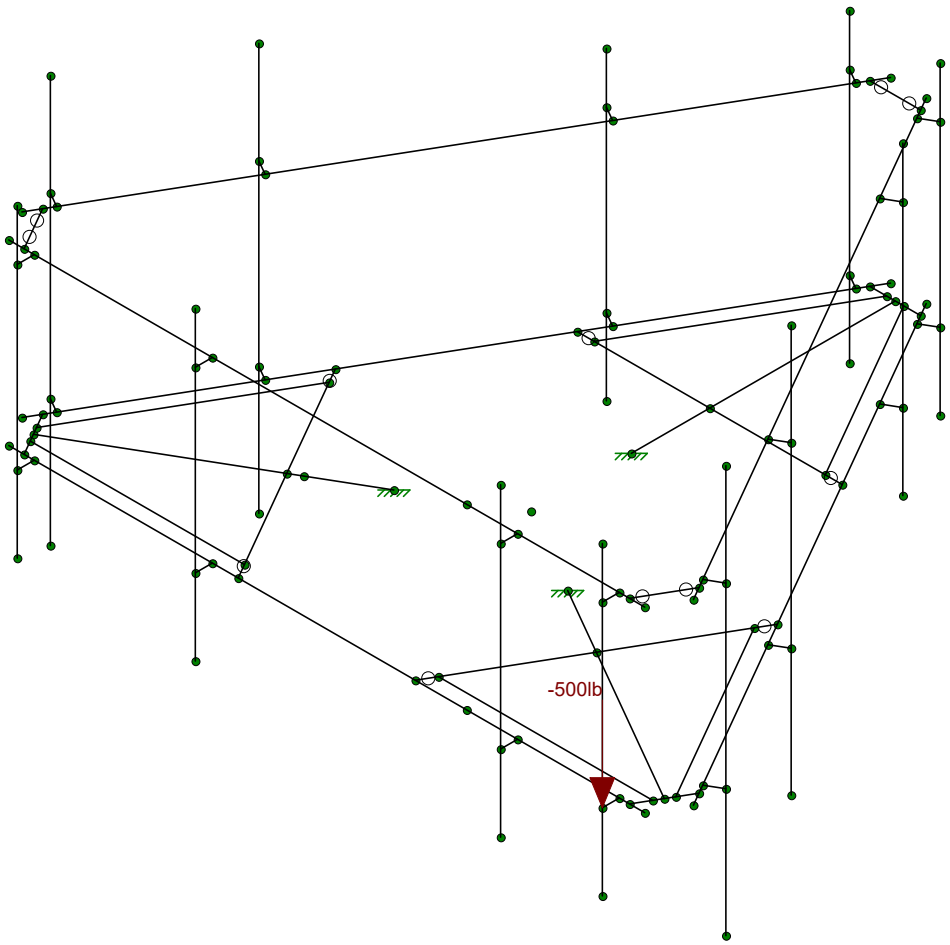
Loads: BLC 31, Seismic Load Z
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Seismic Load 0
RAM		Oct 21, 2020 at 8:57 AM
1106-A0001-B		CTL02383_loaded.r3d



Loads: BLC 32, Seismic Load X
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Seismic Load 90
RAM		Oct 21, 2020 at 8:58 AM
1106-A0001-B		CTL02383_loaded.r3d



Loads: BLC 34, Maintenance Load 1
Envelope Only Solution

Infinigy Engineering PLLC	CTL02383	Maintenance Load
RAM		Oct 21, 2020 at 8:59 AM
1106-A0001-B		CTL02383_loaded.r3d

Program Inputs

PROJECT INFORMATION	
Client:	Smartlink
Carrier:	AT&T
Engineer:	Ray Marshall

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	C	
Topo Factor Procedure:	Method 1, Category 1	
Site Class:	D - Stiff Soil	
Ground Elevation:	242	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	128.0	ft
Tower Height AGL:	150.0	ft

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

FACTORS		
Directionality Fact. (K_d):	0.95	
Ground Ele. Factor (K_e):	0.99	*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}):	127	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1	in
Flat Pressure:	103.67	psf
Round Pressure:	62.20	psf
Ice Wind Pressure:	9.64	psf

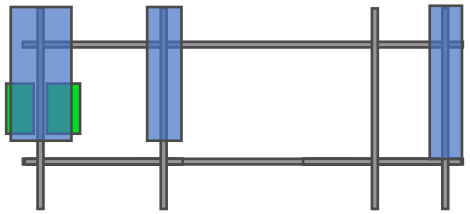
SEISMIC DATA		
Short-Period Accel. (S_s):	0.19	g
1-Second Accel. (S_1):	0.05	g
Short-Period Design (S_{DS}):	0.20	
1-Second Design (S_{D1}):	0.08	
Short-Period Coeff. (F_a):	1.60	
1-Second Coeff. (F_v):	2.40	
Amplification Factor (a_p):	1.00	
Response Mod. (R_p):	2.50	
Overstrength (Ω_o):	1.00	

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

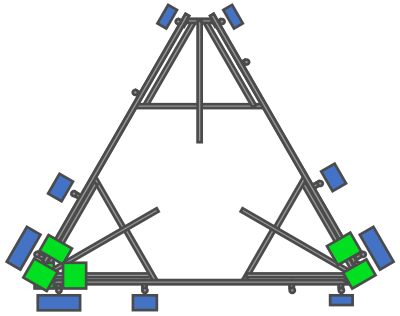
Infinigy Load Calculator V2.1.4

Program Inputs

ELEVATION VIEW



PLAN VIEW



INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

Infinigy Load Calculator V2.1.4

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)
CCI ANTENNAS DMP65R-BU4DA	128.0	1	0.90	51.84	8.28	3.51	386.29	163.56	76.50	7.67	MP4
CCI ANTENNAS HPA-65R-BU4AA	128.0	1	0.90	51.84	4.96	3.47	231.30	161.87	28.70	2.88	MP3
POWERWAVE TECHNOLOGIES 7770.00	128.0	3	0.90	51.84	5.51	2.93	256.99	136.61	35.00	3.51	MP1
ERICSSON TME-RADIO 4449	128.0	3	0.90	51.84	1.98	1.41	92.37	65.78	70.00	7.02	MP4
ERICSSON TME-RADIO 8843	128.0	3	0.90	51.84	1.98	1.70	92.37	79.08	75.00	7.52	MP4
CCI ANTENNAS HPA-65R-BU8AA	128.0	2	0.90	51.84	11.23	8.04	524.07	375.30	54.00	5.41	MP6
CCI ANTENNAS DMP65R-BU8DA	128.0	2	0.90	51.84	17.87	8.12	833.75	378.93	95.70	9.60	MP5
RAYCAP TME-DC6	128.0	2	0.90	51.84	1.21	1.21	56.53	56.53	32.80	3.29	Leg/Flush

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M100	N1	N2			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
2	M2	N3	N4			Corner Plate	Beam	RECT	A36 Gr.36	Typical
3	M102	N5	N8			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
4	M4	N9	N10			Corner Plate	Beam	RECT	A36 Gr.36	Typical
5	M101	N6	N11			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
6	M6	N12	N13			Corner Plate	Beam	RECT	A36 Gr.36	Typical
7	M7	N16	N15			Horizontal	Beam	Pipe	A53 Gr.B	Typical
8	M8	N19	N18			Horizontal	Beam	Pipe	A53 Gr.B	Typical
9	M9	N22	N21			Horizontal	Beam	Pipe	A53 Gr.B	Typical
10	M10	N26	N23			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
11	M11	N28	N25			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
12	M12	N30	N24			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
13	M13	N33	N34			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
14	M14	N32	N35		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
15	M15	N37	N38			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
16	M16	N36	N39		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
17	M17	N41	N42			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
18	M18	N40	N43		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
19	M21	N45	N52			RIGID	None	None	RIGID	Typical
20	MP1	N55	N58			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
21	M37	N23	N27			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
22	M38	N25	N29			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
23	M39	N24	N31			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
24	M24	N52A	N53			RIGID	None	None	RIGID	Typical
25	MP2	N54	N55A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
26	M26	N56	N57			RIGID	None	None	RIGID	Typical
27	MP4	N58A	N59			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
28	M28	N60	N61			RIGID	None	None	RIGID	Typical
29	MP3	N62	N63			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
30	M30	N65	N66			RIGID	None	None	RIGID	Typical
31	MP9	N67	N68			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
32	M32	N69	N70A			RIGID	None	None	RIGID	Typical
33	MP10	N71A	N72A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
34	M34	N73A	N74A			RIGID	None	None	RIGID	Typical
35	MP12	N75A	N76			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
36	M36	N77	N78			RIGID	None	None	RIGID	Typical
37	MP11	N79	N80			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
38	M38A	N82	N83			RIGID	None	None	RIGID	Typical
39	MP5	N84	N85			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
40	M42	N90	N91			RIGID	None	None	RIGID	Typical
41	MP8	N92	N93			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
42	M44	N94	N95			RIGID	None	None	RIGID	Typical
43	MP7	N96	N97			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
44	M46	N90A	N91A		180	Handrail Corner	Beam	Single Angle	A36 Gr.36	Typical
45	M47	N92A	N93A		180	Handrail Corner	Beam	Single Angle	A36 Gr.36	Typical
46	M48	N94A	N95A		180	Handrail Corner	Beam	Single Angle	A36 Gr.36	Typical
47	M49	N97A	N96A			Handrail	Beam	Pipe	A53 Gr.B	Typical
48	M50	N99	N98			Handrail	Beam	Pipe	A53 Gr.B	Typical
49	M51	N101	N100			Handrail	Beam	Pipe	A53 Gr.B	Typical
50	M52	N102	N103			RIGID	None	None	RIGID	Typical
51	M53	N104	N105			RIGID	None	None	RIGID	Typical
52	M54	N106	N107			RIGID	None	None	RIGID	Typical
53	M55	N108	N109			RIGID	None	None	RIGID	Typical
54	M56	N110	N111			RIGID	None	None	RIGID	Typical
55	M57	N112	N113			RIGID	None	None	RIGID	Typical
56	M58	N114	N115			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
57	M59	N116	N117			RIGID	None	None	RIGID	Typical
58	M60	N118	N119			RIGID	None	None	RIGID	Typical
59	M62	N122	N123			RIGID	None	None	RIGID	Typical
60	M63	N124	N125			RIGID	None	None	RIGID	Typical
61	M64	N132	N133A			RIGID	None	None	RIGID	Typical
62	MP6	N134	N135			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
63	M66	N133	N137			RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		24	96	0
3	Total General		24	96	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	PL6X0.5	3	36	30.625
7	A36 Gr.36	L2x2x2	6	303.1	42.203
8	A36 Gr.36	L2.5x2.5x3	3	36	9.198
9	A500 Gr.B Rect	HSS4X4X4	9	374.3	384.708
10	A53 Gr.B	PIPE_2.0	15	1410	407.823
11	A53 Gr.B	PIPE_3.0	3	450	264.141
12	Total HR Steel		39	2609.4	1138.697

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surfac...
1	Self Weight	DL		-1			24		3	
2	Wind Load AZI 0	WLZ					48			
3	Wind Load AZI 30	None					48			
4	Wind Load AZI 60	None					48			
5	Wind Load AZI 90	WLX					48			
6	Wind Load AZI 120	None					48			
7	Wind Load AZI 150	None					48			
8	Wind Load AZI 180	None					48			
9	Wind Load AZI 210	None					48			
10	Wind Load AZI 240	None					48			
11	Wind Load AZI 270	None					48			
12	Wind Load AZI 300	None					48			
13	Wind Load AZI 330	None					48			
14	Distr. Wind Load Z	WLZ						63		
15	Distr. Wind Load X	WLX						63		
16	Ice Weight	OL1					24	63	3	
17	Ice Wind Load AZI 0	OL2					48			
18	Ice Wind Load AZI 30	None					48			
19	Ice Wind Load AZI 60	None					48			
20	Ice Wind Load AZI 90	OL3					48			
21	Ice Wind Load AZI 120	None					48			
22	Ice Wind Load AZI 150	None					48			
23	Ice Wind Load AZI 180	None					48			
24	Ice Wind Load AZI 210	None					48			
25	Ice Wind Load AZI 240	None					48			
26	Ice Wind Load AZI 270	None					48			
27	Ice Wind Load AZI 300	None					48			
28	Ice Wind Load AZI 330	None					48			
29	Distr. Ice Wind Load Z	OL2						63		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surfac...
30	Distr. Ice Wind Load X	OL3						63		
31	Seismic Load Z	ELZ			-.1		24			
32	Seismic Load X	ELX	-.1				24			
33	Service Live Loads	LL								
34	Maintenance Load 1	LL				1				
35	Maintenance Load 2	LL				1				
36	Maintenance Load 3	LL				1				
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 Lo...	None						63		
47	BLC 16 Transient Area L...	None						63		

Load Combinations

	Description	Solve	.....	B...	Factor	BLC	Factor	BLC	Fac...	BLC	F...	BLC	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
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 30	Yes	Y	1	1.2	3	1	14	.866	15	.5														
4	1.2DL + 1WL AZI 60	Yes	Y	1	1.2	4	1	14	.5	15	.8...														
5	1.2DL + 1WL AZI 90	Yes	Y	1	1.2	5	1	14		15	1														
6	1.2DL + 1WL AZI 120	Yes	Y	1	1.2	6	1	14	-.5	15	.8...														
7	1.2DL + 1WL AZI 150	Yes	Y	1	1.2	7	1	14	-.866	15	.5														
8	1.2DL + 1WL AZI 180	Yes	Y	1	1.2	8	1	14	-1	15															
9	1.2DL + 1WL AZI 210	Yes	Y	1	1.2	9	1	14	-.866	15	-.5														
10	1.2DL + 1WL AZI 240	Yes	Y	1	1.2	10	1	14	-.5	15	-....														
11	1.2DL + 1WL AZI 270	Yes	Y	1	1.2	11	1	14		15	-1														
12	1.2DL + 1WL AZI 300	Yes	Y	1	1.2	12	1	14	.5	15	-....														
13	1.2DL + 1WL AZI 330	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 30	Yes	Y	1	.9	3	1	14	.866	15	.5														
16	0.9DL + 1WL AZI 60	Yes	Y	1	.9	4	1	14	.5	15	.8...														
17	0.9DL + 1WL AZI 90	Yes	Y	1	.9	5	1	14		15	1														
18	0.9DL + 1WL AZI 120	Yes	Y	1	.9	6	1	14	-.5	15	.8...														
19	0.9DL + 1WL AZI 150	Yes	Y	1	.9	7	1	14	-.866	15	.5														
20	0.9DL + 1WL AZI 180	Yes	Y	1	.9	8	1	14	-1	15															
21	0.9DL + 1WL AZI 210	Yes	Y	1	.9	9	1	14	-.866	15	-.5														
22	0.9DL + 1WL AZI 240	Yes	Y	1	.9	10	1	14	-.5	15	-....														
23	0.9DL + 1WL AZI 270	Yes	Y	1	.9	11	1	14		15	-1														
24	0.9DL + 1WL AZI 300	Yes	Y	1	.9	12	1	14	.5	15	-....														
25	0.9DL + 1WL AZI 330	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 +1.0Wi AZI 0	Yes	Y	1	1.2	16	1	17	1	29	1	30													
28	1.2D + 1.0Di +1.0Wi AZI 30	Yes	Y	1	1.2	16	1	18	1	29	.8...	30	.5												
29	1.2D + 1.0Di +1.0Wi AZI 60	Yes	Y	1	1.2	16	1	19	1	29	.5	30	.8...												
30	1.2D + 1.0Di +1.0Wi AZI 90	Yes	Y	1	1.2	16	1	20	1	29		30	1												
31	1.2D + 1.0Di +1.0Wi AZI 120	Yes	Y	1	1.2	16	1	21	1	29	-.5	30	.8...												
32	1.2D + 1.0Di +1.0Wi AZI 150	Yes	Y	1	1.2	16	1	22	1	29	-....	30	.5												
33	1.2D + 1.0Di +1.0Wi AZI 180	Yes	Y	1	1.2	16	1	23	1	29	-1	30													
34	1.2D + 1.0Di +1.0Wi AZI 210	Yes	Y	1	1.2	16	1	24	1	29	-....	30	-.5												

Load Combinations (Continued)

	Description	Solve	.....	B...	Factor	BLC	Factor	BLC	Fac...	BLC	F...	BLC	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
35	1.2D + 1.0Di +1.0Wi AZI 240	Yes	Y	1	1.2	16	1	25	1	29	-.5	30	-....										
36	1.2D + 1.0Di +1.0Wi AZI 270	Yes	Y	1	1.2	16	1	26	1	29		30	-1										
37	1.2D + 1.0Di +1.0Wi AZI 300	Yes	Y	1	1.2	16	1	27	1	29	.5	30	-....										
38	1.2D + 1.0Di +1.0Wi AZI 330	Yes	Y	1	1.2	16	1	28	1	29	.8...	30	-.5										
39	(1.2 + 0.2Sds)DL + 1.0E AZI 0	Yes	Y	1	1.24	31	1	32															
40	(1.2 + 0.2Sds)DL + 1.0E AZI 30	Yes	Y	1	1.24	31	.866	32	.5														
41	(1.2 + 0.2Sds)DL + 1.0E AZI 60	Yes	Y	1	1.24	31	.5	32	.866														
42	(1.2 + 0.2Sds)DL + 1.0E AZI 90	Yes	Y	1	1.24	31		32	1														
43	(1.2 + 0.2Sds)DL + 1.0E AZI 120	Yes	Y	1	1.24	31	-.5	32	.866														
44	(1.2 + 0.2Sds)DL + 1.0E AZI 150	Yes	Y	1	1.24	31	-.866	32	.5														
45	(1.2 + 0.2Sds)DL + 1.0E AZI 180	Yes	Y	1	1.24	31	-1	32															
46	(1.2 + 0.2Sds)DL + 1.0E AZI 210	Yes	Y	1	1.24	31	-.866	32	-.5														
47	(1.2 + 0.2Sds)DL + 1.0E AZI 240	Yes	Y	1	1.24	31	-.5	32	-.866														
48	(1.2 + 0.2Sds)DL + 1.0E AZI 270	Yes	Y	1	1.24	31		32	-1														
49	(1.2 + 0.2Sds)DL + 1.0E AZI 300	Yes	Y	1	1.24	31	.5	32	-.866														
50	(1.2 + 0.2Sds)DL + 1.0E AZI 330	Yes	Y	1	1.24	31	.866	32	-.5														
51	(0.9 - 0.2Sds)DL + 1.0E AZI 0	Yes	Y	1	.86	31	1	32															
52	(0.9 - 0.2Sds)DL + 1.0E AZI 30	Yes	Y	1	.86	31	.866	32	.5														
53	(0.9 - 0.2Sds)DL + 1.0E AZI 60	Yes	Y	1	.86	31	.5	32	.866														
54	(0.9 - 0.2Sds)DL + 1.0E AZI 90	Yes	Y	1	.86	31		32	1														
55	(0.9 - 0.2Sds)DL + 1.0E AZI 120	Yes	Y	1	.86	31	-.5	32	.866														
56	(0.9 - 0.2Sds)DL + 1.0E AZI 150	Yes	Y	1	.86	31	-.866	32	.5														
57	(0.9 - 0.2Sds)DL + 1.0E AZI 180	Yes	Y	1	.86	31	-1	32															
58	(0.9 - 0.2Sds)DL + 1.0E AZI 210	Yes	Y	1	.86	31	-.866	32	-.5														
59	(0.9 - 0.2Sds)DL + 1.0E AZI 240	Yes	Y	1	.86	31	-.5	32	-.866														
60	(0.9 - 0.2Sds)DL + 1.0E AZI 270	Yes	Y	1	.86	31		32	-1														
61	(0.9 - 0.2Sds)DL + 1.0E AZI 300	Yes	Y	1	.86	31	.5	32	-.866														
62	(0.9 - 0.2Sds)DL + 1.0E AZI 330	Yes	Y	1	.86	31	.866	32	-.5														
63	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	2	.223	14	.223	15		33	1.5										
64	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	3	.223	14	.193	15	.1...	33	1.5										
65	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	4	.223	14	.112	15	.1...	33	1.5										
66	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	5	.223	14		15	.2...	33	1.5										
67	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	6	.223	14	-.112	15	.1...	33	1.5										
68	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	7	.223	14	-.193	15	.1...	33	1.5										
69	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	8	.223	14	-.223	15		33	1.5										
70	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	9	.223	14	-.193	15	-....	33	1.5										
71	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	10	.223	14	-.112	15	-....	33	1.5										
72	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	11	.223	14		15	-....	33	1.5										
73	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	12	.223	14	.112	15	-....	33	1.5										
74	1.0DL + 1.5LL + 1.0SWL (60 mph) ...	Yes	Y	1	1	13	.223	14	.193	15	-....	33	1.5										
75	1.2DL + 1.5LL	Yes	Y	1	1.2	33	1.5																
76	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	2	.056	14	.0...	15											
77	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	3	.056	14	.0...	15	.0...										
78	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	4	.056	14	.0...	15	.0...										
79	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	5	.056	14		15	.0...										
80	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	6	.056	14	-....	15	.0...										
81	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	7	.056	14	-....	15	.0...										
82	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	8	.056	14	-....	15											
83	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	9	.056	14	-....	15	-....										
84	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	10	.056	14	-....	15	-....										
85	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	11	.056	14		15	-....										
86	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	12	.056	14	.0...	15	-....										
87	1.2DL + 1.5LM-MP1 + 1SWL (30 m...	Yes	Y	1	1.2	34	1.5	13	.056	14	.0...	15	-....										
88	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	2	.056	14	.0...	15											
89	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	3	.056	14	.0...	15	.0...										
90	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	4	.056	14	.0...	15	.0...										
91	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	5	.056	14		15	.0...										

Load Combinations (Continued)

	Description	Solve	.....	B...	Factor	BLC	Factor	BLC	Fac...	BLC	F...	BLC	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
92	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	6	.056	14	-....	15	.0...										
93	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	7	.056	14	-....	15	.0...										
94	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	8	.056	14	-....	15											
95	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	9	.056	14	-....	15	-....										
96	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	10	.056	14	-....	15	-....										
97	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	11	.056	14		15	-....										
98	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	12	.056	14	.0...	15	-....										
99	1.2DL + 1.5LM-MP2 + 1SWL (30 m...	Yes	Y	1	1.2	35	1.5	13	.056	14	.0...	15	-....										
100	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	2	.056	14	.0...	15											
101	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	3	.056	14	.0...	15	.0...										
102	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	4	.056	14	.0...	15	.0...										
103	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	5	.056	14		15	.0...										
104	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	6	.056	14	-....	15	.0...										
105	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	7	.056	14	-....	15	.0...										
106	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	8	.056	14	-....	15											
107	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	9	.056	14	-....	15	-....										
108	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	10	.056	14	-....	15	-....										
109	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	11	.056	14		15	-....										
110	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	12	.056	14	.0...	15	-....										
111	1.2DL + 1.5LM-MP3 + 1SWL (30 m...	Yes	Y	1	1.2	36	1.5	13	.056	14	.0...	15	-....										
112	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	2	.056	14	.0...	15											
113	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	3	.056	14	.0...	15	.0...										
114	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	4	.056	14	.0...	15	.0...										
115	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	5	.056	14		15	.0...										
116	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	6	.056	14	-....	15	.0...										
117	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	7	.056	14	-....	15	.0...										
118	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	8	.056	14	-....	15											
119	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	9	.056	14	-....	15	-....										
120	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	10	.056	14	-....	15	-....										
121	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	11	.056	14		15	-....										
122	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	12	.056	14	.0...	15	-....										
123	1.2DL + 1.5LM-MP4 + 1SWL (30 m...	Yes	Y	1	1.2	37	1.5	13	.056	14	.0...	15	-....										
124	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	2	.056	14	.0...	15											
125	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	3	.056	14	.0...	15	.0...										
126	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	4	.056	14	.0...	15	.0...										
127	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	5	.056	14		15	.0...										
128	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	6	.056	14	-....	15	.0...										
129	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	7	.056	14	-....	15	.0...										
130	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	8	.056	14	-....	15											
131	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	9	.056	14	-....	15	-....										
132	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	10	.056	14	-....	15	-....										
133	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	11	.056	14		15	-....										
134	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	12	.056	14	.0...	15	-....										
135	1.2DL + 1.5LM-MP5 + 1SWL (30 m...	Yes	Y	1	1.2	38	1.5	13	.056	14	.0...	15	-....										
136	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	2	.056	14	.0...	15											
137	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	3	.056	14	.0...	15	.0...										
138	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	4	.056	14	.0...	15	.0...										
139	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	5	.056	14		15	.0...										
140	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	6	.056	14	-....	15	.0...										
141	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	7	.056	14	-....	15	.0...										
142	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	8	.056	14	-....	15											
143	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	9	.056	14	-....	15	-....										
144	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	10	.056	14	-....	15	-....										
145	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	11	.056	14		15	-....										
146	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	12	.056	14	.0...	15	-....										
147	1.2DL + 1.5LM-MP6 + 1SWL (30 m...	Yes	Y	1	1.2	39	1.5	13	.056	14	.0...	15	-....										
148	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	2	.056	14	.0...	15											

Load Combinations (Continued)

	Description	Solve	.....	B...	Factor	BLC	Factor	BLC	Fac...	BLC	F...	BLC	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
149	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	3	.056	14	.0...	15	.0...										
150	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	4	.056	14	.0...	15	.0...										
151	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	5	.056	14		15	.0...										
152	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	6	.056	14	-...	15	.0...										
153	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	7	.056	14	-...	15	.0...										
154	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	8	.056	14	-...	15											
155	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	9	.056	14	-...	15	-...										
156	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	10	.056	14	-...	15	-...										
157	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	11	.056	14		15	-...										
158	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	12	.056	14	.0...	15	-...										
159	1.2DL + 1.5LM-MP7 + 1SWL (30 m...	Yes	Y	1	1.2	40	1.5	13	.056	14	.0...	15	-...										
160	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	2	.056	14	.0...	15											
161	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	3	.056	14	.0...	15	.0...										
162	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	4	.056	14	.0...	15	.0...										
163	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	5	.056	14		15	.0...										
164	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	6	.056	14	-...	15	.0...										
165	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	7	.056	14	-...	15	.0...										
166	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	8	.056	14	-...	15											
167	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	9	.056	14	-...	15	-...										
168	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	10	.056	14	-...	15	-...										
169	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	11	.056	14		15	-...										
170	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	12	.056	14	.0...	15	-...										
171	1.2DL + 1.5LM-MP8 + 1SWL (30 m...	Yes	Y	1	1.2	41	1.5	13	.056	14	.0...	15	-...										
172	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	2	.056	14	.0...	15											
173	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	3	.056	14	.0...	15	.0...										
174	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	4	.056	14	.0...	15	.0...										
175	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	5	.056	14		15	.0...										
176	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	6	.056	14	-...	15	.0...										
177	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	7	.056	14	-...	15	.0...										
178	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	8	.056	14	-...	15											
179	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	9	.056	14	-...	15	-...										
180	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	10	.056	14	-...	15	-...										
181	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	11	.056	14		15	-...										
182	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	12	.056	14	.0...	15	-...										
183	1.2DL + 1.5LM-MP9 + 1SWL (30 m...	Yes	Y	1	1.2	42	1.5	13	.056	14	.0...	15	-...										
184	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	2	.056	14	.0...	15											
185	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	3	.056	14	.0...	15	.0...										
186	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	4	.056	14	.0...	15	.0...										
187	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	5	.056	14		15	.0...										
188	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	6	.056	14	-...	15	.0...										
189	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	7	.056	14	-...	15	.0...										
190	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	8	.056	14	-...	15											
191	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	9	.056	14	-...	15	-...										
192	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	10	.056	14	-...	15	-...										
193	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	11	.056	14		15	-...										
194	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	12	.056	14	.0...	15	-...										
195	1.2DL + 1.5LM-MP10 + 1SWL (30 ...	Yes	Y	1	1.2	43	1.5	13	.056	14	.0...	15	-...										
196	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	2	.056	14	.0...	15											
197	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	3	.056	14	.0...	15	.0...										
198	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	4	.056	14	.0...	15	.0...										
199	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	5	.056	14		15	.0...										
200	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	6	.056	14	-...	15	.0...										
201	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	7	.056	14	-...	15	.0...										
202	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	8	.056	14	-...	15											
203	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	9	.056	14	-...	15	-...										
204	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	10	.056	14	-...	15	-...										
205	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	11	.056	14		15	-...										

Load Combinations (Continued)

	Description	Solve	.....	B...	Factor	BLC	Factor	BLC	Fac...	BLC	F...	BLC	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
206	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	12	.056	14	.0...	15	-....										
207	1.2DL + 1.5LM-MP11 + 1SWL (30 ...	Yes	Y	1	1.2	44	1.5	13	.056	14	.0...	15	-....										
208	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	2	.056	14	.0...	15											
209	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	3	.056	14	.0...	15	.0...										
210	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	4	.056	14	.0...	15	.0...										
211	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	5	.056	14		15	.0...										
212	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	6	.056	14	-....	15	.0...										
213	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	7	.056	14	-....	15	.0...										
214	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	8	.056	14	-....	15											
215	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	9	.056	14	-....	15	-....										
216	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	10	.056	14	-....	15	-....										
217	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	11	.056	14		15	-....										
218	1.2DL + 1.5LM-MP12 + 1SWL (30 ...	Yes	Y	1	1.2	45	1.5	12	.056	14	.0...	15	-....										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N6	m...	744.227	5	1615.073	124	3013.458	14	3725.545	2	832.972	11	1382.177	23
2		m...	-741.508	11	-548.187	20	-3078.955	8	-2197.999	20	-835.307	17	-1391.749	5
3	N5	m...	3023.512	4	2253.451	35	1403.572	2	988.836	15	1679.26	7	4259.693	157
4		m...	-2945.916	22	-283.957	16	-1370.988	20	-2608.405	9	-1674.657	25	-1091.782	17
5	N1	m...	2877.766	18	2846.512	31	1959.631	2	783.778	25	2276.128	15	586.123	24
6		m...	-2959.52	12	-58.414	24	-1927.615	20	-3220.376	7	-2279.739	21	-5681.151	31
7	Totals:	m...	6517.786	5	6095.448	32	6367.605	14						
8		m...	-6517.784	23	2020.744	62	-6367.617	8						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc...	phi*Pn...	phi*M...	phi*Mn...	Cb	Eqn
1	MP4	PIPE_2.0	.882	54	10	.197	54		22	25203....	32130	1871....	1871.6...	1	H1-1b
2	MP1	PIPE_2.0	.784	54	6	.175	54		12	25203....	32130	1871....	1871.6...	1	H1-1b
3	MP5	PIPE_2.0	.780	66	10	.119	66		8	25203....	32130	1871....	1871.6...	1	H1-1b
4	MP11	PIPE_2.0	.744	66	6	.083	66		3	25203....	32130	1871....	1871.6...	1	H1-1b
5	MP12	PIPE_2.0	.718	66	6	.099	66		10	25203....	32130	1871....	1871.6...	1	H1-1b
6	MP6	PIPE_2.0	.709	66	10	.108	66		2	25203....	32130	1871....	1871.6...	1	H1-1b
7	MP2	PIPE_2.0	.596	54	6	.141	54		11	25203....	32130	1871....	1871.6...	1	H1-1b
8	MP3	PIPE_2.0	.560	54	9	.158	54		10	25203....	32130	1871....	1871.6...	1	H1-1b
9	MP7	PIPE_2.0	.475	54	5	.121	54		4	25203....	32130	1871....	1871.6...	1	H1-1b
10	MP10	PIPE_2.0	.459	54	11	.115	54		12	25203....	32130	1871....	1871.6...	1	H1-1b
11	M2	PL6X0.5	.439	6	10	.341	8.125	y	3	67551....	97200	1012.5	12150	1.313	H1-1b
12	MP8	PIPE_2.0	.438	54	5	.088	54		4	25203....	32130	1871....	1871.6...	1	H1-1b
13	M17	L2x2x2	.438	50.52	16	.022	50.52	z	10	6606.063	15908.4	402.5...	788.366	2.196	H2-1
14	M14	L2x2x2	.430	50.52	23	.021	50.52	y	6	6606.013	15908.4	402.5...	764.008	1.898	H2-1
15	M4	PL6X0.5	.430	6	6	.294	3.875	y	13	67551....	97200	1012.5	12150	1.427	H1-1b
16	M18	L2x2x2	.422	50.52	20	.024	50.52	y	2	6606.063	15908.4	402.5...	793.868	2.273	H2-1
17	M100	HSS4X4X4	.404	0	32	.157	0	z	3	131884...	139518	16180...	16180.5	1	H1-1b
18	MP9	PIPE_2.0	.397	54	11	.085	54		12	25203....	32130	1871....	1871.6...	1	H1-1b
19	M49	PIPE_2.0	.387	143.75	2	.177	48.437		3	25983.18	32130	1871....	1871.6...	1	H1-1b
20	M13	L2x2x2	.385	50.52	8	.022	50.52	z	2	6606.013	15908.4	402.5...	793.349	2.266	H2-1
21	M51	PIPE_2.0	.369	6.25	2	.167	118.75		18	25983.18	32130	1871....	1871.6...	1	H1-1b
22	M16	L2x2x2	.344	50.52	3	.017	50.52	y	10	6606.013	15908.4	402.5...	776.916	2.048	H2-1
23	M102	HSS4X4X4	.336	0	10	.142	0	z	13	131884...	139518	16180...	16180.5	1	H1-1b
24	M15	L2x2x2	.333	50.52	13	.017	50.52	z	6	6606.013	15908.4	402.5...	774.317	2.017	H2-1
25	M50	PIPE_2.0	.312	143.75	6	.230	120.3...		6	25983.18	32130	1871....	1871.6...	1	H1-1b
26	M6	PL6X0.5	.304	6	3	.180	3.875	y	6	67551....	97200	1012.5	12150	1.299	H1-1b
27	M101	HSS4X4X4	.257	0	2	.121	0	z	5	131884...	139518	16180...	16180.5	1	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc...	phi*Pn...	phi*M...	phi*Mn...	Cb	Eqn
28	M8	PIPE_3.0	.245	54.688	4	.328	145.3...		7	59307....	65205	5748....	5748.75	1	H1-1b
29	M7	PIPE_3.0	.201	95.312	8	.163	96.875		3	59307....	65205	5748....	5748.75	1	H1-1b
30	M9	PIPE_3.0	.168	54.688	8	.171	145.3...		11	59307....	65205	5748....	5748.75	1	H1-1b
31	M38	HSS4X4X4	.167	0	5	.115	27.352	z	10	136593...	139518	16180...	16180.5	1	H1-1b
32	M11	HSS4X4X4	.157	31.26	32	.124	3.907	z	2	136593...	139518	16180...	16180.5	1	H1-1b
33	M12	HSS4X4X4	.144	31.259	11	.111	3.907	z	6	136593...	139518	16180...	16180.5	1	H1-1b
34	M39	HSS4X4X4	.141	0	9	.111	31.261	z	13	136593...	139518	16180...	16180.5	1	H1-1b
35	M10	HSS4X4X4	.119	31.261	2	.095	3.908	z	10	136593...	139518	16180...	16180.5	1	H1-1b
36	M37	HSS4X4X4	.113	0	13	.085	27.352	z	6	136593...	139518	16180...	16180.5	1	H1-1b
37	M47	L2.5x2.5x3	.024	5.625	18	.235	0	z	18	27702.87	29192.4	872.5...	1971.83	1.136	H2-1
38	M46	L2.5x2.5x3	.020	6.25	5	.241	0	z	22	27702.87	29192.4	872.5...	1971.83	1.136	H2-1
39	M48	L2.5x2.5x3	.011	6	2	.111	0	y	11	27702.87	29192.4	872.5...	1971.83	1.136	H2-1

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoff	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
2	Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Grating Angle	L2x2x2	Beam	Single Angle	A36 Gr.36	Typical	.491	.189	.189	.003
4	Mount Pipe	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	Corner Plate	PL6X0.5	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
6	Handrail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	Handrail Corner	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M100						Yes				None
2	M2						Yes				None
3	M102						Yes				None
4	M4						Yes				None
5	M101						Yes				None
6	M6						Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10	BenPIN					Yes				None
11	M11	BenPIN					Yes				None
12	M12	BenPIN					Yes				None
13	M13						Yes				None
14	M14						Yes				None
15	M15						Yes				None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes				None
19	M21						Yes	** NA **			None
20	MP1						Yes				None
21	M37		BenPIN				Yes				None
22	M38		BenPIN				Yes				None
23	M39		BenPIN				Yes				None
24	M24						Yes	** NA **			None
25	MP2						Yes				None
26	M26						Yes	** NA **			None
27	MP4						Yes				None
28	M28						Yes	** NA **			None
29	MP3						Yes				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...
30	M30						Yes	** NA **			None
31	MP9						Yes				None
32	M32						Yes	** NA **			None
33	MP10						Yes				None
34	M34						Yes	** NA **			None
35	MP12						Yes				None
36	M36						Yes	** NA **			None
37	MP11						Yes				None
38	M38A						Yes	** NA **			None
39	MP5						Yes				None
40	M42						Yes	** NA **			None
41	MP8						Yes				None
42	M44						Yes	** NA **			None
43	MP7						Yes				None
44	M46	BenPIN	BenPIN				Yes				None
45	M47	BenPIN	BenPIN				Yes				None
46	M48	BenPIN	BenPIN				Yes				None
47	M49						Yes				None
48	M50						Yes				None
49	M51						Yes				None
50	M52						Yes	** NA **			None
51	M53						Yes	** NA **			None
52	M54						Yes	** NA **			None
53	M55						Yes	** NA **			None
54	M56						Yes	** NA **			None
55	M57						Yes	** NA **			None
56	M58						Yes	** NA **			None
57	M59						Yes	** NA **			None
58	M60						Yes	** NA **			None
59	M62						Yes	** NA **			None
60	M63						Yes	** NA **			None
61	M64						Yes	** NA **			None
62	MP6						Yes				None
63	M66						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
1	M100	Standoff	62.25	44	44	Lbyy	44	44				Lateral
2	M2	Corner Plate	12									Lateral
3	M102	Standoff	62.251	44	44	Lbyy	44	44				Lateral
4	M4	Corner Plate	12									Lateral
5	M101	Standoff	62.251	44	44	Lbyy	44	44				Lateral
6	M6	Corner Plate	12									Lateral
7	M7	Horizontal	150	50.5	50.5	Lbyy	50.5	50.5				Lateral
8	M8	Horizontal	150	50.5	50.5	Lbyy	50.5	50.5				Lateral
9	M9	Horizontal	150	50.5	50.5	Lbyy	50.5	50.5				Lateral
10	M10	Standoff	31.261	27	27	Lbyy	27	27				Lateral
11	M11	Standoff	31.26	27	27	Lbyy	27	27				Lateral
12	M12	Standoff	31.259	27	27	Lbyy	27	27				Lateral
13	M13	Grating Angle	50.52			Lbyy						Lateral
14	M14	Grating Angle	50.52			Lbyy						Lateral
15	M15	Grating Angle	50.52			Lbyy						Lateral
16	M16	Grating Angle	50.52			Lbyy						Lateral
17	M17	Grating Angle	50.52			Lbyy						Lateral
18	M18	Grating Angle	50.52			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
19	MP1	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
20	M37	Standoff	31.259	27	27	Lbyy	27	27				Lateral
21	M38	Standoff	31.26	27	27	Lbyy	27	27				Lateral
22	M39	Standoff	31.261	27	27	Lbyy	27	27				Lateral
23	MP2	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
24	MP4	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
25	MP3	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
26	MP9	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
27	MP10	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
28	MP12	Mount Pipe	96	54	54	Lbyy	54	54				Lateral
29	MP11	Mount Pipe	96	54	54	Lbyy	54	54				Lateral
30	MP5	Mount Pipe	96	54	54	Lbyy	54	54				Lateral
31	MP8	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
32	MP7	Mount Pipe	72	54	54	Lbyy	54	54				Lateral
33	M46	Handrail Co...	12									Lateral
34	M47	Handrail Co...	12									Lateral
35	M48	Handrail Co...	12									Lateral
36	M49	Handrail	150	50.5	50.5	Lbyy	50.5	50.5				Lateral
37	M50	Handrail	150	50.5	50.5	Lbyy	50.5	50.5				Lateral
38	M51	Handrail	150	50.5	50.5	Lbyy	50.5	50.5				Lateral
39	MP6	Mount Pipe	96	54	54	Lbyy	54	54				Lateral

Joint Loads and Enforced Displacements (BLC 34 : Maintenance Load 1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N52	L	Y	-500

Joint Loads and Enforced Displacements (BLC 35 : Maintenance Load 2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N53	L	Y	-500

Joint Loads and Enforced Displacements (BLC 36 : Maintenance Load 3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N57	L	Y	-500

Joint Loads and Enforced Displacements (BLC 37 : Maintenance Load 4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N61	L	Y	-500

Joint Loads and Enforced Displacements (BLC 38 : Maintenance Load 5)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N66	L	Y	-500

Joint Loads and Enforced Displacements (BLC 39 : Maintenance Load 6)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N70A	L	Y	-500

Joint Loads and Enforced Displacements (BLC 40 : Maintenance Load 7)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N74A	L	Y	-500

Joint Loads and Enforced Displacements (BLC 41 : Maintenance Load 8)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...

Joint Loads and Enforced Displacements (BLC 41 : Maintenance Load 8) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N78	L	Y	-500

Joint Loads and Enforced Displacements (BLC 42 : Maintenance Load 9)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N83	L	Y	-500

Joint Loads and Enforced Displacements (BLC 43 : Maintenance Load 10)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N91	L	Y	-500

Joint Loads and Enforced Displacements (BLC 44 : Maintenance Load 11)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N95	L	Y	-500

Joint Loads and Enforced Displacements (BLC 45 : Maintenance Load 12)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N133A	L	Y	-500

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	Y	-38.25	0
2	MP4	Y	-38.25	48
3	MP3	Y	-14.35	0
4	MP3	Y	-14.35	48
5	MP1	Y	-17.5	0
6	MP1	Y	-17.5	55
7	MP4	Y	-70	36
8	MP4	Y	-75	36
9	MP8	Y	-17.5	0
10	MP8	Y	-17.5	55
11	MP5	Y	-70	48
12	MP5	Y	-75	48
13	MP6	Y	-27	0
14	MP6	Y	-27	96
15	MP5	Y	-47.85	0
16	MP5	Y	-47.85	96
17	MP9	Y	-17.5	0
18	MP9	Y	-17.5	55
19	MP12	Y	-70	36
20	MP12	Y	-75	36
21	MP11	Y	-27	0
22	MP11	Y	-27	96
23	MP12	Y	-47.85	0
24	MP12	Y	-47.85	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	0	0
2	MP4	Z	-193.14	0
3	MP4	X	0	48
4	MP4	Z	-193.14	48
5	MP3	X	0	0
6	MP3	Z	-115.65	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
7	MP3	X	0	48
8	MP3	Z	-115.65	48
9	MP1	X	0	0
10	MP1	Z	-128.49	0
11	MP1	X	0	55
12	MP1	Z	-128.49	55
13	MP4	X	0	36
14	MP4	Z	-92.37	36
15	MP4	X	0	36
16	MP4	Z	-92.37	36
17	MP8	X	0	0
18	MP8	Z	-83.35	0
19	MP8	X	0	55
20	MP8	Z	-83.35	55
21	MP5	X	0	48
22	MP5	Z	-72.43	48
23	MP5	X	0	48
24	MP5	Z	-82.4	48
25	MP6	X	0	0
26	MP6	Z	-206.25	0
27	MP6	X	0	96
28	MP6	Z	-206.25	96
29	MP5	X	0	0
30	MP5	Z	-246.32	0
31	MP5	X	0	96
32	MP5	Z	-246.32	96
33	MP9	X	0	0
34	MP9	Z	-83.35	0
35	MP9	X	0	55
36	MP9	Z	-83.35	55
37	MP12	X	0	36
38	MP12	Z	-72.43	36
39	MP12	X	0	36
40	MP12	Z	-82.4	36
41	MP11	X	0	0
42	MP11	Z	-206.25	0
43	MP11	X	0	96
44	MP11	Z	-206.25	96
45	MP12	X	0	0
46	MP12	Z	-246.32	0
47	MP12	X	0	96
48	MP12	Z	-246.32	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-82.65	0
2	MP4	Z	-143.16	0
3	MP4	X	-82.65	48
4	MP4	Z	-143.16	48
5	MP3	X	-53.48	0
6	MP3	Z	-92.64	0
7	MP3	X	-53.48	48
8	MP3	Z	-92.64	48
9	MP1	X	-56.72	0
10	MP1	Z	-98.25	0
11	MP1	X	-56.72	55

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
12	MP1	Z	-98.25	55
13	MP4	X	-42.86	36
14	MP4	Z	-74.24	36
15	MP4	X	-44.52	36
16	MP4	Z	-77.12	36
17	MP8	X	-56.72	0
18	MP8	Z	-98.25	0
19	MP8	X	-56.72	55
20	MP8	Z	-98.25	55
21	MP5	X	-42.86	48
22	MP5	Z	-74.24	48
23	MP5	X	-44.52	48
24	MP5	Z	-77.12	48
25	MP6	X	-121.72	0
26	MP6	Z	-210.82	0
27	MP6	X	-121.72	96
28	MP6	Z	-210.82	96
29	MP5	X	-180.01	0
30	MP5	Z	-311.79	0
31	MP5	X	-180.01	96
32	MP5	Z	-311.79	96
33	MP9	X	-34.15	0
34	MP9	Z	-59.15	0
35	MP9	X	-34.15	55
36	MP9	Z	-59.15	55
37	MP12	X	-32.89	36
38	MP12	Z	-56.97	36
39	MP12	X	-39.54	36
40	MP12	Z	-68.48	36
41	MP11	X	-93.82	0
42	MP11	Z	-162.51	0
43	MP11	X	-93.82	96
44	MP11	Z	-162.51	96
45	MP12	X	-94.73	0
46	MP12	Z	-164.08	0
47	MP12	X	-94.73	96
48	MP12	Z	-164.08	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-94.94	0
2	MP4	Z	-54.81	0
3	MP4	X	-94.94	48
4	MP4	Z	-54.81	48
5	MP3	X	-77.61	0
6	MP3	Z	-44.81	0
7	MP3	X	-77.61	48
8	MP3	Z	-44.81	48
9	MP1	X	-72.19	0
10	MP1	Z	-41.68	0
11	MP1	X	-72.19	55
12	MP1	Z	-41.68	55
13	MP4	X	-62.73	36
14	MP4	Z	-36.21	36
15	MP4	X	-71.36	36
16	MP4	Z	-41.2	36

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
17	MP8	X	-111.28	0
18	MP8	Z	-64.25	0
19	MP8	X	-111.28	55
20	MP8	Z	-64.25	55
21	MP5	X	-80	48
22	MP5	Z	-46.19	48
23	MP5	X	-80	48
24	MP5	Z	-46.19	48
25	MP6	X	-226.93	0
26	MP6	Z	-131.02	0
27	MP6	X	-226.93	96
28	MP6	Z	-131.02	96
29	MP5	X	-361.02	0
30	MP5	Z	-208.44	0
31	MP5	X	-361.02	96
32	MP5	Z	-208.44	96
33	MP9	X	-72.19	0
34	MP9	Z	-41.68	0
35	MP9	X	-72.19	55
36	MP9	Z	-41.68	55
37	MP12	X	-62.73	36
38	MP12	Z	-36.21	36
39	MP12	X	-71.36	36
40	MP12	Z	-41.2	36
41	MP11	X	-178.61	0
42	MP11	Z	-103.12	0
43	MP11	X	-178.61	96
44	MP11	Z	-103.12	96
45	MP12	X	-213.32	0
46	MP12	Z	-123.16	0
47	MP12	X	-213.32	96
48	MP12	Z	-123.16	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-81.78	0
2	MP4	Z	0	0
3	MP4	X	-81.78	48
4	MP4	Z	0	48
5	MP3	X	-80.93	0
6	MP3	Z	0	0
7	MP3	X	-80.93	48
8	MP3	Z	0	48
9	MP1	X	-68.31	0
10	MP1	Z	0	0
11	MP1	X	-68.31	55
12	MP1	Z	0	55
13	MP4	X	-65.78	36
14	MP4	Z	0	36
15	MP4	X	-79.08	36
16	MP4	Z	0	36
17	MP8	X	-113.45	0
18	MP8	Z	0	0
19	MP8	X	-113.45	55
20	MP8	Z	0	55
21	MP5	X	-85.73	48

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
22	MP5	Z	0	48
23	MP5	X	-89.05	48
24	MP5	Z	0	48
25	MP6	X	-243.44	0
26	MP6	Z	0	0
27	MP6	X	-243.44	96
28	MP6	Z	0	96
29	MP5	X	-360.02	0
30	MP5	Z	0	0
31	MP5	X	-360.02	96
32	MP5	Z	0	96
33	MP9	X	-113.45	0
34	MP9	Z	0	0
35	MP9	X	-113.45	55
36	MP9	Z	0	55
37	MP12	X	-85.73	36
38	MP12	Z	0	36
39	MP12	X	-89.05	36
40	MP12	Z	0	36
41	MP11	X	-243.44	0
42	MP11	Z	0	0
43	MP11	X	-243.44	96
44	MP11	Z	0	96
45	MP12	X	-360.02	0
46	MP12	Z	0	0
47	MP12	X	-360.02	96
48	MP12	Z	0	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-94.94	0
2	MP4	Z	54.81	0
3	MP4	X	-94.94	48
4	MP4	Z	54.81	48
5	MP3	X	-77.61	0
6	MP3	Z	44.81	0
7	MP3	X	-77.61	48
8	MP3	Z	44.81	48
9	MP1	X	-72.19	0
10	MP1	Z	41.68	0
11	MP1	X	-72.19	55
12	MP1	Z	41.68	55
13	MP4	X	-62.73	36
14	MP4	Z	36.21	36
15	MP4	X	-71.36	36
16	MP4	Z	41.2	36
17	MP8	X	-72.19	0
18	MP8	Z	41.68	0
19	MP8	X	-72.19	55
20	MP8	Z	41.68	55
21	MP5	X	-62.73	48
22	MP5	Z	36.21	48
23	MP5	X	-71.36	48
24	MP5	Z	41.2	48
25	MP6	X	-178.61	0
26	MP6	Z	103.12	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
27	MP6	X	-178.61	96
28	MP6	Z	103.12	96
29	MP5	X	-213.32	0
30	MP5	Z	123.16	0
31	MP5	X	-213.32	96
32	MP5	Z	123.16	96
33	MP9	X	-111.28	0
34	MP9	Z	64.25	0
35	MP9	X	-111.28	55
36	MP9	Z	64.25	55
37	MP12	X	-80	36
38	MP12	Z	46.19	36
39	MP12	X	-80	36
40	MP12	Z	46.19	36
41	MP11	X	-226.93	0
42	MP11	Z	131.02	0
43	MP11	X	-226.93	96
44	MP11	Z	131.02	96
45	MP12	X	-361.02	0
46	MP12	Z	208.44	0
47	MP12	X	-361.02	96
48	MP12	Z	208.44	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-82.65	0
2	MP4	Z	143.16	0
3	MP4	X	-82.65	48
4	MP4	Z	143.16	48
5	MP3	X	-53.48	0
6	MP3	Z	92.64	0
7	MP3	X	-53.48	48
8	MP3	Z	92.64	48
9	MP1	X	-56.72	0
10	MP1	Z	98.25	0
11	MP1	X	-56.72	55
12	MP1	Z	98.25	55
13	MP4	X	-42.86	36
14	MP4	Z	74.24	36
15	MP4	X	-44.52	36
16	MP4	Z	77.12	36
17	MP8	X	-34.15	0
18	MP8	Z	59.15	0
19	MP8	X	-34.15	55
20	MP8	Z	59.15	55
21	MP5	X	-32.89	48
22	MP5	Z	56.97	48
23	MP5	X	-39.54	48
24	MP5	Z	68.48	48
25	MP6	X	-93.82	0
26	MP6	Z	162.51	0
27	MP6	X	-93.82	96
28	MP6	Z	162.51	96
29	MP5	X	-94.73	0
30	MP5	Z	164.08	0
31	MP5	X	-94.73	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
32	MP5	Z	164.08	96
33	MP9	X	-56.72	0
34	MP9	Z	98.25	0
35	MP9	X	-56.72	55
36	MP9	Z	98.25	55
37	MP12	X	-42.86	36
38	MP12	Z	74.24	36
39	MP12	X	-44.52	36
40	MP12	Z	77.12	36
41	MP11	X	-121.72	0
42	MP11	Z	210.82	0
43	MP11	X	-121.72	96
44	MP11	Z	210.82	96
45	MP12	X	-180.01	0
46	MP12	Z	311.79	0
47	MP12	X	-180.01	96
48	MP12	Z	311.79	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	0	0
2	MP4	Z	193.14	0
3	MP4	X	0	48
4	MP4	Z	193.14	48
5	MP3	X	0	0
6	MP3	Z	115.65	0
7	MP3	X	0	48
8	MP3	Z	115.65	48
9	MP1	X	0	0
10	MP1	Z	128.49	0
11	MP1	X	0	55
12	MP1	Z	128.49	55
13	MP4	X	0	36
14	MP4	Z	92.37	36
15	MP4	X	0	36
16	MP4	Z	92.37	36
17	MP8	X	0	0
18	MP8	Z	83.35	0
19	MP8	X	0	55
20	MP8	Z	83.35	55
21	MP5	X	0	48
22	MP5	Z	72.43	48
23	MP5	X	0	48
24	MP5	Z	82.4	48
25	MP6	X	0	0
26	MP6	Z	206.25	0
27	MP6	X	0	96
28	MP6	Z	206.25	96
29	MP5	X	0	0
30	MP5	Z	246.32	0
31	MP5	X	0	96
32	MP5	Z	246.32	96
33	MP9	X	0	0
34	MP9	Z	83.35	0
35	MP9	X	0	55
36	MP9	Z	83.35	55

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
37	MP12	X	0	36
38	MP12	Z	72.43	36
39	MP12	X	0	36
40	MP12	Z	82.4	36
41	MP11	X	0	0
42	MP11	Z	206.25	0
43	MP11	X	0	96
44	MP11	Z	206.25	96
45	MP12	X	0	0
46	MP12	Z	246.32	0
47	MP12	X	0	96
48	MP12	Z	246.32	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	82.65	0
2	MP4	Z	143.16	0
3	MP4	X	82.65	48
4	MP4	Z	143.16	48
5	MP3	X	53.48	0
6	MP3	Z	92.64	0
7	MP3	X	53.48	48
8	MP3	Z	92.64	48
9	MP1	X	56.72	0
10	MP1	Z	98.25	0
11	MP1	X	56.72	55
12	MP1	Z	98.25	55
13	MP4	X	42.86	36
14	MP4	Z	74.24	36
15	MP4	X	44.52	36
16	MP4	Z	77.12	36
17	MP8	X	56.72	0
18	MP8	Z	98.25	0
19	MP8	X	56.72	55
20	MP8	Z	98.25	55
21	MP5	X	42.86	48
22	MP5	Z	74.24	48
23	MP5	X	44.52	48
24	MP5	Z	77.12	48
25	MP6	X	121.72	0
26	MP6	Z	210.82	0
27	MP6	X	121.72	96
28	MP6	Z	210.82	96
29	MP5	X	180.01	0
30	MP5	Z	311.79	0
31	MP5	X	180.01	96
32	MP5	Z	311.79	96
33	MP9	X	34.15	0
34	MP9	Z	59.15	0
35	MP9	X	34.15	55
36	MP9	Z	59.15	55
37	MP12	X	32.89	36
38	MP12	Z	56.97	36
39	MP12	X	39.54	36
40	MP12	Z	68.48	36
41	MP11	X	93.82	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
42	MP11	Z	162.51	0
43	MP11	X	93.82	96
44	MP11	Z	162.51	96
45	MP12	X	94.73	0
46	MP12	Z	164.08	0
47	MP12	X	94.73	96
48	MP12	Z	164.08	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	94.94	0
2	MP4	Z	54.81	0
3	MP4	X	94.94	48
4	MP4	Z	54.81	48
5	MP3	X	77.61	0
6	MP3	Z	44.81	0
7	MP3	X	77.61	48
8	MP3	Z	44.81	48
9	MP1	X	72.19	0
10	MP1	Z	41.68	0
11	MP1	X	72.19	55
12	MP1	Z	41.68	55
13	MP4	X	62.73	36
14	MP4	Z	36.21	36
15	MP4	X	71.36	36
16	MP4	Z	41.2	36
17	MP8	X	111.28	0
18	MP8	Z	64.25	0
19	MP8	X	111.28	55
20	MP8	Z	64.25	55
21	MP5	X	80	48
22	MP5	Z	46.19	48
23	MP5	X	80	48
24	MP5	Z	46.19	48
25	MP6	X	226.93	0
26	MP6	Z	131.02	0
27	MP6	X	226.93	96
28	MP6	Z	131.02	96
29	MP5	X	361.02	0
30	MP5	Z	208.44	0
31	MP5	X	361.02	96
32	MP5	Z	208.44	96
33	MP9	X	72.19	0
34	MP9	Z	41.68	0
35	MP9	X	72.19	55
36	MP9	Z	41.68	55
37	MP12	X	62.73	36
38	MP12	Z	36.21	36
39	MP12	X	71.36	36
40	MP12	Z	41.2	36
41	MP11	X	178.61	0
42	MP11	Z	103.12	0
43	MP11	X	178.61	96
44	MP11	Z	103.12	96
45	MP12	X	213.32	0
46	MP12	Z	123.16	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
47	MP12	X	213.32	96
48	MP12	Z	123.16	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	81.78	0
2	MP4	Z	0	0
3	MP4	X	81.78	48
4	MP4	Z	0	48
5	MP3	X	80.93	0
6	MP3	Z	0	0
7	MP3	X	80.93	48
8	MP3	Z	0	48
9	MP1	X	68.31	0
10	MP1	Z	0	0
11	MP1	X	68.31	55
12	MP1	Z	0	55
13	MP4	X	65.78	36
14	MP4	Z	0	36
15	MP4	X	79.08	36
16	MP4	Z	0	36
17	MP8	X	113.45	0
18	MP8	Z	0	0
19	MP8	X	113.45	55
20	MP8	Z	0	55
21	MP5	X	85.73	48
22	MP5	Z	0	48
23	MP5	X	89.05	48
24	MP5	Z	0	48
25	MP6	X	243.44	0
26	MP6	Z	0	0
27	MP6	X	243.44	96
28	MP6	Z	0	96
29	MP5	X	360.02	0
30	MP5	Z	0	0
31	MP5	X	360.02	96
32	MP5	Z	0	96
33	MP9	X	113.45	0
34	MP9	Z	0	0
35	MP9	X	113.45	55
36	MP9	Z	0	55
37	MP12	X	85.73	36
38	MP12	Z	0	36
39	MP12	X	89.05	36
40	MP12	Z	0	36
41	MP11	X	243.44	0
42	MP11	Z	0	0
43	MP11	X	243.44	96
44	MP11	Z	0	96
45	MP12	X	360.02	0
46	MP12	Z	0	0
47	MP12	X	360.02	96
48	MP12	Z	0	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	94.94	0
2	MP4	Z	-54.81	0
3	MP4	X	94.94	48
4	MP4	Z	-54.81	48
5	MP3	X	77.61	0
6	MP3	Z	-44.81	0
7	MP3	X	77.61	48
8	MP3	Z	-44.81	48
9	MP1	X	72.19	0
10	MP1	Z	-41.68	0
11	MP1	X	72.19	55
12	MP1	Z	-41.68	55
13	MP4	X	62.73	36
14	MP4	Z	-36.21	36
15	MP4	X	71.36	36
16	MP4	Z	-41.2	36
17	MP8	X	72.19	0
18	MP8	Z	-41.68	0
19	MP8	X	72.19	55
20	MP8	Z	-41.68	55
21	MP5	X	62.73	48
22	MP5	Z	-36.21	48
23	MP5	X	71.36	48
24	MP5	Z	-41.2	48
25	MP6	X	178.61	0
26	MP6	Z	-103.12	0
27	MP6	X	178.61	96
28	MP6	Z	-103.12	96
29	MP5	X	213.32	0
30	MP5	Z	-123.16	0
31	MP5	X	213.32	96
32	MP5	Z	-123.16	96
33	MP9	X	111.28	0
34	MP9	Z	-64.25	0
35	MP9	X	111.28	55
36	MP9	Z	-64.25	55
37	MP12	X	80	36
38	MP12	Z	-46.19	36
39	MP12	X	80	36
40	MP12	Z	-46.19	36
41	MP11	X	226.93	0
42	MP11	Z	-131.02	0
43	MP11	X	226.93	96
44	MP11	Z	-131.02	96
45	MP12	X	361.02	0
46	MP12	Z	-208.44	0
47	MP12	X	361.02	96
48	MP12	Z	-208.44	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	82.65	0
2	MP4	Z	-143.16	0
3	MP4	X	82.65	48
4	MP4	Z	-143.16	48
5	MP3	X	53.48	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
6	MP3	Z	-92.64	0
7	MP3	X	53.48	48
8	MP3	Z	-92.64	48
9	MP1	X	56.72	0
10	MP1	Z	-98.25	0
11	MP1	X	56.72	55
12	MP1	Z	-98.25	55
13	MP4	X	42.86	36
14	MP4	Z	-74.24	36
15	MP4	X	44.52	36
16	MP4	Z	-77.12	36
17	MP8	X	34.15	0
18	MP8	Z	-59.15	0
19	MP8	X	34.15	55
20	MP8	Z	-59.15	55
21	MP5	X	32.89	48
22	MP5	Z	-56.97	48
23	MP5	X	39.54	48
24	MP5	Z	-68.48	48
25	MP6	X	93.82	0
26	MP6	Z	-162.51	0
27	MP6	X	93.82	96
28	MP6	Z	-162.51	96
29	MP5	X	94.73	0
30	MP5	Z	-164.08	0
31	MP5	X	94.73	96
32	MP5	Z	-164.08	96
33	MP9	X	56.72	0
34	MP9	Z	-98.25	0
35	MP9	X	56.72	55
36	MP9	Z	-98.25	55
37	MP12	X	42.86	36
38	MP12	Z	-74.24	36
39	MP12	X	44.52	36
40	MP12	Z	-77.12	36
41	MP11	X	121.72	0
42	MP11	Z	-210.82	0
43	MP11	X	121.72	96
44	MP11	Z	-210.82	96
45	MP12	X	180.01	0
46	MP12	Z	-311.79	0
47	MP12	X	180.01	96
48	MP12	Z	-311.79	96

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	Y	-63.195	0
2	MP4	Y	-63.195	48
3	MP3	Y	-43.596	0
4	MP3	Y	-43.596	48
5	MP1	Y	-40.929	0
6	MP1	Y	-40.929	55
7	MP4	Y	-46.695	36
8	MP4	Y	-51.418	36
9	MP8	Y	-40.929	0
10	MP8	Y	-40.929	55

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	MP5	Y	-46.695	48
12	MP5	Y	-51.418	48
13	MP6	Y	-82.056	0
14	MP6	Y	-82.056	96
15	MP5	Y	-117.866	0
16	MP5	Y	-117.866	96
17	MP9	Y	-40.929	0
18	MP9	Y	-40.929	55
19	MP12	Y	-46.695	36
20	MP12	Y	-51.418	36
21	MP11	Y	-82.056	0
22	MP11	Y	-82.056	96
23	MP12	Y	-117.866	0
24	MP12	Y	-117.866	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	0	0
2	MP4	Z	-14.52	0
3	MP4	X	0	48
4	MP4	Z	-14.52	48
5	MP3	X	0	0
6	MP3	Z	-9.95	0
7	MP3	X	0	48
8	MP3	Z	-9.95	48
9	MP1	X	0	0
10	MP1	Z	-11.33	0
11	MP1	X	0	55
12	MP1	Z	-11.33	55
13	MP4	X	0	36
14	MP4	Z	-8.09	36
15	MP4	X	0	36
16	MP4	Z	-8.09	36
17	MP8	X	0	0
18	MP8	Z	-9.28	0
19	MP8	X	0	55
20	MP8	Z	-9.28	55
21	MP5	X	0	48
22	MP5	Z	-7.27	48
23	MP5	X	0	48
24	MP5	Z	-7.7	48
25	MP6	X	0	0
26	MP6	Z	-19.78	0
27	MP6	X	0	96
28	MP6	Z	-19.78	96
29	MP5	X	0	0
30	MP5	Z	-21.95	0
31	MP5	X	0	96
32	MP5	Z	-21.95	96
33	MP9	X	0	0
34	MP9	Z	-9.28	0
35	MP9	X	0	55
36	MP9	Z	-9.28	55
37	MP12	X	0	36
38	MP12	Z	-7.27	36
39	MP12	X	0	36

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
40	MP12	Z	-7.7	36
41	MP11	X	0	0
42	MP11	Z	-19.78	0
43	MP11	X	0	96
44	MP11	Z	-19.78	96
45	MP12	X	0	0
46	MP12	Z	-21.95	0
47	MP12	X	0	96
48	MP12	Z	-21.95	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-6.53	0
2	MP4	Z	-11.32	0
3	MP4	X	-6.53	48
4	MP4	Z	-11.32	48
5	MP3	X	-4.82	0
6	MP3	Z	-8.34	0
7	MP3	X	-4.82	48
8	MP3	Z	-8.34	48
9	MP1	X	-5.32	0
10	MP1	Z	-9.22	0
11	MP1	X	-5.32	55
12	MP1	Z	-9.22	55
13	MP4	X	-3.91	36
14	MP4	Z	-6.77	36
15	MP4	X	-3.98	36
16	MP4	Z	-6.89	36
17	MP8	X	-5.32	0
18	MP8	Z	-9.22	0
19	MP8	X	-5.32	55
20	MP8	Z	-9.22	55
21	MP5	X	-3.91	48
22	MP5	Z	-6.77	48
23	MP5	X	-3.98	48
24	MP5	Z	-6.89	48
25	MP6	X	-10.65	0
26	MP6	Z	-18.45	0
27	MP6	X	-10.65	96
28	MP6	Z	-18.45	96
29	MP5	X	-13.86	0
30	MP5	Z	-24.01	0
31	MP5	X	-13.86	96
32	MP5	Z	-24.01	96
33	MP9	X	-4.29	0
34	MP9	Z	-7.44	0
35	MP9	X	-4.29	55
36	MP9	Z	-7.44	55
37	MP12	X	-3.5	36
38	MP12	Z	-6.06	36
39	MP12	X	-3.78	36
40	MP12	Z	-6.55	36
41	MP11	X	-9.51	0
42	MP11	Z	-16.46	0
43	MP11	X	-9.51	96
44	MP11	Z	-16.46	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
45	MP12	X	-9.53	0
46	MP12	Z	-16.51	0
47	MP12	X	-9.53	96
48	MP12	Z	-16.51	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-8.8	0
2	MP4	Z	-5.08	0
3	MP4	X	-8.8	48
4	MP4	Z	-5.08	48
5	MP3	X	-7.79	0
6	MP3	Z	-4.5	0
7	MP3	X	-7.79	48
8	MP3	Z	-4.5	48
9	MP1	X	-8.03	0
10	MP1	Z	-4.64	0
11	MP1	X	-8.03	55
12	MP1	Z	-4.64	55
13	MP4	X	-6.3	36
14	MP4	Z	-3.64	36
15	MP4	X	-6.67	36
16	MP4	Z	-3.85	36
17	MP8	X	-9.81	0
18	MP8	Z	-5.67	0
19	MP8	X	-9.81	55
20	MP8	Z	-5.67	55
21	MP5	X	-7.01	48
22	MP5	Z	-4.05	48
23	MP5	X	-7.01	48
24	MP5	Z	-4.05	48
25	MP6	X	-19.12	0
26	MP6	Z	-11.04	0
27	MP6	X	-19.12	96
28	MP6	Z	-11.04	96
29	MP5	X	-26.51	0
30	MP5	Z	-15.3	0
31	MP5	X	-26.51	96
32	MP5	Z	-15.3	96
33	MP9	X	-8.03	0
34	MP9	Z	-4.64	0
35	MP9	X	-8.03	55
36	MP9	Z	-4.64	55
37	MP12	X	-6.3	36
38	MP12	Z	-3.64	36
39	MP12	X	-6.67	36
40	MP12	Z	-3.85	36
41	MP11	X	-17.13	0
42	MP11	Z	-9.89	0
43	MP11	X	-17.13	96
44	MP11	Z	-9.89	96
45	MP12	X	-19.01	0
46	MP12	Z	-10.98	0
47	MP12	X	-19.01	96
48	MP12	Z	-10.98	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-8.72	0
2	MP4	Z	0	0
3	MP4	X	-8.72	48
4	MP4	Z	0	48
5	MP3	X	-8.68	0
6	MP3	Z	0	0
7	MP3	X	-8.68	48
8	MP3	Z	0	48
9	MP1	X	-8.59	0
10	MP1	Z	0	0
11	MP1	X	-8.59	55
12	MP1	Z	0	55
13	MP4	X	-7	36
14	MP4	Z	0	36
15	MP4	X	-7.56	36
16	MP4	Z	0	36
17	MP8	X	-10.65	0
18	MP8	Z	0	0
19	MP8	X	-10.65	55
20	MP8	Z	0	55
21	MP5	X	-7.82	48
22	MP5	Z	0	48
23	MP5	X	-7.96	48
24	MP5	Z	0	48
25	MP6	X	-21.31	0
26	MP6	Z	0	0
27	MP6	X	-21.31	96
28	MP6	Z	0	96
29	MP5	X	-27.72	0
30	MP5	Z	0	0
31	MP5	X	-27.72	96
32	MP5	Z	0	96
33	MP9	X	-10.65	0
34	MP9	Z	0	0
35	MP9	X	-10.65	55
36	MP9	Z	0	55
37	MP12	X	-7.82	36
38	MP12	Z	0	36
39	MP12	X	-7.96	36
40	MP12	Z	0	36
41	MP11	X	-21.31	0
42	MP11	Z	0	0
43	MP11	X	-21.31	96
44	MP11	Z	0	96
45	MP12	X	-27.72	0
46	MP12	Z	0	0
47	MP12	X	-27.72	96
48	MP12	Z	0	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-8.8	0
2	MP4	Z	5.08	0
3	MP4	X	-8.8	48
4	MP4	Z	5.08	48
5	MP3	X	-7.79	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
6	MP3	Z	4.5	0
7	MP3	X	-7.79	48
8	MP3	Z	4.5	48
9	MP1	X	-8.03	0
10	MP1	Z	4.64	0
11	MP1	X	-8.03	55
12	MP1	Z	4.64	55
13	MP4	X	-6.3	36
14	MP4	Z	3.64	36
15	MP4	X	-6.67	36
16	MP4	Z	3.85	36
17	MP8	X	-8.03	0
18	MP8	Z	4.64	0
19	MP8	X	-8.03	55
20	MP8	Z	4.64	55
21	MP5	X	-6.3	48
22	MP5	Z	3.64	48
23	MP5	X	-6.67	48
24	MP5	Z	3.85	48
25	MP6	X	-17.13	0
26	MP6	Z	9.89	0
27	MP6	X	-17.13	96
28	MP6	Z	9.89	96
29	MP5	X	-19.01	0
30	MP5	Z	10.98	0
31	MP5	X	-19.01	96
32	MP5	Z	10.98	96
33	MP9	X	-9.81	0
34	MP9	Z	5.67	0
35	MP9	X	-9.81	55
36	MP9	Z	5.67	55
37	MP12	X	-7.01	36
38	MP12	Z	4.05	36
39	MP12	X	-7.01	36
40	MP12	Z	4.05	36
41	MP11	X	-19.12	0
42	MP11	Z	11.04	0
43	MP11	X	-19.12	96
44	MP11	Z	11.04	96
45	MP12	X	-26.51	0
46	MP12	Z	15.3	0
47	MP12	X	-26.51	96
48	MP12	Z	15.3	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-6.53	0
2	MP4	Z	11.32	0
3	MP4	X	-6.53	48
4	MP4	Z	11.32	48
5	MP3	X	-4.82	0
6	MP3	Z	8.34	0
7	MP3	X	-4.82	48
8	MP3	Z	8.34	48
9	MP1	X	-5.32	0
10	MP1	Z	9.22	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	MP1	X	-5.32	55
12	MP1	Z	9.22	55
13	MP4	X	-3.91	36
14	MP4	Z	6.77	36
15	MP4	X	-3.98	36
16	MP4	Z	6.89	36
17	MP8	X	-4.29	0
18	MP8	Z	7.44	0
19	MP8	X	-4.29	55
20	MP8	Z	7.44	55
21	MP5	X	-3.5	48
22	MP5	Z	6.06	48
23	MP5	X	-3.78	48
24	MP5	Z	6.55	48
25	MP6	X	-9.51	0
26	MP6	Z	16.46	0
27	MP6	X	-9.51	96
28	MP6	Z	16.46	96
29	MP5	X	-9.53	0
30	MP5	Z	16.51	0
31	MP5	X	-9.53	96
32	MP5	Z	16.51	96
33	MP9	X	-5.32	0
34	MP9	Z	9.22	0
35	MP9	X	-5.32	55
36	MP9	Z	9.22	55
37	MP12	X	-3.91	36
38	MP12	Z	6.77	36
39	MP12	X	-3.98	36
40	MP12	Z	6.89	36
41	MP11	X	-10.65	0
42	MP11	Z	18.45	0
43	MP11	X	-10.65	96
44	MP11	Z	18.45	96
45	MP12	X	-13.86	0
46	MP12	Z	24.01	0
47	MP12	X	-13.86	96
48	MP12	Z	24.01	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	0	0
2	MP4	Z	14.52	0
3	MP4	X	0	48
4	MP4	Z	14.52	48
5	MP3	X	0	0
6	MP3	Z	9.95	0
7	MP3	X	0	48
8	MP3	Z	9.95	48
9	MP1	X	0	0
10	MP1	Z	11.33	0
11	MP1	X	0	55
12	MP1	Z	11.33	55
13	MP4	X	0	36
14	MP4	Z	8.09	36
15	MP4	X	0	36

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
16	MP4	Z	8.09	36
17	MP8	X	0	0
18	MP8	Z	9.28	0
19	MP8	X	0	55
20	MP8	Z	9.28	55
21	MP5	X	0	48
22	MP5	Z	7.27	48
23	MP5	X	0	48
24	MP5	Z	7.7	48
25	MP6	X	0	0
26	MP6	Z	19.78	0
27	MP6	X	0	96
28	MP6	Z	19.78	96
29	MP5	X	0	0
30	MP5	Z	21.95	0
31	MP5	X	0	96
32	MP5	Z	21.95	96
33	MP9	X	0	0
34	MP9	Z	9.28	0
35	MP9	X	0	55
36	MP9	Z	9.28	55
37	MP12	X	0	36
38	MP12	Z	7.27	36
39	MP12	X	0	36
40	MP12	Z	7.7	36
41	MP11	X	0	0
42	MP11	Z	19.78	0
43	MP11	X	0	96
44	MP11	Z	19.78	96
45	MP12	X	0	0
46	MP12	Z	21.95	0
47	MP12	X	0	96
48	MP12	Z	21.95	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	6.53	0
2	MP4	Z	11.32	0
3	MP4	X	6.53	48
4	MP4	Z	11.32	48
5	MP3	X	4.82	0
6	MP3	Z	8.34	0
7	MP3	X	4.82	48
8	MP3	Z	8.34	48
9	MP1	X	5.32	0
10	MP1	Z	9.22	0
11	MP1	X	5.32	55
12	MP1	Z	9.22	55
13	MP4	X	3.91	36
14	MP4	Z	6.77	36
15	MP4	X	3.98	36
16	MP4	Z	6.89	36
17	MP8	X	5.32	0
18	MP8	Z	9.22	0
19	MP8	X	5.32	55
20	MP8	Z	9.22	55

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
21	MP5	X	3.91	48
22	MP5	Z	6.77	48
23	MP5	X	3.98	48
24	MP5	Z	6.89	48
25	MP6	X	10.65	0
26	MP6	Z	18.45	0
27	MP6	X	10.65	96
28	MP6	Z	18.45	96
29	MP5	X	13.86	0
30	MP5	Z	24.01	0
31	MP5	X	13.86	96
32	MP5	Z	24.01	96
33	MP9	X	4.29	0
34	MP9	Z	7.44	0
35	MP9	X	4.29	55
36	MP9	Z	7.44	55
37	MP12	X	3.5	36
38	MP12	Z	6.06	36
39	MP12	X	3.78	36
40	MP12	Z	6.55	36
41	MP11	X	9.51	0
42	MP11	Z	16.46	0
43	MP11	X	9.51	96
44	MP11	Z	16.46	96
45	MP12	X	9.53	0
46	MP12	Z	16.51	0
47	MP12	X	9.53	96
48	MP12	Z	16.51	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	8.8	0
2	MP4	Z	5.08	0
3	MP4	X	8.8	48
4	MP4	Z	5.08	48
5	MP3	X	7.79	0
6	MP3	Z	4.5	0
7	MP3	X	7.79	48
8	MP3	Z	4.5	48
9	MP1	X	8.03	0
10	MP1	Z	4.64	0
11	MP1	X	8.03	55
12	MP1	Z	4.64	55
13	MP4	X	6.3	36
14	MP4	Z	3.64	36
15	MP4	X	6.67	36
16	MP4	Z	3.85	36
17	MP8	X	9.81	0
18	MP8	Z	5.67	0
19	MP8	X	9.81	55
20	MP8	Z	5.67	55
21	MP5	X	7.01	48
22	MP5	Z	4.05	48
23	MP5	X	7.01	48
24	MP5	Z	4.05	48
25	MP6	X	19.12	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
26	MP6	Z	11.04	0
27	MP6	X	19.12	96
28	MP6	Z	11.04	96
29	MP5	X	26.51	0
30	MP5	Z	15.3	0
31	MP5	X	26.51	96
32	MP5	Z	15.3	96
33	MP9	X	8.03	0
34	MP9	Z	4.64	0
35	MP9	X	8.03	55
36	MP9	Z	4.64	55
37	MP12	X	6.3	36
38	MP12	Z	3.64	36
39	MP12	X	6.67	36
40	MP12	Z	3.85	36
41	MP11	X	17.13	0
42	MP11	Z	9.89	0
43	MP11	X	17.13	96
44	MP11	Z	9.89	96
45	MP12	X	19.01	0
46	MP12	Z	10.98	0
47	MP12	X	19.01	96
48	MP12	Z	10.98	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	8.72	0
2	MP4	Z	0	0
3	MP4	X	8.72	48
4	MP4	Z	0	48
5	MP3	X	8.68	0
6	MP3	Z	0	0
7	MP3	X	8.68	48
8	MP3	Z	0	48
9	MP1	X	8.59	0
10	MP1	Z	0	0
11	MP1	X	8.59	55
12	MP1	Z	0	55
13	MP4	X	7	36
14	MP4	Z	0	36
15	MP4	X	7.56	36
16	MP4	Z	0	36
17	MP8	X	10.65	0
18	MP8	Z	0	0
19	MP8	X	10.65	55
20	MP8	Z	0	55
21	MP5	X	7.82	48
22	MP5	Z	0	48
23	MP5	X	7.96	48
24	MP5	Z	0	48
25	MP6	X	21.31	0
26	MP6	Z	0	0
27	MP6	X	21.31	96
28	MP6	Z	0	96
29	MP5	X	27.72	0
30	MP5	Z	0	0

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
31	MP5	X	27.72	96
32	MP5	Z	0	96
33	MP9	X	10.65	0
34	MP9	Z	0	0
35	MP9	X	10.65	55
36	MP9	Z	0	55
37	MP12	X	7.82	36
38	MP12	Z	0	36
39	MP12	X	7.96	36
40	MP12	Z	0	36
41	MP11	X	21.31	0
42	MP11	Z	0	0
43	MP11	X	21.31	96
44	MP11	Z	0	96
45	MP12	X	27.72	0
46	MP12	Z	0	0
47	MP12	X	27.72	96
48	MP12	Z	0	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	8.8	0
2	MP4	Z	-5.08	0
3	MP4	X	8.8	48
4	MP4	Z	-5.08	48
5	MP3	X	7.79	0
6	MP3	Z	-4.5	0
7	MP3	X	7.79	48
8	MP3	Z	-4.5	48
9	MP1	X	8.03	0
10	MP1	Z	-4.64	0
11	MP1	X	8.03	55
12	MP1	Z	-4.64	55
13	MP4	X	6.3	36
14	MP4	Z	-3.64	36
15	MP4	X	6.67	36
16	MP4	Z	-3.85	36
17	MP8	X	8.03	0
18	MP8	Z	-4.64	0
19	MP8	X	8.03	55
20	MP8	Z	-4.64	55
21	MP5	X	6.3	48
22	MP5	Z	-3.64	48
23	MP5	X	6.67	48
24	MP5	Z	-3.85	48
25	MP6	X	17.13	0
26	MP6	Z	-9.89	0
27	MP6	X	17.13	96
28	MP6	Z	-9.89	96
29	MP5	X	19.01	0
30	MP5	Z	-10.98	0
31	MP5	X	19.01	96
32	MP5	Z	-10.98	96
33	MP9	X	9.81	0
34	MP9	Z	-5.67	0
35	MP9	X	9.81	55

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
36	MP9	Z	-5.67	55
37	MP12	X	7.01	36
38	MP12	Z	-4.05	36
39	MP12	X	7.01	36
40	MP12	Z	-4.05	36
41	MP11	X	19.12	0
42	MP11	Z	-11.04	0
43	MP11	X	19.12	96
44	MP11	Z	-11.04	96
45	MP12	X	26.51	0
46	MP12	Z	-15.3	0
47	MP12	X	26.51	96
48	MP12	Z	-15.3	96

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	6.53	0
2	MP4	Z	-11.32	0
3	MP4	X	6.53	48
4	MP4	Z	-11.32	48
5	MP3	X	4.82	0
6	MP3	Z	-8.34	0
7	MP3	X	4.82	48
8	MP3	Z	-8.34	48
9	MP1	X	5.32	0
10	MP1	Z	-9.22	0
11	MP1	X	5.32	55
12	MP1	Z	-9.22	55
13	MP4	X	3.91	36
14	MP4	Z	-6.77	36
15	MP4	X	3.98	36
16	MP4	Z	-6.89	36
17	MP8	X	4.29	0
18	MP8	Z	-7.44	0
19	MP8	X	4.29	55
20	MP8	Z	-7.44	55
21	MP5	X	3.5	48
22	MP5	Z	-6.06	48
23	MP5	X	3.78	48
24	MP5	Z	-6.55	48
25	MP6	X	9.51	0
26	MP6	Z	-16.46	0
27	MP6	X	9.51	96
28	MP6	Z	-16.46	96
29	MP5	X	9.53	0
30	MP5	Z	-16.51	0
31	MP5	X	9.53	96
32	MP5	Z	-16.51	96
33	MP9	X	5.32	0
34	MP9	Z	-9.22	0
35	MP9	X	5.32	55
36	MP9	Z	-9.22	55
37	MP12	X	3.91	36
38	MP12	Z	-6.77	36
39	MP12	X	3.98	36
40	MP12	Z	-6.89	36

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
41	MP11	X	10.65	0
42	MP11	Z	-18.45	0
43	MP11	X	10.65	96
44	MP11	Z	-18.45	96
45	MP12	X	13.86	0
46	MP12	Z	-24.01	0
47	MP12	X	13.86	96
48	MP12	Z	-24.01	96

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	Z	-3.835	0
2	MP4	Z	-3.835	48
3	MP3	Z	-1.439	0
4	MP3	Z	-1.439	48
5	MP1	Z	-1.755	0
6	MP1	Z	-1.755	55
7	MP4	Z	-7.019	36
8	MP4	Z	-7.52	36
9	MP8	Z	-1.755	0
10	MP8	Z	-1.755	55
11	MP5	Z	-7.019	48
12	MP5	Z	-7.52	48
13	MP6	Z	-2.707	0
14	MP6	Z	-2.707	96
15	MP5	Z	-4.798	0
16	MP5	Z	-4.798	96
17	MP9	Z	-1.755	0
18	MP9	Z	-1.755	55
19	MP12	Z	-7.019	36
20	MP12	Z	-7.52	36
21	MP11	Z	-2.707	0
22	MP11	Z	-2.707	96
23	MP12	Z	-4.798	0
24	MP12	Z	-4.798	96

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	X	-3.835	0
2	MP4	X	-3.835	48
3	MP3	X	-1.439	0
4	MP3	X	-1.439	48
5	MP1	X	-1.755	0
6	MP1	X	-1.755	55
7	MP4	X	-7.019	36
8	MP4	X	-7.52	36
9	MP8	X	-1.755	0
10	MP8	X	-1.755	55
11	MP5	X	-7.019	48
12	MP5	X	-7.52	48
13	MP6	X	-2.707	0
14	MP6	X	-2.707	96
15	MP5	X	-4.798	0
16	MP5	X	-4.798	96
17	MP9	X	-1.755	0
18	MP9	X	-1.755	55

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
19	MP12	X	-7.019	36
20	MP12	X	-7.52	36
21	MP11	X	-2.707	0
22	MP11	X	-2.707	96
23	MP12	X	-4.798	0
24	MP12	X	-4.798	96

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
1	M100	SZ	-103.674	-103.674	0	%100
2	M2	SZ	-103.674	-103.674	0	%100
3	M102	SZ	-103.674	-103.674	0	%100
4	M4	SZ	-103.674	-103.674	0	%100
5	M101	SZ	-103.674	-103.674	0	%100
6	M6	SZ	-103.674	-103.674	0	%100
7	M7	SZ	-62.204	-62.204	0	%100
8	M8	SZ	-62.204	-62.204	0	%100
9	M9	SZ	-62.204	-62.204	0	%100
10	M10	SZ	-103.674	-103.674	0	%100
11	M11	SZ	-103.674	-103.674	0	%100
12	M12	SZ	-103.674	-103.674	0	%100
13	M13	SZ	-103.674	-103.674	0	%100
14	M14	SZ	-103.674	-103.674	0	%100
15	M15	SZ	-103.674	-103.674	0	%100
16	M16	SZ	-103.674	-103.674	0	%100
17	M17	SZ	-103.674	-103.674	0	%100
18	M18	SZ	-103.674	-103.674	0	%100
19	M21	SZ	0	0	0	%100
20	MP1	SZ	-62.204	-62.204	0	%100
21	M37	SZ	-103.674	-103.674	0	%100
22	M38	SZ	-103.674	-103.674	0	%100
23	M39	SZ	-103.674	-103.674	0	%100
24	M24	SZ	0	0	0	%100
25	MP2	SZ	-62.204	-62.204	0	%100
26	M26	SZ	0	0	0	%100
27	MP4	SZ	-62.204	-62.204	0	%100
28	M28	SZ	0	0	0	%100
29	MP3	SZ	-62.204	-62.204	0	%100
30	M30	SZ	0	0	0	%100
31	MP9	SZ	-62.204	-62.204	0	%100
32	M32	SZ	0	0	0	%100
33	MP10	SZ	-62.204	-62.204	0	%100
34	M34	SZ	0	0	0	%100
35	MP12	SZ	-62.204	-62.204	0	%100
36	M36	SZ	0	0	0	%100
37	MP11	SZ	-62.204	-62.204	0	%100
38	M38A	SZ	0	0	0	%100
39	MP5	SZ	-62.204	-62.204	0	%100
40	M42	SZ	0	0	0	%100
41	MP8	SZ	-62.204	-62.204	0	%100
42	M44	SZ	0	0	0	%100
43	MP7	SZ	-62.204	-62.204	0	%100
44	M46	SZ	-103.674	-103.674	0	%100
45	M47	SZ	-103.674	-103.674	0	%100
46	M48	SZ	-103.674	-103.674	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
47	M49	SZ	-62.204	-62.204	0	%100
48	M50	SZ	-62.204	-62.204	0	%100
49	M51	SZ	-62.204	-62.204	0	%100
50	M52	SZ	0	0	0	%100
51	M53	SZ	0	0	0	%100
52	M54	SZ	0	0	0	%100
53	M55	SZ	0	0	0	%100
54	M56	SZ	0	0	0	%100
55	M57	SZ	0	0	0	%100
56	M58	SZ	0	0	0	%100
57	M59	SZ	0	0	0	%100
58	M60	SZ	0	0	0	%100
59	M62	SZ	0	0	0	%100
60	M63	SZ	0	0	0	%100
61	M64	SZ	0	0	0	%100
62	MP6	SZ	-62.204	-62.204	0	%100
63	M66	SZ	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
1	M100	SX	-103.674	-103.674	0	%100
2	M2	SX	-103.674	-103.674	0	%100
3	M102	SX	-103.674	-103.674	0	%100
4	M4	SX	-103.674	-103.674	0	%100
5	M101	SX	-103.674	-103.674	0	%100
6	M6	SX	-103.674	-103.674	0	%100
7	M7	SX	-62.204	-62.204	0	%100
8	M8	SX	-62.204	-62.204	0	%100
9	M9	SX	-62.204	-62.204	0	%100
10	M10	SX	-103.674	-103.674	0	%100
11	M11	SX	-103.674	-103.674	0	%100
12	M12	SX	-103.674	-103.674	0	%100
13	M13	SX	-103.674	-103.674	0	%100
14	M14	SX	-103.674	-103.674	0	%100
15	M15	SX	-103.674	-103.674	0	%100
16	M16	SX	-103.674	-103.674	0	%100
17	M17	SX	-103.674	-103.674	0	%100
18	M18	SX	-103.674	-103.674	0	%100
19	M21	SX	0	0	0	%100
20	MP1	SX	-62.204	-62.204	0	%100
21	M37	SX	-103.674	-103.674	0	%100
22	M38	SX	-103.674	-103.674	0	%100
23	M39	SX	-103.674	-103.674	0	%100
24	M24	SX	0	0	0	%100
25	MP2	SX	-62.204	-62.204	0	%100
26	M26	SX	0	0	0	%100
27	MP4	SX	-62.204	-62.204	0	%100
28	M28	SX	0	0	0	%100
29	MP3	SX	-62.204	-62.204	0	%100
30	M30	SX	0	0	0	%100
31	MP9	SX	-62.204	-62.204	0	%100
32	M32	SX	0	0	0	%100
33	MP10	SX	-62.204	-62.204	0	%100
34	M34	SX	0	0	0	%100
35	MP12	SX	-62.204	-62.204	0	%100
36	M36	SX	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
37	MP11	SX	-62.204	-62.204	0	%100
38	M38A	SX	0	0	0	%100
39	MP5	SX	-62.204	-62.204	0	%100
40	M42	SX	0	0	0	%100
41	MP8	SX	-62.204	-62.204	0	%100
42	M44	SX	0	0	0	%100
43	MP7	SX	-62.204	-62.204	0	%100
44	M46	SX	-103.674	-103.674	0	%100
45	M47	SX	-103.674	-103.674	0	%100
46	M48	SX	-103.674	-103.674	0	%100
47	M49	SX	-62.204	-62.204	0	%100
48	M50	SX	-62.204	-62.204	0	%100
49	M51	SX	-62.204	-62.204	0	%100
50	M52	SX	0	0	0	%100
51	M53	SX	0	0	0	%100
52	M54	SX	0	0	0	%100
53	M55	SX	0	0	0	%100
54	M56	SX	0	0	0	%100
55	M57	SX	0	0	0	%100
56	M58	SX	0	0	0	%100
57	M59	SX	0	0	0	%100
58	M60	SX	0	0	0	%100
59	M62	SX	0	0	0	%100
60	M63	SX	0	0	0	%100
61	M64	SX	0	0	0	%100
62	MP6	SX	-62.204	-62.204	0	%100
63	M66	SX	0	0	0	%100

Member Distributed Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
1	M100	Y	-9.517	-9.517	0	%100
2	M2	Y	-10.026	-10.026	0	%100
3	M102	Y	-9.517	-9.517	0	%100
4	M4	Y	-10.026	-10.026	0	%100
5	M101	Y	-9.517	-9.517	0	%100
6	M6	Y	-10.026	-10.026	0	%100
7	M7	Y	-6.499	-6.499	0	%100
8	M8	Y	-6.499	-6.499	0	%100
9	M9	Y	-6.499	-6.499	0	%100
10	M10	Y	-9.517	-9.517	0	%100
11	M11	Y	-9.517	-9.517	0	%100
12	M12	Y	-9.517	-9.517	0	%100
13	M13	Y	-5.559	-5.559	0	%100
14	M14	Y	-5.559	-5.559	0	%100
15	M15	Y	-5.559	-5.559	0	%100
16	M16	Y	-5.559	-5.559	0	%100
17	M17	Y	-5.559	-5.559	0	%100
18	M18	Y	-5.559	-5.559	0	%100
19	M21	Y	-1.602	-1.602	0	%100
20	MP1	Y	-4.925	-4.925	0	%100
21	M37	Y	-9.517	-9.517	0	%100
22	M38	Y	-9.517	-9.517	0	%100
23	M39	Y	-9.517	-9.517	0	%100
24	M24	Y	-1.602	-1.602	0	%100
25	MP2	Y	-4.925	-4.925	0	%100
26	M26	Y	-1.602	-1.602	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
27	MP4	Y	-4.925	-4.925	0	%100
28	M28	Y	-1.602	-1.602	0	%100
29	MP3	Y	-4.925	-4.925	0	%100
30	M30	Y	-1.602	-1.602	0	%100
31	MP9	Y	-4.925	-4.925	0	%100
32	M32	Y	-1.602	-1.602	0	%100
33	MP10	Y	-4.925	-4.925	0	%100
34	M34	Y	-1.602	-1.602	0	%100
35	MP12	Y	-4.925	-4.925	0	%100
36	M36	Y	-1.602	-1.602	0	%100
37	MP11	Y	-4.925	-4.925	0	%100
38	M38A	Y	-1.602	-1.602	0	%100
39	MP5	Y	-4.925	-4.925	0	%100
40	M42	Y	-1.602	-1.602	0	%100
41	MP8	Y	-4.925	-4.925	0	%100
42	M44	Y	-1.602	-1.602	0	%100
43	MP7	Y	-4.925	-4.925	0	%100
44	M46	Y	-6.549	-6.549	0	%100
45	M47	Y	-6.549	-6.549	0	%100
46	M48	Y	-6.549	-6.549	0	%100
47	M49	Y	-4.925	-4.925	0	%100
48	M50	Y	-4.925	-4.925	0	%100
49	M51	Y	-4.925	-4.925	0	%100
50	M52	Y	-1.602	-1.602	0	%100
51	M53	Y	-1.602	-1.602	0	%100
52	M54	Y	-1.602	-1.602	0	%100
53	M55	Y	-1.602	-1.602	0	%100
54	M56	Y	-1.602	-1.602	0	%100
55	M57	Y	-1.602	-1.602	0	%100
56	M58	Y	-1.602	-1.602	0	%100
57	M59	Y	-1.602	-1.602	0	%100
58	M60	Y	-1.602	-1.602	0	%100
59	M62	Y	-1.602	-1.602	0	%100
60	M63	Y	-1.602	-1.602	0	%100
61	M64	Y	-1.602	-1.602	0	%100
62	MP6	Y	-4.925	-4.925	0	%100
63	M66	Y	-1.602	-1.602	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
1	M100	SZ	-13.545	-13.545	0	%100
2	M2	SZ	-13.309	-13.309	0	%100
3	M102	SZ	-13.545	-13.545	0	%100
4	M4	SZ	-13.309	-13.309	0	%100
5	M101	SZ	-13.545	-13.545	0	%100
6	M6	SZ	-13.309	-13.309	0	%100
7	M7	SZ	-15.951	-15.951	0	%100
8	M8	SZ	-15.951	-15.951	0	%100
9	M9	SZ	-15.951	-15.951	0	%100
10	M10	SZ	-13.545	-13.545	0	%100
11	M11	SZ	-13.545	-13.545	0	%100
12	M12	SZ	-13.545	-13.545	0	%100
13	M13	SZ	-17.449	-17.449	0	%100
14	M14	SZ	-17.449	-17.449	0	%100
15	M15	SZ	-17.449	-17.449	0	%100
16	M16	SZ	-17.449	-17.449	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
17	M17	SZ	-17.449	-17.449	0	%100
18	M18	SZ	-17.449	-17.449	0	%100
19	M21	SZ	0	0	0	%100
20	MP1	SZ	-18.94	-18.94	0	%100
21	M37	SZ	-13.545	-13.545	0	%100
22	M38	SZ	-13.545	-13.545	0	%100
23	M39	SZ	-13.545	-13.545	0	%100
24	M24	SZ	0	0	0	%100
25	MP2	SZ	-18.94	-18.94	0	%100
26	M26	SZ	0	0	0	%100
27	MP4	SZ	-18.94	-18.94	0	%100
28	M28	SZ	0	0	0	%100
29	MP3	SZ	-18.94	-18.94	0	%100
30	M30	SZ	0	0	0	%100
31	MP9	SZ	-18.94	-18.94	0	%100
32	M32	SZ	0	0	0	%100
33	MP10	SZ	-18.94	-18.94	0	%100
34	M34	SZ	0	0	0	%100
35	MP12	SZ	-18.94	-18.94	0	%100
36	M36	SZ	0	0	0	%100
37	MP11	SZ	-18.94	-18.94	0	%100
38	M38A	SZ	0	0	0	%100
39	MP5	SZ	-18.94	-18.94	0	%100
40	M42	SZ	0	0	0	%100
41	MP8	SZ	-18.94	-18.94	0	%100
42	M44	SZ	0	0	0	%100
43	MP7	SZ	-18.94	-18.94	0	%100
44	M46	SZ	-15.888	-15.888	0	%100
45	M47	SZ	-15.888	-15.888	0	%100
46	M48	SZ	-15.888	-15.888	0	%100
47	M49	SZ	-18.94	-18.94	0	%100
48	M50	SZ	-18.94	-18.94	0	%100
49	M51	SZ	-18.94	-18.94	0	%100
50	M52	SZ	0	0	0	%100
51	M53	SZ	0	0	0	%100
52	M54	SZ	0	0	0	%100
53	M55	SZ	0	0	0	%100
54	M56	SZ	0	0	0	%100
55	M57	SZ	0	0	0	%100
56	M58	SZ	0	0	0	%100
57	M59	SZ	0	0	0	%100
58	M60	SZ	0	0	0	%100
59	M62	SZ	0	0	0	%100
60	M63	SZ	0	0	0	%100
61	M64	SZ	0	0	0	%100
62	MP6	SZ	-18.94	-18.94	0	%100
63	M66	SZ	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
1	M100	SX	-13.545	-13.545	0	%100
2	M2	SX	-13.309	-13.309	0	%100
3	M102	SX	-13.545	-13.545	0	%100
4	M4	SX	-13.309	-13.309	0	%100
5	M101	SX	-13.545	-13.545	0	%100
6	M6	SX	-13.309	-13.309	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
7	M7	SX	-15.951	-15.951	0	%100
8	M8	SX	-15.951	-15.951	0	%100
9	M9	SX	-15.951	-15.951	0	%100
10	M10	SX	-13.545	-13.545	0	%100
11	M11	SX	-13.545	-13.545	0	%100
12	M12	SX	-13.545	-13.545	0	%100
13	M13	SX	-17.449	-17.449	0	%100
14	M14	SX	-17.449	-17.449	0	%100
15	M15	SX	-17.449	-17.449	0	%100
16	M16	SX	-17.449	-17.449	0	%100
17	M17	SX	-17.449	-17.449	0	%100
18	M18	SX	-17.449	-17.449	0	%100
19	M21	SX	0	0	0	%100
20	MP1	SX	-18.94	-18.94	0	%100
21	M37	SX	-13.545	-13.545	0	%100
22	M38	SX	-13.545	-13.545	0	%100
23	M39	SX	-13.545	-13.545	0	%100
24	M24	SX	0	0	0	%100
25	MP2	SX	-18.94	-18.94	0	%100
26	M26	SX	0	0	0	%100
27	MP4	SX	-18.94	-18.94	0	%100
28	M28	SX	0	0	0	%100
29	MP3	SX	-18.94	-18.94	0	%100
30	M30	SX	0	0	0	%100
31	MP9	SX	-18.94	-18.94	0	%100
32	M32	SX	0	0	0	%100
33	MP10	SX	-18.94	-18.94	0	%100
34	M34	SX	0	0	0	%100
35	MP12	SX	-18.94	-18.94	0	%100
36	M36	SX	0	0	0	%100
37	MP11	SX	-18.94	-18.94	0	%100
38	M38A	SX	0	0	0	%100
39	MP5	SX	-18.94	-18.94	0	%100
40	M42	SX	0	0	0	%100
41	MP8	SX	-18.94	-18.94	0	%100
42	M44	SX	0	0	0	%100
43	MP7	SX	-18.94	-18.94	0	%100
44	M46	SX	-15.888	-15.888	0	%100
45	M47	SX	-15.888	-15.888	0	%100
46	M48	SX	-15.888	-15.888	0	%100
47	M49	SX	-18.94	-18.94	0	%100
48	M50	SX	-18.94	-18.94	0	%100
49	M51	SX	-18.94	-18.94	0	%100
50	M52	SX	0	0	0	%100
51	M53	SX	0	0	0	%100
52	M54	SX	0	0	0	%100
53	M55	SX	0	0	0	%100
54	M56	SX	0	0	0	%100
55	M57	SX	0	0	0	%100
56	M58	SX	0	0	0	%100
57	M59	SX	0	0	0	%100
58	M60	SX	0	0	0	%100
59	M62	SX	0	0	0	%100
60	M63	SX	0	0	0	%100
61	M64	SX	0	0	0	%100
62	MP6	SX	-18.94	-18.94	0	%100
63	M66	SX	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
1	M100	Y	-.274	-6.092	18.675	27.39
2	M100	Y	-6.092	-12.817	27.39	36.105
3	M100	Y	-12.817	-11.157	36.105	44.82
4	M100	Y	-11.157	-5.847	44.82	53.535
5	M100	Y	-5.847	-.363	53.535	62.25
6	M2	Y	-.828	-.92	3.734	4.867
7	M2	Y	-.92	-.966	4.867	6
8	M2	Y	-.966	-.92	6	7.133
9	M2	Y	-.92	-.828	7.133	8.266
10	M11	Y	-7.023	-7.023	6.341	31.26
11	M17	Y	-1.6	-2.518	0	9.094
12	M17	Y	-2.518	-4.806	9.094	18.187
13	M17	Y	-4.806	-8.49	18.187	27.281
14	M17	Y	-8.49	-5.196	27.281	36.374
15	M17	Y	-5.196	-.046	36.374	45.468
16	M18	Y	-1.6	-2.518	0	9.094
17	M18	Y	-2.518	-4.803	9.094	18.187
18	M18	Y	-4.803	-8.482	18.187	27.281
19	M18	Y	-8.482	-5.19	27.281	36.374
20	M18	Y	-5.19	-.046	36.374	45.468
21	M38	Y	-7.021	-7.021	0	24.92
22	M101	Y	-.274	-6.092	18.675	27.391
23	M101	Y	-6.092	-12.817	27.391	36.106
24	M101	Y	-12.817	-11.157	36.106	44.821
25	M101	Y	-11.157	-5.847	44.821	53.536
26	M101	Y	-5.847	-.363	53.536	62.251
27	M6	Y	-.827	-.92	3.734	4.867
28	M6	Y	-.92	-.966	4.867	6
29	M6	Y	-.966	-.921	6	7.133
30	M6	Y	-.921	-.829	7.133	8.265
31	M10	Y	-7.023	-7.023	6.34	31.261
32	M15	Y	-1.599	-2.518	0	9.094
33	M15	Y	-2.518	-4.805	9.094	18.187
34	M15	Y	-4.805	-8.489	18.187	27.281
35	M15	Y	-8.489	-5.196	27.281	36.374
36	M15	Y	-5.196	-.046	36.374	45.468
37	M16	Y	-1.601	-2.518	0	9.094
38	M16	Y	-2.518	-4.803	9.094	18.187
39	M16	Y	-4.803	-8.483	18.187	27.281
40	M16	Y	-8.483	-5.19	27.281	36.374
41	M16	Y	-5.19	-.046	36.374	45.468
42	M37	Y	-7.022	-7.022	0	24.919
43	M102	Y	-.274	-6.092	18.675	27.391
44	M102	Y	-6.092	-12.817	27.391	36.106
45	M102	Y	-12.817	-11.157	36.106	44.821
46	M102	Y	-11.157	-5.847	44.821	53.536
47	M102	Y	-5.847	-.363	53.536	62.251
48	M4	Y	-.828	-.92	3.734	4.867
49	M4	Y	-.92	-.966	4.867	6
50	M4	Y	-.966	-.92	6	7.133
51	M4	Y	-.92	-.828	7.133	8.266
52	M12	Y	-7.023	-7.023	6.34	31.259
53	M13	Y	-1.6	-2.518	0	9.094
54	M13	Y	-2.518	-4.806	9.094	18.187
55	M13	Y	-4.806	-8.49	18.187	27.281
56	M13	Y	-8.49	-5.196	27.281	36.374
57	M13	Y	-5.196	-.046	36.374	45.468

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
58	M14	Y	-1.6	-2.518	0	9.094
59	M14	Y	-2.518	-4.803	9.094	18.187
60	M14	Y	-4.803	-8.482	18.187	27.281
61	M14	Y	-8.482	-5.19	27.281	36.374
62	M14	Y	-5.19	-.046	36.374	45.468
63	M39	Y	-7.021	-7.021	0	24.921

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
1	M100	Y	-.411	-9.138	18.675	27.39
2	M100	Y	-9.138	-19.226	27.39	36.105
3	M100	Y	-19.226	-16.736	36.105	44.82
4	M100	Y	-16.736	-8.771	44.82	53.535
5	M100	Y	-8.771	-.545	53.535	62.25
6	M2	Y	-1.242	-1.38	3.734	4.867
7	M2	Y	-1.38	-1.45	4.867	6
8	M2	Y	-1.45	-1.38	6	7.133
9	M2	Y	-1.38	-1.242	7.133	8.266
10	M11	Y	-10.535	-10.535	6.341	31.26
11	M17	Y	-2.4	-3.777	0	9.094
12	M17	Y	-3.777	-7.209	9.094	18.187
13	M17	Y	-7.209	-12.735	18.187	27.281
14	M17	Y	-12.735	-7.793	27.281	36.374
15	M17	Y	-7.793	-.069	36.374	45.468
16	M18	Y	-2.401	-3.777	0	9.094
17	M18	Y	-3.777	-7.205	9.094	18.187
18	M18	Y	-7.205	-12.724	18.187	27.281
19	M18	Y	-12.724	-7.786	27.281	36.374
20	M18	Y	-7.786	-.069	36.374	45.468
21	M38	Y	-10.532	-10.532	0	24.92
22	M101	Y	-.411	-9.138	18.675	27.391
23	M101	Y	-9.138	-19.226	27.391	36.106
24	M101	Y	-19.226	-16.735	36.106	44.821
25	M101	Y	-16.735	-8.77	44.821	53.536
26	M101	Y	-8.77	-.545	53.536	62.251
27	M6	Y	-1.241	-1.38	3.734	4.867
28	M6	Y	-1.38	-1.449	4.867	6
29	M6	Y	-1.449	-1.381	6	7.133
30	M6	Y	-1.381	-1.243	7.133	8.265
31	M10	Y	-10.535	-10.535	6.34	31.261
32	M15	Y	-2.399	-3.776	0	9.094
33	M15	Y	-3.776	-7.208	9.094	18.187
34	M15	Y	-7.208	-12.734	18.187	27.281
35	M15	Y	-12.734	-7.793	27.281	36.374
36	M15	Y	-7.793	-.069	36.374	45.468
37	M16	Y	-2.401	-3.777	0	9.094
38	M16	Y	-3.777	-7.205	9.094	18.187
39	M16	Y	-7.205	-12.724	18.187	27.281
40	M16	Y	-12.724	-7.786	27.281	36.374
41	M16	Y	-7.786	-.069	36.374	45.468
42	M37	Y	-10.533	-10.533	0	24.919
43	M102	Y	-.411	-9.138	18.675	27.391
44	M102	Y	-9.138	-19.226	27.391	36.106
45	M102	Y	-19.226	-16.736	36.106	44.821
46	M102	Y	-16.736	-8.771	44.821	53.536
47	M102	Y	-8.771	-.545	53.536	62.251

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft...	Start Location[in,%]	End Location[in,%]
48	M4	Y	-1.242	-1.38	3.734	4.867
49	M4	Y	-1.38	-1.45	4.867	6
50	M4	Y	-1.45	-1.38	6	7.133
51	M4	Y	-1.38	-1.242	7.133	8.266
52	M12	Y	-10.535	-10.535	6.34	31.259
53	M13	Y	-2.4	-3.778	0	9.094
54	M13	Y	-3.778	-7.209	9.094	18.187
55	M13	Y	-7.209	-12.735	18.187	27.281
56	M13	Y	-12.735	-7.794	27.281	36.374
57	M13	Y	-7.794	-.069	36.374	45.468
58	M14	Y	-2.401	-3.777	0	9.094
59	M14	Y	-3.777	-7.205	9.094	18.187
60	M14	Y	-7.205	-12.724	18.187	27.281
61	M14	Y	-12.724	-7.786	27.281	36.374
62	M14	Y	-7.786	-.069	36.374	45.468
63	M39	Y	-10.532	-10.532	0	24.921

Member Area Loads (BLC 1 : Self Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N40	N41	N42	N43	Y	Two Way	-10
2	N36	N37	N38	N39	Y	Two Way	-10
3	N32	N33	N34	N35	Y	Two Way	-10

Member Area Loads (BLC 16 : Ice Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N40	N41	N42	N43	Y	Two Way	-15
2	N36	N37	N38	N39	Y	Two Way	-15
3	N32	N33	N34	N35	Y	Two Way	-15

INFINIGY

FROM ZERO TO INFINIGY

the solutions are endless

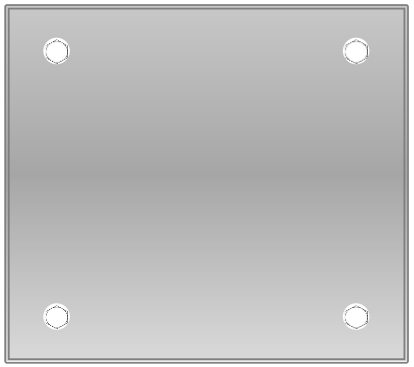
Bolt Calculation Tool, V1.4

PROJECT DATA	
Site Name:	Groton North RT 184
Site Number:	CTL02383
Job Code:	1106-A0001-B
Connection Description:	Standoff to Collar

APPLIED LOADS		
Bolt Tension:	6815.14	lbs
Bolt Shear:	1135.48	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	13805.83	
Tensile Usage	33.5%	
Shear Usage	8.2%	
Interaction Check	0.12	***≤1.05***
Result	Pass	



Mount Analysis and Mapping Checklist

Mount Detail	Both
Mount Type	Platform
Mount Model Number	
If RT, then how is it attached	
If WT, then how is it attached	
Result of previous mount analysis or PE opinion letter	N/A

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?	No
Photos of installation available?	No
Original tower drawings show mounts?	No
Searched for previous mapping?	No
Is latest mod design (dwgs) available?	No
Is the latest structural analysis available?	No

Project Detail	Both
Market	CONNECTICUT
PACE Project ID	MRCTB047225, MRCTB047208, MRCTB047262, MRCTB048182, MRCTB048181
Site Name	GROTON NORTH RT 184
City, State	Groton, CT
RFDS Version Number	5
Initiative (list mult., if applicable)	LTE 2C[700 UPPER D], 4TX4RX Software Retrofit[700 B-C], 5G NR 1DR-1[850 B(U)]LTE 3C [PCS MHz A3+A4+E , LTE 4C AWS F+J].
Tower Owner	
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	10087528
Tower Type	Monopole
Tower Height (Ft)	150
AT&T Rad Center # 1	128
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

SiteSafe
A QUALTEK Company

8618 Westwood Center Drive, Suite 315, Vienna, VA 22182
703.276.1100 ● 703.276.1169 fax
info@sitesafe.com ● www.sitesafe.com

Smartlink on behalf of AT&T Mobility, LLC
Site FA – 10087528
Site ID – CT2383
USID – 97415
Site Name – GROTON NORTH RT 184 (Power Density)

1662 Route 184 DUP 1
Groton, CT 06340

Latitude: N41-23-08.50
Longitude: W72-00-47.90
Structure Type: Monopole

Report generated date: November 4, 2020
Report by: Nick Kutzke
Customer Contact: Sharon Keefe

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

Signed 04 November 2020

Table of Contents

1 General Site Summary

1.1 Report Summary

AT&T Mobility, LLC	Summary
Max Cumulative Simulated RFE Level on the Ground	<1% General Public Limit
Max Cumulative Simulated RFE at the antenna level	2,7011.0% General Public Limit
Safe Distance	48’
Compliant per FCC Rules and Regulations?	Will Be Compliant
Compliant per AT&T Mobility, LLC’s Policy?	No

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

RFDS: NEW-ENGLAND_CONNECTICUT_CT2383_2021-LTE-Next-Carrier_LTE_RX855W_2051A0VBR6_10087528_97415_03-09-2020_Final-Approved_v5.00

CD’s: 10087528_AE201_201027_CTL02383_REV2

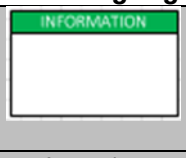
RF Powers Used: Max RRH Powers

1.2 Fall Arrest Anchor Point Summary

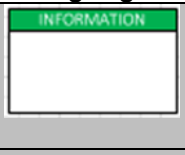
Fall Arrest Anchor & Parapet Info	Parapet Available (Y/N)	Parapet Height (inches)	Fall Arrest Anchor Available (Y/N)
Roof Safety Info	N	N/A	N

1.3 Signage Summary

a. Pre-Site Visit AT&T Signage (Existing Signage)

AT&T Signage Locations									
	Information 1	Information 2	Notice	Notice 2	Caution	Caution 2	Warning	Warning 2	Barriers
Access Point(s)									
Alpha									
Beta									
Gamma									

b. Proposed AT&T Signage

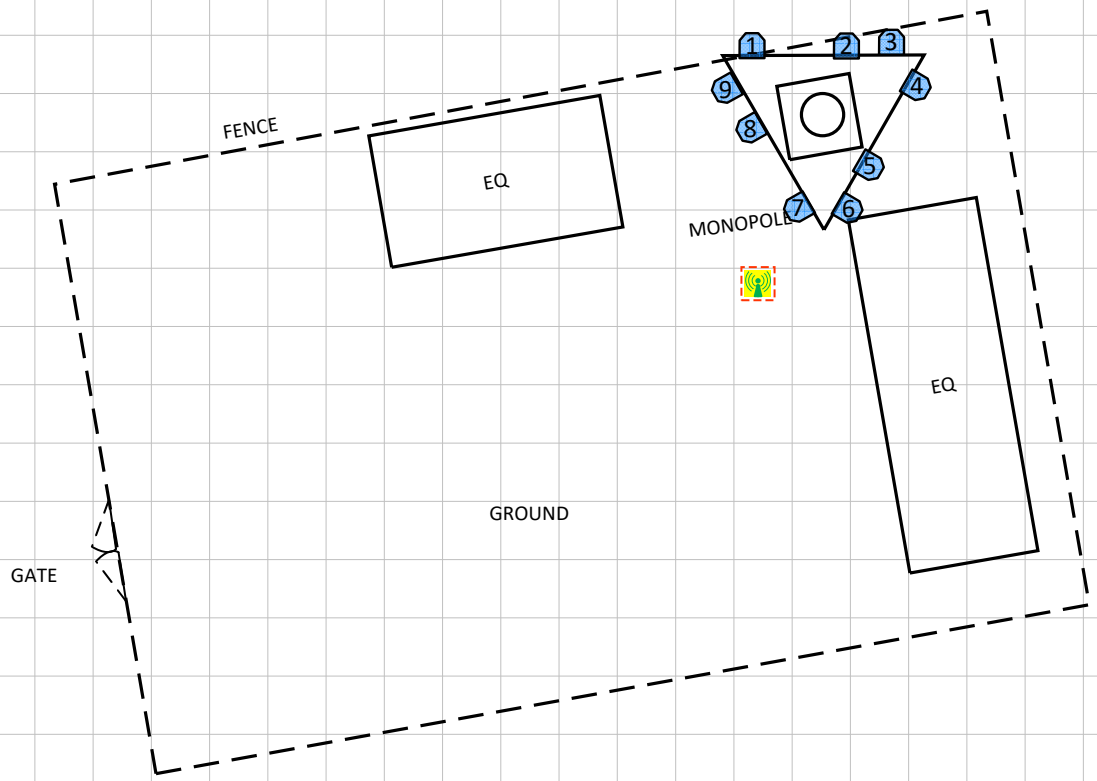
AT&T Signage Locations									
	Information 1	Information 2	Notice	Notice 2	Caution	Caution 2B	Warning	Warning 2	Barriers
Access Point(s)						**1**			
Alpha									
Beta									
Gamma									

2 Scale Maps of Site

The following diagrams are included:

- Site Scale Map
- RF Exposure Diagram
- AT&T Mobility, LLC Contribution

Site Scale Map For: GROTON NORTH RT 184



(Feet)

0 8.2 16.4

www.sitesafe.com
10/7/2020 10:30:33 AM

Carrier Identification

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | UNKNOWN CARRIER

Sign Legend

Notice | Notice 2 | Caution | Caution 2B | Warning | Warning 2 | Info | Info 2 | RF Emissions Diagram | Locked Ladder

Existing Barrier ——— **Proposed Barrier/Sign** — — — **Remove Sign** X

3 Antenna Inventory

The following antenna inventory was obtained by the customer and was utilized to create the site model diagrams:

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Power	Power Type	Power Unit	Misc Loss	TX Count	Total ERP (Watts)	Ant Gain (dBd)	Z	MDT	EDT
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	UMTS	0	82.0	4.6	40	TPO	Watt	0	1	566.3	11.51	125.7'	0°	0°
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA65R-BU4A	Panel	763	LTE	0	68.0	4	160	TPO	Watt	0	1	2037.6	11.05	126'	0°	2°
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA65R-BU4A	Panel	1900	LTE	0	61.0	4	160	TPO	Watt	0	1	4776.6	14.75	126'	0°	2°
3	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	737	LTE	0	65.4	4	160	TPO	Watt	0	1	1581.7	9.95	126'	0°	6°
3	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	850	LTE	0	68.8	4	80	TPO	Watt	0	1	847.4	10.25	126'	0°	6°
3	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	2100	LTE	0	67.1	4	160	TPO	Watt	0	1	4065.6	14.05	126'	0°	6°
3	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	850	5G	0	68.8	4	80	TPO	Watt	0	1	847.4	10.25	126'	0°	6°
4	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU8D	Panel	737	LTE	110	70.6	8	160	TPO	Watt	0	1	2692.3	12.26	124'	0°	8°
4	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU8D	Panel	850	LTE	110	71.4	8	80	TPO	Watt	0	1	1442.4	12.56	124'	0°	8°
4	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU8D	Panel	2100	LTE	110	67.1	8	160	TPO	Watt	0	1	5249.5	15.16	124'	0°	8°
4	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU8D	Panel	850	5G	110	71.4	8	80	TPO	Watt	0	1	1442.4	12.56	124'	0°	8°
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA65R-BU8A	Panel	763	LTE	110	65.7	8	160	TPO	Watt	0	1	3312.2	13.16	124'	0°	8°
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA65R-BU8A	Panel	1900	LTE	110	60.6	8	160	TPO	Watt	0	1	4678.6	14.66	124'	0°	8°
6	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	UMTS	120	82.0	4.6	40	TPO	Watt	0	1	566.3	11.51	125.7'	0°	0°
7	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	UMTS	240	82.0	4.6	40	TPO	Watt	0	1	566.3	11.51	125.7'	0°	0°
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA65R-BU4A	Panel	763	LTE	240	68.0	4	160	TPO	Watt	0	1	2037.6	11.05	126'	0°	10°
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas HPA65R-BU4A	Panel	1900	LTE	240	61.0	4	160	TPO	Watt	0	1	4776.6	14.75	126'	0°	10°
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	737	LTE	240	65.4	4	160	TPO	Watt	0	1	1581.7	9.95	126'	0°	6°
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	850	LTE	240	68.8	4	80	TPO	Watt	0	1	847.4	10.25	126'	0°	6°
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	2100	LTE	240	67.1	4	160	TPO	Watt	0	1	4065.6	14.05	126'	0°	6°

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Power	Power Type	Power Unit	Misc Loss	TX Count	Total ERP (Watts)	Ant Gain (dBd)	Z	MDT	EDT
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU4D	Panel	850	5G	240	68.8	4	80	TPO	Watt	0	1	847.4	10.25	126'	0°	6°

Note: The Z reference indicates the bottom of the antenna height **above ground level (AGL).** Effective Radiated Power (ERP) is provided by the operator or based on Sitesafe experience. The values used in the modeling may be greater than are currently deployed. Proposed equipment is tagged as (Proposed) under Operator or Antenna Make & Model.

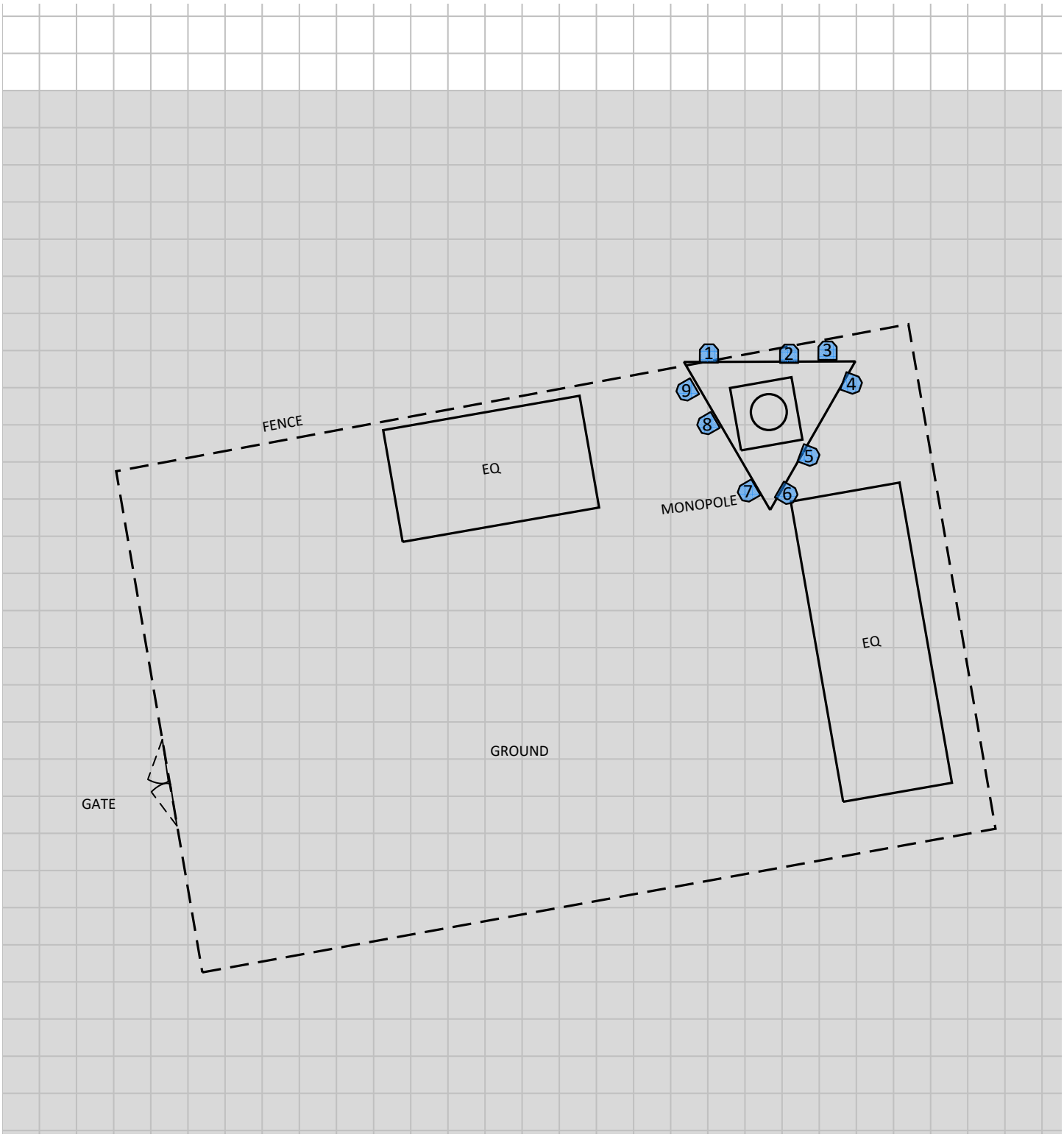
4 Emission Predictions

In the RF Exposure Simulations below, all heights are reflected with respect to ground level. Each different height area, rooftop, or platform level is labeled with its height relative to the main site level. Emissions are calculated appropriately based on the relative height and location of that area to all antennas. The total analyzed elevations in the below RF Exposure Simulations are listed below.

- GROUND = 0'

The Antenna Inventory heights are referenced to the same level.

RF Exposure Simulation For: GROTON NORTH RT 184



% of FCC Public Exposure Limit
Spatially Averaged

% of FCC Public Exposure Limit

0-5	5-100	100-500	500-5000	5000+

Carrier Identification

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | UNKNOWN CARRIER

Existing Barrier | Proposed Barrier/Sign | Remove Sign X | Locked Ladder

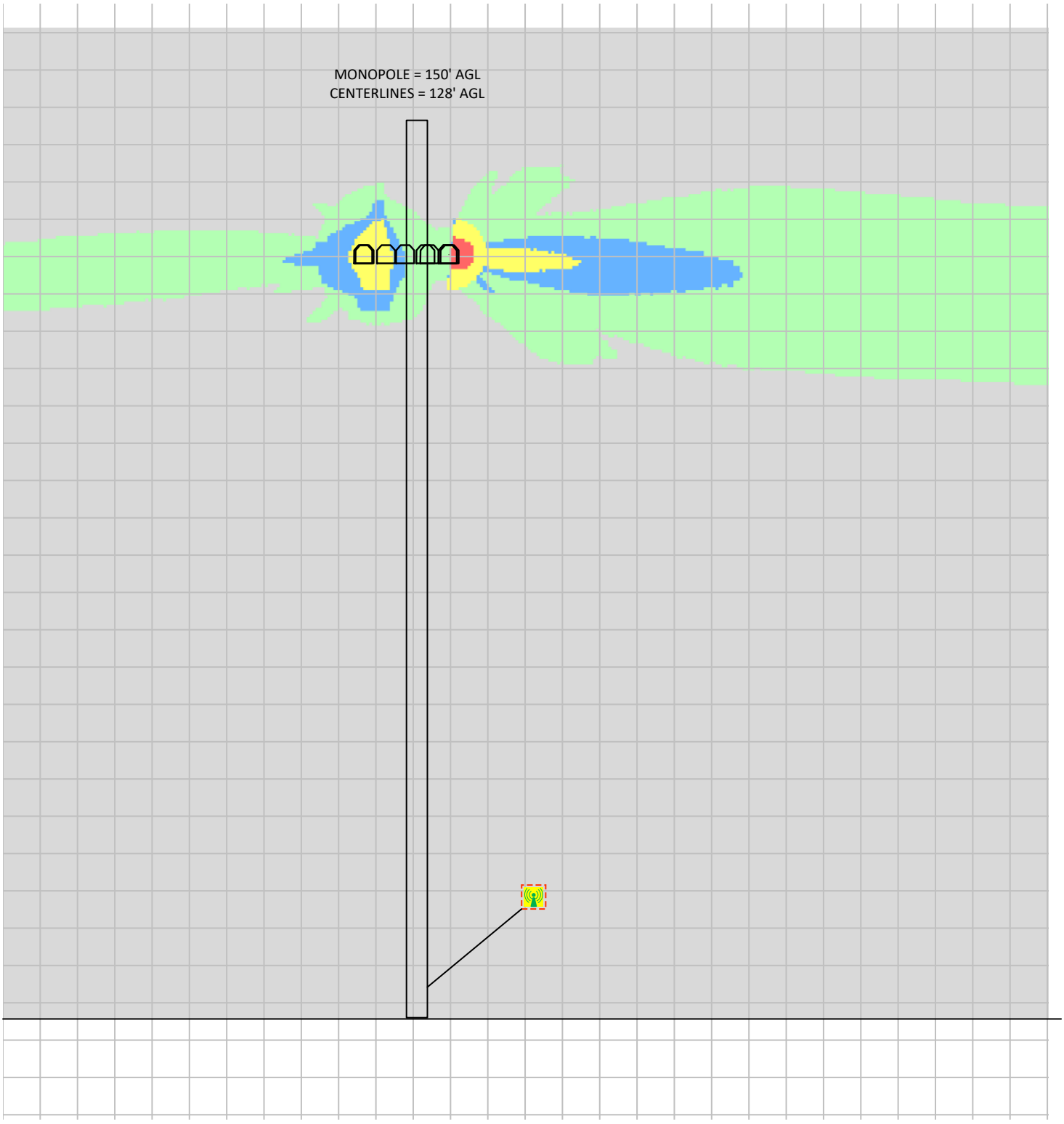
(Feet)

0 7.1 14.2

www.sitesafe.com
11/4/2020 11:01:32 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

RF Exposure Simulation For: GROTON NORTH RT 184
Elevation View



% of FCC Public Exposure Limit
Single Level (0)

% of FCC Public Exposure Limit
0-5 5-100 100-500 500-5000 5000+

Carrier Identification
AT&T MOBILITY LLC VERIZON WIRELESS T-MOBILE SPRINT UNKNOWN CARRIER

Sign Legend
Notice Notice 2 Caution Caution 2B Warning Warning 2 Info Info 2 RF Emissions Diagram Locked Ladder

Existing Barrier
Proposed Barrier/Sign
Remove Sign X

(Feet)
0 12.4 24.8

www.sitesafe.com
11/4/2020 11:22:23 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Single Level (0)

5 Site Compliance

5.1 Site Compliance Statement

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

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

The compliance determination is based on General Public RFE levels derived from theoretical modeling, RF signage placement, and the level of restricted access to the antennas at the site. Any deviation from the proposed AT&T Mobility, LLC deployment plan could result in the site being rendered non-compliant upon further evaluation.

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

5.2 Actions for Site Compliance

Based on FCC regulations, common industry practice, and our understanding of AT&T Mobility, LLC's RF Safety Policy requirements, this section provides a statement of recommendations for site compliance. Recommendations have been proposed based on our understanding of existing access restrictions, signage, and an analysis of predicted RFE levels.

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

Site Access Location

(1) Caution 2B sign(s) required.

Note:

- Data concerning all other carriers on site was unavailable and therefore not included in this report.

6 Engineer Certification

The professional engineer whose seal appears on the cover of this document hereby certifies and affirms:

That I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I am an employee of Site Safe, LLC, in Vienna, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

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

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

November 4, 2020

Appendix A – Statement of Limiting Conditions

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

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

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

Appendix B – Regulatory Background Information

FCC Rules and Regulations

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

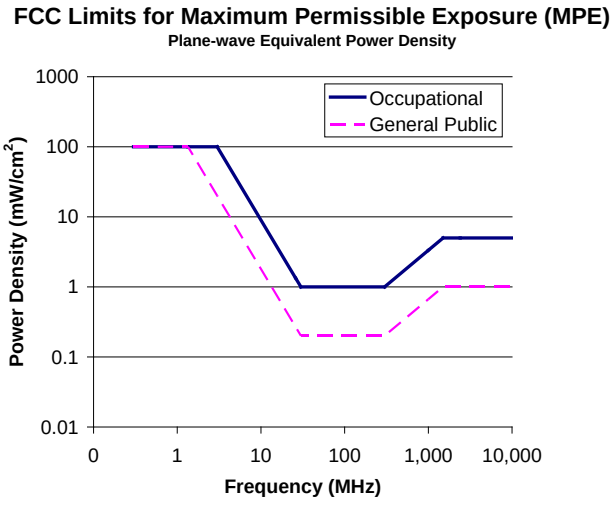
FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible*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

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

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

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

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



Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^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

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^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

OSHA Statement

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

(a) Each employer –

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

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

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

Appendix C – Safety Plan and Procedures

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

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

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

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

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

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

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

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

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

Appendix D – RF Emissions

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

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

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

If trained occupational personnel require access to areas that are delineated as above 100% of the limit, Sitesafe recommends that they utilize the proper personal protection equipment (RF monitors), coordinate with the carriers to reduce or shutdown power, or make real-time power density measurements with the appropriate power density meter to determine real-time MPE levels. This will allow the personnel to ensure that their work area is within exposure limits.

Appendix E – Assumptions and Definitions

General Model Assumptions

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

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

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

Appendix F – Definitions

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

Compliance – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

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

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

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

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

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

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

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

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

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

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

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

Radio Frequency Exposure or Electromagnetic Fields – Electromagnetic waves that are propagated from antennas through space.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy a 6-foot tall human body will absorb while present in an electromagnetic field of energy.

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

Appendix G – References

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

Site Safe, LLC
http://www.sitesafe.com
FCC Radio Frequency Safety
http://www.fcc.gov/encyclopedia/radio-frequency-safety
National Council on Radiation Protection and Measurements (NCRP)
http://www.ncrponline.org
Institute of Electrical and Electronics Engineers, Inc., (IEEE)
http://www.ieee.org
American National Standards Institute (ANSI)
http://www.ansi.org
Environmental Protection Agency (EPA)
http://www.epa.gov/radtown/wireless-tech.html
National Institutes of Health (NIH)
http://www.niehs.nih.gov/health/topics/agents/emf/
Occupational Safety and Health Agency (OSHA)
http://www.osha.gov/SLTC/radiofrequencyradiation/
International Commission on Non-Ionizing Radiation Protection (ICNIRP)
http://www.icnirp.org
World Health Organization (WHO)
http://www.who.int/peh-emf/en/
National Cancer Institute
http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones
American Cancer Society (ACS)
http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?sitearea=PED
European Commission Scientific Committee on Emerging and Newly Identified Health Risks
http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_022.pdf
Fairfax County, Virginia Public School Survey
http://www.fcps.edu/fts/safety-security/RFEESurvey/
UK Health Protection Agency Advisory Group on Non-Ionizing Radiation
http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368
Norwegian Institute of Public Health
http://www.fhi.no/dokumenter/545eea7147.pdf

Sharon Keefe

From: TrackingUpdates@fedex.com
Sent: Friday, November 6, 2020 11:23 AM
To: Sharon Keefe
Subject: FedEx Shipment 772000748470: Your package has been delivered

Hi. Your package was delivered Fri, 11/06/2020 at 11:18am.

Delivered to 45 FORT HILL RD, GROTON, CT 06340
Received by M.THORPE

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER 772000748470

FROM
Smartlink LLC
85 Rangeway Rd.
Bldg 3, Suite 102
NORTH BILLERICA, MA, US, 01862

TO
Town of Groton CT
Jon Reiner, Planning & Dev. Directo
45 Fort Hill Rd
GROTON, CT, US, 06340

REFERENCE	AT&T CT2383/Groton/CSC Filing
SHIPPER REFERENCE	AT&T CT2383/Groton/CSC Filing
SHIP DATE	Thu 11/05/2020 07:06 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Pak
ORIGIN	NORTH BILLERICA, MA, US, 01862
DESTINATION	GROTON, CT, US, 06340
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	2.00 LB
SERVICE TYPE	FedEx Standard Overnight

Sharon Keefe

From: TrackingUpdates@fedex.com
Sent: Friday, November 6, 2020 11:23 AM
To: Sharon Keefe
Subject: FedEx Shipment 772000707631: Your package has been delivered

Hi. Your package was delivered Fri, 11/06/2020 at 11:18am.

Delivered to 45 FORT HILL RD, GROTON, CT 06340
Received by M.THORPE

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER	772000707631
FROM	Smartlink LLC 85 Rangeway Rd. Bldg 3, Suite 102 NORTH BILLERICA, MA, US, 01862
TO	Town of Groton CT John M. Burt - Town Manager 45 Fort Hill Rd. GROTON, CT, US, 06340

REFERENCE	AT&T CT2383/Groton/CSC Filing
SHIPPER REFERENCE	AT&T CT2383/Groton/CSC Filing
SHIP DATE	Thu 11/05/2020 07:06 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Pak
ORIGIN	NORTH BILLERICA, MA, US, 01862
DESTINATION	GROTON, CT, US, 06340
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	2.00 LB
SERVICE TYPE	FedEx Standard Overnight

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 10:23 AM CST 11/06/2020.

Sharon Keefe

From: TrackingUpdates@fedex.com
Sent: Friday, November 6, 2020 10:32 AM
To: Sharon Keefe
Subject: FedEx Shipment 772000791127: Your package has been delivered

Hi. Your package was delivered Fri, 11/06/2020 at 10:27am.

Delivered to 8051 CONGRESS AVE 33, BOCA RATON, FL 33487
Received by B.HAMPTON

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER	772000791127
FROM	Smartlink Group 85 Rangeway Rd. Bldg 3, Suite 102 NORTH BILLERICA, MA, US, 01862
TO	SBA Communications Corp. Zoning Dept. 8051 Congress Avenue BOCA RATON, FL, US, 33487

REFERENCE	AT&T Groton CT/CSC Filing
SHIPPER REFERENCE	AT&T Groton CT/CSC Filing
SHIP DATE	Thu 11/05/2020 07:06 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Pak
ORIGIN	NORTH BILLERICA, MA, US, 01862
DESTINATION	BOCA RATON, FL, US, 33487
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	2.00 LB
SERVICE TYPE	FedEx Standard Overnight

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:31 AM CST 11/06/2020.

772000822818

Delivered
Friday 11/06/2020 at 3:35 pm

DELIVERED

Signature not required

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

Smartlink Group
Sharon Keefe
85 Rangeway Rd.
Bldg 3, Suite 102
NORTH BILLERICA, MA US 01862
978 930-3918

TO

Chester G. Crouch Jr.
603 Princeton St.
BRANDON, FL US 33511
978 930-3918

Shipment Facts

TRACKING NUMBER
772000822818

SERVICE
FedEx Standard Overnight

WEIGHT
2 lbs / 0.91 kgs

DELIVERY ATTEMPTS
1

DELIVERED TO
Residence

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
2 lbs / 0.91 kgs

TERMS
Shipper

SHIPPER REFERENCE
AT&T/Groton CT/CSC Notice

PACKAGING
FedEx Pak

SPECIAL HANDLING SECTION
Deliver Weekday, Residential Delivery

STANDARD TRANSIT
11/06/2020 by 8:00 pm

SHIP DATE
Thu 11/05/2020

ACTUAL DELIVERY
Fri 11/06/2020 3:35 pm

Travel History

Local Scan Time

Friday , 11/06/2020

3:35 pm	BRANDON, FL	Delivered

Left at front door. Package delivered to recipient address - release authorized

8:07 am	TAMPA, FL	On FedEx vehicle for delivery
7:30 am	TAMPA, FL	At local FedEx facility
5:36 am	TAMPA, FL	At destination sort facility
2:59 am	MEMPHIS, TN	Departed FedEx location
Thursday , 11/05/2020		
11:53 pm	MEMPHIS, TN	Arrived at FedEx location
8:38 pm	WILMINGTON, MA	Left FedEx origin facility
7:06 pm	WILMINGTON, MA	Picked up
10:32 am		Shipment information sent to FedEx