August 24, 2020

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

Regarding: **Notice of Exempt Modification – T-Mobile Site #: CTNH522A_Anchor**
Address: **50 Devine Street, North Haven, CT**

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennae at the 119-foot level of the existing +/- 130-foot monopole tower at the above-referenced address, latitude 41.377800, longitude -72.876200. The tower is operated by American Tower Corporation.

T-Mobile now intends to modify its existing telecommunications facility by adding three (3) antennae, adding three (3) remote radio units (RRU) and adding one (1) cable as more particularly detailed and described in the enclosed Construction Drawings prepared by A.T. Engineering Service, PLLC, last revised July 16, 2020. The centerline height of the existing and proposed antennas is and will remain at 119 feet.

Planned Modifications:

Add:
- (3) AIR6449 B41 Antennae
- (3) 4415 B25 RRU
- (1) 1-1/4" Hybrid Cables

Existing to Remain:
- (9) Antennae
- (3) RRU
- (3) 1-1/4" Hybrid Cables

Please accept this letter 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). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to American Tower Corporation as tower operator, Michael J. Freda, First Selectman of the Town of North Haven as chief elected official, Laura Magaraci, Zoning Enforcement Officer of the Town of North Haven and 424 Chapel Street LLC as underlying property owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require an extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the RF emissions calculation for T-Mobile's modified facility dated July 16, 2020 and prepared by EBI Consulting enclosed herewith.*

5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated July 9, 2020 and prepared by American Tower Corporation enclosed herewith.*

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

Respectfully submitted,

Jennifer Iliades
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
jiliades@clinellc.com

Enclosures:
Exhibit A – Original Facility Approval
Exhibit B – Property Card and GIS
Exhibit C – Construction Drawings
Exhibit D – Structural Analysis Report
Exhibit E – Mount Analysis
Exhibit F – Power Density/RF Emissions Report

cc:
American Tower Corporation, tower operator
Michael J. Freda, First Selectman of the Town of North Haven
Laura Magaraci, Zoning Enforcement Officer of the Town of North Haven
424 Chapel Street LLC, underlying property owner

Exhibit A

Original Facility Approval

BUILDING PERMIT

TOWN OF NORTH HAVEN
18 Church Street, North Haven
Connecticut 06473
203-239-5321

Job Address *50 DEVINE ST*	Building: *CELL TOWER*	Map/Lot#:	051021000
Owner: *424 CHAPEL STREET LLC*	Address: *50 DEVINE ST.*	Account#:	*256482*
City/State/County/Zipcode: *NORTH HAVEN, CT 06473*	Phone: *0000000000*	Unit#:	
Applicant: *G C MANAGEMENT LLC*	Address: *594 MAIN ST*	Project#:	
City/State/County/Zipcode: *NEW HARTFORD, CT 06057*	Phone: *8607299357*	Permit#:	*B-10-0452*
		Constr.Value$:	*50000*
Contractor: *G C MANAGEMENT LLC*	Address: *594 MAIN ST*	Fee:	$ *636*
City/State/County/Zipcode: *NEW HARTFORD CT 06057*	Phone: *8607299357* / License No.: *902099*	Zoning:	*IG 80*
		Project Description	*new cell tower*

Issued on:	Amended on:	Expires on:	Type of Construction:	*Non-Residential*
6/8/2010				

24 HR NOTICE FOR INSPECTION REQUEST

Required Inspections:

1. Footings before they are poured.
2. Footing drains and waterproofing prior to backfill
3. Slab inspection for vapor barrier if required.
4. Rough Framing, Electrical, HVAC and Plumbing.
5. Insulation.
6. Final Building, Electrical, HVAC, Plumbing and Footing Drain Discharge.

Exhibit B

Property Card

50 DEVINE ST

Location	50 DEVINE ST	**Mblu**	051/ / 021/ /
Acct#	256482	**Owner**	424 CHAPEL STREET LLC
Assessment	$1,287,160	**Appraisal**	$1,838,800
PID	8849	**Building Count**	2

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$1,255,400	$583,400	$1,838,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$878,780	$408,380	$1,287,160

Owner of Record

Owner	424 CHAPEL STREET LLC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	50 DEVINE ST NORTH HAVEN, CT 06473	**Book & Page**	832/ 52
		Sale Date	08/02/2010

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
424 CHAPEL STREET LLC	$0		832/ 52	08/02/2010
424 CHAPEL STREET LLC	$0	1	772/ 943	08/02/2007
PAPA ANTHONY S (RET ANN TRUST 1,2,3) &	$0	2	427/ 372	02/11/1992
PAPA ANTHONY S	$0	3	410/ 102	07/24/1990
PAPA ANTHONY S	$0	4	410/ 87	07/24/1990

Building Information

Building 1 : Section 1

Year Built:	1949
Living Area:	24,300

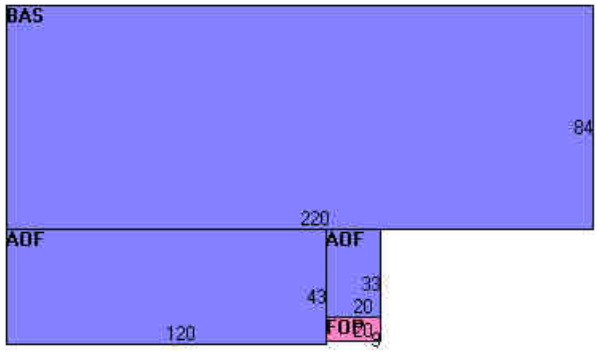
Replacement Cost: $807,225
Building Percent Good: 80
Replacement Cost Less Depreciation: $645,800

Building Attributes	
Field	**Description**
STYLE	Lt. Industrial
MODEL	Ind/Comm
Grade	C
Stories:	1
Occupancy	1
Exterior Wall 1	Brick
Exterior Wall 2	Metal
Roof Structure	Gable/Hip
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	Minim/Masonry
Interior Floor 1	Concr-Finished
Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Unit Heat
AC Type	Central
Bldg Use	MANUFAC M96
Total Rooms	
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	HEAT/AC PKGS
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL/MN WL
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/NorthHavenCTPhotos//\00\01\54/75.jpg)

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	18,480	18,480
AOF	Office	5,820	5,820
FOP	Porch, Open	180	0
		24,480	24,300

Building 2 : Section 1

Year Built: 1984
Living Area: 18,228
Replacement Cost: $671,884
Building Percent Good: 80
Replacement Cost Less Depreciation: $537,500

Building Attributes : Bldg 2 of 2

Field	Description
STYLE	Lt. Industrial
MODEL	Ind/Comm
Grade	C
Stories:	1
Occupancy	1
Exterior Wall 1	Metal
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Metal/Tin
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Unit Heat
AC Type	Partial
Bldg Use	MANUFAC M96
Total Rooms	
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	HEAT/AC PKGS
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL/MN WL
Rooms/Prtns	AVERAGE
Wall Height	22
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/NorthHavenCTPhotos//\00\01\54/76.jpg)

Building Layout

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	11,772	11,772
AOF	Office	6,456	6,456
		18,228	18,228

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
A/C	AIR CONDITION	52800 S.F.	$82,400	2
SPR1	SPRINKLERS-WET	0 S.F.	$0	2
SPR1	SPRINKLERS-WET	19202 S.F.	$13,800	1
LDL1	LOAD LEVELERS	3 UNITS	$7,000	1
MEZ1	MEZZANINE-UNF	2959 S.F.	$21,300	1

Land

Land Use

Use Code	4000
Description	MANUFAC M96
Zone	IG80
Neighborhood	305
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	5.97
Frontage	
Depth	
Assessed Value	$408,380
Appraised Value	$583,400

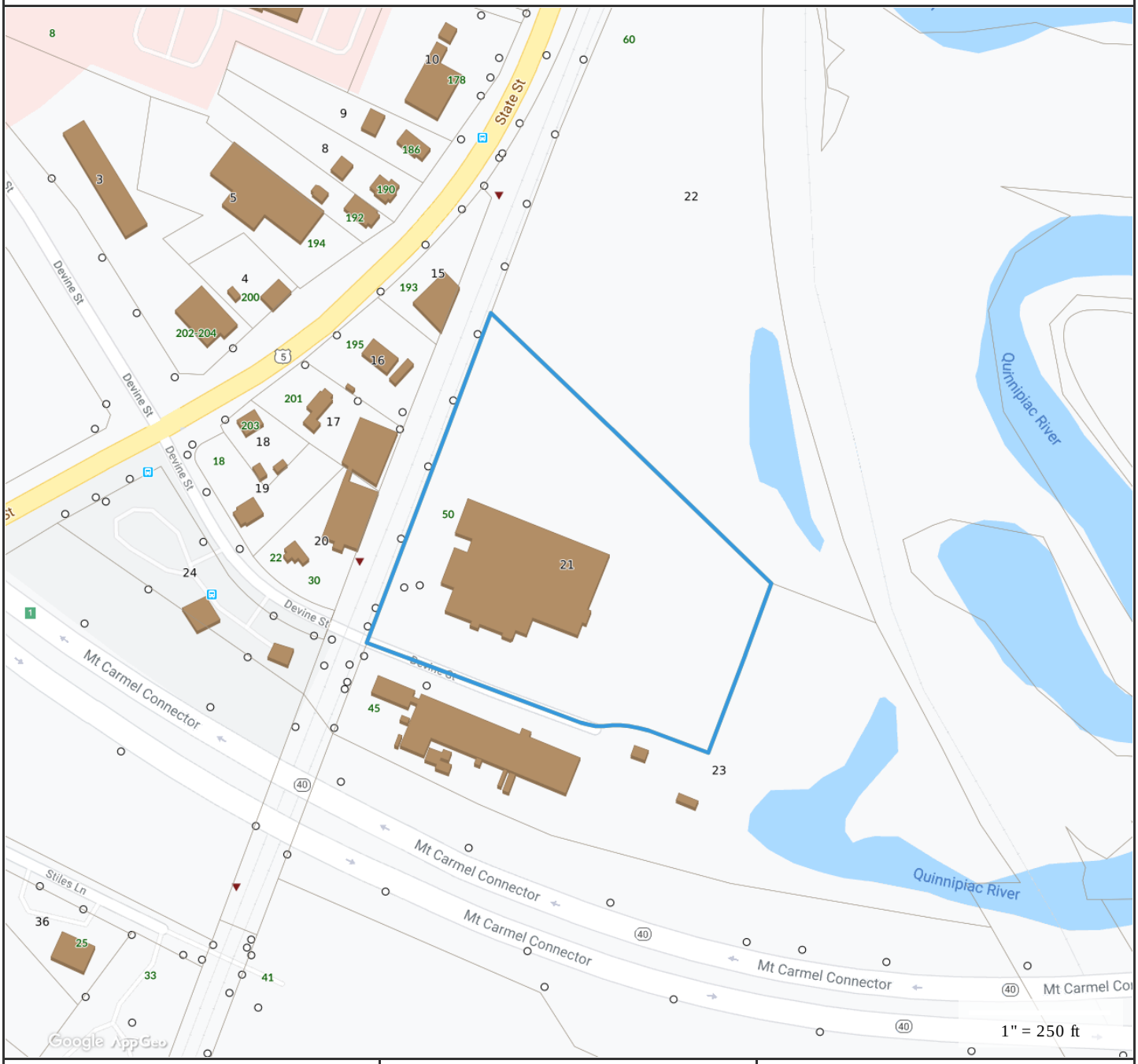
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	PAVING-ASPHALT			45000 S.F.	$6,100	1
TWR1	COMMU-TOWER			1 UNITS	$112,500	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2013	$1,332,500	$657,800	$1,990,300
2008	$733,200	$688,200	$1,421,400
2007		$481,740	$994,980

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2013	$932,750	$460,460	$1,393,210
2008	$526,390	$481,740	$1,008,130
2007		$481,740	$994,980



Property Information

Property ID	051 021
Location	50 DEVINE ST
Owner	424 CHAPEL STREET LLC

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town of North Haven, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 4/1/2020
Data updated 4/1/2020

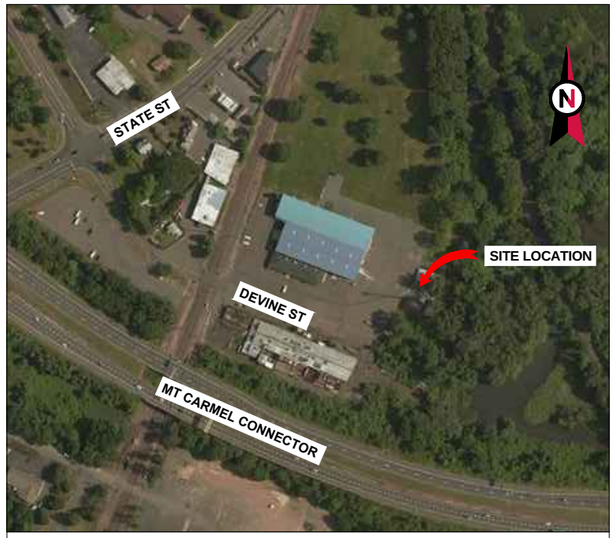
Exhibit C

Construction Drawings

VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: NORTH HAVEN CT
ATC SITE NUMBER: 283418
T-MOBILE SITE NAME: FLORIDA PARTNERS NORTH HAVEN MONOPOLE
T-MOBILE SITE NUMBER:CTNH522A
SITE ADDRESS: 50 DEVINE STREET
NORTH HAVEN, CT 06473



LOCATION MAP

BIRD WATCH SITE:
PLEASE CONTACT BIRD.WATCH@AMERICANTOWER.COM OR AMERICAN TOWER NOC AT 877-518-6937 FOR ASSISTANCE

T-MOBILE ANCHOR ANTENNA AMENDMENT PLAN
67D5A992DB HYBRID CONFIGURATION

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: UNITED ILLUMINATING
PHONE: (800) 722-5584

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 921-8102

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

PROJECT SUMMARY

SITE ADDRESS:

50 DEVINE STREET

NORTH HAVEN, CT 06473

COUNTY: NEW HAVEN

GEOGRAPHIC COORDINATES:

LATITUDE: 41.377778

LONGITUDE: -72.8761583

GROUND ELEVATION: 8' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

T-MOBILE

ENGINEER:

ATC TOWER SERVICES, LLC
3500 REGENCY PKWY STE 100
CARY, NC 27518

PROPERTY OWNER:

424 CHAPEL STREET LLC
50 DEVINE STREET
NORTH HAVEN, CT 06473

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

TOWER WORK:

INSTALL (3) MOUNTING PIPES, (3) ANTENNA(s), (6) RRH(s), AND (1) 1-1/4" HYBRID CABLE(s)

EXISTING (9) ANTENNA(s), (3) RRH(s), AND (3) 1-1/4" HYBRID CABLE(s) TO REMAIN

GROUND WORK:

INSTALL (1) RF CABINET 6160 AND (1) B160 BATTERY CABINET

NOTE:

(11) COAX CABLES LISTED AS REMOVED ON THE STRUCTURAL ANALYSIS ALREADY REMOVED FROM THE TOWER PER CUSTOMER.

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

FROM NEW HAVEN CT START GOING NORTHEAST ON CHURCH ST WHICH TURNS INTO WHITNEY AVE. TURN RIGHT ON TRUMBULL ST. MERGE ONTO I-91 NORTH TOWARD HARTFORD. TAKE EXIT 10 TO CT-40 HAMDEN / CHESHIRE TAKE EXIT 1 TOWARD US-5 STATE ST. TURN RIGHT ON DEVINE ST. GO STRAIGHT OVER RAILROAD TRACKS TO END.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	2	08/13/20	CWB
G-002	GENERAL NOTES	0	07/16/20	CWB
C-101	DETAILED SITE PLAN	1	08/11/20	CWB
C-102	DETAILED GROUND PLAN	2	08/13/20	CWB
C-201	TOWER ELEVATION	0	07/16/20	CWB
C-401	ANTENNA INFORMATION & SCHEDULE	0	07/16/20	CWB
C-501	CONSTRUCTION DETAILS	0	07/16/20	CWB
E-501	GROUNDING DETAILS	0	07/16/20	CWB
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	07/16/20
1	EDIT CABINET LAYOUT	CWB	08/12/20
2	ADDED CLEARANCES	CWB	08/13/20

ATC SITE NUMBER:
283418
ATC SITE NAME:
NORTH HAVEN CT
T-MOBILE SITE NAME:
FLORIDA PARTNERS NORTH HAVEN MONOPOLE
SITE ADDRESS:
50 DEVINE STREET
NORTH HAVEN, CT 06473

SEAL:

T-Mobile

DATE DRAWN:	07/16/20
ATC JOB NO:	13251803_D1
CUSTOMER ID:	FLORIDA PARTNERS NORTH HAVEN MONOPOLE
CUSTOMER #:	CTNH522A

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	2

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL

   A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   B. AC/TELCO INTERFACE BOX (PPC)
   C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   D. TOWERS, MONOPOLES
   E. TOWER LIGHTING
   F. GENERATORS & LIQUID PROPANE TANK
   G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   H. ANTENNAS (INSTALLED BY OTHERS)
   I. TRANSMISSION LINE
   J. TRANSMISSION LINE JUMPERS
   K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   L. TRANSMISSION LINE GROUND KITS
   M. HANGERS
   N. HOISTING GRIPS
   O. BTS EQUIPMENT

2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.

3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.

4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.

6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.

7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.

8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.

9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.

11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.

12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.

13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.

14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.

15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.

16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.

17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.

19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.

20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.

21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.

23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.

24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.

26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.

28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.

29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.

30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.

31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.

33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:

   A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND

   B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND T-MOBILE SPECIFICATIONS.

   C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS

   D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.

   E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

   F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

   G. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	07/16/20

ATC SITE NUMBER:
283418
ATC SITE NAME:
NORTH HAVEN CT
T-MOBILE SITE NAME:
FLORIDA PARTNERS NORTH HAVEN MONOPOLE
SITE ADDRESS:
50 DEVINE STREET
NORTH HAVEN, CT 06473

SEAL:

T-Mobile

DATE DRAWN:	07/16/20
ATC JOB NO:	13251803_D1
CUSTOMER ID:	FLORIDA PARTNERS NORTH HAVEN MONOPOLE
CUSTOMER #:	CTNH522A

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

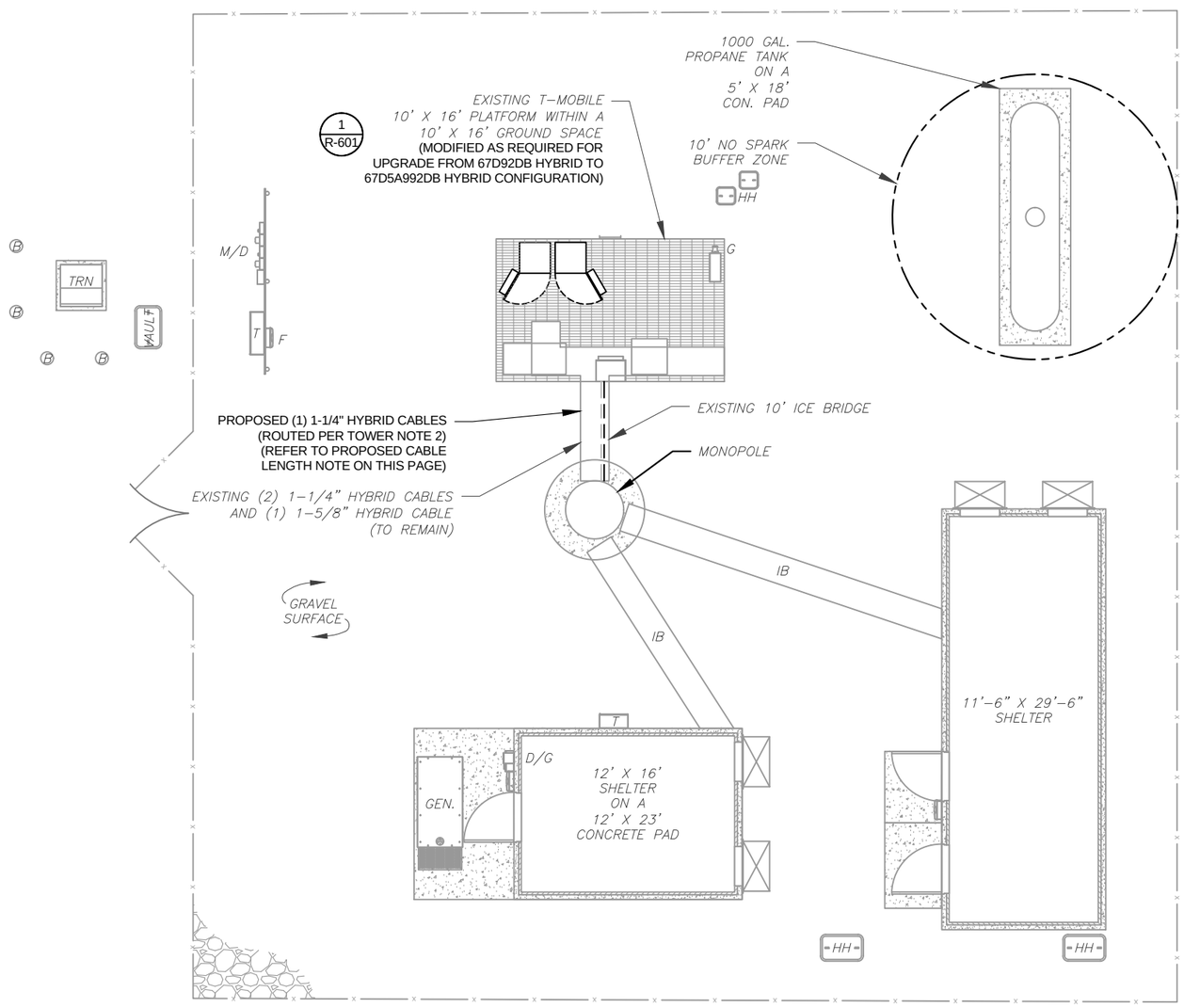
SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
x x	CHAINLINK FENCE



1 DETAILED SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **150'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	07/16/20
1	EDIT CABINET LAYOUT	CWB	08/11/20

ATC SITE NUMBER:
283418
ATC SITE NAME:
NORTH HAVEN CT
T-MOBILE SITE NAME:
FLORIDA PARTNERS NORTH HAVEN MONOPOLE
SITE ADDRESS:
50 DEVINE STREET
NORTH HAVEN, CT 06473

SEAL:

T-Mobile

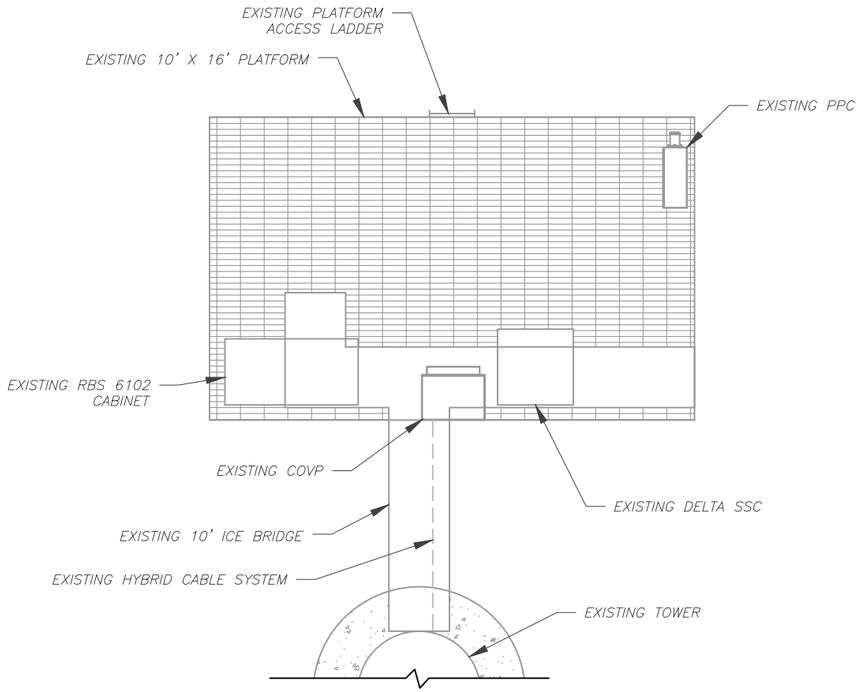
DATE DRAWN:	07/16/20
ATC JOB NO:	13251803_D1
CUSTOMER ID:	FLORIDA PARTNERS NORTH HAVEN MONOPOLE
CUSTOMER #:	CTNH522A

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	1

SITE PLAN NOTES:

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
4. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.

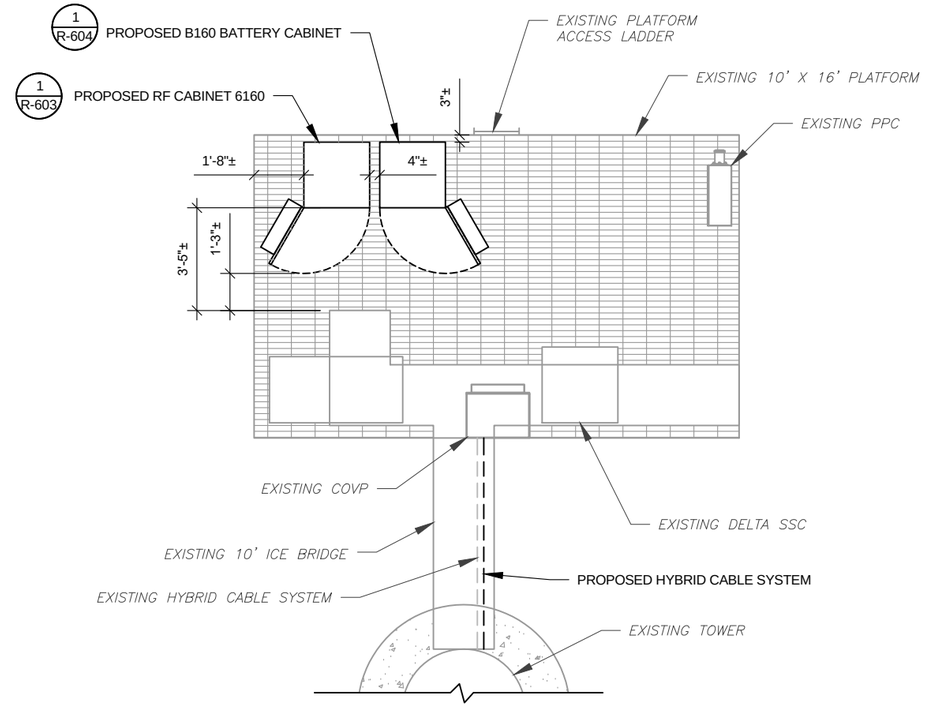


1 EXISTING GROUND EQUIPMENT LAYOUT

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



2 PROPOSED GROUND EQUIPMENT LAYOUT

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

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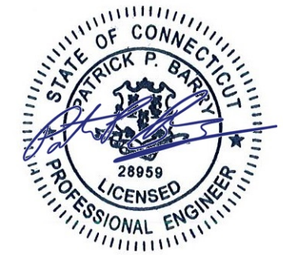
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	07/16/20
1	EDIT CABINET LAYOUT	CWB	08/11/20
2	ADDED CLEARANCES	CWB	08/13/20

ATC SITE NUMBER:
283418
ATC SITE NAME:
NORTH HAVEN CT
T-MOBILE SITE NAME:
FLORIDA PARTNERS NORTH HAVEN MONOPOLE
SITE ADDRESS:
50 DEVINE STREET
NORTH HAVEN, CT 06473

SEAL:



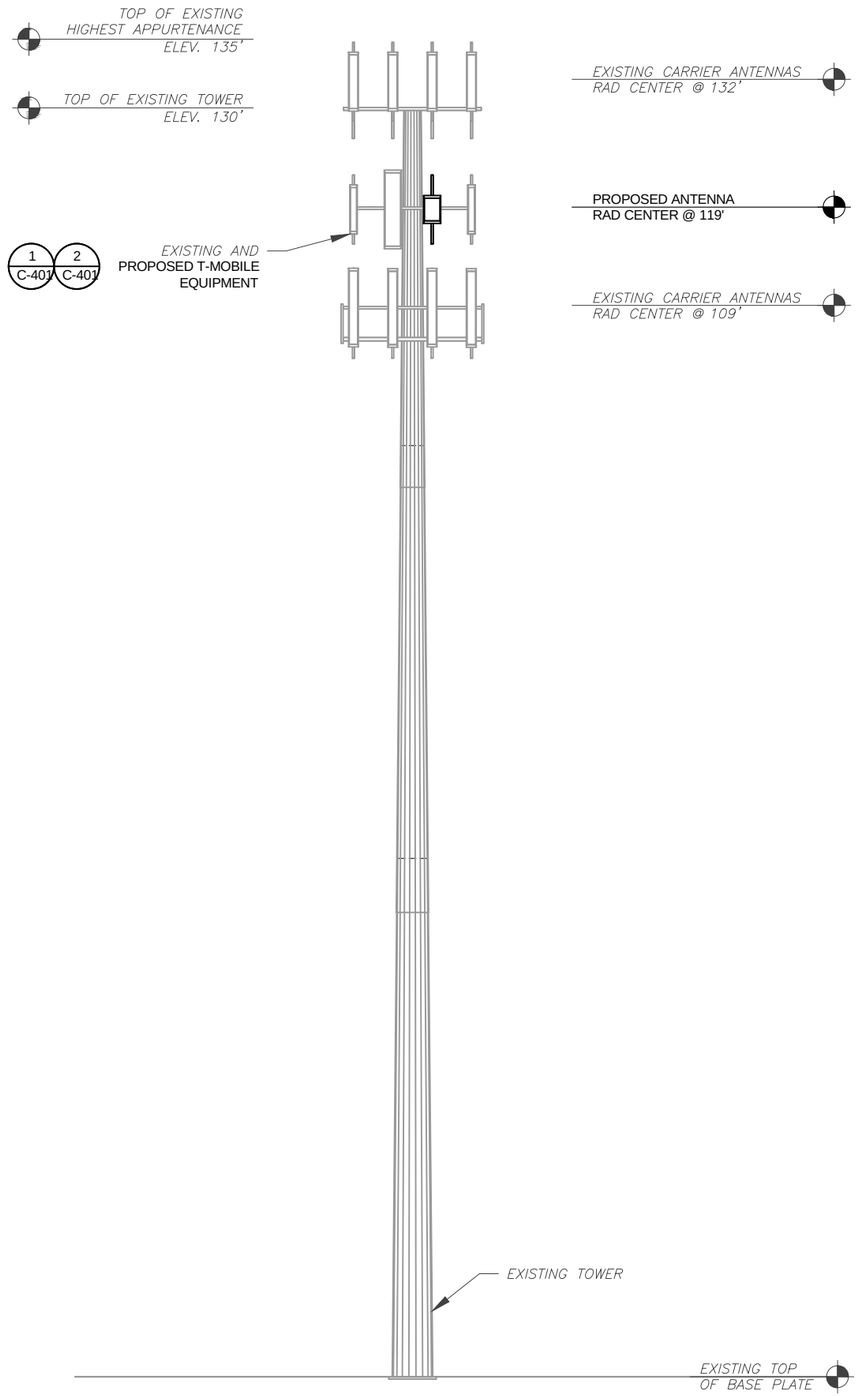
T-Mobile

DATE DRAWN:	07/16/20
ATC JOB NO:	13251803_D1
CUSTOMER ID:	FLORIDA PARTNERS NORTH HAVEN MONOPOLE
CUSTOMER #:	CTNH522A

DETAILED GROUND PLAN

SHEET NUMBER:	REVISION:
C-102	2

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 06/25/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
3. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	07/16/20

ATC SITE NUMBER:
283418
ATC SITE NAME:
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T-MOBILE SITE NAME:
FLORIDA PARTNERS NORTH HAVEN MONOPOLE
SITE ADDRESS:
50 DEVINE STREET
NORTH HAVEN, CT 06473

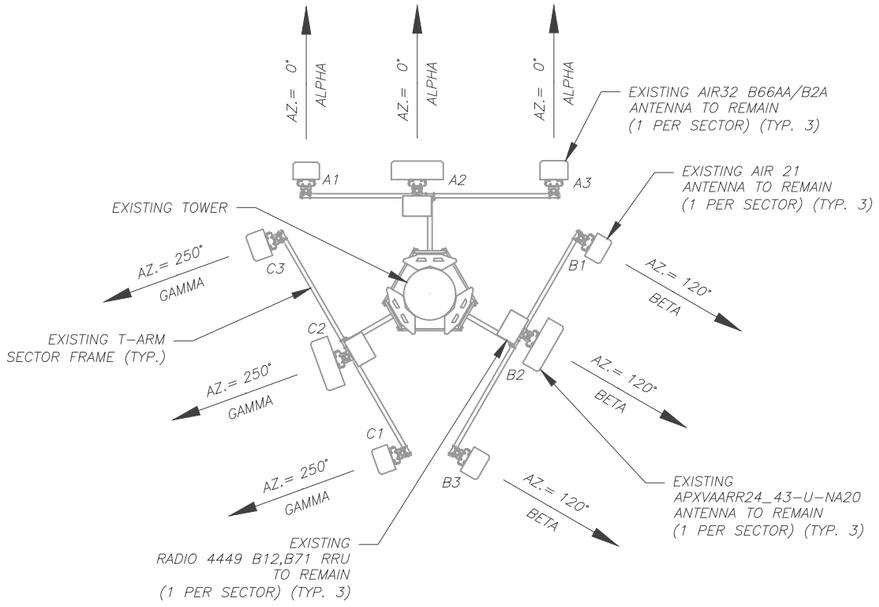
SEAL:

T-Mobile

DATE DRAWN:	07/16/20
ATC JOB NO:	13251803_D1
CUSTOMER ID:	FLORIDA PARTNERS NORTH HAVEN MONOPOLE
CUSTOMER #:	CTNH522A

TOWER ELEVATION

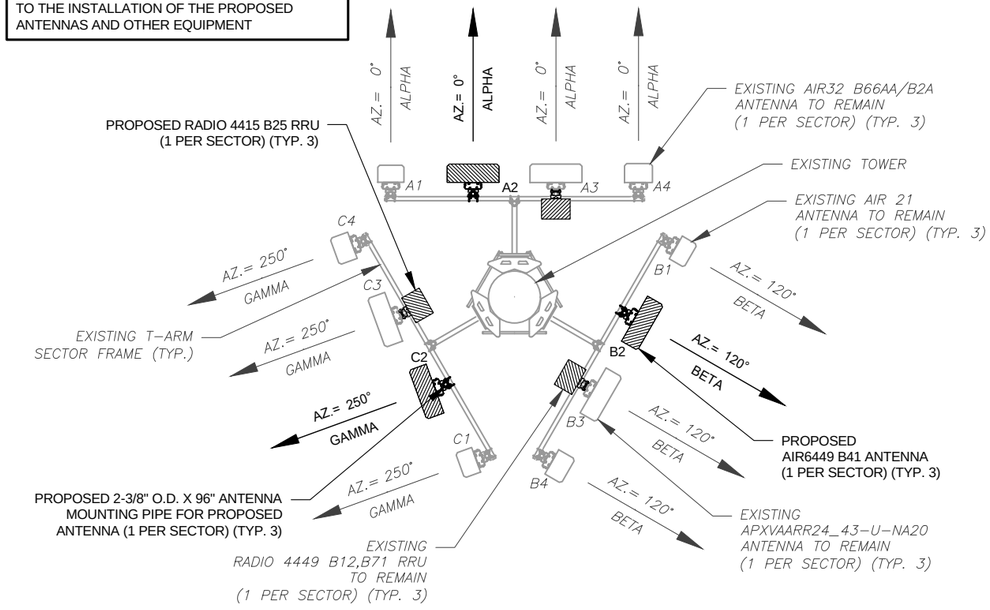
SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 06/25/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	119'	0°	A1	AIR 21, 1.3 M, B2A B4P	U1900	0°/2°	RMN	–	–
			A2	APXVAARR24_43-U-NA 20	L700/L600/N600	0°/2°	RMN	RADIO 4449 B71 B85A	RMN
			A3	AIR-32 B2A/B66AA	L2100/L1900	0°/2°	RMN	–	–
BETA	119'	120°	B1	AIR 21, 1.3 M, B2A B4P	U1900	0°/2°	RMN	–	–
			B2	APXVAARR24_43-U-NA 20	L700/L600/N600	0°/2°	RMN	RADIO 4449 B71 B85A	RMN
			B3	AIR-32 B2A/B66AA	L2100/L1900	0°/2°	RMN	–	–
GAMMA	119'	250°	C1	AIR 21, 1.3 M, B2A B4P	U1900	0°/2°	RMN	–	–
			C2	APXVAARR24_43-U-NA 20	L700/L600/N600	0°/2°	RMN	RADIO 4449 B71 B85A	RMN
			C3	AIR-32 B2A/B66AA	L2100/L1900	0°/2°	RMN	–	–

NOTES

1. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	119'	0°	A1	AIR 21	U1900	0°/2°	RMN	-	-
			A2	AIR6449 B41	L2500/N2500	0°	ADD	-	-
			A3	APXVAARR24_43-U-NA 20	L700/L600/N600/ L1900	0°/2°	RMN	RADIO 4449 B71 B85A	RMN
								RADIO 4415 B25	ADD
			A4	AIR32 B66AA/B2A	L2100/L1900	0°/2°	RMN	-	-
BETA	119'	120°	B1	AIR 21	U1900	0°/2°	RMN	-	-
			B2	AIR6449 B41	L2500/N2500	0°	ADD	-	-
			B3	APXVAARR24_43-U-NA 20	L700/L600/N600/ L1900	0°/2°	RMN	RADIO 4449 B71 B85A	RMN
								RADIO 4415 B25	ADD
			B4	AIR32 B66AA/B2A	L2100/L1900	0°/2°	RMN	-	-
GAMMA	119'	250°	C1	AIR 21	U1900	0°/2°	RMN	-	-
			C2	AIR6449 B41	L2500/N2500	0°	ADD	-	-
			C3	APXVAARR24_43-U-NA 20	L700/L600/N600/ L1900	0°/2°	RMN	RADIO 4449 B71 B85A	RMN
								RADIO 4415 B25	ADD
			C4	AIR32 B66AA/B2A	L2100/L1900	0°/2°	RMN	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	–	(3) 1-1/4"	RMN

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 1-1/4"	RMN
-	-	-	1-1/4"	ADD

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
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COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	07/16/20

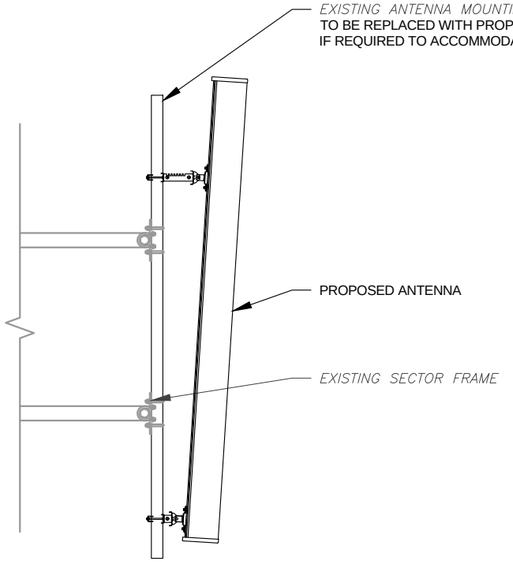
ATC SITE NUMBER:
283418
ATC SITE NAME:
NORTH HAVEN CT
T-MOBILE SITE NAME:
FLORIDA PARTNERS NORTH HAVEN MONOPOLE
SITE ADDRESS:
50 DEVINE STREET
NORTH HAVEN, CT 06473

SEAL:

DATE DRAWN:	07/16/20
ATC JOB NO:	13251803_D1
CUSTOMER ID:	FLORIDA PARTNERS NORTH HAVEN MONOPOLE
CUSTOMER #:	CTNH522A

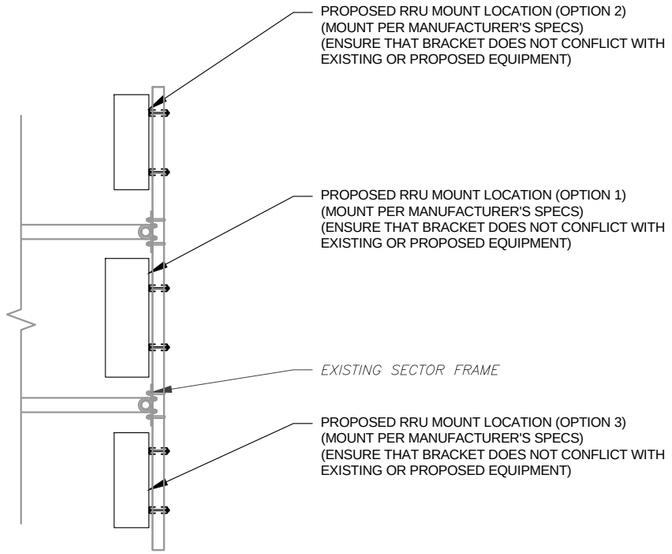
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0



1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	07/16/20

ATC SITE NUMBER:
283418
ATC SITE NAME:
NORTH HAVEN CT
T-MOBILE SITE NAME:
FLORIDA PARTNERS NORTH HAVEN MONOPOLE
SITE ADDRESS:
50 DEVINE STREET
NORTH HAVEN, CT 06473

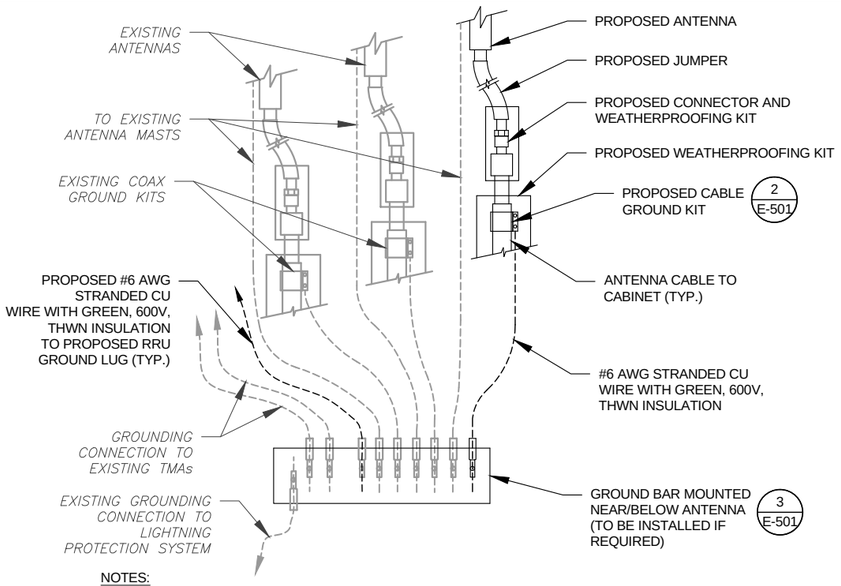
SEAL:

T-Mobile

DATE DRAWN:	07/16/20
ATC JOB NO:	13251803_D1
CUSTOMER ID:	FLORIDA PARTNERS NORTH HAVEN MONOPOLE
CUSTOMER #:	CTNH522A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

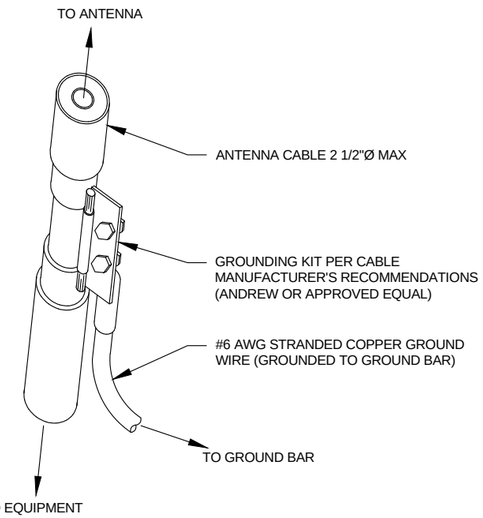


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

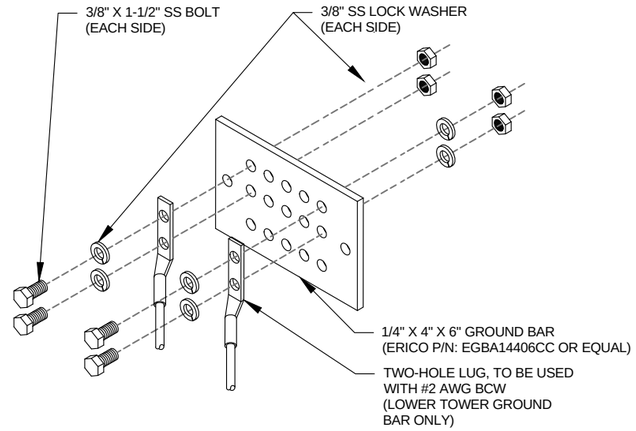


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

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CUSTOMER #:	CTNH522A

GROUNDING DETAILS

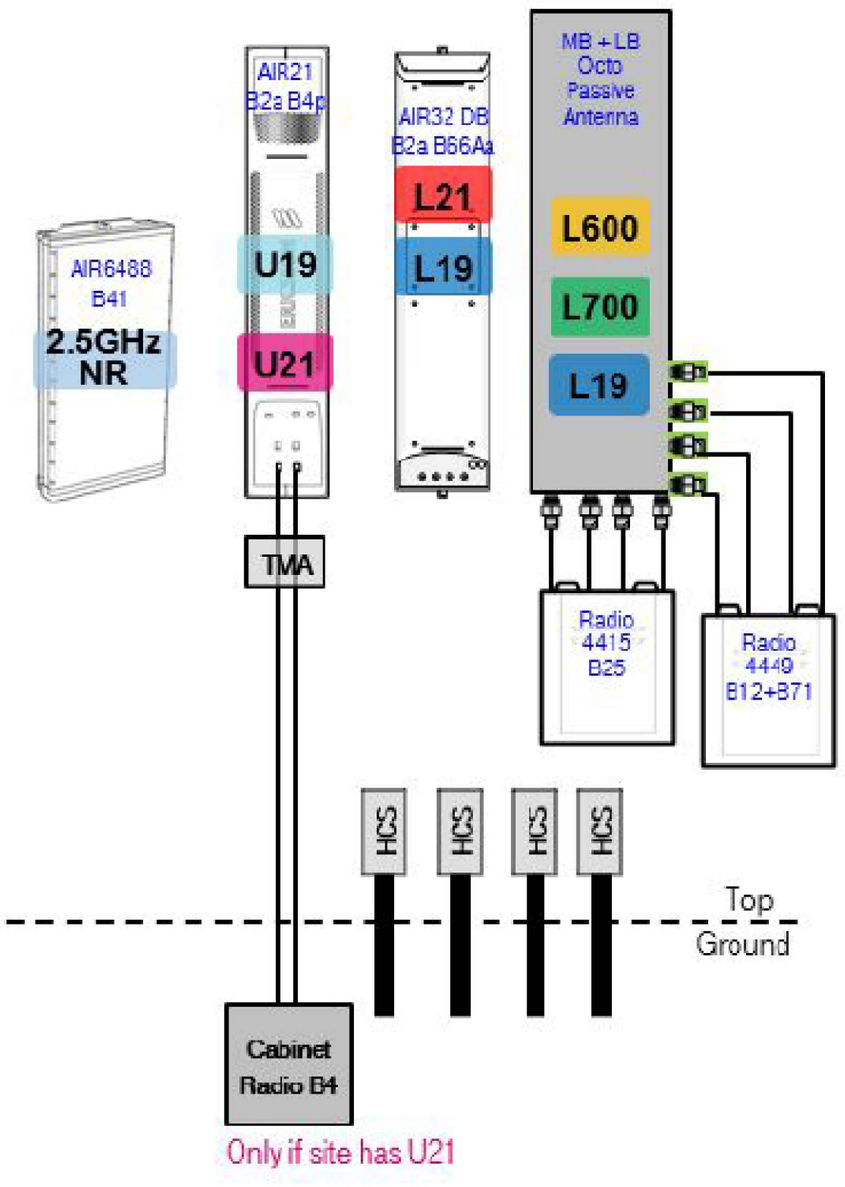
SHEET NUMBER:	REVISION:
E-501	0

Existing RAN Equipment		
Template: 67D82DB Hybrid		
Enclosure	1	2
Enclosure Type	RBS 6102 MU AC	Ancillary Equipment (Ericsson)
Baseband	DUW30 U1900; BB 6630 L700 L600 L2100 L1900; BB 6630 N600	
Hybrid Cable System		Ericsson 6x12 HCS 6AWG 50m (x 2); Ericsson 6x12 HCS "Select AWG & Length"

Proposed RAN Equipment				
Template: 67D5A992DB Hybrid				
Enclosure	1	2	3	4
Enclosure Type	RBS 6102 MU AC	Ancillary Equipment (Ericsson)	Enclosure 6160	B160
Baseband	DUW30 U1900; BB 6630 L2100 L1900 L700 L600; BB 6630 N600		BB 6630 (x 3) L2500; BB 6648 N2500	
Hybrid Cable System		Ericsson 6x12 HCS 6AWG 50m (x 2); Ericsson 6x12 HCS "Select AWG & Length"	Ericsson 6x12 HCS "Select AWG & Length"	

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

67D5992DB_3xAIR+1OP.JPG



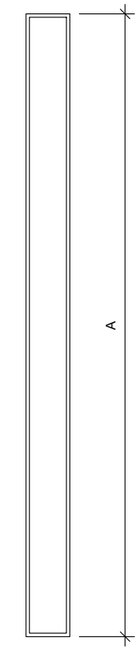
2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

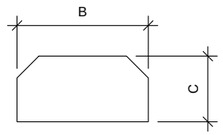
SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0



FRONT VIEW

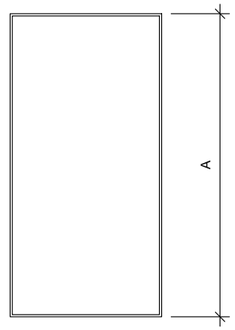


TOP VIEW

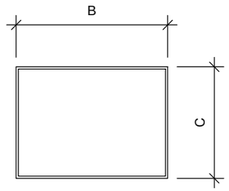
1 ANTENNA SPECIFICATIONS

FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
AIR6449 B41	20.6"	8.6"	33.1"	104.0



FRONT VIEW



TOP VIEW

2 RRU SPECIFICATIONS

FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RRUS 4415 B25	15.0"	13.2"	5.4"	46.0

SUPPLEMENTAL

SHEET NUMBER: **R-602**

REVISION: 0

Enclosure 6160 AC

The Enclosure 6160 is a multi-purpose site cabinet designed to support a multitude of equipment such as ERS Baseband, Transport, Li-Ion battery and 3PP vendor equipment. It also provides a highly capable power system and battery back-up - all in a streamlined design and minimized footprint to support cost efficient expansion of mobile broadband.

Being an all-in-one enclosure, the Enclosure 6160 is a very fitting choice for all types of sites where the capacity need is large or room for future expansion is needed. It is ideally used for modernizing existing sites or in greenfield scenarios to match both current and future needs.

With a robust design, IP65 compliance and a sealed Heat Exchanger (HEX) climate system the Enclosure 6160 ensures optimal environmental protection of the active equipment - enabling them for a long-lasting service. The complete system is also integrated and verified for the entire Ericsson Radio System and ensures best-in-class service.

The power system offers 31,5kW of power in total and provides 24kW of -48V DC power for both internal and external consumers.

The equipment space allows 19U of rack space ensuring well enough capacity for existing need and future expansion.

One of the main advantages of the Enclosure 6160 is its default integration with ENM - allowing for advanced remote monitoring and control such a fault management (alarms), inventory management and performance measurements. The cabinet also provides an open O&M interface for integration to 3PP O&M systems.

Preliminary technical specification for Enclosure 6160 AC

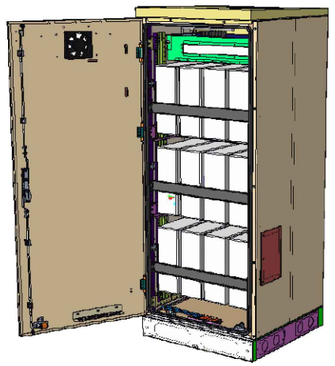
CAPACITY	
Rack space user equipment	19U (19" rack)
Hardware capabilities	Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option
MECHANICAL SPECIFICATION	
Weight	145 kg (excluding active equipment) 320 lbs (excluding active equipment)
Dimension (H x W x D)	1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame)
Base frame height	150 mm 6 in.
Mounting position	Ground
Enclosure material	Aluminum
Color	Power paint NCS 2002-B
Door	Front access
Rack type	19" (IEC 60297-3-100)
Locking type	Pad lock or Cylinder
POWER SYSTEM	
Input voltage	3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC
Input power	<33kW
Output load (-48VDC)	24kW
Total capacity (-48VDC)	31.5kW
AC SPD	Class 2/Type 2
DC SPD	Class 2/Type 2
PSU Slots	9x
Service outlet	Optional
Priority load	8x Circuit Breaker
LLVD 1	6x Circuit Breaker
LLVD 2	6x Circuit Breaker
CB ratings	3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A
Battery Interface	2x Circuit Breaker
Battery Circuit Breaker rating	125A 2pol (200A)
PSU capacity	3500W

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

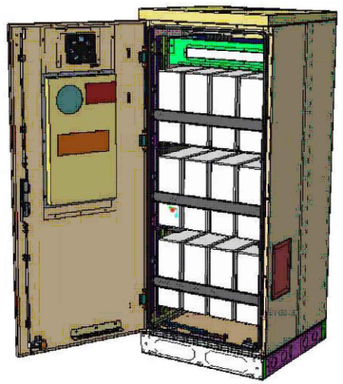
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	0

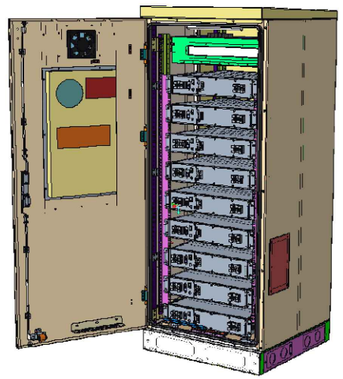
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

Enclosure B160

Capacity
- VRLA 12V: 100Ah / 150Ah / 170Ah / 190Ah / 210Ah
- Li-Ion: 24U 19" / 23"
- Sodium-Nickel: 3x FIAMM

Electrical specification
- DC Output: -48VDC/200A
- Battery breakers: 2x 125/2p
- Alarms: Door open, Climate failure, MCB Connection

Mechanical specification
- Weight: 134kg
- Dimensions: 63 x 26 x 26 in. (incl. Base frame)
- Base frame height: 6 in.
- Material: Galvanized steel (180g/m^2)
- Color: Powder paint NCS 2002-B
- Door: Front access
- Locking type: Pad lock / cylinder

Environmental specification
- Ingress protection: VRLA/Sodium IP44
  Li-Ion IP55
- Relative humidity: 15-100%

Climate system
- Air Conditioner
  - Fan type: DC
  - Cooling capacity: 500W @L35/L35
- Convection cooling
  - Emergency fan

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-604

REVISION: 0

AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**NORTH HAVEN CT, CT**
ATC Site Number	:	**283418**
Engineering Number	:	**13251803_C8_01**
Mount Elevation	:	**118 ft**
Carrier	:	**Metro Pcs Inc**
Carrier Site Name	:	**Florida Partners North Haven Monopole**
Carrier Site Number	:	**CTNH522A**
Site Location	:	**50 Devine Street** **North Haven, CT 06473-2204** **41.377778, -72.8761583**
County	:	**New Haven**
Date	:	**June 25, 2020**
Max Usage	:	**79%**
Result	:	**Contingent Pass**

Prepared By:
Michael Ellis
Structural Engineer

Reviewed By:

STATE OF CONNECTICUT · ESHA KAUSHAL MODI · 32593 · LICENSED PROFESSIONAL ENGINEER

Authorized by "EOR"
26 Jun 2020 05:36:12 cosign

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Metro Pcs Inc at 118 ft.

Supporting Documents

Radio Frequency Data Sheet	RFDS ID #CTNH522A, dated May 20, 2020
Reference Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	120 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.203, S1 = 0.054
Site Class:	D - Stiff Soil
Live Loads: *	Lm = 500 lbs

*** Based on experience it has been determined that the maintenance load cases do not control over rigging load cases in platform mount analyses. Therefore, these load cases have been excluded from this analysis.**

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Mount pipes B, F and J will need to be added to support new equipment.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

1 MOUNT ANALYSIS
SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	0

Exhibit D

Structural Analysis Report

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**129 ft Monopole**
ATC Site Name	:	**NORTH HAVEN CT, CT**
ATC Asset Number	:	**283418**
Engineering Number	:	**13251803_C3_05**
Proposed Carrier	:	**METRO PCS INC**
Carrier Site Name	:	**Florida Partners North Haven Monopole**
Carrier Site Number	:	**CTNH522A**
Site Location	:	**50 Devine Street** **North Haven, CT 06473-2204** **41.377800,-72.876200**
County	:	**New Haven**
Date	:	**July 9, 2020**
Max Usage	:	**53%**
Result	:	**Pass**

Prepared By:
Purity Mbugua
Engineer Intern

Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 129 ft monopole to reflect the change in loading by METRO PCS INC.

Supporting Documents

Tower Drawings	Sabre, FTP Job #11-05062, dated May 12, 2010
Foundation Drawing	Sabre, FTP Job #11-05062, dated May 12, 2010
Geotechnical Report	Terracon Project #J2105136, dated April 20, 2010
Mount Analysis	ATC Engineering #13251803_C8_01, dated June 25, 2020

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	120 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.20, S_1 = 0.05
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
130.0	3	Amphenol Antel BXA-171063-12CF	Low Profile Platform	(8) 1 5/8" Coax (4) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Alcatel-Lucent RRH2x60 700			
	3	Nokia B5 RRH4x40-850			
	3	Alcatel-Lucent PCS B25 RRH2x60/4x30			
	3	Alcatel-Lucent B66A RRH 4x45			
	6	Commscope JAHH-65B-R3B			
	3	Amphenol Antel BXA-80080-6CF-EDIN-X			
	2	RFS DB-T1-6Z-8AB-0Z			
119.0	3	RFS APXVAARR24_43-U-NA20	T-Arm	(2) 1 1/4" (1.25"-31.8mm) Fiber (1) 1 5/8" Hybriflex	METRO PCS INC
	3	Ericsson AIR-32 B2A/B66Aa			
107.0	3	Kathrein Scala 80010966	Platform with Handrails	(3) 0.39" (10mm) Fiber Trunk (8) 0.78" (19.7mm) 8 AWG 6 (7) 2" conduit (3) 3/8" (0.38"-9.5mm) RET Control Cable	AT&T MOBILITY
	3	Ericsson RRUS 32 (50.8 lbs)			
	6	Ericsson RRUS 32 B2			
	9	CCI CCI-HPA-65R-BUU-H8			
	6	Ericsson RRUS 32 B2			
	3	Ericsson RRUS 32 (50.8 lbs)			
	3	Ericsson RRUS-11 (50 lbs.)			
	6	Ericsson RRUS A2 B2			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 8843 B2, B66A			
	3	Ericsson RRUS-11 (50 lbs.)			
	1	Raycap DC6-48-60-0-8C-EV			
	3	Raycap DC6-48-60-18-8F			

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
119.0	3	Ericsson Radio 4449 B12,B71	-	(11) 1 5/8" Coax	METRO PCS INC
117.0	3	Ericsson AIR 21, 1.3 M, B2A B4P			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
119.0	3	Ericsson Radio 4449 B71 B85A	T-Arm	(1) 1 1/4" (1.25"-31.8mm) Fiber	METRO PCS INC
	3	Ericsson RRUS 4415 B25			
	3	Ericsson Air6449 B41			
	3	Ericsson AIR 21, 1.3 M, B2A B4P			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	39%	Pass
Shaft	45%	Pass
Base Plate	29%	Pass
Flange	11%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2,149.4	46%
Axial (Kips)	41.9	53%
Shear (Kips)	21.8	38%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
119.0	Ericsson Radio 4449 B71 B85A	METRO PCS INC	1.131	1.057
	Ericsson RRUS 4415 B25			
	Ericsson Air6449 B41			
	Ericsson AIR 21, 1.3 M, B2A B4P			

***Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

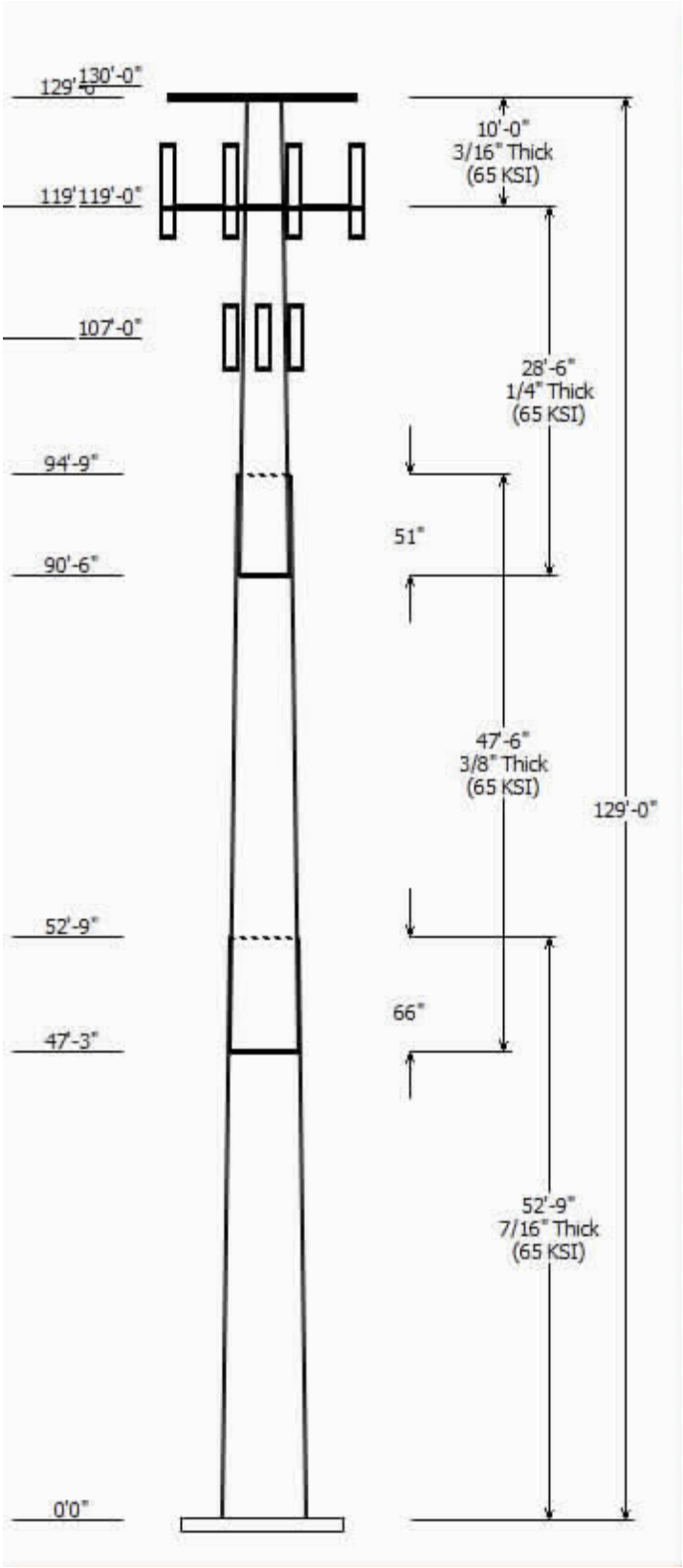
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Job Information

Client :	METRO PCS INC		
Pole :	283418	Code:	ANSI/TIA-222-H
Location :	NORTH HAVEN CT, CT		
Description :	129' monopole	Risk Category :	II
Shape :	18 Sides	Exposure :	B
Height :	129.00 (ft)	Topo Method :	Method 1
Base Elev (ft):	0.00	Topographic Category :	1
Taper:	0.225969 (in/ft)		

Sections Properties

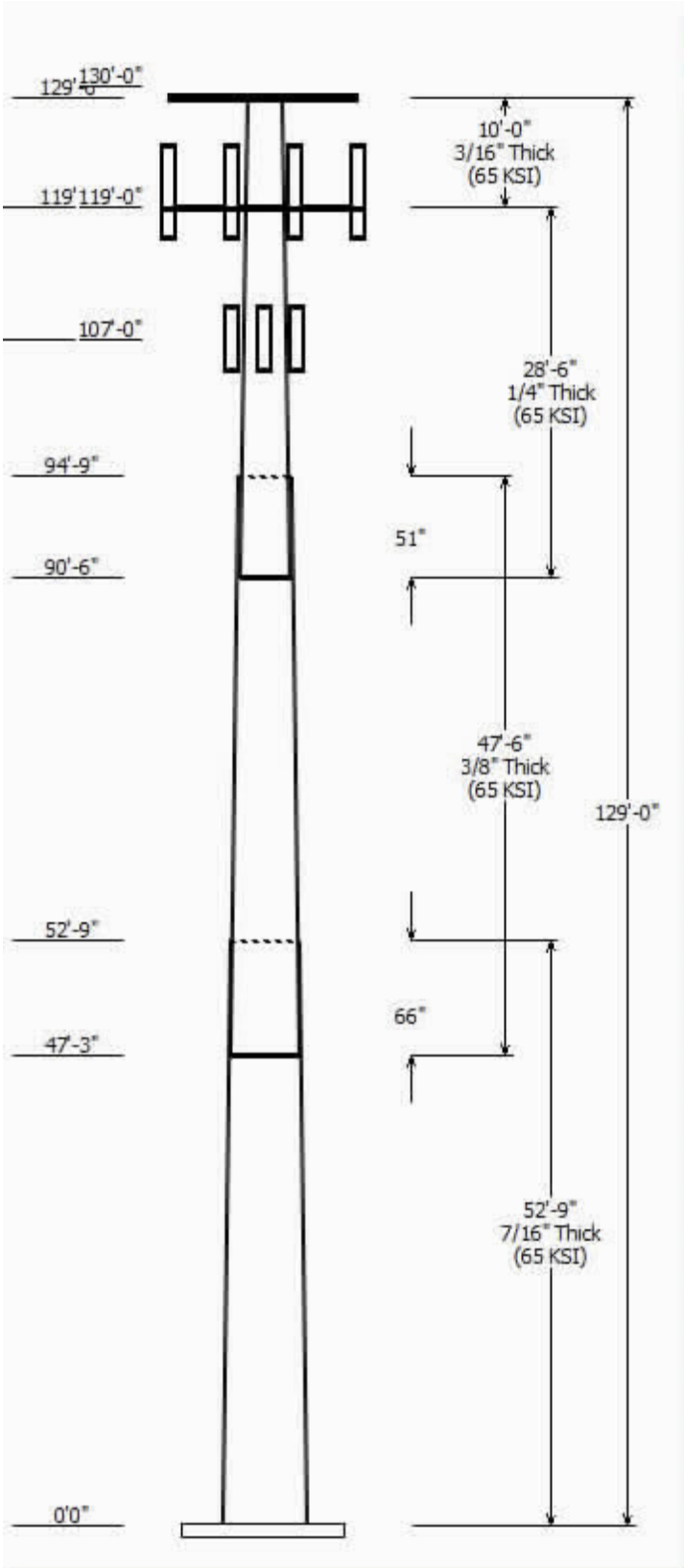
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	52.750	36.88	48.80	0.438		0.000	18 Sides	65
2	47.500	28.13	38.87	0.375	Slip Joint	66.000	18 Sides	65
3	28.500	23.16	29.60	0.250	Slip Joint	51.000	18 Sides	65
4	10.000	20.90	23.16	0.188	Butt Joint	0.000	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
130.000	132.000	6	Commscope JAHH-65B-R3B
130.000	132.000	3	Amphenol Antel BXA-80080-
130.000	132.000	2	RFS DB-T1-6Z-8AB-0Z
130.000	132.000	3	Amphenol Antel BXA-171063-
130.000	132.000	3	Alcatel-Lucent B66A RRH 4x45
130.000	132.000	3	Alcatel-Lucent PCS B25
130.000	132.000	3	Alcatel-Lucent RRH2x60 700
130.000	132.000	3	Nokia B5 RRH4x40-850
129.000	129.000	1	Round Low Profile Platform
119.000	119.000	3	Round T-Arm
119.000	123.000	3	RFS APXVAARR24_43-U-NA20
119.000	119.000	3	Ericsson AIR-32 B2A/B66Aa
119.000	119.000	3	Ericsson AIR 21, 1.3 M, B2A B4
119.000	119.000	3	Ericsson Air6449 B41
119.000	119.000	3	Ericsson RRUS 4415 B25
119.000	119.000	3	Ericsson Radio 4449 B71 B85A
107.000	107.000	1	Round Platform w/ Handrails
107.000	107.000	3	Ericsson RRUS-11 (50 lbs.)
107.000	107.000	6	Ericsson RRUS 32 B2
107.000	107.000	3	Ericsson RRUS 32 (50.8 lbs)
107.000	107.000	3	Kathrein Scala 80010966
107.000	107.000	9	CCI CCI-HPA-65R-BUU-H8
107.000	107.000	6	Ericsson RRUS 32 B2
107.000	107.000	3	Ericsson RRUS 32 (50.8 lbs)
107.000	107.000	3	Ericsson RRUS-11 (50 lbs.)
107.000	107.000	6	Ericsson RRUS A2 B2
107.000	107.000	3	Ericsson RRUS 4449 B5, B12
107.000	107.000	3	Ericsson RRUS 4478 B14
107.000	107.000	3	Ericsson RRUS 8843 B2, B66A
107.000	107.000	3	Raycap DC6-48-60-18-8F
107.000	107.000	1	Raycap DC6-48-60-0-8C-EV

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	107.0	0.39" (10mm)	No
0.000	107.0	0.78" (19.7mm) 8	No
0.000	107.0	2" conduit	No
0.000	107.0	2" conduit	No
0.000	107.0	3/8" (0.38"-	No
0.000	119.0	1 1/4" (1.25"-	No



0.000	119.0	1 1/4" (1.25"-	No
0.000	119.0	1 5/8" Hybriflex	No
0.000	130.0	1 5/8" Coax	No
0.000	130.0	1 5/8" Hybriflex	No

Load Cases

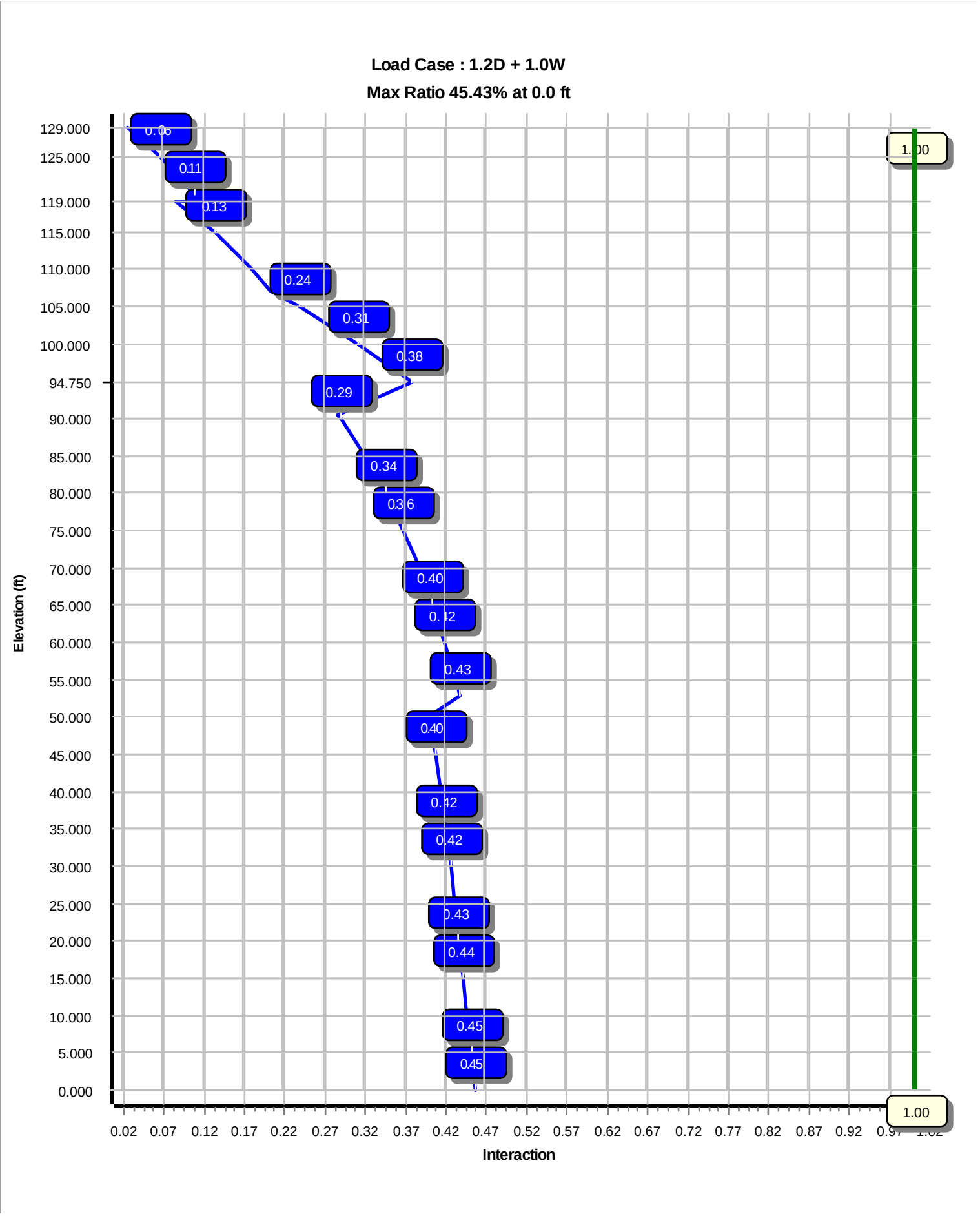
1.2D + 1.0W	120 mph with No Ice
0.9D + 1.0W	120 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	2149.36	21.78	41.93
0.9D + 1.0W	2128.25	21.76	31.44
1.2D + 1.0Di + 1.0Wi	535.67	5.56	55.04
1.2D + 1.0Ev + 1.0Eh	110.38	1.05	41.75
0.9D - 1.0Ev + 1.0Eh	109.07	1.05	28.81
1.0D + 1.0W	477.82	4.87	34.97

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000


Load Case : 1.2D + 1.0W
Max Ratio 45.43% at 0.0 ft
Elevation (ft)
129.000
125.000
119.000
115.000
110.000
105.000
100.000
94.750
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.06
0.11
0.13
0.24
0.31
0.38
0.29
0.34
0.36
0.40
0.42
0.43
0.40
0.42
0.42
0.43
0.44
0.45
0.45
1.00
1.00
0.02 0.07 0.12 0.17 0.22 0.27 0.32 0.37 0.42 0.47 0.52 0.57 0.62 0.67 0.72 0.77 0.82 0.87 0.92
Interaction

Site Number: 283418 | Code: ANSI/TIA-222-H |

Site Name: NORTH HAVEN CT, CT | Engineering Number:13251803_C3_05 | 7/10/2020 12:03:11 PM

Customer: METRO PCS INC

Analysis Parameters

Location :	New Haven County, CT	Height (ft) :	129
Code :	ANSI/TIA-222-H	Base Diameter (in) :	48.80
Shape :	18 Sides	Top Diameter (in) :	20.90
Pole Type :	Taper	Taper (in/ft) :	0.226
Pole Manfacturer :		Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	1.00

Ice & Wind Parameters

Exposure Category:	B	Design Wind Speed Without Ice:	120 mph
Risk Category:	II	Design Wind Speed With Ice:	50 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.00 in
Crest Height:	0 ft	HMSL:	29.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	2.00				
T_L (sec):	6	p:	1	C_s:	0.030
S_s:	0.200	S_1:	0.050	C_s Max:	0.030
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.213	S_{d1}:	0.080		

Load Cases

1.2D + 1.0W	120 mph with No Ice
0.9D + 1.0W	120 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Site Number: 283418 | Code: ANSI/TIA-222-H |

Site Name: NORTH HAVEN CT, CT | Engineering Number:13251803_C3_05 | 7/10/2020 12:03:11 PM

Customer: METRO PCS INC

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	52.750	0.4375	65		0.00	10,569	48.80	0.00	67.15	19844.9	17.90	111.54	36.88	52.75	50.60	8490.9	13.10	84.30	0.225969
2-18	47.500	0.3750	65	Slip	66.00	6,374	38.87	47.25	45.82	8580.0	16.52	103.66	28.13	94.75	33.05	3218.4	11.47	75.04	0.225969
3-18	28.500	0.2500	65	Slip	51.00	2,011	29.60	90.50	23.29	2534.5	19.11	118.40	23.16	119.00	18.18	1205.4	14.57	92.64	0.225969
4-18	10.000	0.1875	65	Butt	0.00	442	23.16	119.00	13.67	911.5	20.02	123.52	20.90	129.00	12.33	668.1	17.89	111.47	0.225969
				Shaft Weight		19,395													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
130.00	Nokia B5 RRH4x40-850	3	0.80	2.000	48.50	1.322	0.50	75.60	1.822	0.50
130.00	Alcatel-Lucent RRH2x60 700	3	0.80	2.000	56.70	2.150	0.67	101.42	2.808	0.67
130.00	Alcatel-Lucent PCS B25	3	0.80	2.000	55.00	2.200	0.67	101.82	2.868	0.67
130.00	Alcatel-Lucent B66A RRH 4x45	3	0.80	2.000	67.00	2.580	0.67	113.74	3.322	0.67
130.00	Amphenol Antel BXA-171063-	3	0.80	2.000	12.80	4.790	0.72	75.71	6.340	0.72
130.00	RFS DB-T1-6Z-8AB-0Z	2	0.80	2.000	44.00	4.800	0.72	126.69	5.734	0.72
130.00	Amphenol Antel BXA-80080-6CF-	3	0.80	2.000	18.00	5.760	0.73	101.06	7.315	0.73
130.00	Commscope JAHH-65B-R3B	6	0.80	2.000	60.60	9.113	0.69	193.52	10.936	0.69
129.00	Round Low Profile Platform	1	1.00	0.000	1,500.00	21.700	1.00	1,925.67	34.314	1.00
119.00	Ericsson Radio 4449 B71 B85A	3	0.80	0.000	75.00	1.650	0.50	114.19	2.204	0.50
119.00	Ericsson RRUS 4415 B25	3	0.80	0.000	46.00	1.650	0.50	74.21	2.204	0.50
119.00	Ericsson Air6449 B41	3	0.80	0.000	104.00	5.682	0.63	192.81	6.716	0.63
119.00	Ericsson AIR 21, 1.3 M, B2A B4P	3	0.80	0.000	83.00	6.049	0.71	178.10	7.458	0.71
119.00	Ericsson AIR-32 B2A/B66Aa	3	0.80	0.000	132.20	6.510	0.71	236.21	7.937	0.71
119.00	Round T-Arm	3	0.75	0.000	250.00	9.700	0.67	386.19	15.072	0.67
119.00	RFS APXVAARR24_43-U-NA20	3	0.80	4.000	127.90	20.243	0.63	383.72	22.660	0.63
107.00	Raycap DC6-48-60-0-8C-EV	1	0.75	0.000	16.00	1.020	1.00	45.22	1.385	1.00
107.00	Raycap DC6-48-60-18-8F	3	0.75	0.000	20.00	1.260	1.00	53.97	1.685	1.00
107.00	Ericsson RRUS 8843 B2, B66A	3	0.75	0.000	72.00	1.639	0.50	111.55	2.184	0.50
107.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.90	1.842	0.50	95.58	2.421	0.50
107.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	112.59	2.571	0.50
107.00	Ericsson RRUS A2 B2	6	0.75	0.000	22.00	2.064	0.67	50.45	2.673	0.67
107.00	Ericsson RRUS-11 (50 lbs.)	3	0.75	0.000	50.00	2.566	0.67	93.98	3.242	0.67
107.00	Ericsson RRUS-11 (50 lbs.)	3	0.75	0.000	50.00	2.570	0.67	93.98	3.247	0.67
107.00	Ericsson RRUS 32 (50.8 lbs)	3	0.75	0.000	50.80	2.690	0.67	96.95	3.435	0.67
107.00	Ericsson RRUS 32 (50.8 lbs)	3	0.75	0.000	50.80	2.692	0.67	96.95	3.437	0.67
107.00	Ericsson RRUS 32 B2	6	0.75	0.000	53.00	2.740	0.67	100.46	3.494	0.67
107.00	Ericsson RRUS 32 B2	6	0.75	0.000	53.00	2.743	0.67	100.46	3.498	0.67
107.00	CCI CCI-HPA-65R-BUU-H8	9	0.75	0.000	68.00	12.976	0.67	233.79	15.286	0.67
107.00	Kathrein Scala 80010966	3	0.75	0.000	114.60	17.363	0.63	321.79	19.743	0.63
107.00	Round Platform w/ Handrails and	1	1.00	0.000	2,000.00	28.000	1.00	2,836.09	44.236	1.00
Totals	Num Loadings :31	104			10,193.20			19,470.19		

Linear Appurtenance Properties

Load Case Azimuth (deg) : 0

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	130.00	8	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	130.00	4	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	119.00	2	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	METRO PCS INC
0.00	119.00	1	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	METRO PCS INC
0.00	119.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	METRO PCS INC

0.00	107.00	3	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	107.00	8	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	107.00	6	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	107.00	1	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	107.00	3	3/8" (0.38"- 9.5mm)	0.38	0.23	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.4375	48.800	67.155	19,844.9	17.90	111.54	80.3	801.0	0.0	0.0
5.00		0.4375	47.670	65.586	18,486.3	17.45	108.96	80.9	763.8	0.0	1,129.2
10.00		0.4375	46.540	64.017	17,191.1	16.99	106.38	81.4	727.5	0.0	1,102.5
15.00		0.4375	45.410	62.448	15,957.9	16.54	103.80	81.9	692.2	0.0	1,075.8
20.00		0.4375	44.281	60.879	14,785.2	16.08	101.21	82.5	657.6	0.0	1,049.1
25.00		0.4375	43.151	59.311	13,671.3	15.63	98.63	82.6	624.0	0.0	1,022.5
30.00		0.4375	42.021	57.742	12,614.9	15.17	96.05	82.6	591.3	0.0	995.8
35.00		0.4375	40.891	56.173	11,614.3	14.72	93.47	82.6	559.4	0.0	969.1
40.00		0.4375	39.761	54.604	10,668.1	14.26	90.88	82.6	528.5	0.0	942.4
45.00		0.4375	38.631	53.035	9,774.7	13.81	88.30	82.6	498.4	0.0	915.7
47.25	Bot - Section 2	0.4375	38.123	52.329	9,389.5	13.60	87.14	82.6	485.1	0.0	403.3
50.00		0.4375	37.502	51.466	8,932.7	13.35	85.72	82.6	469.2	0.0	911.0
52.75	Top - Section 1	0.3750	37.630	44.341	7,775.6	15.93	100.35	82.6	407.0	0.0	896.0
55.00		0.3750	37.122	43.736	7,461.6	15.69	98.99	82.6	395.9	0.0	337.2
60.00		0.3750	35.992	42.391	6,794.3	15.16	95.98	82.6	371.8	0.0	732.7
65.00		0.3750	34.862	41.047	6,168.0	14.63	92.97	82.6	348.5	0.0	709.8
70.00		0.3750	33.732	39.702	5,581.4	14.10	89.95	82.6	325.9	0.0	686.9
75.00		0.3750	32.602	38.357	5,033.2	13.57	86.94	82.6	304.1	0.0	664.0
80.00		0.3750	31.472	37.012	4,522.2	13.04	83.93	82.6	283.0	0.0	641.2
85.00		0.3750	30.343	35.668	4,047.0	12.50	80.91	82.6	262.7	0.0	618.3
90.00		0.3750	29.213	34.323	3,606.3	11.97	77.90	82.6	243.1	0.0	595.4
90.50	Bot - Section 3	0.3750	29.100	34.188	3,564.1	11.92	77.60	82.6	241.2	0.0	58.3
94.75	Top - Section 2	0.2500	28.639	22.526	2,293.8	18.44	114.56	79.7	157.8	0.0	817.4
95.00		0.2500	28.583	22.481	2,280.1	18.40	114.33	79.8	157.1	0.0	19.1
100.0		0.2500	27.453	21.585	2,018.1	17.60	109.81	80.7	144.8	0.0	374.9
105.0		0.2500	26.323	20.688	1,776.9	16.80	105.29	81.6	133.0	0.0	359.6
107.0		0.2500	25.871	20.330	1,686.1	16.48	103.49	82.0	128.4	0.0	139.6
110.0		0.2500	25.193	19.792	1,555.8	16.01	100.77	82.6	121.6	0.0	204.8
115.0		0.2500	24.064	18.895	1,353.8	15.21	96.25	82.6	110.8	0.0	329.1
119.0	Top - Section 3	0.2500	23.160	18.178	1,205.4	14.57	92.64	82.6	102.5	0.0	252.3
119.0	Bot - Section 4	0.1875	23.160	13.671	911.5	20.02	123.52	77.9	77.5	0.0	
120.0		0.1875	22.934	13.536	884.9	19.80	122.31	78.1	76.0	0.0	46.3
125.0		0.1875	21.804	12.864	759.4	18.74	116.29	79.4	68.6	0.0	224.6
129.0		0.1875	20.900	12.326	668.1	17.89	111.47	80.4	63.0	0.0	171.4
											19,395.2

Load Case: 1.2D + 1.0W — 120 mph with No Ice — 22 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.20
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		200.7	0.0					0.0	0.0	200.7	0.0	0.0	0.0
5.00		396.6	1,355.1					0.0	284.1	396.6	1,639.2	0.0	0.0
10.00		387.2	1,323.0					0.0	284.1	387.2	1,607.1	0.0	0.0
15.00		377.8	1,291.0					0.0	284.1	377.8	1,575.1	0.0	0.0
20.00		368.4	1,259.0					0.0	284.1	368.4	1,543.1	0.0	0.0
25.00		359.0	1,226.9					0.0	284.1	359.0	1,511.0	0.0	0.0
30.00		353.8	1,194.9					0.0	284.1	353.8	1,479.0	0.0	0.0
35.00		355.5	1,162.9					0.0	284.1	355.5	1,447.0	0.0	0.0
40.00		359.2	1,130.8					0.0	284.1	359.2	1,414.9	0.0	0.0
45.00		261.6	1,098.8					0.0	284.1	261.6	1,382.9	0.0	0.0
47.25	Bot - Section 2	182.7	484.0					0.0	127.8	182.7	611.9	0.0	0.0
50.00		202.7	1,093.1					0.0	156.3	202.7	1,249.4	0.0	0.0
52.75	Top - Section 1	184.1	1,075.1					0.0	156.3	184.1	1,231.4	0.0	0.0
55.00		266.1	404.6					0.0	127.8	266.1	532.5	0.0	0.0
60.00		365.2	879.2					0.0	284.1	365.2	1,163.3	0.0	0.0
65.00		361.9	851.8					0.0	284.1	361.9	1,135.9	0.0	0.0
70.00		357.7	824.3					0.0	284.1	357.7	1,108.4	0.0	0.0
75.00		352.6	796.9					0.0	284.1	352.6	1,081.0	0.0	0.0
80.00		346.7	769.4					0.0	284.1	346.7	1,053.5	0.0	0.0
85.00		340.1	741.9					0.0	284.1	340.1	1,026.0	0.0	0.0
90.00		185.0	714.5					0.0	284.1	185.0	998.6	0.0	0.0
90.50	Bot - Section 3	158.8	69.9					0.0	28.4	158.8	98.3	0.0	0.0
94.75	Top - Section 2	150.5	980.9					0.0	241.5	150.5	1,222.4	0.0	0.0
95.00		171.6	23.0					0.0	14.2	171.6	37.2	0.0	0.0
100.00		322.4	449.8					0.0	284.1	322.4	733.9	0.0	0.0
105.00		221.4	431.5					0.0	284.1	221.4	715.6	0.0	0.0
107.00	Appurtenance(s)	154.4	167.5	6,189.4	0.0	0.0	6,016.0	0.0	113.6	6,343.9	6,297.1	0.0	0.0
110.00		241.7	245.7					0.0	58.4	241.7	304.1	0.0	0.0
115.00		265.6	394.9					0.0	97.3	265.6	492.2	0.0	0.0
119.00	Top - Section 3	144.5	302.8	3,176.3	0.0	4,939.6	2,945.2	0.0	77.8	3,320.8	3,325.7	0.0	0.0
120.00		167.7	55.5					0.0	14.1	167.7	69.7	0.0	0.0
125.00		246.6	269.5					0.0	70.6	246.6	340.1	0.0	0.0
129.00	Appurtenance(s)	107.4	205.7	887.5	0.0	0.0	1,800.0	0.0	56.4	994.9	2,062.2	0.0	0.0
									Totals:	19,170.6	40,489.6	0.00	0.00

Site Number: 283418 | Code: ANSI/TIA-222-H |

Site Name: NORTH HAVEN CT, CT | Engineering Number:13251803_C3_05 | 7/10/2020 12:03:13 PM

Customer: METRO PCS INC

Load Case: 1.2D + 1.0W | 120 mph with No Ice | 22 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.20
Wind Load Factor :1.00

Calculated Forces

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 (deg)	Ratio
0.00	-41.93	-21.78	0.00	-2,149.36	0.00	2,149.36	4,855.79	1,178.57	5,148.44	4,826.26	0.00	0.00	0.454
5.00	-40.24	-21.48	0.00	-2,040.48	0.00	2,040.48	4,773.96	1,151.04	4,910.73	4,633.09	0.08	-0.15	0.449
10.00	-38.57	-21.19	0.00	-1,933.07	0.00	1,933.07	4,690.62	1,123.50	4,678.64	4,442.31	0.32	-0.30	0.444
15.00	-36.94	-20.91	0.00	-1,827.09	0.00	1,827.09	4,605.77	1,095.97	4,452.16	4,254.05	0.72	-0.46	0.438
20.00	-35.35	-20.62	0.00	-1,722.56	0.00	1,722.56	4,519.41	1,068.43	4,231.30	4,068.40	1.29	-0.62	0.432
25.00	-33.78	-20.34	0.00	-1,619.45	0.00	1,619.45	4,406.48	1,040.90	4,016.06	3,863.51	2.02	-0.78	0.427
30.00	-32.25	-20.06	0.00	-1,517.74	0.00	1,517.74	4,289.92	1,013.37	3,806.44	3,660.81	2.92	-0.94	0.423
35.00	-30.75	-19.77	0.00	-1,417.45	0.00	1,417.45	4,173.36	985.83	3,602.43	3,463.58	3.99	-1.11	0.417
40.00	-29.29	-19.46	0.00	-1,318.62	0.00	1,318.62	4,056.80	958.30	3,404.05	3,271.80	5.24	-1.27	0.411
45.00	-27.87	-19.23	0.00	-1,221.31	0.00	1,221.31	3,940.24	930.77	3,211.28	3,085.49	6.67	-1.44	0.403
47.25	-27.24	-19.07	0.00	-1,178.04	0.00	1,178.04	3,887.79	918.38	3,126.37	3,003.43	7.37	-1.52	0.400
50.00	-25.96	-18.88	0.00	-1,125.59	0.00	1,125.59	3,823.68	903.23	3,024.13	2,904.64	8.27	-1.62	0.395
52.75	-24.71	-18.70	0.00	-1,073.68	0.00	1,073.68	3,294.34	778.19	2,618.77	2,519.75	9.23	-1.71	0.434
55.00	-24.14	-18.47	0.00	-1,031.61	0.00	1,031.61	3,249.38	767.57	2,547.79	2,451.11	10.06	-1.79	0.429
60.00	-22.93	-18.14	0.00	-939.25	0.00	939.25	3,149.47	743.97	2,393.55	2,301.96	12.04	-1.98	0.416
65.00	-21.75	-17.81	0.00	-848.53	0.00	848.53	3,049.56	720.37	2,244.13	2,157.49	14.22	-2.17	0.401
70.00	-20.60	-17.48	0.00	-759.48	0.00	759.48	2,949.66	696.77	2,099.52	2,017.71	16.59	-2.35	0.384
75.00	-19.48	-17.14	0.00	-672.10	0.00	672.10	2,849.75	673.17	1,959.72	1,882.61	19.15	-2.54	0.364
80.00	-18.39	-16.80	0.00	-586.40	0.00	586.40	2,749.84	649.57	1,824.74	1,752.19	21.90	-2.71	0.342
85.00	-17.34	-16.46	0.00	-502.39	0.00	502.39	2,649.93	625.97	1,694.58	1,626.45	24.84	-2.89	0.316
90.00	-16.33	-16.25	0.00	-420.09	0.00	420.09	2,550.02	602.37	1,569.23	1,505.39	27.95	-3.05	0.286
90.50	-16.22	-16.11	0.00	-411.96	0.00	411.96	2,540.03	600.01	1,556.96	1,493.54	28.27	-3.06	0.283
94.75	-14.98	-15.91	0.00	-343.51	0.00	343.51	1,616.13	395.33	1,013.75	943.15	31.05	-3.19	0.375
95.00	-14.93	-15.76	0.00	-339.53	0.00	339.53	1,613.86	394.55	1,009.72	939.93	31.22	-3.20	0.372
100.00	-14.17	-15.44	0.00	-260.73	0.00	260.73	1,567.71	378.81	930.81	876.33	34.67	-3.39	0.308
105.00	-13.44	-15.20	0.00	-183.53	0.00	183.53	1,520.05	363.08	855.10	814.07	38.31	-3.54	0.236
107.00	-7.54	-8.48	0.00	-153.13	0.00	153.13	1,500.57	356.79	825.72	789.57	39.80	-3.60	0.200
110.00	-7.24	-8.23	0.00	-127.69	0.00	127.69	1,470.44	347.35	782.61	753.05	42.09	-3.67	0.175
115.00	-6.76	-7.95	0.00	-86.52	0.00	86.52	1,403.83	331.61	713.33	686.05	45.98	-3.77	0.131
119.00	-3.66	-4.41	0.00	-49.80	0.00	49.80	1,350.55	319.03	660.21	634.70	49.16	-3.83	0.081
119.00	-3.66	-4.41	0.00	-49.80	0.00	49.80	957.94	239.92	497.82	452.65	49.16	-3.83	0.114
120.00	-3.59	-4.24	0.00	-45.38	0.00	45.38	951.57	237.56	488.08	445.18	49.96	-3.84	0.106
125.00	-3.27	-3.98	0.00	-24.16	0.00	24.16	918.77	225.76	440.80	408.31	54.01	-3.89	0.063
129.00	0.00	-3.75	0.00	-8.25	0.00	8.25	891.44	216.32	404.71	379.46	57.28	-3.92	0.022

Load Case: 0.9D + 1.0W — 120 mph with No Ice (Reduced DL) — 22 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		200.7	0.0					0.0	0.0	200.7	0.0	0.0	0.0
5.00		396.6	1,016.3					0.0	213.1	396.6	1,229.4	0.0	0.0
10.00		387.2	992.3					0.0	213.1	387.2	1,205.4	0.0	0.0
15.00		377.8	968.3					0.0	213.1	377.8	1,181.3	0.0	0.0
20.00		368.4	944.2					0.0	213.1	368.4	1,157.3	0.0	0.0
25.00		359.0	920.2					0.0	213.1	359.0	1,133.3	0.0	0.0
30.00		353.8	896.2					0.0	213.1	353.8	1,109.3	0.0	0.0
35.00		355.5	872.2					0.0	213.1	355.5	1,085.2	0.0	0.0
40.00		359.2	848.1					0.0	213.1	359.2	1,061.2	0.0	0.0
45.00		261.6	824.1					0.0	213.1	261.6	1,037.2	0.0	0.0
47.25	Bot - Section 2	182.7	363.0					0.0	95.9	182.7	458.9	0.0	0.0
50.00		202.7	819.9					0.0	117.2	202.7	937.0	0.0	0.0
52.75	Top - Section 1	184.1	806.4					0.0	117.2	184.1	923.6	0.0	0.0
55.00		266.1	303.5					0.0	95.9	266.1	399.3	0.0	0.0
60.00		365.2	659.4					0.0	213.1	365.2	872.5	0.0	0.0
65.00		361.9	638.8					0.0	213.1	361.9	851.9	0.0	0.0
70.00		357.7	618.2					0.0	213.1	357.7	831.3	0.0	0.0
75.00		352.6	597.6					0.0	213.1	352.6	810.7	0.0	0.0
80.00		346.7	577.0					0.0	213.1	346.7	790.1	0.0	0.0
85.00		340.1	556.5					0.0	213.1	340.1	769.5	0.0	0.0
90.00		185.0	535.9					0.0	213.1	185.0	748.9	0.0	0.0
90.50	Bot - Section 3	158.8	52.5					0.0	21.3	158.8	73.8	0.0	0.0
94.75	Top - Section 2	150.5	735.7					0.0	181.1	150.5	916.8	0.0	0.0
95.00		171.6	17.2					0.0	10.7	171.6	27.9	0.0	0.0
100.00		322.4	337.4					0.0	213.1	322.4	550.5	0.0	0.0
105.00		221.4	323.7					0.0	213.1	221.4	536.7	0.0	0.0
107.00	Appurtenance(s)	154.4	125.6	6,189.4	0.0	0.0	4,512.0	0.0	85.2	6,343.9	4,722.8	0.0	0.0
110.00		241.7	184.3					0.0	43.8	241.7	228.1	0.0	0.0
115.00		265.6	296.2					0.0	72.9	265.6	369.1	0.0	0.0
119.00	Top - Section 3	144.5	227.1	3,176.3	0.0	4,939.6	2,208.9	0.0	58.4	3,320.8	2,494.3	0.0	0.0
120.00		167.7	41.7					0.0	10.6	167.7	52.2	0.0	0.0
125.00		246.6	202.1					0.0	52.9	246.6	255.0	0.0	0.0
129.00	Appurtenance(s)	107.4	154.3	887.5	0.0	0.0	1,350.0	0.0	42.3	994.9	1,546.6	0.0	0.0
								Totals:		19,170.6	30,367.2	0.00	0.00

Load Case: 0.9D + 1.0W — 120 mph with No Ice (Reduced DL) — 22 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.00

Calculated Forces

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 (deg)	Ratio
0.00	-31.44	-21.76	0.00	-2,128.25	0.00	2,128.25	4,855.79	1,178.57	5,148.44	4,826.26	0.00	0.00	0.448
5.00	-30.16	-21.44	0.00	-2,019.44	0.00	2,019.44	4,773.96	1,151.04	4,910.73	4,633.09	0.08	-0.15	0.443
10.00	-28.90	-21.13	0.00	-1,912.23	0.00	1,912.23	4,690.62	1,123.50	4,678.64	4,442.31	0.32	-0.30	0.437
15.00	-27.66	-20.82	0.00	-1,806.59	0.00	1,806.59	4,605.77	1,095.97	4,452.16	4,254.05	0.71	-0.45	0.431
20.00	-26.45	-20.51	0.00	-1,702.50	0.00	1,702.50	4,519.41	1,068.43	4,231.30	4,068.40	1.27	-0.61	0.425
25.00	-25.27	-20.21	0.00	-1,599.95	0.00	1,599.95	4,406.48	1,040.90	4,016.06	3,863.51	2.00	-0.77	0.420
30.00	-24.11	-19.91	0.00	-1,498.91	0.00	1,498.91	4,289.92	1,013.37	3,806.44	3,660.81	2.89	-0.93	0.415
35.00	-22.97	-19.60	0.00	-1,399.37	0.00	1,399.37	4,173.36	985.83	3,602.43	3,463.58	3.95	-1.09	0.410
40.00	-21.86	-19.28	0.00	-1,301.38	0.00	1,301.38	4,056.80	958.30	3,404.05	3,271.80	5.19	-1.26	0.404
45.00	-20.79	-19.04	0.00	-1,204.98	0.00	1,204.98	3,940.24	930.77	3,211.28	3,085.49	6.59	-1.43	0.396
47.25	-20.31	-18.88	0.00	-1,162.14	0.00	1,162.14	3,887.79	918.38	3,126.37	3,003.43	7.29	-1.50	0.393
50.00	-19.35	-18.68	0.00	-1,110.23	0.00	1,110.23	3,823.68	903.23	3,024.13	2,904.64	8.18	-1.60	0.388
52.75	-18.40	-18.50	0.00	-1,058.86	0.00	1,058.86	3,294.34	778.19	2,618.77	2,519.75	9.13	-1.69	0.426
55.00	-17.97	-18.26	0.00	-1,017.25	0.00	1,017.25	3,249.38	767.57	2,547.79	2,451.11	9.95	-1.77	0.421
60.00	-17.05	-17.92	0.00	-925.94	0.00	925.94	3,149.47	743.97	2,393.55	2,301.96	11.90	-1.96	0.408
65.00	-16.15	-17.58	0.00	-836.33	0.00	836.33	3,049.56	720.37	2,244.13	2,157.49	14.05	-2.14	0.394
70.00	-15.28	-17.24	0.00	-748.42	0.00	748.42	2,949.66	696.77	2,099.52	2,017.71	16.39	-2.32	0.377
75.00	-14.44	-16.90	0.00	-662.22	0.00	662.22	2,849.75	673.17	1,959.72	1,882.61	18.92	-2.50	0.357
80.00	-13.61	-16.56	0.00	-577.73	0.00	577.73	2,749.84	649.57	1,824.74	1,752.19	21.64	-2.68	0.335
85.00	-12.81	-16.22	0.00	-494.94	0.00	494.94	2,649.93	625.97	1,694.58	1,626.45	24.53	-2.85	0.310
90.00	-12.05	-16.01	0.00	-413.85	0.00	413.85	2,550.02	602.37	1,569.23	1,505.39	27.60	-3.01	0.280
90.50	-11.97	-15.87	0.00	-405.85	0.00	405.85	2,540.03	600.01	1,556.96	1,493.54	27.92	-3.02	0.277
94.75	-11.04	-15.68	0.00	-338.42	0.00	338.42	1,616.13	395.33	1,013.75	943.15	30.67	-3.15	0.367
95.00	-10.99	-15.52	0.00	-334.50	0.00	334.50	1,613.86	394.55	1,009.72	939.93	30.83	-3.16	0.364
100.00	-10.42	-15.20	0.00	-256.87	0.00	256.87	1,567.71	378.81	930.81	876.33	34.24	-3.34	0.301
105.00	-9.87	-14.97	0.00	-180.86	0.00	180.86	1,520.05	363.08	855.10	814.07	37.83	-3.50	0.230
107.00	-5.54	-8.35	0.00	-150.93	0.00	150.93	1,500.57	356.79	825.72	789.57	39.30	-3.55	0.195
110.00	-5.31	-8.10	0.00	-125.88	0.00	125.88	1,470.44	347.35	782.61	753.05	41.56	-3.62	0.171
115.00	-4.95	-7.82	0.00	-85.36	0.00	85.36	1,403.83	331.61	713.33	686.05	45.40	-3.72	0.129
119.00	-2.68	-4.35	0.00	-49.14	0.00	49.14	1,350.55	319.03	660.21	634.70	48.54	-3.77	0.080
119.00	-2.68	-4.35	0.00	-49.14	0.00	49.14	957.94	239.92	497.82	452.65	48.54	-3.77	0.112
120.00	-2.63	-4.18	0.00	-44.79	0.00	44.79	951.57	237.56	488.08	445.18	49.33	-3.79	0.104
125.00	-2.39	-3.92	0.00	-23.91	0.00	23.91	918.77	225.76	440.80	408.31	53.32	-3.84	0.061
129.00	0.00	-3.75	0.00	-8.25	0.00	8.25	891.44	216.32	404.71	379.46	56.55	-3.86	0.022

Site Number: 283418 | Code: ANSI/TIA-222-H |

Site Name: NORTH HAVEN CT, CT | Engineering Number:13251803_C3_05 | 7/10/2020 12:03:15 PM

Customer: METRO PCS INC

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 1.00 in Radial Ice — 21 Iterations

Gust Response Factor : 1.10 | Ice Dead Load Factor : 1.00

Dead Load Factor : 1.20 | Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		59.1	0.0					0.0	0.0	59.1	0.0	0.0	0.0
5.00		117.0	1,589.5					0.0	284.1	117.0	1,873.6	0.0	0.0
10.00		114.6	1,579.1					0.0	284.1	114.6	1,863.2	0.0	0.0
15.00		112.1	1,554.3					0.0	284.1	112.1	1,838.4	0.0	0.0
20.00		109.6	1,524.8					0.0	284.1	109.6	1,808.9	0.0	0.0
25.00		107.0	1,492.9					0.0	284.1	107.0	1,777.0	0.0	0.0
30.00		105.6	1,459.4					0.0	284.1	105.6	1,743.5	0.0	0.0
35.00		106.4	1,424.9					0.0	284.1	106.4	1,709.0	0.0	0.0
40.00		107.7	1,389.6					0.0	284.1	107.7	1,673.7	0.0	0.0
45.00		78.5	1,353.6					0.0	284.1	78.5	1,637.7	0.0	0.0
47.25	Bot - Section 2	54.9	598.2					0.0	127.8	54.9	726.0	0.0	0.0
50.00		60.9	1,233.9					0.0	156.3	60.9	1,390.1	0.0	0.0
52.75	Top - Section 1	55.4	1,214.4					0.0	156.3	55.4	1,370.7	0.0	0.0
55.00		80.2	517.6					0.0	127.8	80.2	645.5	0.0	0.0
60.00		110.3	1,124.5					0.0	284.1	110.3	1,408.6	0.0	0.0
65.00		109.5	1,091.7					0.0	284.1	109.5	1,375.8	0.0	0.0
70.00		108.5	1,058.5					0.0	284.1	108.5	1,342.6	0.0	0.0
75.00		107.2	1,025.1					0.0	284.1	107.2	1,309.2	0.0	0.0
80.00		105.7	991.5					0.0	284.1	105.7	1,275.6	0.0	0.0
85.00		104.0	957.7					0.0	284.1	104.0	1,241.8	0.0	0.0
90.00		56.6	923.8					0.0	284.1	56.6	1,207.9	0.0	0.0
90.50	Bot - Section 3	48.7	90.9					0.0	28.4	48.7	119.3	0.0	0.0
94.75	Top - Section 2	46.2	1,156.5					0.0	241.5	46.2	1,398.0	0.0	0.0
95.00		52.8	33.3					0.0	14.2	52.8	47.5	0.0	0.0
100.00		99.4	649.2					0.0	284.1	99.4	933.3	0.0	0.0
105.00		68.4	624.0					0.0	284.1	68.4	908.1	0.0	0.0
107.00	Appurtenance(s)	47.9	243.5	1,370.0	0.0	0.0	9,680.0	0.0	113.6	1,417.9	10,037.1	0.0	0.0
110.00		75.1	357.1					0.0	58.4	75.1	415.5	0.0	0.0
115.00		82.8	573.3					0.0	97.3	82.8	670.6	0.0	0.0
119.00	Top - Section 3	45.2	440.9	686.8	0.0	960.0	4,693.3	0.0	77.8	732.0	5,212.0	0.0	0.0
120.00		52.6	89.8					0.0	14.1	52.6	103.9	0.0	0.0
125.00		77.6	433.3					0.0	70.6	77.6	503.9	0.0	0.0
129.00	Appurtenance(s)	33.9	332.1	243.7	0.0	0.0	2,132.7	0.0	56.4	277.5	2,521.2	0.0	0.0
									Totals:	5,002.25	52,089.3	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 1.00 in Radial Ice — 21 Iterations

Gust Response Factor : 1.10 Ice Dead Load Factor : 1.00
Dead Load Factor : 1.20 Ice Importance Factor : 1.00
Wind Load Factor : 1.00

Calculated Forces

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 (deg)	Ratio
0.00	-55.04	-5.56	0.00	-535.67	0.00	535.67	4,855.79	1,178.57	5,148.44	4,826.26	0.00	0.00	0.122
5.00	-53.16	-5.47	0.00	-507.89	0.00	507.89	4,773.96	1,151.04	4,910.73	4,633.09	0.02	-0.04	0.121
10.00	-51.30	-5.39	0.00	-480.52	0.00	480.52	4,690.62	1,123.50	4,678.64	4,442.31	0.08	-0.08	0.119
15.00	-49.45	-5.31	0.00	-453.57	0.00	453.57	4,605.77	1,095.97	4,452.16	4,254.05	0.18	-0.11	0.117
20.00	-47.64	-5.23	0.00	-427.02	0.00	427.02	4,519.41	1,068.43	4,231.30	4,068.40	0.32	-0.15	0.116
25.00	-45.86	-5.15	0.00	-400.87	0.00	400.87	4,406.48	1,040.90	4,016.06	3,863.51	0.50	-0.19	0.114
30.00	-44.12	-5.07	0.00	-375.13	0.00	375.13	4,289.92	1,013.37	3,806.44	3,660.81	0.73	-0.23	0.113
35.00	-42.40	-4.98	0.00	-349.79	0.00	349.79	4,173.36	985.83	3,602.43	3,463.58	0.99	-0.27	0.111
40.00	-40.73	-4.90	0.00	-324.87	0.00	324.87	4,056.80	958.30	3,404.05	3,271.80	1.30	-0.32	0.109
45.00	-39.09	-4.83	0.00	-300.39	0.00	300.39	3,940.24	930.77	3,211.28	3,085.49	1.66	-0.36	0.107
47.25	-38.36	-4.78	0.00	-289.52	0.00	289.52	3,887.79	918.38	3,126.37	3,003.43	1.83	-0.38	0.106
50.00	-36.97	-4.73	0.00	-276.36	0.00	276.36	3,823.68	903.23	3,024.13	2,904.64	2.05	-0.40	0.105
52.75	-35.60	-4.68	0.00	-263.35	0.00	263.35	3,294.34	778.19	2,618.77	2,519.75	2.29	-0.42	0.115
55.00	-34.95	-4.61	0.00	-252.83	0.00	252.83	3,249.38	767.57	2,547.79	2,451.11	2.49	-0.44	0.114
60.00	-33.54	-4.52	0.00	-229.77	0.00	229.77	3,149.47	743.97	2,393.55	2,301.96	2.98	-0.49	0.110
65.00	-32.16	-4.42	0.00	-207.18	0.00	207.18	3,049.56	720.37	2,244.13	2,157.49	3.52	-0.54	0.107
70.00	-30.81	-4.32	0.00	-185.07	0.00	185.07	2,949.66	696.77	2,099.52	2,017.71	4.11	-0.58	0.102
75.00	-29.50	-4.23	0.00	-163.45	0.00	163.45	2,849.75	673.17	1,959.72	1,882.61	4.74	-0.62	0.097
80.00	-28.23	-4.13	0.00	-142.32	0.00	142.32	2,749.84	649.57	1,824.74	1,752.19	5.42	-0.67	0.092
85.00	-26.98	-4.03	0.00	-121.69	0.00	121.69	2,649.93	625.97	1,694.58	1,626.45	6.14	-0.71	0.085
90.00	-25.77	-3.96	0.00	-101.56	0.00	101.56	2,550.02	602.37	1,569.23	1,505.39	6.90	-0.75	0.078
90.50	-25.65	-3.92	0.00	-99.57	0.00	99.57	2,540.03	600.01	1,556.96	1,493.54	6.98	-0.75	0.077
94.75	-24.26	-3.86	0.00	-82.91	0.00	82.91	1,616.13	395.33	1,013.75	943.15	7.67	-0.78	0.103
95.00	-24.21	-3.82	0.00	-81.94	0.00	81.94	1,613.86	394.55	1,009.72	939.93	7.71	-0.79	0.102
100.00	-23.27	-3.73	0.00	-62.84	0.00	62.84	1,567.71	378.81	930.81	876.33	8.55	-0.83	0.087
105.00	-22.36	-3.65	0.00	-44.21	0.00	44.21	1,520.05	363.08	855.10	814.07	9.45	-0.87	0.069
107.00	-12.35	-2.08	0.00	-36.91	0.00	36.91	1,500.57	356.79	825.72	789.57	9.81	-0.88	0.055
110.00	-11.93	-2.01	0.00	-30.65	0.00	30.65	1,470.44	347.35	782.61	753.05	10.37	-0.90	0.049
115.00	-11.26	-1.92	0.00	-20.62	0.00	20.62	1,403.83	331.61	713.33	686.05	11.33	-0.92	0.038
119.00	-6.07	-1.10	0.00	-11.99	0.00	11.99	1,350.55	319.03	660.21	634.70	12.11	-0.94	0.023
119.00	-6.07	-1.10	0.00	-11.99	0.00	11.99	957.94	239.92	497.82	452.65	12.11	-0.94	0.033
120.00	-5.96	-1.05	0.00	-10.88	0.00	10.88	951.57	237.56	488.08	445.18	12.30	-0.94	0.031
125.00	-5.46	-0.96	0.00	-5.64	0.00	5.64	918.77	225.76	440.80	408.31	13.29	-0.95	0.020
129.00	0.00	-0.87	0.00	-1.79	0.00	1.79	891.44	216.32	404.71	379.46	14.09	-0.96	0.005

Load Case: 1.0D + 1.0W Serviceability 60 mph 20 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		44.9	0.0					0.0	0.0	44.9	0.0	0.0	0.0
5.00		88.7	1,129.2					0.0	236.7	88.7	1,366.0	0.0	0.0
10.00		86.6	1,102.5					0.0	236.7	86.6	1,339.3	0.0	0.0
15.00		84.5	1,075.8					0.0	236.7	84.5	1,312.6	0.0	0.0
20.00		82.4	1,049.1					0.0	236.7	82.4	1,285.9	0.0	0.0
25.00		80.3	1,022.5					0.0	236.7	80.3	1,259.2	0.0	0.0
30.00		79.1	995.8					0.0	236.7	79.1	1,232.5	0.0	0.0
35.00		79.5	969.1					0.0	236.7	79.5	1,205.8	0.0	0.0
40.00		80.4	942.4					0.0	236.7	80.4	1,179.1	0.0	0.0
45.00		58.5	915.7					0.0	236.7	58.5	1,152.4	0.0	0.0
47.25	Bot - Section 2	40.9	403.3					0.0	106.5	40.9	509.9	0.0	0.0
50.00		45.3	911.0					0.0	130.2	45.3	1,041.2	0.0	0.0
52.75	Top - Section 1	41.2	896.0					0.0	130.2	41.2	1,026.2	0.0	0.0
55.00		59.5	337.2					0.0	106.5	59.5	443.7	0.0	0.0
60.00		81.7	732.7					0.0	236.7	81.7	969.4	0.0	0.0
65.00		81.0	709.8					0.0	236.7	81.0	946.6	0.0	0.0
70.00		80.0	686.9					0.0	236.7	80.0	923.7	0.0	0.0
75.00		78.9	664.0					0.0	236.7	78.9	900.8	0.0	0.0
80.00		77.6	641.2					0.0	236.7	77.6	877.9	0.0	0.0
85.00		76.1	618.3					0.0	236.7	76.1	855.0	0.0	0.0
90.00		41.4	595.4					0.0	236.7	41.4	832.2	0.0	0.0
90.50	Bot - Section 3	35.5	58.3					0.0	23.7	35.5	82.0	0.0	0.0
94.75	Top - Section 2	33.7	817.4					0.0	201.2	33.7	1,018.7	0.0	0.0
95.00		38.4	19.1					0.0	11.8	38.4	31.0	0.0	0.0
100.00		72.1	374.9					0.0	236.7	72.1	611.6	0.0	0.0
105.00		49.5	359.6					0.0	236.7	49.5	596.4	0.0	0.0
107.00	Appurtenance(s)	34.5	139.6	1,384.5	0.0	0.0	5,013.3	0.0	94.7	1,419.0	5,247.6	0.0	0.0
110.00		54.1	204.8					0.0	48.6	54.1	253.4	0.0	0.0
115.00		59.4	329.1					0.0	81.0	59.4	410.2	0.0	0.0
119.00	Top - Section 3	32.3	252.3	710.5	0.0	1,104.9	2,454.3	0.0	64.8	742.8	2,771.4	0.0	0.0
120.00		37.5	46.3					0.0	11.8	37.5	58.1	0.0	0.0
125.00		55.2	224.6					0.0	58.8	55.2	283.4	0.0	0.0
129.00	Appurtenance(s)	24.0	171.4	198.5	0.0	0.0	1,500.0	0.0	47.0	222.5	1,718.5	0.0	0.0
									Totals:	4,288.17	33,741.4	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 20 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

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 (deg)	Ratio
0.00	-34.97	-4.87	0.00	-477.82	0.00	477.82	4,855.79	1,178.57	5,148.44	4,826.26	0.00	0.00	0.106
5.00	-33.60	-4.80	0.00	-453.48	0.00	453.48	4,773.96	1,151.04	4,910.73	4,633.09	0.02	-0.03	0.105
10.00	-32.25	-4.73	0.00	-429.49	0.00	429.49	4,690.62	1,123.50	4,678.64	4,442.31	0.07	-0.07	0.104
15.00	-30.94	-4.66	0.00	-405.84	0.00	405.84	4,605.77	1,095.97	4,452.16	4,254.05	0.16	-0.10	0.102
20.00	-29.65	-4.60	0.00	-382.53	0.00	382.53	4,519.41	1,068.43	4,231.30	4,068.40	0.29	-0.14	0.101
25.00	-28.39	-4.53	0.00	-359.55	0.00	359.55	4,406.48	1,040.90	4,016.06	3,863.51	0.45	-0.17	0.100
30.00	-27.15	-4.46	0.00	-336.90	0.00	336.90	4,289.92	1,013.37	3,806.44	3,660.81	0.65	-0.21	0.098
35.00	-25.95	-4.40	0.00	-314.58	0.00	314.58	4,173.36	985.83	3,602.43	3,463.58	0.89	-0.25	0.097
40.00	-24.76	-4.33	0.00	-292.60	0.00	292.60	4,056.80	958.30	3,404.05	3,271.80	1.16	-0.28	0.096
45.00	-23.61	-4.27	0.00	-270.97	0.00	270.97	3,940.24	930.77	3,211.28	3,085.49	1.48	-0.32	0.094
47.25	-23.10	-4.24	0.00	-261.36	0.00	261.36	3,887.79	918.38	3,126.37	3,003.43	1.64	-0.34	0.093
50.00	-22.06	-4.19	0.00	-249.70	0.00	249.70	3,823.68	903.23	3,024.13	2,904.64	1.84	-0.36	0.092
52.75	-21.03	-4.15	0.00	-238.17	0.00	238.17	3,294.34	778.19	2,618.77	2,519.75	2.05	-0.38	0.101
55.00	-20.58	-4.10	0.00	-228.83	0.00	228.83	3,249.38	767.57	2,547.79	2,451.11	2.23	-0.40	0.100
60.00	-19.61	-4.03	0.00	-208.32	0.00	208.32	3,149.47	743.97	2,393.55	2,301.96	2.67	-0.44	0.097
65.00	-18.66	-3.95	0.00	-188.19	0.00	188.19	3,049.56	720.37	2,244.13	2,157.49	3.16	-0.48	0.093
70.00	-17.74	-3.88	0.00	-168.43	0.00	168.43	2,949.66	696.77	2,099.52	2,017.71	3.68	-0.52	0.090
75.00	-16.84	-3.80	0.00	-149.05	0.00	149.05	2,849.75	673.17	1,959.72	1,882.61	4.25	-0.56	0.085
80.00	-15.96	-3.73	0.00	-130.04	0.00	130.04	2,749.84	649.57	1,824.74	1,752.19	4.86	-0.60	0.080
85.00	-15.10	-3.65	0.00	-111.42	0.00	111.42	2,649.93	625.97	1,694.58	1,626.45	5.52	-0.64	0.074
90.00	-14.27	-3.60	0.00	-93.17	0.00	93.17	2,550.02	602.37	1,569.23	1,505.39	6.21	-0.68	0.068
90.50	-14.18	-3.57	0.00	-91.37	0.00	91.37	2,540.03	600.01	1,556.96	1,493.54	6.28	-0.68	0.067
94.75	-13.16	-3.53	0.00	-76.19	0.00	76.19	1,616.13	395.33	1,013.75	943.15	6.90	-0.71	0.089
95.00	-13.13	-3.49	0.00	-75.31	0.00	75.31	1,613.86	394.55	1,009.72	939.93	6.93	-0.71	0.088
100.00	-12.52	-3.42	0.00	-57.84	0.00	57.84	1,567.71	378.81	930.81	876.33	7.70	-0.75	0.074
105.00	-11.92	-3.37	0.00	-40.72	0.00	40.72	1,520.05	363.08	855.10	814.07	8.51	-0.79	0.058
107.00	-6.69	-1.88	0.00	-33.98	0.00	33.98	1,500.57	356.79	825.72	789.57	8.84	-0.80	0.048
110.00	-6.44	-1.83	0.00	-28.34	0.00	28.34	1,470.44	347.35	782.61	753.05	9.35	-0.81	0.042
115.00	-6.03	-1.76	0.00	-19.21	0.00	19.21	1,403.83	331.61	713.33	686.05	10.21	-0.84	0.032
119.00	-3.27	-0.98	0.00	-11.06	0.00	11.06	1,350.55	319.03	660.21	634.70	10.92	-0.85	0.020
119.00	-3.27	-0.98	0.00	-11.06	0.00	11.06	957.94	239.92	497.82	452.65	10.92	-0.85	0.028
120.00	-3.21	-0.94	0.00	-10.08	0.00	10.08	951.57	237.56	488.08	445.18	11.09	-0.85	0.026
125.00	-2.93	-0.88	0.00	-5.37	0.00	5.37	918.77	225.76	440.80	408.31	11.99	-0.86	0.016
129.00	0.00	-0.84	0.00	-1.85	0.00	1.85	891.44	216.32	404.71	379.46	12.72	-0.87	0.005

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_S):	0.20	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.08	
Seismic Response Coefficient (C_s):	0.03	
Upper Limit C_s	0.03	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	2.00	
Redundancy Factor (p):	1.00	
Seismic Force Distribution Exponent (k):	1.75	
Total Unfactored Dead Load:	34.97	k
Seismic Base Shear (E):	1.05	k

Load Case 1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
32	127.00	218	1,062	0.014	15	271
31	122.50	283	1,293	0.017	18	352
30	119.50	58	254	0.003	4	72
29	117.00	317	1,335	0.018	19	394
28	112.50	410	1,612	0.022	23	510
27	108.50	253	935	0.013	13	315
26	106.00	234	829	0.011	12	291
25	102.50	596	1,991	0.027	28	741
24	97.50	612	1,870	0.025	26	760
23	94.88	31	90	0.001	1	38
22	92.63	1,019	2,847	0.038	40	1,266
21	90.25	82	219	0.003	3	102
20	87.50	832	2,105	0.028	30	1,034
19	82.50	855	1,951	0.026	28	1,063
18	77.50	878	1,796	0.024	25	1,091
17	72.50	901	1,639	0.022	23	1,119
16	67.50	924	1,483	0.020	21	1,148
15	62.50	947	1,328	0.018	19	1,176
14	57.50	969	1,175	0.016	17	1,205
13	53.88	444	480	0.006	7	551
12	51.38	1,026	1,021	0.014	14	1,275
11	48.63	1,041	941	0.013	13	1,294
10	46.13	510	420	0.006	6	634
9	42.50	1,152	823	0.011	12	1,432
8	37.50	1,179	676	0.009	10	1,465

7	32.50	1,206	538	0.007	8	1,498
6	27.50	1,233	410	0.006	6	1,532
5	22.50	1,259	295	0.004	4	1,565
4	17.50	1,286	194	0.003	3	1,598
3	12.50	1,313	110	0.001	2	1,631
2	7.50	1,339	46	0.001	1	1,664
1	2.50	1,366	7	0.000	0	1,697
Nokia B5 RRH4x40-850	129.00	146	727	0.010	10	181
Alcatel-Lucent RRH2x	129.00	170	850	0.011	12	211
Alcatel-Lucent PCS B	129.00	165	824	0.011	12	205
Alcatel-Lucent B66A	129.00	201	1,004	0.014	14	250
Amphenol Antel BXA-1	129.00	38	192	0.003	3	48
RFS DB-T1-6Z-8AB-0Z	129.00	88	440	0.006	6	109
Amphenol Antel BXA-8	129.00	54	270	0.004	4	67
Commscope JAHH-65B-R	129.00	364	1,816	0.025	26	452
Round Low Profile Pl	129.00	1,500	7,492	0.101	106	1,864
Ericsson Radio 4449	119.00	225	976	0.013	14	280
Ericsson RRUS 4415 B	119.00	138	598	0.008	8	171
Ericsson Air6449 B41	119.00	312	1,353	0.018	19	388
Ericsson AIR 21, 1.3	119.00	249	1,080	0.015	15	309
Ericsson AIR-32 B2A/	119.00	397	1,720	0.023	24	493
Round T-Arm	119.00	750	3,252	0.044	46	932
RFS APXVAARR24_43-U-	119.00	384	1,664	0.022	24	477
Raycap DC6-48-60-0-8	107.00	16	58	0.001	1	20
Raycap DC6-48-60-18-	107.00	60	216	0.003	3	75
Ericsson RRUS 8843 B	107.00	216	777	0.010	11	268
Ericsson RRUS 4478 B	107.00	180	647	0.009	9	223
Ericsson RRUS 4449 B	107.00	213	767	0.010	11	265
Ericsson RRUS A2 B2	107.00	132	475	0.006	7	164
Ericsson RRUS-11 (50	107.00	150	540	0.007	8	186
Ericsson RRUS-11 (50	107.00	150	540	0.007	8	186
Ericsson RRUS 32 (50	107.00	152	549	0.007	8	189
Ericsson RRUS 32 (50	107.00	152	549	0.007	8	189
Ericsson RRUS 32 B2	107.00	318	1,145	0.015	16	395
Ericsson RRUS 32 B2	107.00	318	1,145	0.015	16	395
CCI CCI-HPA-65R-BUU-	107.00	612	2,203	0.030	31	761
Kathrein Scala 80010	107.00	344	1,237	0.017	18	427
Round Platform w/ Ha	107.00	2,000	7,199	0.097	102	2,485
		34,967	74,074	1.000	1,049	43,452

Load Case 0.9D - 1.0Ev + 1.0Eh Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
32	127.00	218	1,062	0.014	15	187
31	122.50	283	1,293	0.017	18	243
30	119.50	58	254	0.003	4	50
29	117.00	317	1,335	0.018	19	272
28	112.50	410	1,612	0.022	23	352
27	108.50	253	935	0.013	13	217
26	106.00	234	829	0.011	12	201
25	102.50	596	1,991	0.027	28	511
24	97.50	612	1,870	0.025	26	524
23	94.88	31	90	0.001	1	27
22	92.63	1,019	2,847	0.038	40	873
21	90.25	82	219	0.003	3	70
20	87.50	832	2,105	0.028	30	713
19	82.50	855	1,951	0.026	28	733
18	77.50	878	1,796	0.024	25	753
17	72.50	901	1,639	0.022	23	772
16	67.50	924	1,483	0.020	21	792

15	62.50	947	1,328	0.018	19	812
14	57.50	969	1,175	0.016	17	831
13	53.88	444	480	0.006	7	380
12	51.38	1,026	1,021	0.014	14	880
11	48.63	1,041	941	0.013	13	893
10	46.13	510	420	0.006	6	437
9	42.50	1,152	823	0.011	12	988
8	37.50	1,179	676	0.009	10	1,011
7	32.50	1,206	538	0.007	8	1,034
6	27.50	1,233	410	0.006	6	1,057
5	22.50	1,259	295	0.004	4	1,080
4	17.50	1,286	194	0.003	3	1,102
3	12.50	1,313	110	0.001	2	1,125
2	7.50	1,339	46	0.001	1	1,148
1	2.50	1,366	7	0.000	0	1,171
Nokia B5 RRH4x40-850	129.00	146	727	0.010	10	125
Alcatel-Lucent RRH2x	129.00	170	850	0.011	12	146
Alcatel-Lucent PCS B	129.00	165	824	0.011	12	141
Alcatel-Lucent B66A	129.00	201	1,004	0.014	14	172
Amphenol Antel BXA-1	129.00	38	192	0.003	3	33
RFS DB-T1-6Z-8AB-0Z	129.00	88	440	0.006	6	75
Amphenol Antel BXA-8	129.00	54	270	0.004	4	46
Commscope JAHH-65B-R	129.00	364	1,816	0.025	26	312
Round Low Profile Pl	129.00	1,500	7,492	0.101	106	1,286
Ericsson Radio 4449	119.00	225	976	0.013	14	193
Ericsson RRUS 4415 B	119.00	138	598	0.008	8	118
Ericsson Air6449 B41	119.00	312	1,353	0.018	19	267
Ericsson AIR 21, 1.3	119.00	249	1,080	0.015	15	213
Ericsson AIR-32 B2A/	119.00	397	1,720	0.023	24	340
Round T-Arm	119.00	750	3,252	0.044	46	643
RFS APXVAARR24_43-U-	119.00	384	1,664	0.022	24	329
Raycap DC6-48-60-0-8	107.00	16	58	0.001	1	14
Raycap DC6-48-60-18-	107.00	60	216	0.003	3	51
Ericsson RRUS 8843 B	107.00	216	777	0.010	11	185
Ericsson RRUS 4478 B	107.00	180	647	0.009	9	154
Ericsson RRUS 4449 B	107.00	213	767	0.010	11	183
Ericsson RRUS A2 B2	107.00	132	475	0.006	7	113
Ericsson RRUS-11 (50	107.00	150	540	0.007	8	129
Ericsson RRUS-11 (50	107.00	150	540	0.007	8	129
Ericsson RRUS 32 (50	107.00	152	549	0.007	8	131
Ericsson RRUS 32 (50	107.00	152	549	0.007	8	131
Ericsson RRUS 32 B2	107.00	318	1,145	0.015	16	273
Ericsson RRUS 32 B2	107.00	318	1,145	0.015	16	273
CCI CCI-HPA-65R-BUU-	107.00	612	2,203	0.030	31	525
Kathrein Scala 80010	107.00	344	1,237	0.017	18	295
Round Platform w/ Ha	107.00	2,000	7,199	0.097	102	1,715
		34,967	74,074	1.000	1,049	29,978

Load Case 1.2D + 1.0Ev + 1.0Eh **Seismic**

Calculated Forces

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 (deg)	Ratio
0.00	-41.75	-1.05	0.00	-110.38	0.00	110.38	4,855.79	1,178.57	5,148.44	4,826.26	0.00	0.00	0.031
5.00	-40.09	-1.06	0.00	-105.12	0.00	105.12	4,773.96	1,151.04	4,910.73	4,633.09	0.00	-0.01	0.031
10.00	-38.46	-1.06	0.00	-99.85	0.00	99.85	4,690.62	1,123.50	4,678.64	4,442.31	0.02	-0.02	0.031
15.00	-36.86	-1.06	0.00	-94.55	0.00	94.55	4,605.77	1,095.97	4,452.16	4,254.05	0.04	-0.02	0.030
20.00	-35.30	-1.06	0.00	-89.25	0.00	89.25	4,519.41	1,068.43	4,231.30	4,068.40	0.07	-0.03	0.030
25.00	-33.76	-1.06	0.00	-83.94	0.00	83.94	4,406.48	1,040.90	4,016.06	3,863.51	0.10	-0.04	0.029
30.00	-32.27	-1.06	0.00	-78.65	0.00	78.65	4,289.92	1,013.37	3,806.44	3,660.81	0.15	-0.05	0.029
35.00	-30.80	-1.05	0.00	-73.37	0.00	73.37	4,173.36	985.83	3,602.43	3,463.58	0.21	-0.06	0.029
40.00	-29.37	-1.04	0.00	-68.12	0.00	68.12	4,056.80	958.30	3,404.05	3,271.80	0.27	-0.07	0.028
45.00	-28.73	-1.04	0.00	-62.92	0.00	62.92	3,940.24	930.77	3,211.28	3,085.49	0.34	-0.07	0.028
47.25	-27.44	-1.02	0.00	-60.59	0.00	60.59	3,887.79	918.38	3,126.37	3,003.43	0.38	-0.08	0.027
50.00	-26.17	-1.01	0.00	-57.77	0.00	57.77	3,823.68	903.23	3,024.13	2,904.64	0.43	-0.08	0.027
52.75	-25.61	-1.00	0.00	-55.00	0.00	55.00	3,294.34	778.19	2,618.77	2,519.75	0.48	-0.09	0.030
55.00	-24.41	-0.99	0.00	-52.74	0.00	52.74	3,249.38	767.57	2,547.79	2,451.11	0.52	-0.09	0.029
60.00	-23.23	-0.97	0.00	-47.79	0.00	47.79	3,149.47	743.97	2,393.55	2,301.96	0.62	-0.10	0.028
65.00	-22.08	-0.95	0.00	-42.94	0.00	42.94	3,049.56	720.37	2,244.13	2,157.49	0.73	-0.11	0.027
70.00	-20.97	-0.93	0.00	-38.17	0.00	38.17	2,949.66	696.77	2,099.52	2,017.71	0.86	-0.12	0.026
75.00	-19.87	-0.91	0.00	-33.52	0.00	33.52	2,849.75	673.17	1,959.72	1,882.61	0.99	-0.13	0.025
80.00	-18.81	-0.88	0.00	-29.00	0.00	29.00	2,749.84	649.57	1,824.74	1,752.19	1.13	-0.14	0.023
85.00	-17.78	-0.85	0.00	-24.61	0.00	24.61	2,649.93	625.97	1,694.58	1,626.45	1.28	-0.15	0.022
90.00	-17.68	-0.85	0.00	-20.36	0.00	20.36	2,550.02	602.37	1,569.23	1,505.39	1.44	-0.16	0.020
90.50	-16.41	-0.80	0.00	-19.94	0.00	19.94	2,540.03	600.01	1,556.96	1,493.54	1.45	-0.16	0.020
94.75	-16.37	-0.80	0.00	-16.53	0.00	16.53	1,616.13	395.33	1,013.75	943.15	1.60	-0.16	0.028
95.00	-15.61	-0.78	0.00	-16.32	0.00	16.32	1,613.86	394.55	1,009.72	939.93	1.60	-0.16	0.027
100.00	-14.87	-0.75	0.00	-12.44	0.00	12.44	1,567.71	378.81	930.81	876.33	1.78	-0.17	0.024
105.00	-14.58	-0.74	0.00	-8.71	0.00	8.71	1,520.05	363.08	855.10	814.07	1.96	-0.18	0.020
107.00	-8.04	-0.45	0.00	-7.23	0.00	7.23	1,500.57	356.79	825.72	789.57	2.04	-0.18	0.015
110.00	-7.53	-0.42	0.00	-5.89	0.00	5.89	1,470.44	347.35	782.61	753.05	2.15	-0.18	0.013
115.00	-7.13	-0.40	0.00	-3.77	0.00	3.77	1,403.83	331.61	713.33	686.05	2.35	-0.19	0.011
119.00	-4.01	-0.24	0.00	-2.16	0.00	2.16	1,350.55	319.03	660.21	634.70	2.51	-0.19	0.006
119.00	-4.01	-0.24	0.00	-2.16	0.00	2.16	957.94	239.92	497.82	452.65	2.51	-0.19	0.009
120.00	-3.66	-0.22	0.00	-1.92	0.00	1.92	951.57	237.56	488.08	445.18	2.55	-0.19	0.008
125.00	-3.39	-0.20	0.00	-0.82	0.00	0.82	918.77	225.76	440.80	408.31	2.75	-0.19	0.006
129.00	0.00	-0.19	0.00	0.00	0.00	0.00	891.44	216.32	404.71	379.46	2.92	-0.20	0.000

Load Case **0.9D - 1.0Ev + 1.0Eh** **Seismic (Reduced DL)**

Calculated Forces

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 (deg)	Ratio
0.00	-28.81	-1.05	0.00	-109.07	0.00	109.07	4,855.79	1,178.57	5,148.44	4,826.26	0.00	0.00	0.029
5.00	-27.66	-1.05	0.00	-103.82	0.00	103.82	4,773.96	1,151.04	4,910.73	4,633.09	0.00	-0.01	0.028
10.00	-26.53	-1.05	0.00	-98.55	0.00	98.55	4,690.62	1,123.50	4,678.64	4,442.31	0.02	-0.02	0.028
15.00	-25.43	-1.06	0.00	-93.28	0.00	93.28	4,605.77	1,095.97	4,452.16	4,254.05	0.04	-0.02	0.027
20.00	-24.35	-1.05	0.00	-88.00	0.00	88.00	4,519.41	1,068.43	4,231.30	4,068.40	0.07	-0.03	0.027
25.00	-23.29	-1.05	0.00	-82.73	0.00	82.73	4,406.48	1,040.90	4,016.06	3,863.51	0.10	-0.04	0.027
30.00	-22.26	-1.05	0.00	-77.47	0.00	77.47	4,289.92	1,013.37	3,806.44	3,660.81	0.15	-0.05	0.026
35.00	-21.25	-1.04	0.00	-72.25	0.00	72.25	4,173.36	985.83	3,602.43	3,463.58	0.20	-0.06	0.026
40.00	-20.26	-1.03	0.00	-67.05	0.00	67.05	4,056.80	958.30	3,404.05	3,271.80	0.27	-0.06	0.025
45.00	-19.82	-1.02	0.00	-61.91	0.00	61.91	3,940.24	930.77	3,211.28	3,085.49	0.34	-0.07	0.025
47.25	-18.93	-1.01	0.00	-59.60	0.00	59.60	3,887.79	918.38	3,126.37	3,003.43	0.38	-0.08	0.025
50.00	-18.05	-1.00	0.00	-56.82	0.00	56.82	3,823.68	903.23	3,024.13	2,904.64	0.42	-0.08	0.024
52.75	-17.67	-0.99	0.00	-54.08	0.00	54.08	3,294.34	778.19	2,618.77	2,519.75	0.47	-0.09	0.027
55.00	-16.84	-0.98	0.00	-51.85	0.00	51.85	3,249.38	767.57	2,547.79	2,451.11	0.51	-0.09	0.026
60.00	-16.03	-0.96	0.00	-46.97	0.00	46.97	3,149.47	743.97	2,393.55	2,301.96	0.61	-0.10	0.025
65.00	-15.24	-0.94	0.00	-42.18	0.00	42.18	3,049.56	720.37	2,244.13	2,157.49	0.72	-0.11	0.025
70.00	-14.46	-0.92	0.00	-37.49	0.00	37.49	2,949.66	696.77	2,099.52	2,017.71	0.84	-0.12	0.023
75.00	-13.71	-0.89	0.00	-32.92	0.00	32.92	2,849.75	673.17	1,959.72	1,882.61	0.97	-0.13	0.022
80.00	-12.98	-0.86	0.00	-28.46	0.00	28.46	2,749.84	649.57	1,824.74	1,752.19	1.11	-0.14	0.021
85.00	-12.26	-0.83	0.00	-24.15	0.00	24.15	2,649.93	625.97	1,694.58	1,626.45	1.26	-0.15	0.019
90.00	-12.19	-0.83	0.00	-19.98	0.00	19.98	2,550.02	602.37	1,569.23	1,505.39	1.42	-0.15	0.018
90.50	-11.32	-0.79	0.00	-19.57	0.00	19.57	2,540.03	600.01	1,556.96	1,493.54	1.43	-0.15	0.018
94.75	-11.29	-0.79	0.00	-16.21	0.00	16.21	1,616.13	395.33	1,013.75	943.15	1.57	-0.16	0.024
95.00	-10.77	-0.76	0.00	-16.02	0.00	16.02	1,613.86	394.55	1,009.72	939.93	1.58	-0.16	0.024
100.00	-10.26	-0.73	0.00	-12.21	0.00	12.21	1,567.71	378.81	930.81	876.33	1.75	-0.17	0.020
105.00	-10.06	-0.72	0.00	-8.54	0.00	8.54	1,520.05	363.08	855.10	814.07	1.93	-0.18	0.017
107.00	-5.54	-0.44	0.00	-7.10	0.00	7.10	1,500.57	356.79	825.72	789.57	2.01	-0.18	0.013
110.00	-5.19	-0.42	0.00	-5.78	0.00	5.78	1,470.44	347.35	782.61	753.05	2.12	-0.18	0.011
115.00	-4.92	-0.40	0.00	-3.70	0.00	3.70	1,403.83	331.61	713.33	686.05	2.32	-0.19	0.009
119.00	-2.77	-0.24	0.00	-2.12	0.00	2.12	1,350.55	319.03	660.21	634.70	2.47	-0.19	0.005
119.00	-2.77	-0.24	0.00	-2.12	0.00	2.12	957.94	239.92	497.82	452.65	2.47	-0.19	0.008
120.00	-2.52	-0.22	0.00	-1.88	0.00	1.88	951.57	237.56	488.08	445.18	2.51	-0.19	0.007
125.00	-2.34	-0.20	0.00	-0.80	0.00	0.80	918.77	225.76	440.80	408.31	2.71	-0.19	0.005
129.00	0.00	-0.19	0.00	0.00	0.00	0.00	891.44	216.32	404.71	379.46	2.87	-0.19	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	21.78	0.00	41.93	0.00	0.00	2149.36	0.00	0.45
0.9D + 1.0W	21.76	0.00	31.44	0.00	0.00	2128.25	0.00	0.45
1.2D + 1.0Di + 1.0Wi	5.56	0.00	55.04	0.00	0.00	535.67	0.00	0.12
1.2D + 1.0Ev + 1.0Eh	1.05	0.00	41.75	0.00	0.00	110.38	0.00	0.03
0.9D - 1.0Ev + 1.0Eh	1.05	0.00	28.81	0.00	0.00	109.07	0.00	0.03
1.0D + 1.0W	4.87	0.00	34.97	0.00	0.00	477.82	0.00	0.11

Site Name: North Heaven CT, CT
Site Number: 283418
Tower Type: MP
Design Loads (Factored) - Analysis per TIA-222-H Standards

Monolithic Mat & Pier Foundation Analysis

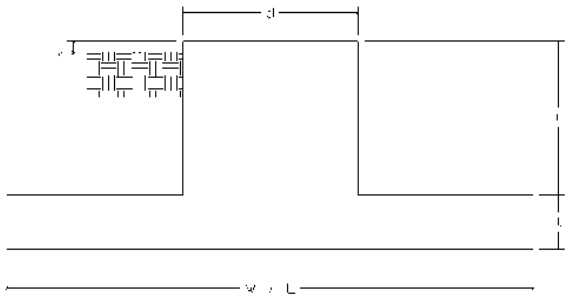
Foundation Analysis Parameters		
Design / Analysis / Mapping:	Analysis	-
Compression/Leg:	41.9	k
Uplift/Leg:	0.0	k
Total Shear:	21.8	k
Moment:	2,149.4	k-ft
Tower + Appurtenance Weight:	41.9	k
Depth to Base of Foundation (l + t - h):	8	ft
Diameter of Pier (d):	7	ft
Length of Pier (l):	7	ft
Height of Pier above Ground (h):	1	ft
Width of Pad (W):	24	ft
Length of Pad (L):	24	ft
Thickness of Pad (t):	2	ft
Tower Leg Center to Center:	0	ft
Number of Tower Legs:	1	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	5.5	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil Above Water Table:	120	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	57.6	pcf
Friction Angle of Uplift:	15	°
Coefficient of Shear Friction:	0.2	-
Ultimate Compressive Bearing Pressure:	6,000	psf
Ultimate Passive Pressure on Pad Face:	310	psf
$f_{Soil\ and\ Concrete\ Weight}$:	0.9	-
f_{Soil}:	0.75	-

Overturning Moment Usage		
Design OTM:	2345.6	k-ft
OTM Resistance:	6294.2	k-ft
Design OTM / OTM Resistance:	37%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	2377	psf
Factored Nominal Bearing Pressure:	4500	psf
Factored Nominal (Net) Bearing Pressure:	53%	Pass
Load Direction Controling Design Bearing Pressure:	*Diagonal to Pad Edge*	

Sliding Factor of Safety		
Ultimate Friction Resistance:	109.1	k
Ultimate Passive Pressure Resistance:	11.2	k
Total Factored Sliding Resistance:	90.2	k
Sliding Design / Sliding Resistance:	24%	Pass

Foundation Steel Parameters		
Shear/Leg (Compression):	14.5	k
Shear/Leg (Uplift):	12.0	k
Concrete Strength (f'_c):	4,000	psi
Pad Tension Steel Depth:	20.50	in
Dead Load Factor:	0.9	-
f_{Shear}:	0.75	-
$f_{Flexure\ /\ Tension}$:	0.9	-
$f_{Compression:}$	0.65	-
b:	0.85	-
Bottom Pad Rebar Size #:	8	-
# of Bottom Pad Rebar:	33	-
Pad Bottom Steel Area:	26.07	in^2
Pad Steel F_y:	60,000	psi
Top Pad Rebar Size #:	8	-
# of Top Pad Rebar:	33	-
Pad Top Steel Area:	26.07	in^2
Pier Rebar Size #:	8	-
Pier Steel Area (Single Bar):	0.79	in^2
# of Pier Rebar:	38	-
Pier Steel F_y:	60,000	psi
Pier Cage Diameter:	76.0	in
Rebar Strain Limit:	0.008	-
Steel Elastic Modulus:	29,000	ksi
Tie Rebar Size #:	4	-
Tie Steel Area (Single Bar):	0.20	in^2
Tie Spacing:	12	in
Tie Steel F_y:	60,000	psi
Clear Cover:	3	in



Pad Strength Capacity			
Factored One Way Shear (V_u):	211.4	k	
One Way Shear Capacity (fV_c):	560.1	k	*ACI 318-14 25.5.5.1*
V_u / fV_c:	38%	Pass	
Load Direction Controling Shear Capacity:	*Parallel to Pad Edge*		
Lower Steel Pad Factored Moment (M_u):	1179.5	k-ft	
Lower Steel Pad Moment Capacity (fM_n):	2325.3	k-ft	*ACI 318-14 22.3.1.1*
M_u / fM_n:	51%	Pass	
Load Direction Controling Flexural Capacity:	*Parallel to Pad Edge*		
Upper Steel Pad Factored Moment (M_u):	628.1	k-ft	
Upper Steel Pad Moment Capacity (fM_n):	2325.3	k-ft	
M_u / fM_n:	27%	Pass	
Lower Pad Flexural Reinforcement Ratio:	0.0044		*OK - ACI 318-14 7.6.1.1 & 8.6.1.1*
Upper Pad Flexural Reinforcement Ratio:	0.0044		*OK - ACI 318-14 7.6.1.1 & 8.6.1.1*
Pad Shrinkage Reinforcement Ratio:	0.0088		*OK - ACI 318-14 24.4.3.2*
Lower Pad Reinforcement Spacing:	8.8	in	*OK - ACI 318-14 7.7.2.3, 8.7.2.2, & 24.4.3.3*
Upper Pad Reinforcement Spacing:	8.8	in	*OK - ACI 318-14 7.7.2.3, 8.7.2.2, & 24.4.3.3*
Ultimate Punching Shear Stress, v_u:	50.38	psi	*ACI 318-14 R8.4.4.2.3*
Nominal Punching Shear Capacity (f_cv_c):	189.7	psi	*ACI 318-14 22.6.5.2*
v_u / f_cv_c:	27%	Pass	
Pier Moment Pad Flexure Transfer Ratio, γ_f:	0.60		*TIA-222-H 9.4.2*
Moment Transfer Effective Flexural Width, B_{eff}:	13.00	ft	*TIA-222-H 9.4.2*
Moment Transfer Through Pad Flexure:	16574.40	k-in	*TIA-222-H 9.4.2*
Moment Transfer Flexural Capacity ($fM_{sc,f}$):	15814.44	k-in	
g_fM_{sc} / $fM_{sc,f}$:	0%	Pass	

Pier Strength Capacity			
Factored Moment in Pier (M_u):	2302.0	k-ft	
Pier Moment Capacity (fM_n):	5022.7	k-ft	
M_u / fM_n:	46%	Pass	
Factored Shear in Pier (V_u):	21.8	k	
Pier Shear Capacity (fV_n):	628.5	k	*ACI 318-14 22.5.1.1*
V_u / fV_c:	3%	Pass	
Pier Shear Reinforcement Ratio:	0.0004		*OK - No Ties Necessary for Shear - ACI11.5.6.1*
Factored Tension in Pier (T_u):	0.0	k	
Pier Tension Capacity (fT_n):	1621.1	k	
T_u / fT_n:	0%	Pass	
Factored Compression in Pier (P_u):	41.9	k	
Pier Compression Capacity (fP_n):	9769.4	k	*ACI 318-14 22.4.2.1*
P_u / fP_n:	0%	Pass	
Pier Compression Reinforcement Ratio:	0.005		*OK - TIA-222-H 9.4.1*
Minimum Depth to Develop Vertical Rebar:	29	in	*ACI 318-14 25.4.2.3*
Minimum Hook Development Length:	19	in	*ACI 318-14 25.4.3.1*
Minimum Mat Thickness / Edge Distance from Pier:	22.0	in	
Minimum Foundation Depth:	4.02	ft	
$M_u/f_BM_n + T_u/f_TT_n$:	46%	Pass	

Base Plate & Anchor Rod Analysis

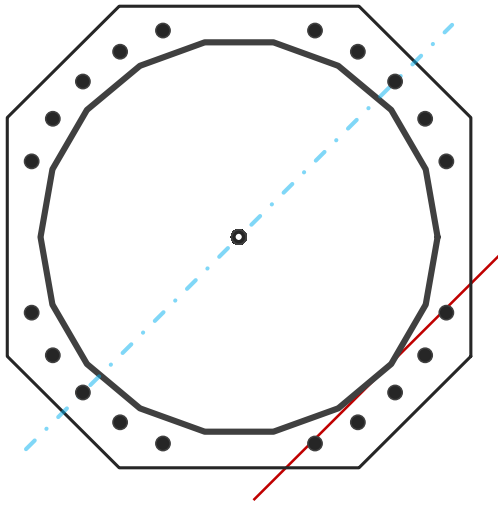
Pole Dimensions		
Number of Sides	18	-
Diameter	48.8	in
Thickness	7/16	in
Orientation Offset		°

Base Reactions		
Moment, Mu	2149.4	k-ft
Axial, Pu	41.9	k
Shear, Vu	21.8	k
Neutral Axis	225	°

Report Capacities		
Component	Capacity	Result
Base Plate	29%	Pass
Anchor Rods	39%	Pass
Dwyidag	-	-

Base Plate		
Shape	Square	-
Width	58	in
Thickness	2 3/4	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	14	in
Orientation Offset		°
Anchor Rod Detail	d	η=0.5
Clear Distance	3 3/4	in
Applied Moment, Mu	873.8	k
Bending Stress, ϕMn	3050.0	k

Original Anchor Rods		
Arrangement	Cluster	-
Quantity	20	-
Diameter, ø	2 1/4	in
Bolt Circle	55.25	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset		°
Applied Force, Pu	95.4	k
Anchor Rods, ϕPn	243.6	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	21.8	2149.4	1.00
Anchor Rod Forces	21.8	2149.4	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	66.1347	3.6742	0.2355		19339.81
Bolt	3.9761	3.2477	0.8393	4.5	24801.22
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Square	-
Width, W	58	in
Thickness, t	2.75	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	31.346	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3.75	-

Anchor Rods		
Anchor Rod Quantity, N	20	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	55.25	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	95.4	k
Applied Shear, Vu	0.4	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.392	OK
Interaction Capacity	0.395	OK

External Base Plate		
Chord Length AA	33.099	in
Additional AA	2.750	in
Section Modulus, Z	67.778	in^3
Applied Moment, Mu	873.8	k-ft
Bending Capacity, ϕMn	3050.0	k-ft
Capacity, Mu/ϕMn	0.286	OK
Chord Length AB	32.345	in
Additional AB	2.750	in
Section Modulus, Z	66.351	in^3
Applied Moment, Mu	702.0	k-ft
Bending Capacity, ϕMn	2985.8	k-ft
Capacity, Mu/ϕMn	0.235	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in^3
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Flange Plate Analysis

Flange Plate

Plate Type	***Flange***	***@ 119 ft***
Pole Diameter	23.16	in
Pole Thickness	0.1875	in
Plate Diameter	30.4	in
Plate Thickness	1 1/4	in
Plate Fy	60	ksi
Weld Length	3/16	in
f_s Resistance	94.63	k-in
Applied	4.59	k-in

Code Rev.	***H***
Moment	49.8 k-ft
Axial	3.7 k

Required Flange Thickness:
0.28 in OK

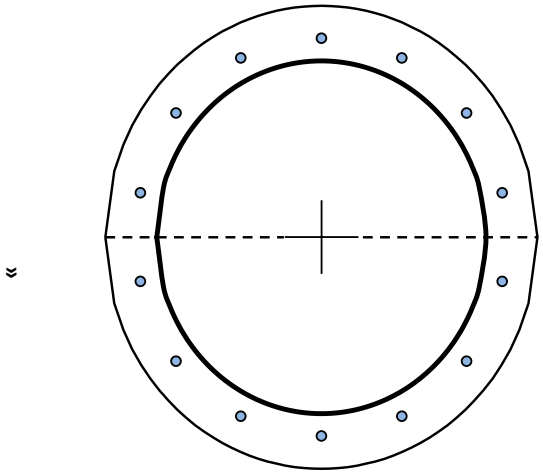
Date	7/9/2020
Engineer	P.MBUGUA
Site #	283418
Carrier	METRO PCS INC

Stiffeners

#	

Bolts

#	***14***	
Bolt Circle	26.125	in
(R)adial / (S)quare	R	
Diameter	1	in
Hole Diameter	1 1/8	in
Type	A325	
Fy	92	ksi
Fu	120	ksi
f_s Resistance	54.52	k
Applied	6.27	k



Reinforcement

#	

Plate Stress Ratio:
5% Pass

Bolt Stress Ratio:
11% Pass

Extra Bolts 0

#	

Exhibit E

Mount Analysis

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Antenna Mount Analysis Report

ATC Site Name	:	**NORTH HAVEN CT, CT**
ATC Site Number	:	**283418**
Engineering Number	:	**13251803_C8_01**
Mount Elevation	:	**118 ft**
Carrier	:	**Metro Pcs Inc**
Carrier Site Name	:	**Florida Partners North Haven Monopole**
Carrier Site Number	:	**CTNH522A**
Site Location	:	**50 Devine Street** **North Haven, CT 06473-2204** **41.377778, -72.8761583**
County	:	**New Haven**
Date	:	**June 25, 2020**
Max Usage	:	**79%**
Result	:	**Contingent Pass**

Prepared By:
Michael Ellis
Structural Engineer

Reviewed By:

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Metro Pcs Inc at 118 ft.

Supporting Documents

Radio Frequency Data Sheet	RFDS ID #CTNH522A, dated May 20, 2020
Reference Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	120 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.203, S1 = 0.054
Site Class:	D - Stiff Soil
Live Loads: *	Lm = 500 lbs

*** Based on experience it has been determined that the maintenance load cases do not control over rigging load cases in platform mount analyses. Therefore, these load cases have been excluded from this analysis.**

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Mount pipes B, F and J will need to be added to support new equipment.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

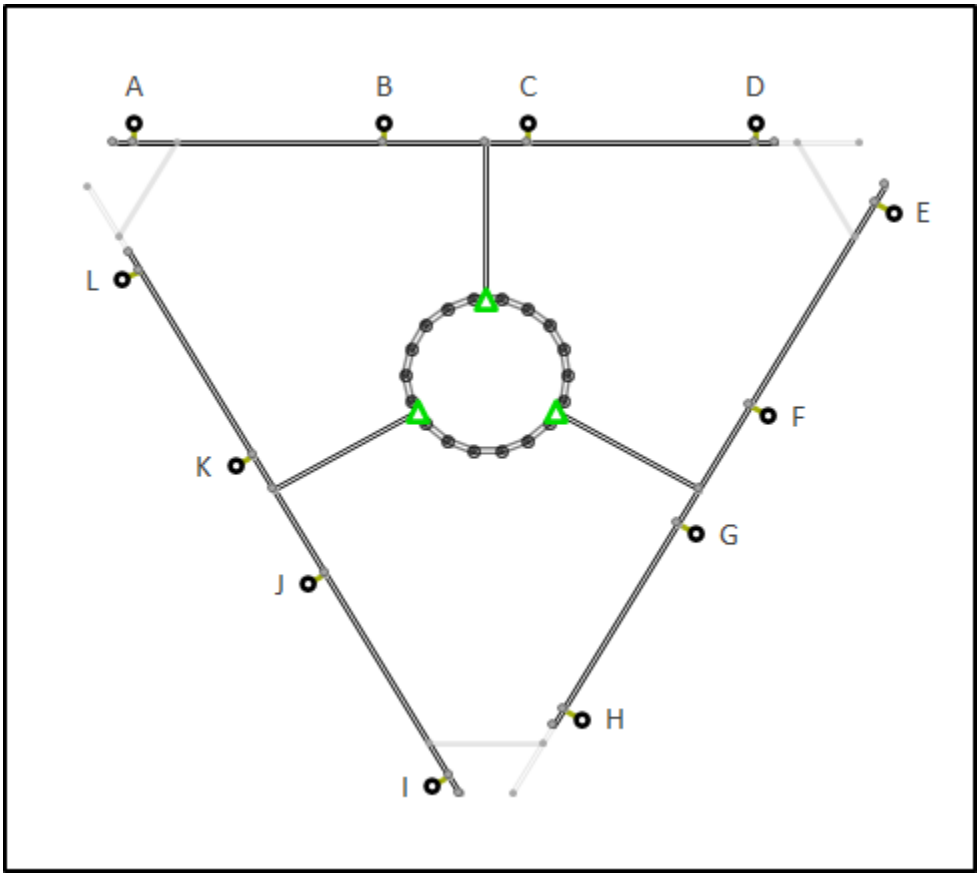
Application Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
118.0	119.0	3	Ericsson AIR 21, 1.3 M, B2A B4P
		3	RFS APXVAARR24_43-U-NA20
		3	Ericsson AIR-32 B2A/B66Aa
		3	Ericsson Air6449 B41
		3	Ericsson Radio 4449 B71 B85A
		3	Ericsson RRUS 4415 B25

Structure Usages

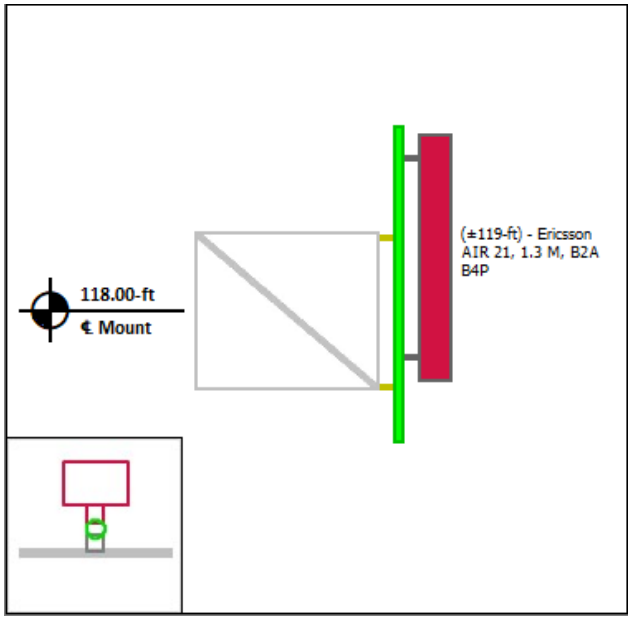
Structural Component	Controlling Usage	Pass/Fail
Horizontals	79%	Pass
Mount Pipes	69%	Pass

Mount Layout

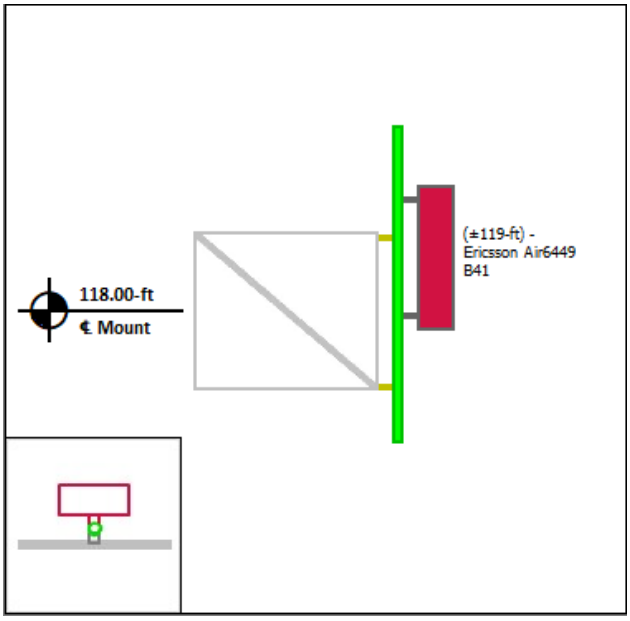


Equipment Layout

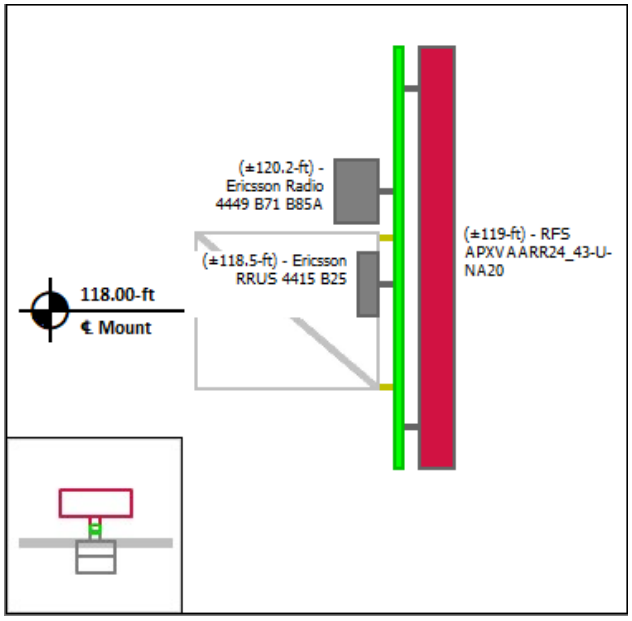
Mount Pipe A



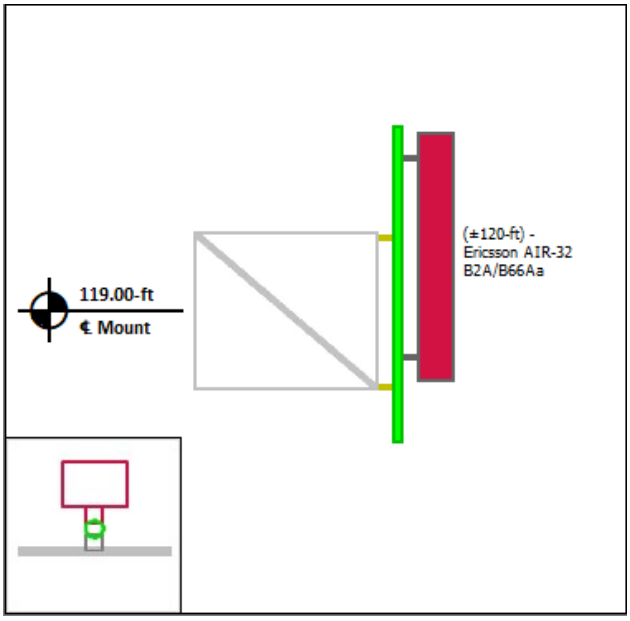
Mount Pipe B



Mount Pipe C

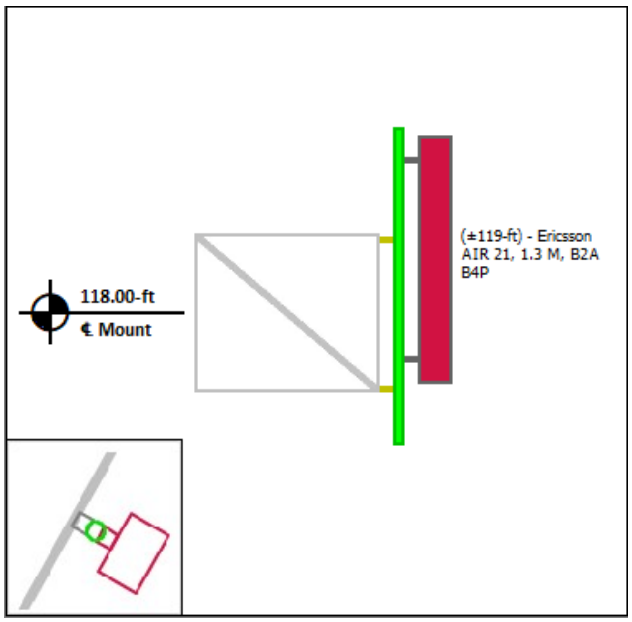


Mount Pipe D

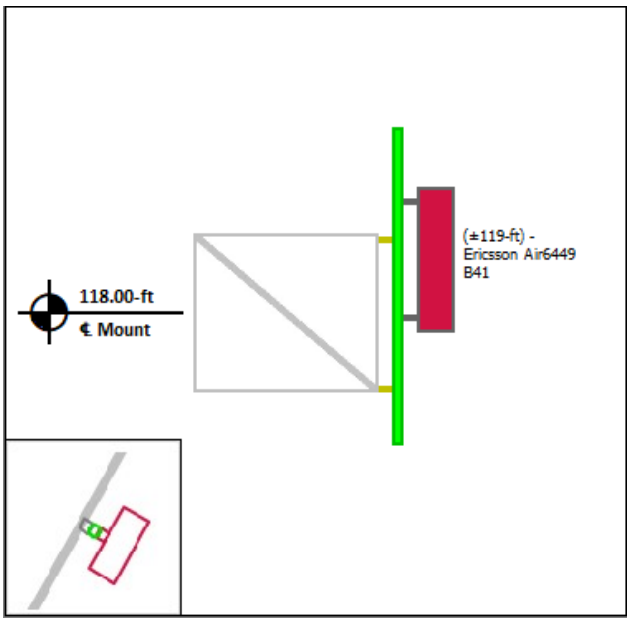


Equipment Layout Cont'd.

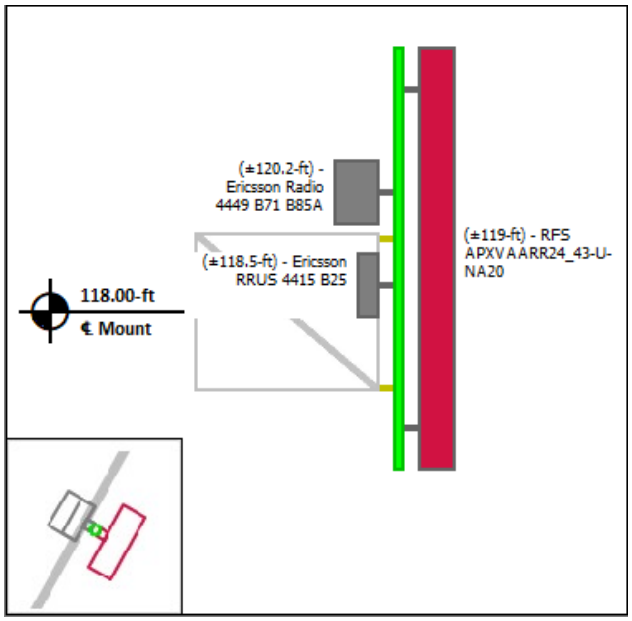
Mount Pipe E



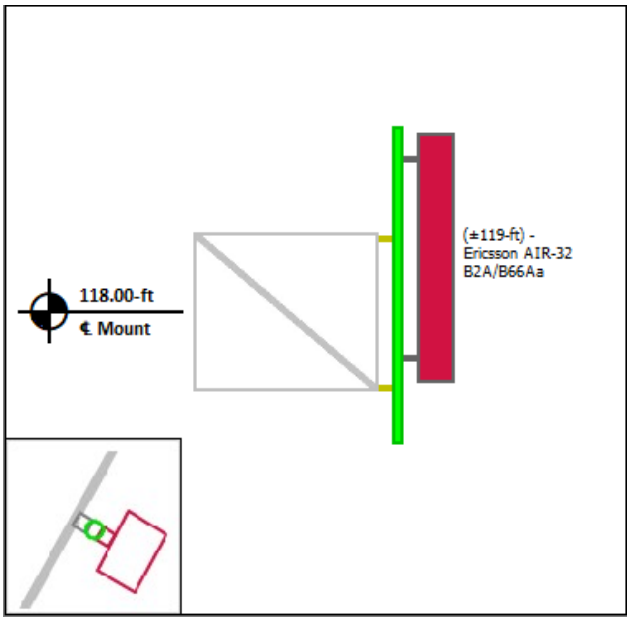
Mount Pipe F



Mount Pipe G

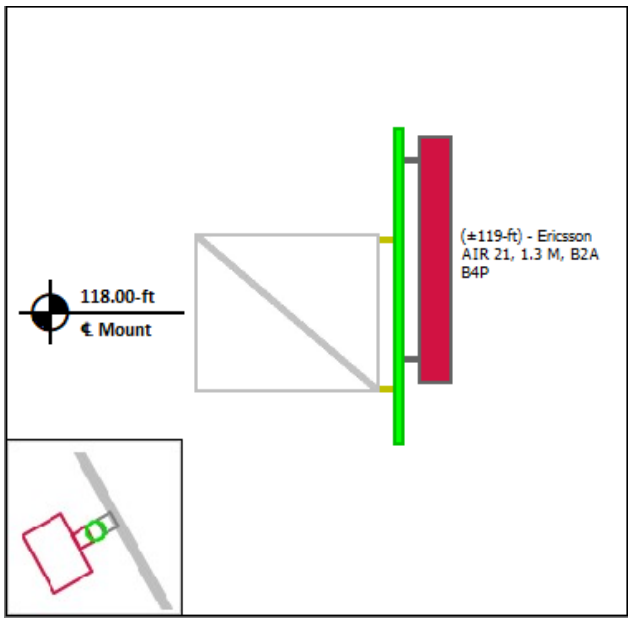


Mount Pipe H

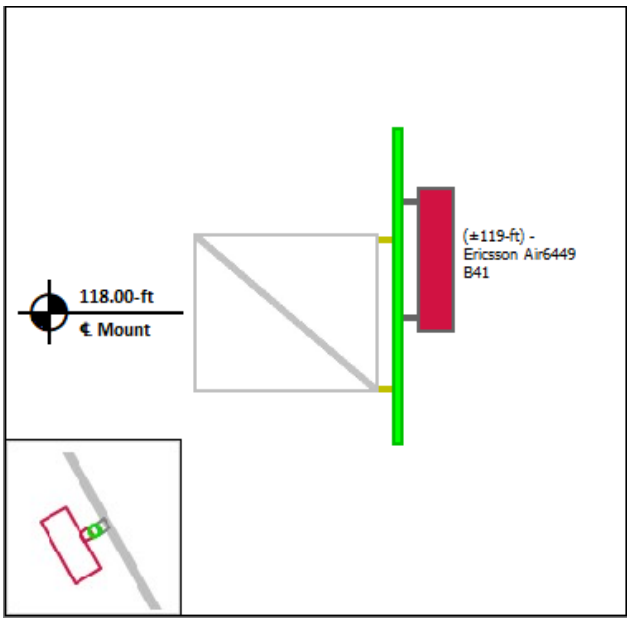


Equipment Layout Cont'd.

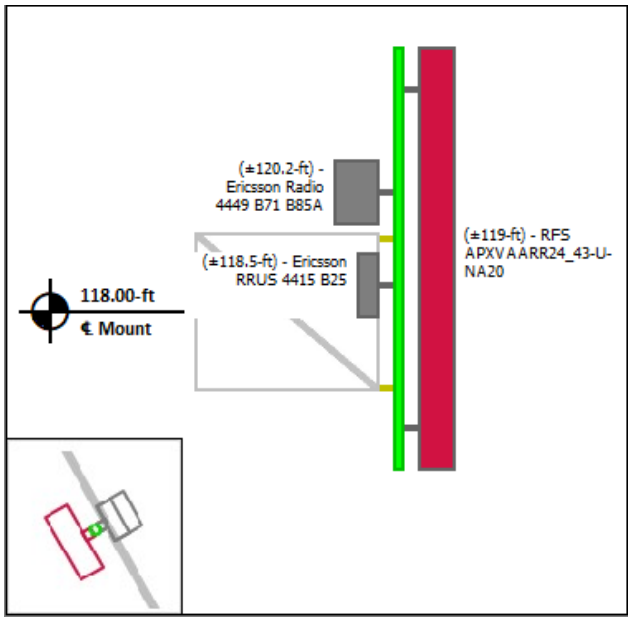
Mount Pipe I



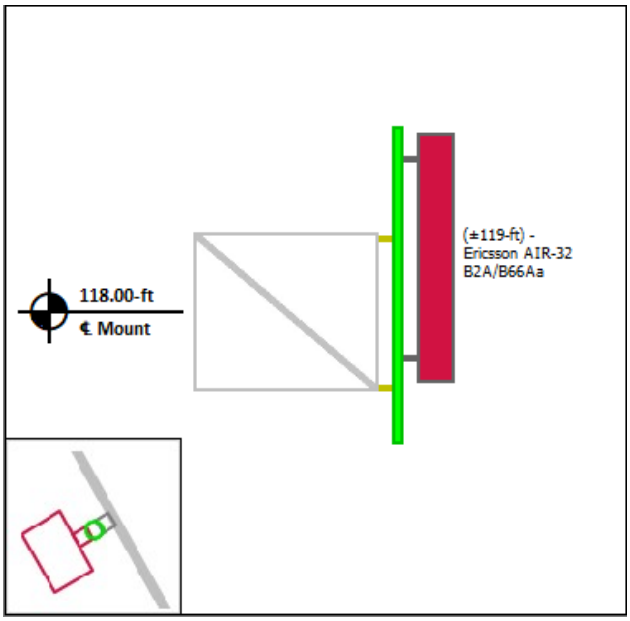
Mount Pipe J



Mount Pipe K



Mount Pipe L



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

AMERICAN TOWER®
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Site Number:	*283418*
Project Number:	*13251803_C8_01*
Carrier:	*Metro Pcs Inc*
Mount Elevation:	*118 ft*
Date:	6/25/2020

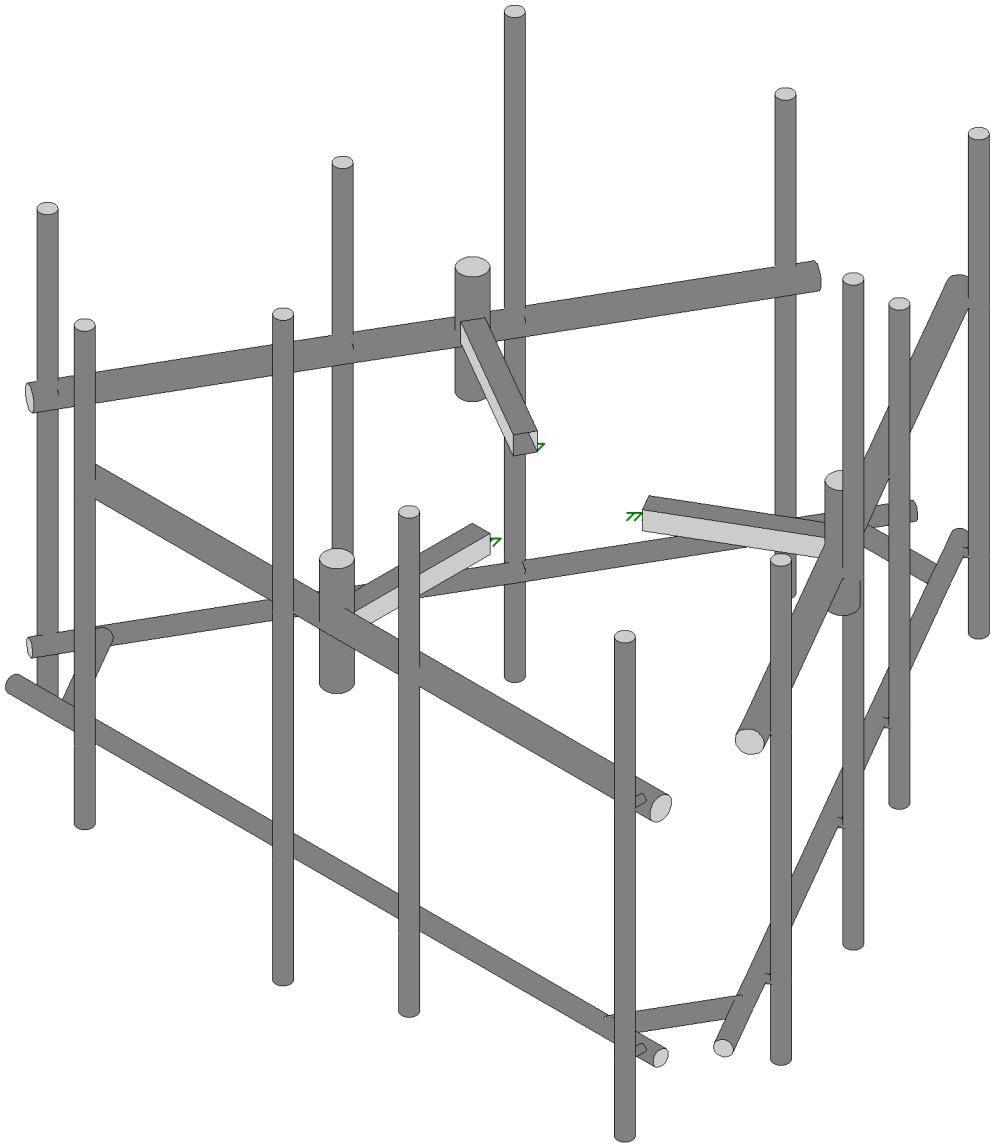
Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.31	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	1.00	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	120	mph
Velocity Pressure	q_z	45.9	psf
Height Escalation Factor	K_{iz}	1.14	
Thickness of Radial Glaze Ice	T_{iz}	1.14	in

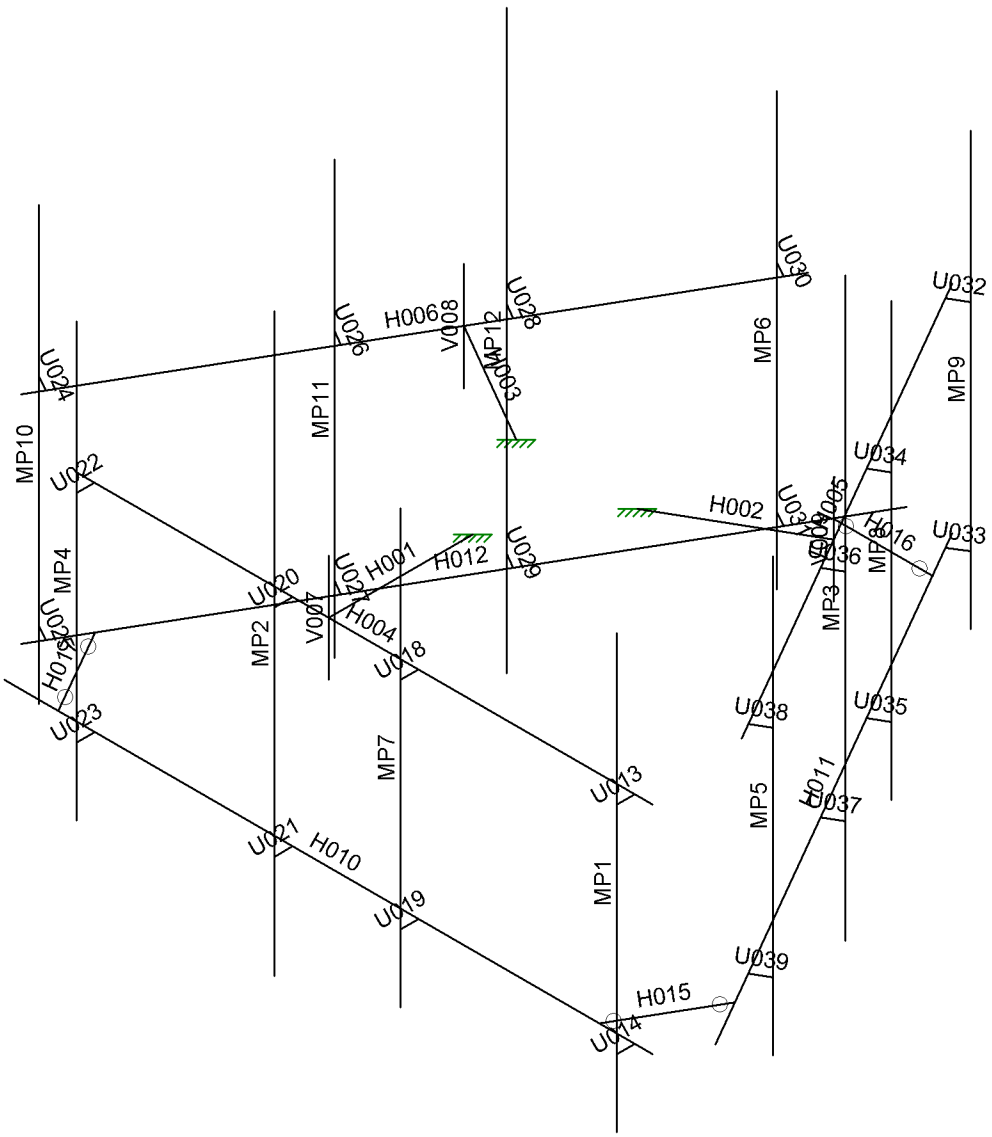
Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.217	
1 Second DSRAP	S_{D1}	0.086	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.108	
Amplification Factor	A	1.0	
Total Weight	W	2373.3	lbs
Total Shear Force	V_S	257.0	lbs
Horizontal Seismic Load	Eh	257.0	lbs
Vertical Seismic Load	Ev	102.8	lbs

Antenna Calculations

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
Ericsson AIR 21, 1.3 M, B2A B4P	56.0	12.0	8.0	83.0	6.05	3.11	7.49	4.16
RFS APXVAARR24_43-U-NA20	95.9	24.0	8.7	127.9	20.24	3.48	22.68	4.49
Ericsson AIR-32 B2A/B66Aa	56.6	12.9	8.7	132.2	6.51	3.31	7.96	4.34
Ericsson Air6449 B41	33.1	20.6	8.6	104.0	5.68	1.56	6.74	2.11
Ericsson Radio 4449 B71 B85A	15.0	13.2	10.5	75.0	1.65	1.31	2.23	1.84
Ericsson RRUS 4415 B25	15.0	13.2	5.4	46.0	1.65	0.68	2.23	1.12



American Tower Corp.		SK - 1
Michael.Ellis	283418, NORTH HAVEN CT	June 25, 2020 at 5:42 PM
13251803_C8_01	3D Rendering	R3D. METRO PCS INC @ 283418, ...



American Tower Corp.		SK - 2
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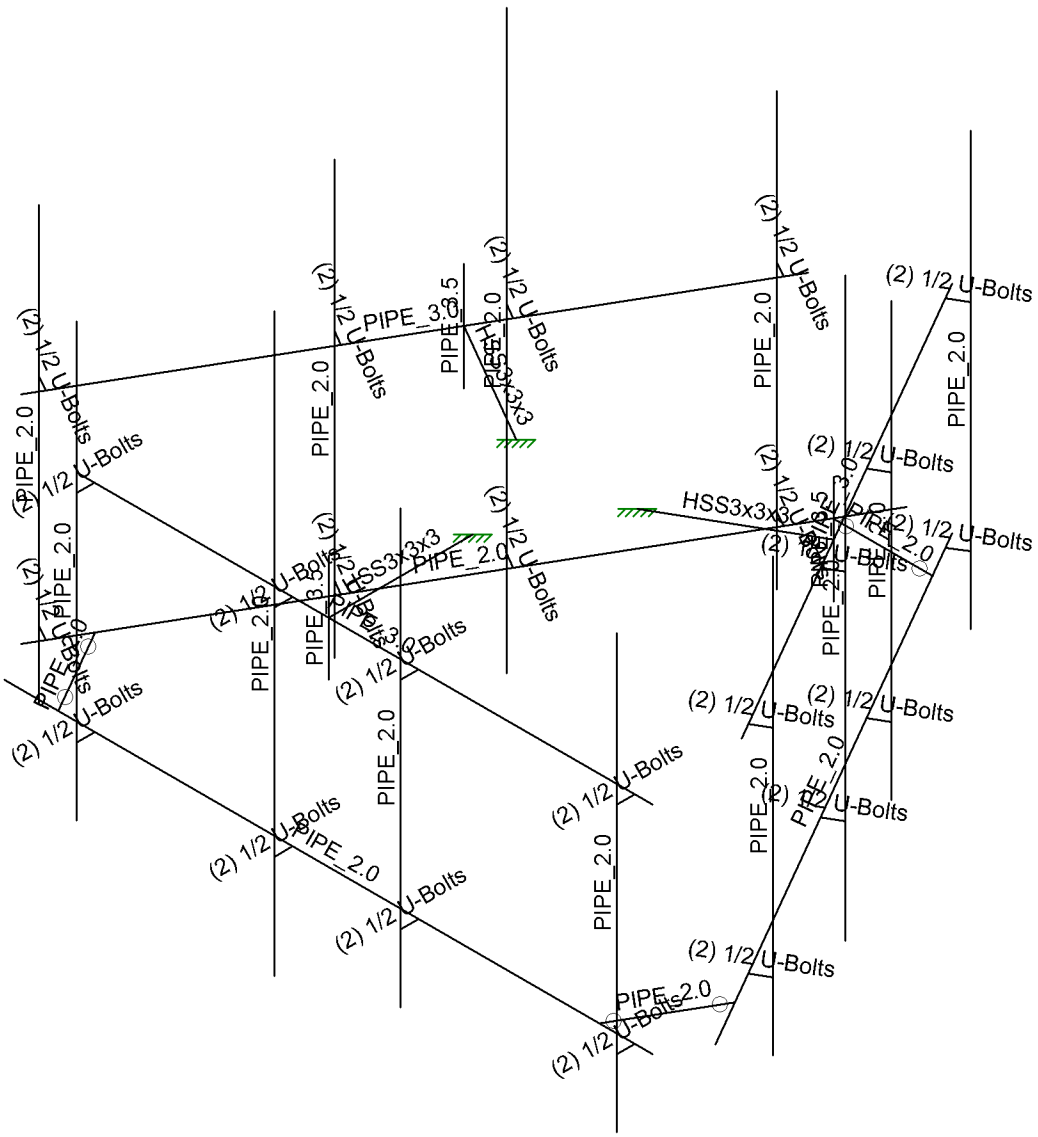
13251803_C8_01	Member Labels	R3D. METRO PCS INC @ 283418, ...



American Tower Corp.		SK - 3
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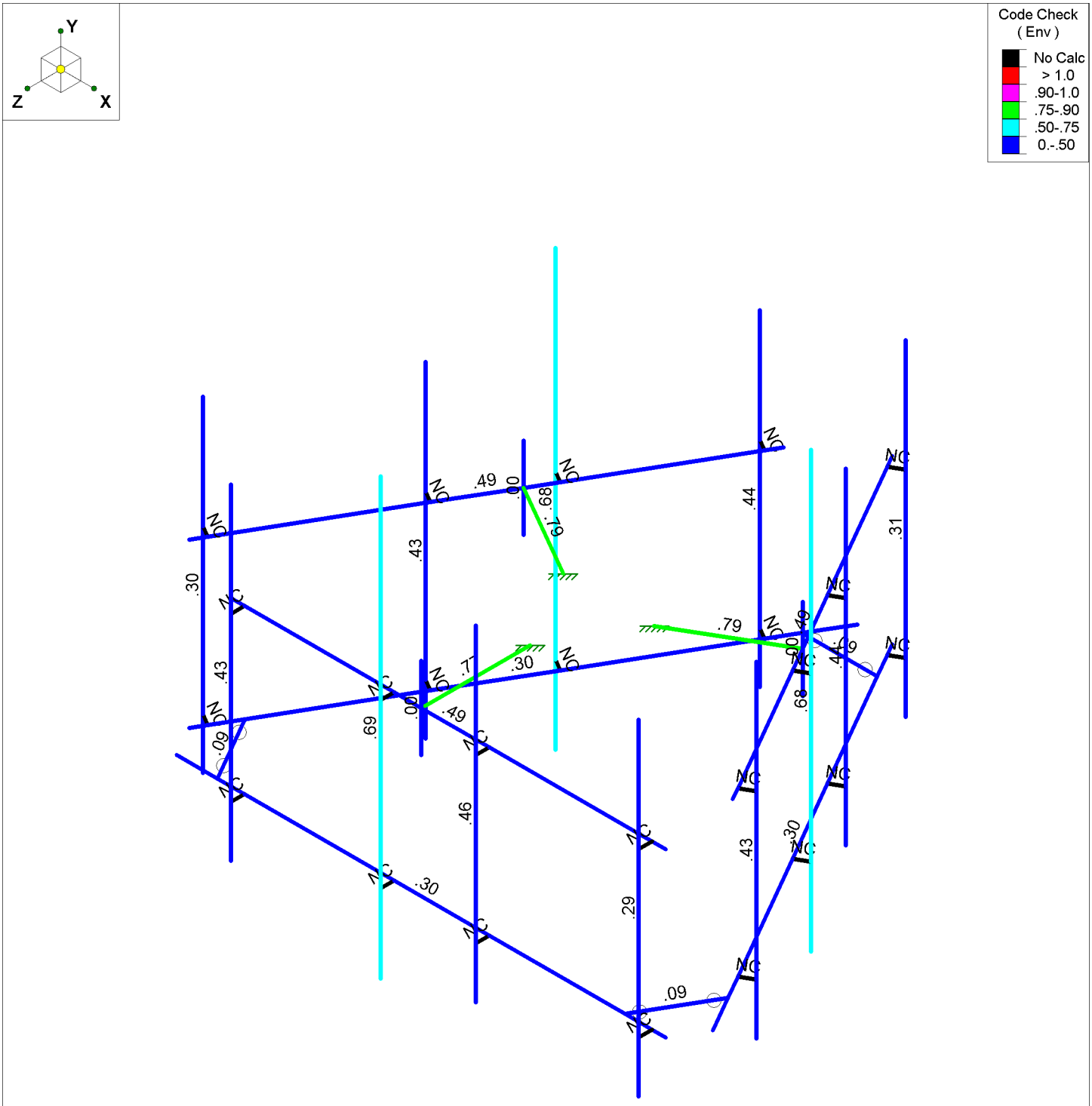
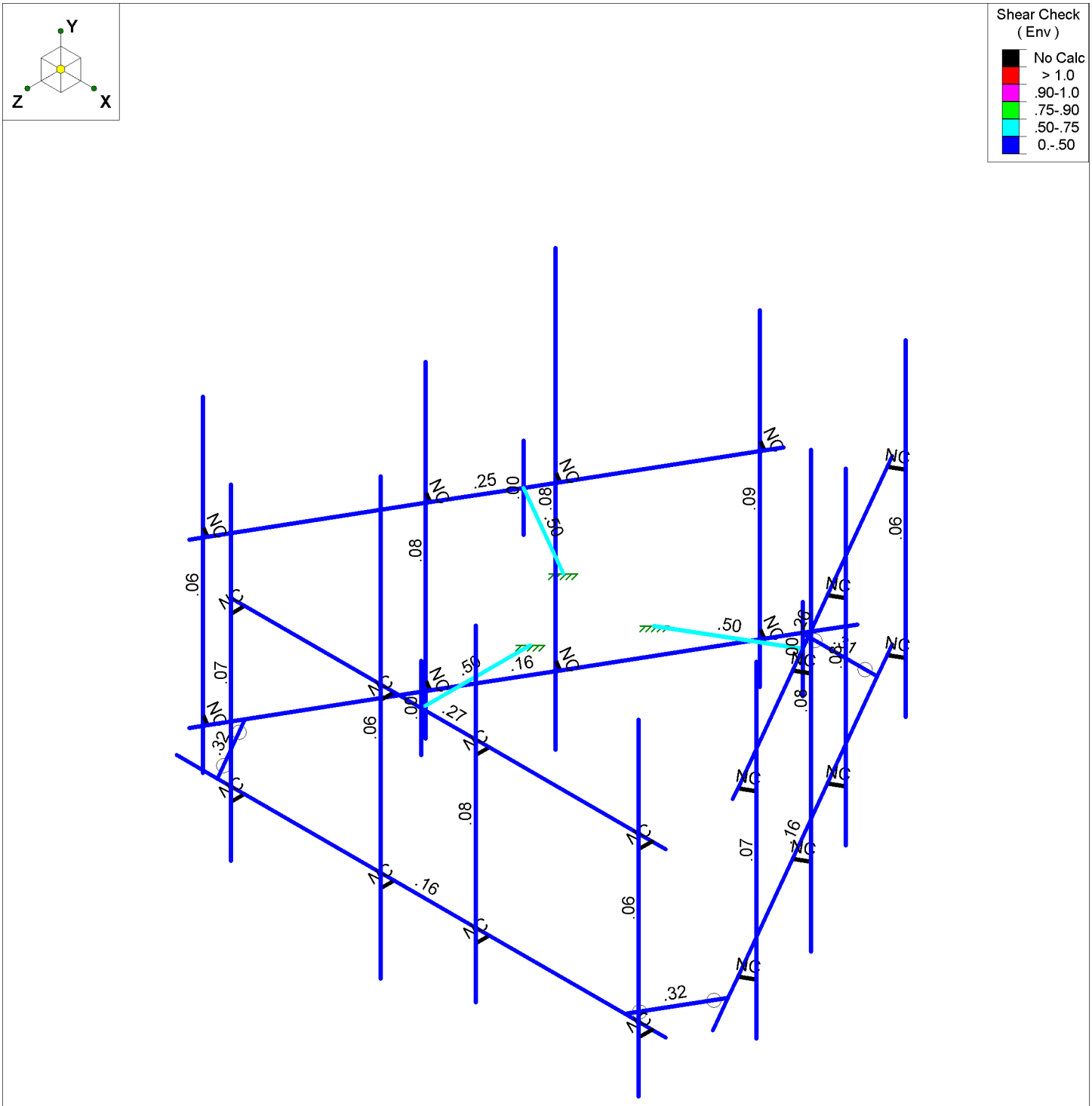


Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.4D

American Tower Corp.		SK - 4
Michael.Ellis	283418, NORTH HAVEN CT	June 25, 2020 at 5:43 PM
13251803_C8_01	Unity Bending Checks	R3D. METRO PCS INC @ 283418, ...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.4D

American Tower Corp.		SK - 5
Michael.Ellis	283418, NORTH HAVEN CT	June 25, 2020 at 5:43 PM
13251803_C8_01	Shear Checks	R3D. METRO PCS INC @ 283418, ...

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N001	48	120	156	0	
2	N002	58.028574	120	138.63	0	
3	N003	37.971426	120	138.63	0	
4	N004	48	120	180	0	
5	N005	78.813184	120	126.63	0	
6	N006	17.186816	120	126.63	0	
7	N007	102	120	180	0	
8	N008	6	120	180	0	
9	N009	51.813184	120	79.864628	0	
10	N010	-9.813184	120	173.395372	0	
11	N011	99.813184	120	163.003067	0	
12	N012	38.186816	120	90.256933	0	
13	N013	48	111	180	0	
14	N014	78.813184	111	126.63	0	
15	N015	17.186816	111	126.63	0	
16	N016	48	129	180	0	
17	N017	78.813184	129	126.63	0	
18	N018	17.186816	129	126.63	0	
19	N019	102	84	180	0	
20	N020	-6	84	180	0	
21	N021	51.813184	84	79.864628	0	
22	N022	-9.813184	84	173.395372	0	
23	N023	105.813184	84	173.395372	0	
24	N024	44.186816	84	79.864628	0	
25	N025	99	120	183	0	
26	N026	99	120	180	0	
27	N027	99	84	183	0	
28	N028	99	84	180	0	
29	N029	93	84	180	0	
30	N030	56.313184	84	87.658857	0	
31	N031	-5.313184	84	165.601143	0	
32	N032	3	84	180	0	
33	N033	101.313184	84	165.601143	0	
34	N034	39.686816	84	87.658857	0	
35	N035	42	120	183	0	
36	N036	84.41126	120	130.326152	0	
37	N037	9	120	183	0	
38	N038	100.91126	120	158.904991	0	
39	N039	34.08874	120	91.355009	0	
40	N040	63	120	183	0	
41	N041	73.91126	120	112.139619	0	
42	N042	63	120	180	0	
43	N043	63	84	183	0	
44	N044	63	84	180	0	
45	N045	42	120	180	0	
46	N046	42	84	183	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
47	N047	42	84	180	0	
48	N048	9	120	180	0	
49	N049	9	84	183	0	
50	N050	9	84	180	0	
51	N051	55.91126	120	80.962704	0	
52	N052	-10.91126	120	169.297296	0	
53	N053	7.08874	120	138.120381	0	
54	N054	17.58874	120	119.933848	0	
55	N055	-8.313184	120	170.797296	0	
56	N056	-10.91126	84	169.297296	0	
57	N057	-8.313184	84	170.797296	0	
58	N058	9.686816	120	139.620381	0	
59	N059	7.08874	84	138.120381	0	
60	N060	9.686816	84	139.620381	0	
61	N061	20.186816	120	121.433848	0	
62	N062	17.58874	84	119.933848	0	
63	N063	20.186816	84	121.433848	0	
64	N064	36.686816	120	92.855009	0	
65	N065	34.08874	84	91.355009	0	
66	N066	36.686816	84	92.855009	0	
67	N067	53.313184	120	82.462704	0	
68	N068	55.91126	84	80.962704	0	
69	N069	53.313184	84	82.462704	0	
70	N070	71.313184	120	113.639619	0	
71	N071	73.91126	84	112.139619	0	
72	N072	71.313184	84	113.639619	0	
73	N073	81.813184	120	131.826152	0	
74	N074	84.41126	84	130.326152	0	
75	N075	81.813184	84	131.826152	0	
76	N076	98.313184	120	160.404991	0	
77	N077	100.91126	84	158.904991	0	
78	N078	98.313184	84	160.404991	0	
79	MP1t	99	144.75	183	0	
80	MP1b	99	72.75	183	0	
81	MP2t	42	162.75	183	0	
82	MP2b	42	66.75	183	0	
83	MP3t	84.41126	162.75	130.326152	0	
84	MP3b	84.41126	66.75	130.326152	0	
85	MP4t	9	144.75	183	0	
86	MP4b	9	72.75	183	0	
87	MP5t	100.91126	144.75	158.904991	0	
88	MP5b	100.91126	72.75	158.904991	0	
89	MP6t	34.08874	144.75	91.355009	0	
90	MP6b	34.08874	72.75	91.355009	0	
91	MP7t	63	144.75	183	0	
92	MP7b	63	72.75	183	0	
93	MP8t	73.91126	144.75	112.139619	0	
94	MP8b	73.91126	72.75	112.139619	0	
95	MP9t	55.91126	144.75	80.962704	0	
96	MP9b	55.91126	72.75	80.962704	0	
97	MP10t	-10.91126	144.75	169.297296	0	
98	MP10b	-10.91126	72.75	169.297296	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
99	MP11t	7.08874	144.75	138.120381	0	
100	MP11b	7.08874	72.75	138.120381	0	
101	MP12t	17.58874	162.75	119.933848	0	
102	MP12b	17.58874	66.75	119.933848	0	
103	NAL1	-16.91126	186.75	207	0	
104	NAL2	-16.91126	60.75	207	0	
105	NAL3	111.813184	186.75	207	0	
106	NAL4	111.813184	60.75	207	0	
107	NAL5	111.813184	186.75	55.864628	0	
108	NAL6	111.813184	60.75	55.864628	0	

Joint Boundary Conditions

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-in/rad]	Y Rot.[k-in/rad]	Z Rot.[k-in/rad]
1	N001	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N002	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N003	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	H001	N001	N004			HSS3x3x3	Beam	None	A500 Gr. ...	Typical
2	H002	N002	N005			HSS3x3x3	Beam	None	500 Gr. ...	Typical
3	H003	N003	N006			HSS3x3x3	Beam	None	A500 Gr. ...	Typical
4	H004	N007	N008			PIPE_3.0	Beam	None	A53 Gr. B	Typical
5	H005	N009	N011			PIPE_3.0	Beam	None	A53 Gr. B	Typical
6	H006	N010	N012			PIPE_3.0	Beam	None	A53 Gr. B	Typical
7	V007	N013	N016			PIPE_3.5	Column	None	A53 Gr. B	Typical
8	V008	N018	N015			PIPE_3.5	Column	None	A53 Gr. B	Typical
9	V009	N017	N014			PIPE_3.5	Column	None	A53 Gr. B	Typical
10	H010	N019	N020			PIPE_2.0	Beam	None	A53 Gr. B	Typical
11	H011	N021	N023			PIPE_2.0	Beam	None	A53 Gr. B	Typical
12	H012	N022	N024			PIPE_2.0	Beam	None	A53 Gr. B	Typical
13	U013	N025	N026			(2) 1/2 U-Bolts	Beam	None	A36	Typical
14	U014	N027	N028			(2) 1/2 U-Bolts	Beam	None	A36	Typical
15	H015	N029	N033			PIPE_2.0	Beam	None	A53 Gr. B	Typical
16	H016	N030	N034			PIPE_2.0	Beam	None	A53 Gr. B	Typical
17	H017	N031	N032			PIPE_2.0	Beam	None	A53 Gr. B	Typical
18	U018	N040	N042			(2) 1/2 U-Bolts	Beam	None	A36	Typical
19	U019	N043	N044			(2) 1/2 U-Bolts	Beam	None	A36	Typical
20	U020	N035	N045			(2) 1/2 U-Bolts	Beam	None	A36	Typical
21	U021	N046	N047			(2) 1/2 U-Bolts	Beam	None	A36	Typical
22	U022	N037	N048			(2) 1/2 U-Bolts	Beam	None	A36	Typical
23	U023	N049	N050			(2) 1/2 U-Bolts	Beam	None	A36	Typical
24	U024	N052	N055			(2) 1/2 U-Bolts	Beam	None	A36	Typical
25	U025	N056	N057			(2) 1/2 U-Bolts	Beam	None	A36	Typical
26	U026	N053	N058			(2) 1/2 U-Bolts	Beam	None	A36	Typical
27	U027	N059	N060			(2) 1/2 U-Bolts	Beam	None	A36	Typical
28	U028	N054	N061			(2) 1/2 U-Bolts	Beam	None	A36	Typical
29	U029	N062	N063			(2) 1/2 U-Bolts	Beam	None	A36	Typical
30	U030	N039	N064			(2) 1/2 U-Bolts	Beam	None	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
31	U031	N065	N066			(2) 1/2 U-Bolts	Beam	None	A36	Typical
32	U032	N051	N067			(2) 1/2 U-Bolts	Beam	None	A36	Typical
33	U033	N068	N069			(2) 1/2 U-Bolts	Beam	None	A36	Typical
34	U034	N041	N070			(2) 1/2 U-Bolts	Beam	None	A36	Typical
35	U035	N071	N072			(2) 1/2 U-Bolts	Beam	None	A36	Typical
36	U036	N036	N073			(2) 1/2 U-Bolts	Beam	None	A36	Typical
37	U037	N074	N075			(2) 1/2 U-Bolts	Beam	None	A36	Typical
38	U038	N038	N076			(2) 1/2 U-Bolts	Beam	None	A36	Typical
39	U039	N077	N078			(2) 1/2 U-Bolts	Beam	None	A36	Typical
40	MP1	MP1t	MP1b			PIPE_2.0	Column	None	A53 Gr. B	Typical
41	MP2	MP2t	MP2b			PIPE_2.0	Column	None	A53 Gr. B	Typical
42	MP3	MP3t	MP3b			PIPE_2.0	Column	None	A53 Gr. B	Typical
43	MP4	MP4t	MP4b			PIPE_2.0	Column	None	A53 Gr. B	Typical
44	MP5	MP5t	MP5b			PIPE_2.0	Column	None	A53 Gr. B	Typical
45	MP6	MP6t	MP6b			PIPE_2.0	Column	None	A53 Gr. B	Typical
46	MP7	MP7t	MP7b			PIPE_2.0	Column	None	A53 Gr. B	Typical
47	MP8	MP8t	MP8b			PIPE_2.0	Column	None	A53 Gr. B	Typical
48	MP9	MP9t	MP9b			PIPE_2.0	Column	None	A53 Gr. B	Typical
49	MP10	MP10t	MP10b			PIPE_2.0	Column	None	A53 Gr. B	Typical
50	MP11	MP11t	MP11b			PIPE_2.0	Column	None	A53 Gr. B	Typical
51	MP12	MP12t	MP12b			PIPE_2.0	Column	None	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	H001						Yes				None
2	H002						Yes				None
3	H003						Yes				None
4	H004						Yes				None
5	H005						Yes				None
6	H006						Yes				None
7	V007						Yes	** NA **			None
8	V008						Yes	* NA **			None
9	V009						Yes	** NA **			None
10	H010						Yes				None
11	H011						Yes				None
12	H012						Yes				None
13	U013						Yes			Exclude	None
14	U014						Yes			Exclude	None
15	H015	BenPIN	BenPIN				Yes				None
16	H016	BenPIN	BenPIN				Yes				None
17	H017	BenPIN	BenPIN				Yes				None
18	U018						Yes			Exclude	None
19	U019						Yes			Exclude	None
20	U020						Yes			Exclude	None
21	U021						Yes			Exclude	None
22	U022						Yes			Exclude	None
23	U023						Yes			Exclude	None
24	U024						Yes			Exclude	None
25	U025						Yes			Exclude	None
26	U026						Yes			Exclude	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...
27	U027						Yes			Exclude	None
28	U028						Yes			Exclude	None
29	U029						Yes			Exclude	None
30	U030						Yes			Exclude	None
31	U031						Yes			Exclude	None
32	U032						Yes			Exclude	None
33	U033						Yes			Exclude	None
34	U034						Yes			Exclude	None
35	U035						Yes			Exclude	None
36	U036						Yes			Exclude	None
37	U037						Yes			Exclude	None
38	U038						Yes			Exclude	None
39	U039						Yes			Exclude	None
40	MP1						Yes	*	NA **		None
41	MP2						Yes	**	NA **		None
42	MP3						Yes	*	NA **		None
43	MP4						Yes	**	NA **		None
44	MP5						Yes	*	NA **		None
45	MP6						Yes	**	NA **		None
46	MP7						Yes	*	NA **		None
47	MP8						Yes	**	NA **		None
48	MP9						Yes	*	NA **		None
49	MP10						Yes	**	NA **		None
50	MP11						Yes	*	NA **		None
51	MP12						Yes	**	NA **		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	H001	HSS3x3x3	24						1	1		Lateral
2	H002	HSS3x3x3	24						1	1		Lateral
3	H003	HSS3x3x3	24						1	1		Lateral
4	H004	PIPE 3.0	96						1	1		Lateral
5	H005	PIPE 3.0	96						1	1		Lateral
6	H006	PIPE 3.0	96						1	1		Lateral
7	V007	PIPE 3.5	18						1	1		Lateral
8	V008	PIPE 3.5	18						1	1		Lateral
9	V009	PIPE 3.5	18						1	1		Lateral
10	H010	PIPE 2.0	108						1	1		Lateral
11	H011	PIPE 2.0	108						1	1		Lateral
12	H012	PIPE 2.0	108						1	1		Lateral
13	U013	(2) 1/2 U-B...	3						.5	.5		Lateral
14	U014	(2) 1/2 U-B...	3						.5	.5		Lateral
15	H015	PIPE 2.0	16.626						1	1		Lateral
16	H016	PIPE 2.0	16.626						1	1		Lateral
17	H017	PIPE 2.0	16.626						1	1		Lateral
18	U018	(2) 1/2 U-B...	3						.5	.5		Lateral
19	U019	(2) 1/2 U-B...	3						.5	.5		Lateral
20	U020	(2) 1/2 U-B...	3						.5	.5		Lateral
21	U021	(2) 1/2 U-B...	3						.5	.5		Lateral
22	U022	(2) 1/2 U-B...	3						.5	.5		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
23	U023	(2) 1/2 U-B...	3						5	5		Lateral
24	U024	(2) 1/2 U-B...	3						5	5		Lateral
25	U025	(2) 1/2 U-B...	3						5	5		Lateral
26	U026	(2) 1/2 U-B...	3						5	5		Lateral
27	U027	(2) 1/2 U-B...	3						5	5		Lateral
28	U028	(2) 1/2 U-B...	3						5	5		Lateral
29	U029	(2) 1/2 U-B...	3						5	5		Lateral
30	U030	(2) 1/2 U-B...	3						5	5		Lateral
31	U031	(2) 1/2 U-B...	3						5	5		Lateral
32	U032	(2) 1/2 U-B...	3						5	5		Lateral
33	U033	(2) 1/2 U-B...	3						5	5		Lateral
34	U034	(2) 1/2 U-B...	3						5	5		Lateral
35	U035	(2) 1/2 U-B...	3						5	5		Lateral
36	U036	(2) 1/2 U-B...	3						5	5		Lateral
37	U037	(2) 1/2 U-B...	3						5	5		Lateral
38	U038	(2) 1/2 U-B...	3						5	5		Lateral
39	U039	(2) 1/2 U-B...	3						5	5		Lateral
40	MP1	PIPE 2.0	72						2.1	2.1		Lateral
41	MP2	PIPE 2.0	96						2.1	2.1		Lateral
42	MP3	PIPE 2.0	96						2.1	2.1		Lateral
43	MP4	PIPE 2.0	72						2.1	2.1		Lateral
44	MP5	PIPE 2.0	72						2.1	2.1		Lateral
45	MP6	PIPE 2.0	72						2.1	2.1		Lateral
46	MP7	PIPE 2.0	72						2.1	2.1		Lateral
47	MP8	PIPE 2.0	72						2.1	2.1		Lateral
48	MP9	PIPE 2.0	72						2.1	2.1		Lateral
49	MP10	PIPE 2.0	72						2.1	2.1		Lateral
50	MP11	PIPE 2.0	72						2.1	2.1		Lateral
51	MP12	PIPE 2.0	96						2.1	2.1		Lateral

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm (/1E..	Density[lb/f...	Yield[psi]	Ry	Fu[psi]	Rt
1	A36	2.9e+7	1.115e+7	.3	.65	490	36000	1.5	58000	1.2
2	A572-50	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
3	A500 Gr. B [RND]	2.9e+7	1.115e+7	.3	.65	527	42000	1.4	58000	1.3
4	A500 Gr. B [SQR]	2.9e+7	1.115e+7	.3	.65	527	46000	1.4	58000	1.3
5	A500 Gr. C	2.9e+7	1.115e+7	.3	.65	190	46000	1.4	62000	1.3
6	A1085	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
7	A53 Gr. B	2.9e+7	1.115e+7	.3	.65	490	35000	1.6	60000	1.2
8	A992	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
9	SAE J429 Gr. 2	2.9e+7	1.115e+7	.3	.65	490	57000	1.1	74000	1.1

Joint Loads and Enforced Displacements (BLC 12 : Lm (1))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP1t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 13 : Lm (2))

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

Joint Loads and Enforced Displacements (BLC 13 : Lm (2)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP2t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 14 : Lm (3))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP3t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 15 : Lm (4))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP4t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 16 : Lm (5))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP5t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 17 : Lm (6))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP6t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 18 : Lm (7))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP7t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 19 : Lm (8))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP8t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 20 : Lm (9))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP9t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 21 : Lm (10))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP10t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 22 : Lm (11))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP11t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 23 : Lm (12))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP12t	L	Y	-500

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-41.5	6.85

Member Point Loads (BLC 1 : Dead) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
2	MP1	Y	-41.5	51.65
3	MP2	Y	-63.95	8.9
4	MP2	Y	-63.95	85.6
5	MP2	Y	-46	53.25
6	MP2	Y	-75	32.25
7	MP3	Y	-63.95	8.9
8	MP3	Y	-63.95	85.6
9	MP3	Y	-75	32.25
10	MP3	Y	-46	53.25
11	MP4	Y	-66.1	6.6
12	MP4	Y	-66.1	51.9
13	MP5	Y	-66.1	6.6
14	MP5	Y	-66.1	51.9
15	MP6	Y	-66.1	6.6
16	MP6	Y	-66.1	51.9
17	MP7	Y	-52	16
18	MP7	Y	-52	42.5
19	MP8	Y	-52	16
20	MP8	Y	-52	42.5
21	MP9	Y	-41.5	6.85
22	MP9	Y	-41.5	51.65
23	MP10	Y	-41.5	6.85
24	MP10	Y	-41.5	51.65
25	MP11	Y	-52	16
26	MP11	Y	-52	42.5
27	MP12	Y	-63.95	8.9
28	MP12	Y	-63.95	85.6
29	MP12	Y	-75	32.25
30	MP12	Y	-46	53.25

Member Point Loads (BLC 2 : Ice)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-52.458	6.85
2	MP1	Y	-52.458	51.65
3	MP2	Y	-137.066	8.9
4	MP2	Y	-137.066	85.6
5	MP2	Y	-32.502	53.25
6	MP2	Y	-44.2	32.25
7	MP3	Y	-137.066	8.9
8	MP3	Y	-137.066	85.6
9	MP3	Y	-44.2	32.25
10	MP3	Y	-32.502	53.25
11	MP4	Y	-57.116	6.6
12	MP4	Y	-57.116	51.9
13	MP5	Y	-57.116	6.6
14	MP5	Y	-57.116	51.9
15	MP6	Y	-57.116	6.6
16	MP6	Y	-57.116	51.9
17	MP7	Y	-48.564	16
18	MP7	Y	-48.564	42.5
19	MP8	Y	-48.564	16

Member Point Loads (BLC 2 : Ice) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP8	Y	-48.564	42.5
21	MP9	Y	-52.458	6.85
22	MP9	Y	-52.458	51.65
23	MP10	Y	-52.458	6.85
24	MP10	Y	-52.458	51.65
25	MP11	Y	-48.564	16
26	MP11	Y	-48.564	42.5
27	MP12	Y	-137.066	8.9
28	MP12	Y	-137.066	85.6
29	MP12	Y	-44.2	32.25
30	MP12	Y	-32.302	53.25

Member Point Loads (BLC 3 : Wind -Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-125.121	6.85
2	MP1	Z	-125.121	51.65
3	MP2	Z	-418.684	8.9
4	MP2	Z	-418.684	85.6
5	MP2	Z	-34.127	53.25
6	MP2	Z	-34.127	32.25
7	MP3	Z	-271.612	8.9
8	MP3	Z	-271.612	85.6
9	MP3	Z	-40.574	32.25
10	MP3	Z	-29.279	53.25
11	MP4	Z	-134.646	6.6
12	MP4	Z	-134.646	51.9
13	MP5	Z	-126.557	6.6
14	MP5	Z	-126.557	51.9
15	MP6	Z	-126.557	6.6
16	MP6	Z	-126.557	51.9
17	MP7	Z	-117.526	16
18	MP7	Z	-117.526	42.5
19	MP8	Z	-86.733	16
20	MP8	Z	-86.733	42.5
21	MP9	Z	-118.288	6.85
22	MP9	Z	-118.288	51.65
23	MP10	Z	-118.288	6.85
24	MP10	Z	-118.288	51.65
25	MP11	Z	-86.733	16
26	MP11	Z	-86.733	42.5
27	MP12	Z	-271.612	8.9
28	MP12	Z	-271.612	85.6
29	MP12	Z	-40.574	32.25
30	MP12	Z	-29.279	53.25

Member Point Loads (BLC 4 : Wind -X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-64.348	6.85
2	MP1	X	-64.348	51.65
3	MP2	X	-71.903	8.9
4	MP2	X	-71.903	85.6

Member Point Loads (BLC 4 : Wind -X) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
5	MP2	X	-28.21	53.25
6	MP2	X	-54.294	32.25
7	MP3	X	-398.543	8.9
8	MP3	X	-398.543	85.6
9	MP3	X	-86.257	32.25
10	MP3	X	-73.215	53.25
11	MP4	X	-68.398	6.6
12	MP4	X	-68.398	51.9
13	MP5	X	-150.806	6.6
14	MP5	X	-150.806	51.9
15	MP6	X	-150.806	6.6
16	MP6	X	-150.806	51.9
17	MP7	X	-32.297	16
18	MP7	X	-32.297	42.5
19	MP8	X	-117.929	16
20	MP8	X	-117.929	42.5
21	MP9	X	-140.532	6.85
22	MP9	X	-140.532	51.65
23	MP10	X	-140.532	6.85
24	MP10	X	-140.532	51.65
25	MP11	X	-117.929	16
26	MP11	X	-117.929	42.5
27	MP12	X	-398.543	8.9
28	MP12	X	-398.543	85.6
29	MP12	X	-86.257	32.25
30	MP12	X	-73.215	53.25

Member Point Loads (BLC 5 : Wind -Z (Ice))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-29.75	6.85
2	MP1	Z	-29.75	51.65
3	MP2	Z	-50.532	8.9
4	MP2	Z	-50.532	85.6
5	MP2	Z	-11.943	53.25
6	MP2	Z	-11.943	32.25
7	MP3	Z	-43.402	8.9
8	MP3	Z	-43.402	85.6
9	MP3	Z	-15.397	32.25
10	MP3	Z	-13.746	53.25
11	MP4	Z	-30.094	6.6
12	MP4	Z	-30.094	51.9
13	MP5	Z	-33.529	6.6
14	MP5	Z	-33.529	51.9
15	MP6	Z	-33.529	6.6
16	MP6	Z	-33.529	51.9
17	MP7	Z	-21.936	16
18	MP7	Z	-21.936	42.5
19	MP8	Z	-20.792	16
20	MP8	Z	-20.792	42.5
21	MP9	Z	-33.619	6.85
22	MP9	Z	-33.619	51.65

Member Point Loads (BLC 5 : Wind -Z (Ice)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
23	MP10	Z	-33.619	6.85
24	MP10	Z	-33.619	51.65
25	MP11	Z	-20.792	16
26	MP11	Z	-20.792	42.5
27	MP12	Z	-43.402	8.9
28	MP12	Z	-43.402	85.6
29	MP12	Z	-15.397	32.25
30	MP12	Z	-15.740	53.25

Member Point Loads (BLC 6 : Wind -X (Ice))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-21.644	6.85
2	MP1	X	-21.644	51.65
3	MP2	X	-20.942	8.9
4	MP2	X	-20.942	85.6
5	MP2	X	-17.954	53.25
6	MP2	X	-21.769	32.25
7	MP3	X	-54.233	8.9
8	MP3	X	-54.233	85.6
9	MP3	X	-31.57	32.25
10	MP3	X	-29.662	53.25
11	MP4	X	-21.341	6.6
12	MP4	X	-21.341	51.9
13	MP5	X	-36.733	6.6
14	MP5	X	-36.733	51.9
15	MP6	X	-36.733	6.6
16	MP6	X	-36.733	51.9
17	MP7	X	-11.344	16
18	MP7	X	-11.344	42.5
19	MP8	X	-24.669	16
20	MP8	X	-24.669	42.5
21	MP9	X	-36.586	6.85
22	MP9	X	-36.586	51.65
23	MP10	X	-36.586	6.85
24	MP10	X	-36.586	51.65
25	MP11	X	-24.669	16
26	MP11	X	-24.669	42.5
27	MP12	X	-54.233	8.9
28	MP12	X	-54.233	85.6
29	MP12	X	-31.57	32.25
30	MP12	X	-29.662	53.25

Member Point Loads (BLC 7 : Wind -Z (Working))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-7.82	6.85
2	MP1	Z	-7.82	51.65
3	MP2	Z	-26.168	8.9
4	MP2	Z	-26.168	85.6
5	MP2	Z	-2.133	53.25
6	MP2	Z	-2.133	32.25
7	MP3	Z	-16.976	8.9

Member Point Loads (BLC 7 : Wind -Z (Working)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
8	MP3	Z	-16.976	85.6
9	MP3	Z	-2.536	32.25
10	MP3	Z	-1.83	53.25
11	MP4	Z	-8.415	6.6
12	MP4	Z	-8.415	51.9
13	MP5	Z	-7.91	6.6
14	MP5	Z	-7.91	51.9
15	MP6	Z	-7.91	6.6
16	MP6	Z	-7.91	51.9
17	MP7	Z	-7.345	16
18	MP7	Z	-7.345	42.5
19	MP8	Z	-5.421	16
20	MP8	Z	-5.421	42.5
21	MP9	Z	-7.393	6.85
22	MP9	Z	-7.393	51.65
23	MP10	Z	-7.393	6.85
24	MP10	Z	-7.393	51.65
25	MP11	Z	-5.421	16
26	MP11	Z	-5.421	42.5
27	MP12	Z	-16.976	8.9
28	MP12	Z	-16.976	85.6
29	MP12	Z	-2.536	32.25
30	MP12	Z	-1.83	53.25

Member Point Loads (BLC 8 : Wind -X (Working))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-4.022	6.85
2	MP1	X	-4.022	51.65
3	MP2	X	-4.494	8.9
4	MP2	X	-4.494	85.6
5	MP2	X	-1.763	53.25
6	MP2	X	-3.393	32.25
7	MP3	X	-24.909	8.9
8	MP3	X	-24.909	85.6
9	MP3	X	-5.391	32.25
10	MP3	X	-4.576	53.25
11	MP4	X	-4.275	6.6
12	MP4	X	-4.275	51.9
13	MP5	X	-9.425	6.6
14	MP5	X	-9.425	51.9
15	MP6	X	-9.425	6.6
16	MP6	X	-9.425	51.9
17	MP7	X	-2.019	16
18	MP7	X	-2.019	42.5
19	MP8	X	-7.371	16
20	MP8	X	-7.371	42.5
21	MP9	X	-8.783	6.85
22	MP9	X	-8.783	51.65
23	MP10	X	-8.783	6.85
24	MP10	X	-8.783	51.65
25	MP11	X	-7.371	16

Member Point Loads (BLC 8 : Wind -X (Working)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
26	MP11	X	-7.371	42.5
27	MP12	X	-24.909	8.9
28	MP12	X	-24.909	85.6
29	MP12	X	-5.391	32.25
30	MP12	X	-4.570	55.25

Member Distributed Loads (BLC 2 : Ice)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Y	-7.651	-7.651	0	%100
2	H002	Y	-7.651	-7.651	0	%100
3	H003	Y	-7.651	-7.651	0	%100
4	H004	Y	-6.594	-6.594	0	%100
5	H005	Y	-6.594	-6.594	0	%100
6	H006	Y	-6.594	-6.594	0	%100
7	V007	Y	-7.306	-7.306	0	%100
8	V008	Y	-7.306	-7.306	0	%100
9	V009	Y	-7.306	-7.306	0	%100
10	H010	Y	-4.994	-4.994	0	%100
11	H011	Y	-4.994	-4.994	0	%100
12	H012	Y	-4.994	-4.994	0	%100
13	H015	Y	-4.994	-4.994	0	%100
14	H016	Y	-4.994	-4.994	0	%100
15	H017	Y	-4.994	-4.994	0	%100
16	MP1	Y	-4.994	-4.994	0	%100
17	MP2	Y	-4.994	-4.994	0	%100
18	MP3	Y	-4.994	-4.994	0	%100
19	MP4	Y	-4.994	-4.994	0	%100
20	MP5	Y	-4.994	-4.994	0	%100
21	MP6	Y	-4.994	-4.994	0	%100
22	MP7	Y	-4.994	-4.994	0	%100
23	MP8	Y	-4.994	-4.994	0	%100
24	MP9	Y	-4.994	-4.994	0	%100
25	MP10	Y	-4.994	-4.994	0	%100
26	MP11	Y	-4.994	-4.994	0	%100
27	MP12	Y	-4.994	-4.994	0	%100

Member Distributed Loads (BLC 5 : Wind -Z (Ice))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-1.81	-1.81	0	%100
2	H002	Z	-1.81	-1.81	0	%100
3	H003	Z	-1.81	-1.81	0	%100
4	H004	Z	-1.81	-1.81	0	%100
5	H005	Z	-1.81	-1.81	0	%100
6	H006	Z	-1.81	-1.81	0	%100
7	V007	Z	-1.81	-1.81	0	%100
8	V008	Z	-1.81	-1.81	0	%100
9	V009	Z	-1.81	-1.81	0	%100
10	H010	Z	-1.81	-1.81	0	%100
11	H011	Z	-1.81	-1.81	0	%100
12	H012	Z	-1.81	-1.81	0	%100

Member Distributed Loads (BLC 5 : Wind -Z (Ice)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
13	H015	Z	-1.81	-1.81	0	%100
14	H016	Z	-1.81	-1.81	0	%100
15	H017	Z	-1.81	-1.81	0	%100
16	MP1	Z	-1.81	-1.81	0	%100
17	MP2	Z	-1.81	-1.81	0	%100
18	MP3	Z	-1.81	-1.81	0	%100
19	MP4	Z	-1.81	-1.81	0	%100
20	MP5	Z	-1.81	-1.81	0	%100
21	MP6	Z	-1.81	-1.81	0	%100
22	MP7	Z	-1.81	-1.81	0	%100
23	MP8	Z	-1.81	-1.81	0	%100
24	MP9	Z	-1.81	-1.81	0	%100
25	MP10	Z	-1.81	-1.81	0	%100
26	MP11	Z	-1.81	-1.81	0	%100
27	MP12	Z	-1.81	-1.81	0	%100

Member Distributed Loads (BLC 6 : Wind -X (Ice))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	X	-1.811	-1.811	0	%100
2	H002	X	-1.811	-1.811	0	%100
3	H003	X	-1.811	-1.811	0	%100
4	H004	X	-1.811	-1.811	0	%100
5	H005	X	-1.811	-1.811	0	%100
6	H006	X	-1.811	-1.811	0	%100
7	V007	X	-1.811	-1.811	0	%100
8	V008	X	-1.811	-1.811	0	%100
9	V009	X	-1.811	-1.811	0	%100
10	H010	X	-1.811	-1.811	0	%100
11	H011	X	-1.811	-1.811	0	%100
12	H012	X	-1.811	-1.811	0	%100
13	H015	X	-1.811	-1.811	0	%100
14	H016	X	-1.811	-1.811	0	%100
15	H017	X	-1.811	-1.811	0	%100
16	MP1	X	-1.811	-1.811	0	%100
17	MP2	X	-1.811	-1.811	0	%100
18	MP3	X	-1.811	-1.811	0	%100
19	MP4	X	-1.811	-1.811	0	%100
20	MP5	X	-1.811	-1.811	0	%100
21	MP6	X	-1.811	-1.811	0	%100
22	MP7	X	-1.811	-1.811	0	%100
23	MP8	X	-1.811	-1.811	0	%100
24	MP9	X	-1.811	-1.811	0	%100
25	MP10	X	-1.811	-1.811	0	%100
26	MP11	X	-1.811	-1.811	0	%100
27	MP12	X	-1.811	-1.811	0	%100

Member Distributed Loads (BLC 9 : Ev -Y (Seismic))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Y	-.687	-.687	0	%100
2	H002	Y	-.687	-.687	0	%100
3	H003	Y	-.687	-.687	0	%100

Member Distributed Loads (BLC 9 : Ev -Y (Seismic)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
4	H004	Y	-.687	-.687	0	%100
5	H005	Y	-.687	-.687	0	%100
6	H006	Y	-.687	-.687	0	%100
7	V007	Y	-.687	-.687	0	%100
8	V008	Y	-.687	-.687	0	%100
9	V009	Y	-.687	-.687	0	%100
10	H010	Y	-.687	-.687	0	%100
11	H011	Y	-.687	-.687	0	%100
12	H012	Y	-.687	-.687	0	%100
13	H015	Y	-.687	-.687	0	%100
14	H016	Y	-.687	-.687	0	%100
15	H017	Y	-.687	-.687	0	%100
16	MP1	Y	-.687	-.687	0	%100
17	MP2	Y	-.687	-.687	0	%100
18	MP3	Y	-.687	-.687	0	%100
19	MP4	Y	-.687	-.687	0	%100
20	MP5	Y	-.687	-.687	0	%100
21	MP6	Y	-.687	-.687	0	%100
22	MP7	Y	-.687	-.687	0	%100
23	MP8	Y	-.687	-.687	0	%100
24	MP9	Y	-.687	-.687	0	%100
25	MP10	Y	-.687	-.687	0	%100
26	MP11	Y	-.687	-.687	0	%100
27	MP12	Y	-.687	-.687	0	%100

Member Distributed Loads (BLC 10 : Eh -Z (Seismic))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-1.717	-1.717	0	%100
2	H002	Z	-1.717	-1.717	0	%100
3	H003	Z	-1.717	-1.717	0	%100
4	H004	Z	-1.717	-1.717	0	%100
5	H005	Z	-1.717	-1.717	0	%100
6	H006	Z	-1.717	-1.717	0	%100
7	V007	Z	-1.717	-1.717	0	%100
8	V008	Z	-1.717	-1.717	0	%100
9	V009	Z	-1.717	-1.717	0	%100
10	H010	Z	-1.717	-1.717	0	%100
11	H011	Z	-1.717	-1.717	0	%100
12	H012	Z	-1.717	-1.717	0	%100
13	H015	Z	-1.717	-1.717	0	%100
14	H016	Z	-1.717	-1.717	0	%100
15	H017	Z	-1.717	-1.717	0	%100
16	MP1	Z	-1.717	-1.717	0	%100
17	MP2	Z	-1.717	-1.717	0	%100
18	MP3	Z	-1.717	-1.717	0	%100
19	MP4	Z	-1.717	-1.717	0	%100
20	MP5	Z	-1.717	-1.717	0	%100
21	MP6	Z	-1.717	-1.717	0	%100
22	MP7	Z	-1.717	-1.717	0	%100
23	MP8	Z	-1.717	-1.717	0	%100
24	MP9	Z	-1.717	-1.717	0	%100

Member Distributed Loads (BLC 10 : Eh -Z (Seismic)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
25	MP10	Z	-1.717	-1.717	0	%100
26	MP11	Z	-1.717	-1.717	0	%100
27	MP12	Z	-1.717	-1.717	0	%100

Member Distributed Loads (BLC 11 : Eh -X (Seismic))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	X	-1.717	-1.717	0	%100
2	H002	X	-1.717	-1.717	0	%100
3	H003	X	-1.717	-1.717	0	%100
4	H004	X	-1.717	-1.717	0	%100
5	H005	X	-1.717	-1.717	0	%100
6	H006	X	-1.717	-1.717	0	%100
7	V007	X	-1.717	-1.717	0	%100
8	V008	X	-1.717	-1.717	0	%100
9	V009	X	-1.717	-1.717	0	%100
10	H010	X	-1.717	-1.717	0	%100
11	H011	X	-1.717	-1.717	0	%100
12	H012	X	-1.717	-1.717	0	%100
13	H015	X	-1.717	-1.717	0	%100
14	H016	X	-1.717	-1.717	0	%100
15	H017	X	-1.717	-1.717	0	%100
16	MP1	X	-1.717	-1.717	0	%100
17	MP2	X	-1.717	-1.717	0	%100
18	MP3	X	-1.717	-1.717	0	%100
19	MP4	X	-1.717	-1.717	0	%100
20	MP5	X	-1.717	-1.717	0	%100
21	MP6	X	-1.717	-1.717	0	%100
22	MP7	X	-1.717	-1.717	0	%100
23	MP8	X	-1.717	-1.717	0	%100
24	MP9	X	-1.717	-1.717	0	%100
25	MP10	X	-1.717	-1.717	0	%100
26	MP11	X	-1.717	-1.717	0	%100
27	MP12	X	-1.717	-1.717	0	%100

Member Distributed Loads (BLC 24 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H002	Z	-10.728	-10.728	0	24
2	H003	Z	-10.728	-10.728	0	24
3	H004	Z	-14.453	-14.453	0	96
4	H005	Z	-7.226	-7.226	0	96
5	H006	Z	-7.226	-7.226	0	96
6	V007	Z	-16.517	-16.517	0	18
7	V008	Z	-16.517	-16.517	0	18
8	V009	Z	-16.517	-16.517	0	18
9	H010	Z	-9.807	-9.807	0	108
10	H011	Z	-4.904	-4.904	0	108
11	H012	Z	-4.904	-4.904	0	108
12	H015	Z	-4.904	-4.904	0	16.626
13	H016	Z	-9.807	-9.807	0	16.626
14	H017	Z	-4.904	-4.904	0	16.626
15	U024	Z	-3.576	-3.576	0	3

Member Distributed Loads (BLC 24 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[in,%]	End Location[in,%]
16	U025	Z	-3.576	-3.576	0	3
17	U026	Z	-3.576	-3.576	0	3
18	U027	Z	-3.576	-3.576	0	3
19	U028	Z	-3.576	-3.576	0	3
20	U029	Z	-3.576	-3.576	0	3
21	U030	Z	-3.576	-3.576	0	3
22	U031	Z	-3.576	-3.576	0	3
23	U032	Z	-3.576	-3.576	0	3
24	U033	Z	-3.576	-3.576	0	3
25	U034	Z	-3.576	-3.576	0	3
26	U035	Z	-3.576	-3.576	0	3
27	U036	Z	-3.576	-3.576	0	3
28	U037	Z	-3.576	-3.576	0	3
29	U038	Z	-3.576	-3.576	0	3
30	U039	Z	-3.576	-3.576	0	3
31	MP1	Z	-9.807	-9.807	0	72
32	MP2	Z	-9.807	-9.807	0	96
33	MP3	Z	-9.807	-9.807	0	96
34	MP4	Z	-9.807	-9.807	0	72
35	MP5	Z	-9.807	-9.807	0	72
36	MP6	Z	-9.807	-9.807	0	72
37	MP7	Z	-9.807	-9.807	0	72
38	MP8	Z	-9.807	-9.807	0	72
39	MP9	Z	-9.807	-9.807	0	72
40	MP10	Z	-9.807	-9.807	0	72
41	MP11	Z	-9.807	-9.807	0	72
42	MP12	Z	-9.807	-9.807	0	96

Member Distributed Loads (BLC 25 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	X	-12.388	-12.388	0	24
2	H002	X	-6.194	-6.194	0	24
3	H003	X	-6.194	-6.194	0	24
4	H005	X	-12.516	-12.516	0	96
5	H006	X	-12.516	-12.516	0	96
6	V007	X	-16.517	-16.517	0	18
7	V008	X	-16.517	-16.517	0	18
8	V009	X	-16.517	-16.517	0	18
9	H011	X	-8.493	-8.493	0	108
10	H012	X	-8.493	-8.493	0	108
11	U013	X	-4.129	-4.129	0	3
12	U014	X	-4.129	-4.129	0	3
13	H015	X	-8.493	-8.493	0	16.626
14	H017	X	-8.493	-8.493	0	16.626
15	U018	X	-4.129	-4.129	0	3
16	U019	X	-4.129	-4.129	0	3
17	U020	X	-4.129	-4.129	0	3
18	U021	X	-4.129	-4.129	0	3
19	U022	X	-4.129	-4.129	0	3
20	U023	X	-4.129	-4.129	0	3
21	U024	X	-2.065	-2.065	0	3

Member Distributed Loads (BLC 25 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[in,%]	End Location[in,%]
22	U025	X	-2.065	-2.065	0	3
23	U026	X	-2.065	-2.065	0	3
24	U027	X	-2.065	-2.065	0	3
25	U028	X	-2.065	-2.065	0	3
26	U029	X	-2.065	-2.065	0	3
27	U030	X	-2.065	-2.065	0	3
28	U031	X	-2.065	-2.065	0	3
29	U032	X	-2.065	-2.065	0	3
30	U033	X	-2.065	-2.065	0	3
31	U034	X	-2.065	-2.065	0	3
32	U035	X	-2.065	-2.065	0	3
33	U036	X	-2.065	-2.065	0	3
34	U037	X	-2.065	-2.065	0	3
35	U038	X	-2.065	-2.065	0	3
36	U039	X	-2.065	-2.065	0	3
37	MP1	X	-9.807	-9.807	0	72
38	MP2	X	-9.807	-9.807	0	96
39	MP3	X	-9.807	-9.807	0	96
40	MP4	X	-9.807	-9.807	0	72
41	MP5	X	-9.807	-9.807	0	72
42	MP6	X	-9.807	-9.807	0	72
43	MP7	X	-9.807	-9.807	0	72
44	MP8	X	-9.807	-9.807	0	72
45	MP9	X	-9.807	-9.807	0	72
46	MP10	X	-9.807	-9.807	0	72
47	MP11	X	-9.807	-9.807	0	72
48	MP12	X	-9.807	-9.807	0	96

Member Distributed Loads (BLC 26 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H002	Z	-1.863	-1.863	0	24
2	H003	Z	-1.863	-1.863	0	24
3	H004	Z	-2.509	-2.509	0	96
4	H005	Z	-1.255	-1.255	0	96
5	H006	Z	-1.255	-1.255	0	96
6	V007	Z	-2.868	-2.868	0	18
7	V008	Z	-2.868	-2.868	0	18
8	V009	Z	-2.868	-2.868	0	18
9	H010	Z	-1.703	-1.703	0	108
10	H011	Z	-.851	-.851	0	108
11	H012	Z	-.851	-.851	0	108
12	H015	Z	-.851	-.851	0	16.626
13	H016	Z	-1.703	-1.703	0	16.626
14	H017	Z	-.851	-.851	0	16.626
15	U024	Z	-.621	-.621	0	3
16	U025	Z	-.621	-.621	0	3
17	U026	Z	-.621	-.621	0	3
18	U027	Z	-.621	-.621	0	3
19	U028	Z	-.621	-.621	0	3
20	U029	Z	-.621	-.621	0	3
21	U030	Z	-.621	-.621	0	3

Member Distributed Loads (BLC 26 : BLC 5 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[in,%]	End Location[in,%]
22	U031	Z	-.621	-.621	0	3
23	U032	Z	-.621	-.621	0	3
24	U033	Z	-.621	-.621	0	3
25	U034	Z	-.621	-.621	0	3
26	U035	Z	-.621	-.621	0	3
27	U036	Z	-.621	-.621	0	3
28	U037	Z	-.621	-.621	0	3
29	U038	Z	-.621	-.621	0	3
30	U039	Z	-.621	-.621	0	3
31	MP1	Z	-1.703	-1.703	0	72
32	MP2	Z	-1.703	-1.703	0	96
33	MP3	Z	-1.703	-1.703	0	96
34	MP4	Z	-1.703	-1.703	0	72
35	MP5	Z	-1.703	-1.703	0	72
36	MP6	Z	-1.703	-1.703	0	72
37	MP7	Z	-1.703	-1.703	0	72
38	MP8	Z	-1.703	-1.703	0	72
39	MP9	Z	-1.703	-1.703	0	72
40	MP10	Z	-1.703	-1.703	0	72
41	MP11	Z	-1.703	-1.703	0	72
42	MP12	Z	-1.703	-1.703	0	96

Member Distributed Loads (BLC 27 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	X	-2.151	-2.151	0	24
2	H002	X	-1.075	-1.075	0	24
3	H003	X	-1.075	-1.075	0	24
4	H005	X	-2.173	-2.173	0	96
5	H006	X	-2.173	-2.173	0	96
6	V007	X	-2.868	-2.868	0	18
7	V008	X	-2.868	-2.868	0	18
8	V009	X	-2.868	-2.868	0	18
9	H011	X	-1.475	-1.475	0	108
10	H012	X	-1.475	-1.475	0	108
11	U013	X	-.717	-.717	0	3
12	U014	X	-.717	-.717	0	3
13	H015	X	-1.475	-1.475	0	16.626
14	H017	X	-1.475	-1.475	0	16.626
15	U018	X	-.717	-.717	0	3
16	U019	X	-.717	-.717	0	3
17	U020	X	-.717	-.717	0	3
18	U021	X	-.717	-.717	0	3
19	U022	X	-.717	-.717	0	3
20	U023	X	-.717	-.717	0	3
21	U024	X	-.358	-.358	0	3
22	U025	X	-.358	-.358	0	3
23	U026	X	-.358	-.358	0	3
24	U027	X	-.358	-.358	0	3
25	U028	X	-.358	-.358	0	3
26	U029	X	-.358	-.358	0	3
27	U030	X	-.358	-.358	0	3

Member Distributed Loads (BLC 27 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
28	U031	X	-.358	-.358	0	3
29	U032	X	-.358	-.358	0	3
30	U033	X	-.358	-.358	0	3
31	U034	X	-.358	-.358	0	3
32	U035	X	-.358	-.358	0	3
33	U036	X	-.358	-.358	0	3
34	U037	X	-.358	-.358	0	3
35	U038	X	-.358	-.358	0	3
36	U039	X	-.358	-.358	0	3
37	MP1	X	-1.703	-1.703	0	72
38	MP2	X	-1.703	-1.703	0	96
39	MP3	X	-1.703	-1.703	0	96
40	MP4	X	-1.703	-1.703	0	72
41	MP5	X	-1.703	-1.703	0	72
42	MP6	X	-1.703	-1.703	0	72
43	MP7	X	-1.703	-1.703	0	72
44	MP8	X	-1.703	-1.703	0	72
45	MP9	X	-1.703	-1.703	0	72
46	MP10	X	-1.703	-1.703	0	72
47	MP11	X	-1.703	-1.703	0	72
48	MP12	X	-1.703	-1.703	0	96

Member Distributed Loads (BLC 28 : BLC 7 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H002	Z	-.671	-.671	0	24
2	H003	Z	-.671	-.671	0	24
3	H004	Z	-.903	-.903	0	96
4	H005	Z	-.452	-.452	0	96
5	H006	Z	-.452	-.452	0	96
6	V007	Z	-1.032	-1.032	0	18
7	V008	Z	-1.032	-1.032	0	18
8	V009	Z	-1.032	-1.032	0	18
9	H010	Z	-.613	-.613	0	108
10	H011	Z	-.307	-.307	0	108
11	H012	Z	-.307	-.307	0	108
12	H015	Z	-.307	-.307	0	16.626
13	H016	Z	-.613	-.613	0	16.626
14	H017	Z	-.307	-.307	0	16.626
15	U024	Z	-.224	-.224	0	3
16	U025	Z	-.224	-.224	0	3
17	U026	Z	-.224	-.224	0	3
18	U027	Z	-.224	-.224	0	3
19	U028	Z	-.224	-.224	0	3
20	U029	Z	-.224	-.224	0	3
21	U030	Z	-.224	-.224	0	3
22	U031	Z	-.224	-.224	0	3
23	U032	Z	-.224	-.224	0	3
24	U033	Z	-.224	-.224	0	3
25	U034	Z	-.224	-.224	0	3
26	U035	Z	-.224	-.224	0	3
27	U036	Z	-.224	-.224	0	3

Member Distributed Loads (BLC 28 : BLC 7 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
28	U037	Z	-.224	-.224	0	3
29	U038	Z	-.224	-.224	0	3
30	U039	Z	-.224	-.224	0	3
31	MP1	Z	-.613	-.613	0	72
32	MP2	Z	-.613	-.613	0	96
33	MP3	Z	-.613	-.613	0	96
34	MP4	Z	-.613	-.613	0	72
35	MP5	Z	-.613	-.613	0	72
36	MP6	Z	-.613	-.613	0	72
37	MP7	Z	-.613	-.613	0	72
38	MP8	Z	-.613	-.613	0	72
39	MP9	Z	-.613	-.613	0	72
40	MP10	Z	-.613	-.613	0	72
41	MP11	Z	-.613	-.613	0	72
42	MP12	Z	-.613	-.613	0	96

Member Distributed Loads (BLC 29 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	X	-.774	-.774	0	24
2	H002	X	-.387	-.387	0	24
3	H003	X	-.387	-.387	0	24
4	H005	X	-.782	-.782	0	96
5	H006	X	-.782	-.782	0	96
6	V007	X	-1.032	-1.032	0	18
7	V008	X	-1.032	-1.032	0	18
8	V009	X	-1.032	-1.032	0	18
9	H011	X	-.531	-.531	0	108
10	H012	X	-.531	-.531	0	108
11	U013	X	-.258	-.258	0	3
12	U014	X	-.258	-.258	0	3
13	H015	X	-.531	-.531	0	16.626
14	H017	X	-.531	-.531	0	16.626
15	U018	X	-.258	-.258	0	3
16	U019	X	-.258	-.258	0	3
17	U020	X	-.258	-.258	0	3
18	U021	X	-.258	-.258	0	3
19	U022	X	-.258	-.258	0	3
20	U023	X	-.258	-.258	0	3
21	U024	X	-.129	-.129	0	3
22	U025	X	-.129	-.129	0	3
23	U026	X	-.129	-.129	0	3
24	U027	X	-.129	-.129	0	3
25	U028	X	-.129	-.129	0	3
26	U029	X	-.129	-.129	0	3
27	U030	X	-.129	-.129	0	3
28	U031	X	-.129	-.129	0	3
29	U032	X	-.129	-.129	0	3
30	U033	X	-.129	-.129	0	3
31	U034	X	-.129	-.129	0	3
32	U035	X	-.129	-.129	0	3
33	U036	X	-.129	-.129	0	3

Member Distributed Loads (BLC 29 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft, F	End Magnitude[lb/ft, F	Start Location[in,%]	End Location[in,%]
34	U037	X	-.129	-.129	0	3
35	U038	X	-.129	-.129	0	3
36	U039	X	-.129	-.129	0	3
37	MP1	X	-.613	-.613	0	72
38	MP2	X	-.613	-.613	0	96
39	MP3	X	-.613	-.613	0	96
40	MP4	X	-.613	-.613	0	72
41	MP5	X	-.613	-.613	0	72
42	MP6	X	-.613	-.613	0	72
43	MP7	X	-.613	-.613	0	72
44	MP8	X	-.613	-.613	0	72
45	MP9	X	-.613	-.613	0	72
46	MP10	X	-.613	-.613	0	72
47	MP11	X	-.613	-.613	0	72
48	MP12	X	-.613	-.613	0	96

Member Area Loads (BLC 3 : Wind -Z)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-49.551

Member Area Loads (BLC 4 : Wind -X)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-49.551

Member Area Loads (BLC 5 : Wind -Z (Ice))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-8.603

Member Area Loads (BLC 6 : Wind -X (Ice))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-8.603

Member Area Loads (BLC 7 : Wind -Z (Working))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-3.097

Member Area Loads (BLC 8 : Wind -X (Working))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-3.097

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	DL		-1			30			
2	Ice	IL					30	27		
3	Wind -Z	WLZ					30		1	
4	Wind -X	WLX					30		1	

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
5	Wind -Z (Ice)	WL-Z					30	27	1	
6	Wind -X (Ice)	WL-X					30	27	1	
7	Wind -Z (Working)	WLZP1					30		1	
8	Wind -X (Working)	WLXP1					30		1	
9	Ev -Y (Seismic)	ELY						27		
10	Eh -Z (Seismic)	ELZ						27		
11	Eh -X (Seismic)	ELX						27		
12	Lm (1)	LL				1				
13	Lm (2)	LL				1				
14	Lm (3)	LL				1				
15	Lm (4)	LL				1				
16	Lm (5)	LL				1				
17	Lm (6)	LL				1				
18	Lm (7)	LL				1				
19	Lm (8)	LL				1				
20	Lm (9)	LL				1				
21	Lm (10)	LL				1				
22	Lm (11)	LL				1				
23	Lm (12)	LL				1				
24	BLC 3 Transient Area...	None						42		
25	BLC 4 Transient Area...	None						48		
26	BLC 5 Transient Area...	None						42		
27	BLC 6 Transient Area...	None						48		
28	BLC 7 Transient Area...	None						42		
29	BLC 8 Transient Area...	None						48		

Load Combinations

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..
1	1.4D	Yes	Y		DL	1.4																				
2	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	.001	W...	1																
3	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	.5	W...	.866																
4	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	.866	W...	.5																
5	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	1	W...	.001																
6	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	.866	W...	-.5																
7	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	.5	W...	-.866																
8	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	.001	W...	-1																
9	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	-.5	W...	-.866																
10	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	-.866	W...	-.5																
11	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	-1	W...	.001																
12	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	-.866	W...	.5																
13	1.2D + 1.0Wo...	Yes	Y		DL	1.2	W...	-.5	W...	.866																
14	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	.001	W...	1																
15	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	.5	W...	.866																
16	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	.866	W...	.5																
17	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	1	W...	.001																
18	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	.866	W...	-.5																
19	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	.5	W...	-.866																
20	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	.001	W...	-1																
21	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	-.5	W...	-.866																
22	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	-.866	W...	-.5																

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
23	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	-1	W...	.001																
24	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	-.866	W...	.5																
25	0.9D + 1.0Wo...	Yes	Y		DL	.9	W...	-.5	W...	.866																
26	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	.001	W...	1														
27	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	.5	W...	.866														
28	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	.866	W...	.5														
29	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	1	W...	.001														
30	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	.866	W...	-.5														
31	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	.5	W...	-.866														
32	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	.001	W...	-1														
33	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	-.866														
34	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	-.866	W...	-.5														
35	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	-1	W...	.001														
36	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	-.866	W...	.5														
37	1.2D + 1.0Di +...	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	.866														
38	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	1	ELX	.001														
39	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	.5														
40	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	.866														
41	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	1														
42	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	.866														
43	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	.5														
44	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	-1	ELX	.001														
45	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	-.5														
46	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	-.866														
47	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	-1														
48	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	-.866														
49	1.2D + 1.0Ev ...	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	-.5														
50	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	1	ELX	.001														
51	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	.866	ELX	.5														
52	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	.5	ELX	.866														
53	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	.001	ELX	1														
54	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	.866														
55	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	.5														
56	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	-1	ELX	.001														
57	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	-.5														
58	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	-.866														
59	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	.001	ELX	-1														
60	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	.5	ELX	-.866														
61	0.9D + 1.0Ev ...	Yes	Y		DL	.9	ELY	1	ELZ	.866	ELX	-.5														
62	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	.001	W...	1														
63	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	.5	W...	.866														
64	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	.866	W...	.5														
65	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	1	W...	.001														
66	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	.866	W...	-.5														
67	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	.5	W...	-.866														
68	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	.001	W...	-1														
69	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	-.5	W...	-.866														
70	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	-.866	W...	-.5														
71	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	-1	W...	.001														
72	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	-.866	W...	.5														
73	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	12	1.5	W...	-.5	W...	.866														
74	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	.001	W...	1														

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
75	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	.5	W...	.866														
76	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	.866	W...	.5														
77	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	1	W...	.001														
78	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	.866	W...	-.5														
79	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	.5	W...	-.866														
80	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	.001	W...	-1														
81	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	-.5	W...	-.866														
82	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	-.866	W...	-.5														
83	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	-1	W...	.001														
84	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	-.866	W...	.5														
85	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	13	1.5	W...	-.5	W...	.866														
86	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	.001	W...	1														
87	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	.5	W...	.866														
88	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	.866	W...	.5														
89	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	1	W...	.001														
90	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	.866	W...	-.5														
91	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	.5	W...	-.866														
92	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	.001	W...	-1														
93	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	-.5	W...	-.866														
94	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	-.866	W...	-.5														
95	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	-1	W...	.001														
96	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	-.866	W...	.5														
97	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	14	1.5	W...	-.5	W...	.866														
98	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	.001	W...	1														
99	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	.5	W...	.866														
100	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	.866	W...	.5														
101	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	1	W...	.001														
102	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	.866	W...	-.5														
103	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	.5	W...	-.866														
104	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	.001	W...	-1														
105	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	-.5	W...	-.866														
106	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	-.866	W...	-.5														
107	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	-1	W...	.001														
108	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	-.866	W...	.5														
109	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	15	1.5	W...	-.5	W...	.866														
110	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	.001	W...	1														
111	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	.5	W...	.866														
112	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	.866	W...	.5														
113	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	1	W...	.001														
114	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	.866	W...	-.5														
115	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	.5	W...	-.866														
116	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	.001	W...	-1														
117	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	-.5	W...	-.866														
118	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	-.866	W...	-.5														
119	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	-1	W...	.001														
120	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	-.866	W...	.5														
121	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	16	1.5	W...	-.5	W...	.866														
122	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	.001	W...	1														
123	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	.5	W...	.866														
124	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	.866	W...	.5														
125	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	1	W...	.001														
126	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	.866	W...	-.5														

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
127	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	.5	W...	-.866														
128	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	.001	W...	-1														
129	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	-.5	W...	-.866														
130	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	-.866	W...	-.5														
131	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	-1	W...	.001														
132	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	-.866	W...	.5														
133	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	17	1.5	W...	-.5	W...	.866														
134	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	.001	W...	1														
135	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	.5	W...	.866														
136	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	.866	W...	.5														
137	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	1	W...	.001														
138	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	.866	W...	-.5														
139	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	.5	W...	-.866														
140	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	.001	W...	-1														
141	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	-.5	W...	-.866														
142	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	-.866	W...	-.5														
143	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	-1	W...	.001														
144	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	-.866	W...	.5														
145	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	18	1.5	W...	-.5	W...	.866														
146	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	.001	W...	1														
147	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	.5	W...	.866														
148	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	.866	W...	.5														
149	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	1	W...	.001														
150	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	.866	W...	-.5														
151	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	.5	W...	-.866														
152	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	.001	W...	-1														
153	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	-.5	W...	-.866														
154	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	-.866	W...	-.5														
155	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	-1	W...	.001														
156	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	-.866	W...	.5														
157	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	19	1.5	W...	-.5	W...	.866														
158	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	.001	W...	1														
159	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	.5	W...	.866														
160	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	.866	W...	.5														
161	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	1	W...	.001														
162	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	.866	W...	-.5														
163	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	.5	W...	-.866														
164	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	.001	W...	-1														
165	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	-.5	W...	-.866														
166	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	-.866	W...	-.5														
167	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	-1	W...	.001														
168	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	-.866	W...	.5														
169	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	20	1.5	W...	-.5	W...	.866														
170	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	.001	W...	1														
171	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	.5	W...	.866														
172	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	.866	W...	.5														
173	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	1	W...	.001														
174	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	.866	W...	-.5														
175	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	.5	W...	-.866														
176	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	.001	W...	-1														
177	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	-.5	W...	-.866														
178	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	-.866	W...	-.5														

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
179	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	-1	W...	.001														
180	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	-.866	W...	.5														
181	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	21	1.5	W...	-.5	W...	.866														
182	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	.001	W...	1														
183	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	.5	W...	.866														
184	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	.866	W...	.5														
185	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	1	W...	.001														
186	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	.866	W...	-.5														
187	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	.5	W...	-.866														
188	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	.001	W...	-1														
189	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	-.5	W...	-.866														
190	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	-.866	W...	-.5														
191	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	-1	W...	.001														
192	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	-.866	W...	.5														
193	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	22	1.5	W...	-.5	W...	.866														
194	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	.001	W...	1														
195	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	.5	W...	.866														
196	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	.866	W...	.5														
197	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	1	W...	.001														
198	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	.866	W...	-.5														
199	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	.5	W...	-.866														
200	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	.001	W...	-1														
201	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	-.5	W...	-.866														
202	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	-.866	W...	-.5														
203	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	-1	W...	.001														
204	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	-.866	W...	.5														
205	1.2D + 1.5Lm(...	Yes	Y		DL	1.2	23	1.5	W...	-.5	W...	.866														

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	N001	max	814.446	17	1868.121	32	2095.895	14	-117.696	20	1390.113	17	2425.865	65
2		min	-814.383	23	703.559	24	-2388.332	8	-3425.426	26	-1390.872	23	-1935.289	107
3	N002	max	2166.452	17	1868.096	36	1757.511	2	3607.728	164	3206.329	21	3617.558	113
4		min	-2420.783	11	701.859	16	-1611.63	20	-280.278	14	-3210.462	15	78.504	23
5	N003	max	2443.851	5	1868.098	28	1731.546	2	3200.839	128	3241.546	25	.685	17
6		min	-2189.586	23	702.438	19	-1586.03	20	-640.025	170	-3237.522	19	-3829.305	179
7	Totals:	max	5388.6	17	5600.97	37	5544.115	14						
8		min	-5388.6	11	2113.093	14	-5544.115	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*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	H001	HSS3x3x3	.774	0	72	.500	0	y	65	75951.062	78246	6796.5	6796.5	1.813	H3-6
2	H002	HSS3x3x3	.791	0	160	.503	0	y	165	75951.062	78246	6796.5	6796.5	1.815	H3-6
3	H003	HSS3x3x3	.789	0	175	.503	0	y	181	75951.062	78246	6796.5	6796.5	1.828	H3-6
4	H004	PIPE_3.0	.491	54	67	.267	54		8	46290.523	65205	5748.75	5748.75	1.969	H1-1b
5	H005	PIPE_3.0	.493	54	166	.262	54		12	46290.523	65205	5748.75	5748.75	1.973	H1-1b
6	H006	PIPE_3.0	.492	54	170	.254	54		4	46290.523	65205	5748.75	5748.75	1.972	H1-1b
7	V007	PIPE_3.5	.001	9	7	.001	9		18	78031.006	78750	7953.75	7953.75	1.563	H1-1b
8	V008	PIPE_3.5	.001	9	4	.001	9		15	78031.006	78750	7953.75	7953.75	1.563	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*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
9	V009	PIPE_3.5	.001	9	12	.001	9	24	78031.006	78750	7953.75	7953.75	1.563	H1-1b
10	H010	PIPE_2.0	.296	38.25	68	.165	93.3	77	2143.947	32130	871.625	871.625	2.489	H1-1b
11	H011	PIPE_2.0	.297	38.25	168	.165	93.3	73	12143.947	32130	1871.625	1871.625	2.491	H1-1b
12	H012	PIPE_2.0	.296	38.25	172	.163	93.3	61	2143.947	32130	871.625	871.625	2.483	H1-1b
13	H015	PIPE_2.0	.092	9.699	73	.316	0	73	31398.915	32130	1871.625	1871.625	1.136	H3-6
14	H016	PIPE_2.0	.090	6.928	161	.313	16.6..	61	1398.915	32130	871.625	871.625	1.136	H3-6
15	H017	PIPE_2.0	.092	9.699	177	.316	16.6	177	31398.915	32130	1871.625	1871.625	1.136	H3-6
16	MP1	PIPE_2.0	.289	24.75	9	.059	24.75	13	6195.892	32130	871.625	871.625	2.043	H1-1b
17	MP2	PIPE_2.0	.692	42	8	.061	43	6	3485.189	32130	1871.625	1871.625	1.812	H1-1b
18	MP3	PIPE_2.0	.685	42	11	.078	43	9	3485.189	32130	871.625	871.625	1.708	H1-1b
19	MP4	PIPE_2.0	.430	24.75	8	.072	24.75	3	6195.892	32130	1871.625	1871.625	2.131	H1-1b
20	MP5	PIPE_2.0	.425	24.75	11	.072	24.75	8	6195.892	32130	871.625	871.625	2.268	H1-1b
21	MP6	PIPE_2.0	.435	24.75	4	.091	24.75	13	6195.892	32130	1871.625	1871.625	2.051	H1-1b
22	MP7	PIPE_2.0	.456	24.75	8	.083	24.75	13	6195.892	32130	871.625	871.625	2.419	H1-1b
23	MP8	PIPE_2.0	.441	24.75	12	.081	24.75	5	6195.892	32130	1871.625	1871.625	2.232	H1-1b
24	MP9	PIPE_2.0	.314	24.75	13	.061	24.75	5	6195.892	32130	871.625	871.625	1.975	H1-1b
25	MP10	PIPE_2.0	.305	24.75	5	.058	24.75	9	6195.892	32130	1871.625	1871.625	2.208	H1-1b
26	MP11	PIPE_2.0	.430	24.75	4	.082	24.75	9	6195.892	32130	871.625	871.625	2.298	H1-1b
27	MP12	PIPE_2.0	.685	42	5	.082	43	13	3485.189	32130	1871.625	1871.625	1.71	H1-1b

Exhibit F

Power Density/RF Emissions Report

EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CTNH522A

Florida Partners North Haven Monopole
50 Devine Street
North Haven, Connecticut 06473

July 16, 2020

EBI Project Number: 6220003152

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**25.11%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

July 16, 2020

T-Mobile
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTNH522A - Florida Partners North Haven Monopole

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **50 Devine Street** in **North Haven, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 50 Devine Street in North Haven, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.

3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

5) 4 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

7) 2 LTE channels (BRS Band - 2500 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

8) 2 NR channels (BRS Band - 2500 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

9) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

10) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

11) The antennas used in this modeling are the Ericsson AIR 21 for the 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR 21 for the 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s) in Sector B, the Ericsson AIR 21 for the 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

12) The antenna mounting height centerline of the proposed antennas is 119 feet above ground level (AGL).

13) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

14) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21
Frequency Bands:	1900 MHz	Frequency Bands:	1900 MHz	Frequency Bands:	1900 MHz
Gain:	15.35 dBd	Gain:	15.35 dBd	Gain:	15.35 dBd
Height (AGL):	119 feet	Height (AGL):	119 feet	Height (AGL):	119 feet
Channel Count:	2	Channel Count:	2	Channel Count:	2
Total TX Power (W):	60 Watts	Total TX Power (W):	60 Watts	Total TX Power (W):	60 Watts
ERP (W):	2,056.61	ERP (W):	2,056.61	ERP (W):	2,056.61
Antenna A1 MPE %:	**0.52%**	Antenna B1 MPE %:	**0.52%**	Antenna C1 MPE %:	**0.52%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz
Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd
Height (AGL):	119 feet	Height (AGL):	119 feet	Height (AGL):	119 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	160 Watts	Total TX Power (W):	160 Watts	Total TX Power (W):	160 Watts
ERP (W):	25,651.93	ERP (W):	25,651.93	ERP (W):	25,651.93
Antenna A2 MPE %:	**6.51%**	Antenna B2 MPE %:	**6.51%**	Antenna C2 MPE %:	**6.51%**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd
Height (AGL):	119 feet	Height (AGL):	119 feet	Height (AGL):	119 feet
Channel Count:	7	Channel Count:	7	Channel Count:	7
Total TX Power (W):	320 Watts	Total TX Power (W):	320 Watts	Total TX Power (W):	320 Watts
ERP (W):	8,466.41	ERP (W):	8,466.41	ERP (W):	8,466.41
Antenna A3 MPE %:	**3.58%**	Antenna B3 MPE %:	**3.58%**	Antenna C3 MPE %:	**3.58%**
Antenna #:	**4**	Antenna #:	**4**	Antenna #:	**4**
Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd
Height (AGL):	119 feet	Height (AGL):	119 feet	Height (AGL):	119 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	8,728.31	ERP (W):	8,728.31	ERP (W):	8,728.31
Antenna A4 MPE %:	**2.22%**	Antenna B4 MPE %:	**2.22%**	Antenna C4 MPE %:	**2.22%**

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	12.83%
Verizon	3.07%
AT&T	9.21%
Site Total MPE % :	25.11%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	12.83%
T-Mobile Sector B Total:	12.83%
T-Mobile Sector C Total:	12.83%
Site Total MPE % :	25.11%

T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 1900 MHz UMTS	2	1028.30	119.0	5.22	1900 MHz UMTS	1000	0.52%
T-Mobile 2500 MHz LTE	2	6412.98	119.0	32.56	2500 MHz LTE	1000	3.26%
T-Mobile 2500 MHz NR	2	6412.98	119.0	32.56	2500 MHz NR	1000	3.26%
T-Mobile 600 MHz LTE	2	591.73	119.0	3.00	600 MHz LTE	400	0.75%
T-Mobile 600 MHz NR	1	1577.94	119.0	4.01	600 MHz NR	400	1.00%
T-Mobile 700 MHz LTE	2	648.82	119.0	3.29	700 MHz LTE	467	0.71%
T-Mobile 1900 MHz LTE	2	2203.69	119.0	11.19	1900 MHz LTE	1000	1.12%
T-Mobile 1900 MHz LTE	2	2056.61	119.0	10.44	1900 MHz LTE	1000	1.04%
T-Mobile 2100 MHz LTE	2	2307.55	119.0	11.72	2100 MHz LTE	1000	1.17%
						Total:	**12.83%**

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	12.83%
Sector B:	12.83%
Sector C:	12.83%
T-Mobile Maximum MPE % (Sector A):	12.83%
Site Total:	25.11%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **25.11%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Exhibit G

Mailing Receipts / Proof of Notice

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

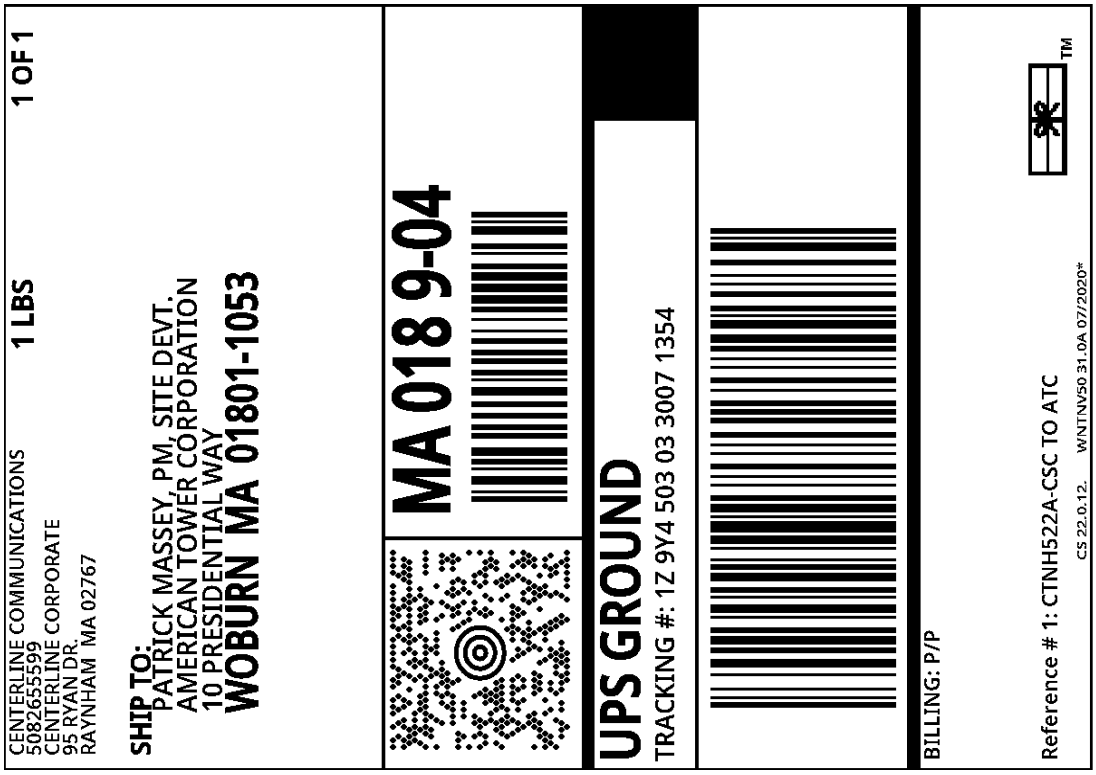
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Friday, August 28, 2020 10:30 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030330071354

Hello, your package has been delivered.

Delivery Date: Friday, 08/28/2020
Delivery Time: 10:27 AM
Left At: FRONT DESK
Signed by: ANCRI

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030330071354
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	0.2 LBS
Reference Number:	CTNH522A-CSC TO ATC

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For Questions, Visit Our Help and Support Center

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

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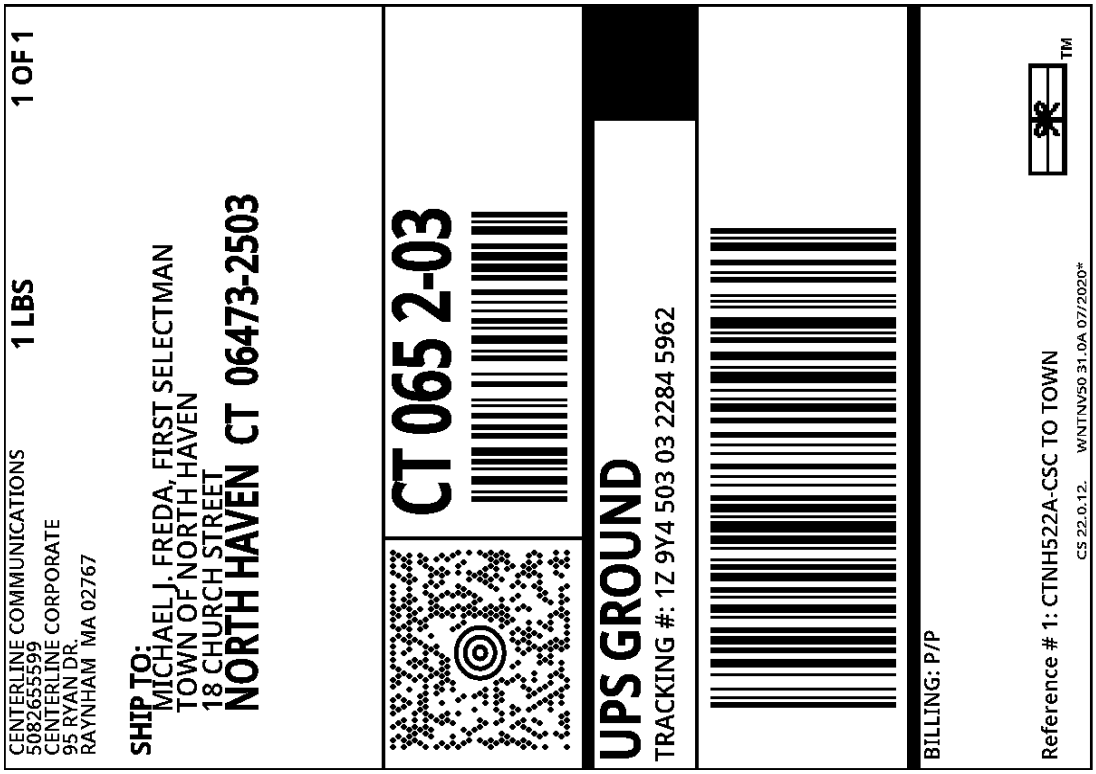
UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Monday, August 31, 2020 9:15 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030322845962

Hello, your package has been delivered.

Delivery Date: Monday, 08/31/2020
Delivery Time: 09:13 AM
Left At: FRONT DESK
Signed by: OFFICE

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030322845962
Ship To:	TOWN OF NORTH HAVEN 18 CHURCH STREET NORTH HAVEN, CT 064732503 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	0.2 LBS
Reference Number:	CTNH522A-CSC TO TOWN

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UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

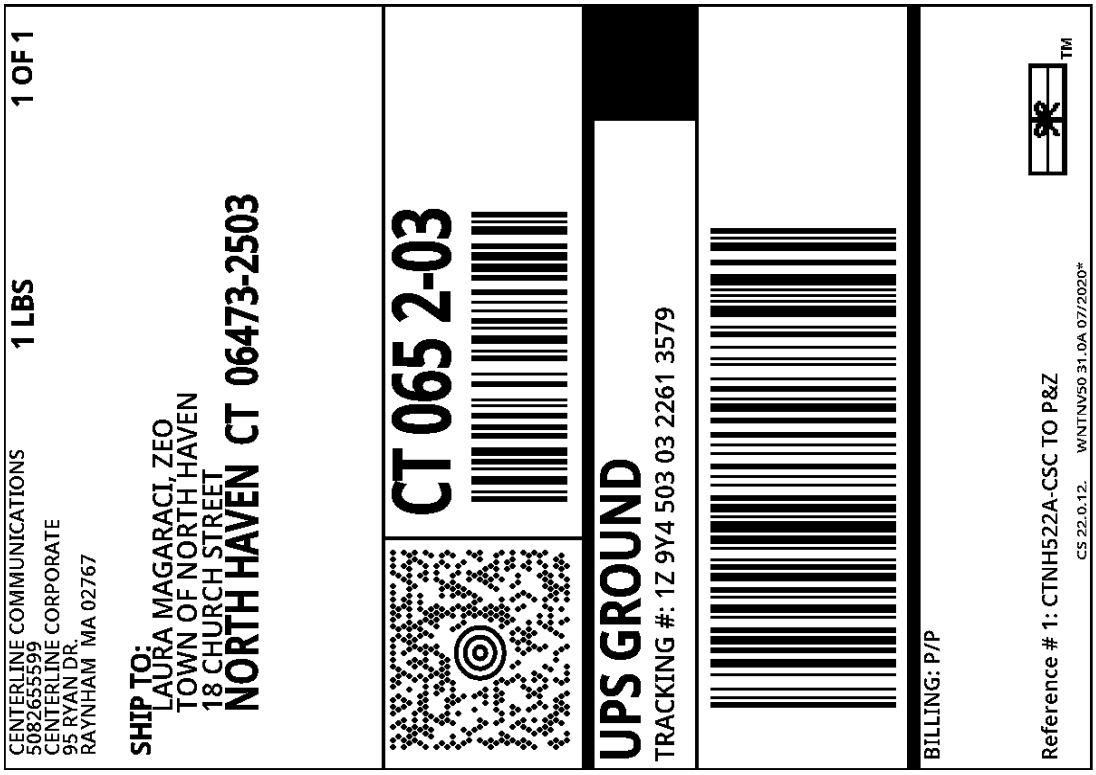
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number
1Z9Y45030322613579

Weight
0.20 LBS

Service

UPS Ground

Shipped / Billed On
08/27/2020

Delivered On

08/31/2020 9:13 A.M.

Delivered To
18 CHURCH ST
NORTH HAVEN, CT, 06473, US

Received By

OFFICE

Left At
Front Desk

Reference Number(s)
CTNH522A-CSC TO P&Z

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 08/31/2020 10:27 A.M. EST

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TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE

Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Friday, August 28, 2020 11:23 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030336727797

Hello, your package has been delivered.

Delivery Date: Friday, 08/28/2020
Delivery Time: 11:22 AM
Left At: INSIDE DELIV
Signed by: SIG ON FILE

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030336727797
Ship To:	424 CHAPEL STREET LLC 50 DEVINE ST NORTH HAVEN, CT 064732244 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	0.2 LBS
Reference Number:	CTNH522A-CSC TO PROPERTY

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