Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

May 5, 2025

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

Re: **Cellco Partnership d/b/a Verizon Wireless – Petition for a Declaratory Ruling on the Need to Obtain a Certificate for the Installation of a Wireless Telecommunications Facility at 293 Elm Street, Enfield, Connecticut**

Dear Attorney Bachman:

Enclosed is an original and fifteen (15) copies of the above-referenced Petition for Declaratory Ruling filed on behalf of Cellco Partnership d/b/a Verizon Wireless for the installation of a wireless telecommunications facility at 293 Elm Street, Enfield, Connecticut. Also enclosed is a $625.00 check for the filing fee.

Thank you in advance for your assistance and cooperation.

Sincerely,

Kenneth C. Baldwin

Enclosures

32108551-v1

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS FOR A DECLARATORY RULING ON THE NEED TO OBTAIN A SITING COUNCIL CERTIFICATE FOR THE INSTALLATION OF A WIRELESS TELECOMMUNICATIONS FACILITY AT 293 ELM STREET, ENFIELD, CONNECTICUT	:	PETITION NO. ____
	:	MAY 5, 2025

PETITION FOR A DECLARATORY RULING:
INSTALLATION HAVING NO
SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

I. Introduction

Pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies ("R.C.S.A."), Cellco Partnership d/b/a Verizon Wireless ("Cellco") hereby petitions the Connecticut Siting Council (the "Council") for a declaratory ruling ("Petition") that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required under Section 16-50k(a) of the Connecticut General Statutes ("C.G.S.") for the installation of wireless telecommunications facility at the Town of Enfield's Public Safety Complex, at 293 Elm Street in Enfield, Connecticut (the "Property"). *See* Attachment 1 –Site Schematic. The Property and existing tower are owned by the Town of Enfield (the "Town" or the "Property Owner"). Cellco refers to its proposed facility as its "Enfield 6" cell site.

II. Cellco's Proposed Enfield 6 Facility

Cellco's proposed Enfield 6 Facility will involve the installation of nine (9) panel type antennas and nine (9) remote radio heads ("RRHs"), attached to new antenna mounting frames at the 105-foot level of the Town's 160-foot lattice tower. Equipment associated with Cellco's

antennas will be located on the ground to the north of T-Mobile's equipment. Cellco will need to expand the existing facility compound by approximately 615 square feet (23'-8" x 26') to accommodate its ground-mounted equipment. (*See* Cellco's Project Plans included in Attachment 2).

Cellco will provide wireless telecommunications services in its 700 MHz, 850 MHz, 1900 MHz, 2100 MHz and 5G/C-Band (3700 MHz) frequencies from the proposed Enfield 6 Facility. Specifications for Cellco's antennas and remote radio heads are included in Attachment 3. The Enfield 6 Facility will be capable of providing 5G wireless services.

According to the attached Structural Analysis and Reinforcement Design Report ("SA") and Antenna Mount Analysis Report ("MA"), the existing tower, with certain modifications, tower foundation and new antenna mounts, can support Cellco's proposed installation. A copy of the SA and MA are included in Attachment 4.

III. Discussion

A. The Proposed Facility Will Not Have A Substantial Adverse Environmental Effect

The Public Utility Environmental Standards Act (the "Act"), C.G.S. § 16-50g et seq., provides for the orderly and environmentally compatible development of telecommunications facilities in the state to avoid "a significant impact on the environment and ecology of the State of Connecticut." C.G.S. § 16-50g. To achieve these goals, the Act established the Council, and requires a Certificate of Environmental Compatibility and Public Need for the construction of cellular telecommunication towers "that may, as determined by the council, have a substantial adverse environmental effect". C.G.S. § 16-50k(a). The addition of Cellco antennas at the 105-foot level on the existing 160-foot lattice tower will have an insignificant effect on the surrounding area.

1. Physical Environmental Effects

Cellco respectfully submits that the proposed facility will not involve a significant impact on the physical and environmental characteristics of the Property or the surrounding community. Cellco's ground disturbance will be restricted to an approximately 615 square foot expansion of the facility compound. This area is currently clear of any trees or substantial vegetation. Due to its location behind the Town's Public Safety Complex, and the substantial tree growth around the tower site, Cellco's ground-based equipment will not be visible from Elm Street or adjacent properties.

2. Visual Effects

Included in Attachment 5 is a Photo Documentation & Photo Simulations report of the proposed facility modifications described above. The Petitioner respectfully submits that, the modified Enfield 6 Facility would not have an adverse impact on existing views of the tower, this Property, or the character of the surrounding area. Views of the proposed antennas at the 105-foot level on the existing 160-foot lattice tower, would be limited to areas where the tower is visible today and have a limited incremental visual impact. As mentioned above, due to existing vegetation and development on the Property, Cellco's ground equipment would not be visible from area roadways or adjacent parcels.

3. FCC Compliance

Radio frequency ("RF") emissions from the Enfield 6 Facility will not exceed the maximum permissible exposure limits established by the Federal Communications Commission ("FCC"). Included in Attachment 6 is a Calculated Radio Frequency Emissions Report demonstrating that the facility, with Cellco's proposed modifications will operate well within (9.99%) the FCC safety standards.

4. FAA Notification Not Required

A Federal Airways and Airspace Summary Report (the "FAA Summary Report") was not prepared for this project since Cellco's antennas would be located at the 105-foot level of an existing 160-foot tower.

In sum, the effect of Cellco's proposed facility modifications on the environment would be minimal and limited, rather than significant. This stands in contrast to typical proposals for new towers that frequently must be located on properties with no other approved towers, or with no development at all. Thus, the proposed facility with equipment located on the ground would not present a substantial adverse environmental effect and is not a modification for which the General Assembly intended to require a Certificate under C.G.S. § 16-50k(a).

B. Notice to the Town, Property Owner and Abutting Landowners

On April 5, 2025, a copy of this Petition was sent to Enfield's Mayor, Ken Nelson, Jr., Town Manager, Christopher W. Bromson and Director of Planning, Lauren Whitten. Copies of the letters sent to these public officials are included in Attachment 7.

Notice of this Petition was also sent to the owners of land considered to abut the Property. A sample abutter's notice letter and a list of those abutting landowners to whom notice was sent is included in Attachment 8.

IV. Conclusion

Based on the information provided above, Cellco respectfully requests that the Council issue a determination, in the form of a declaratory ruling, that the facility modification described above, will not have a substantial adverse environmental effect and does not require the issuance of a Certificate of Environmental Compatibility and Public Need pursuant to § 16-50k of the General Statutes.

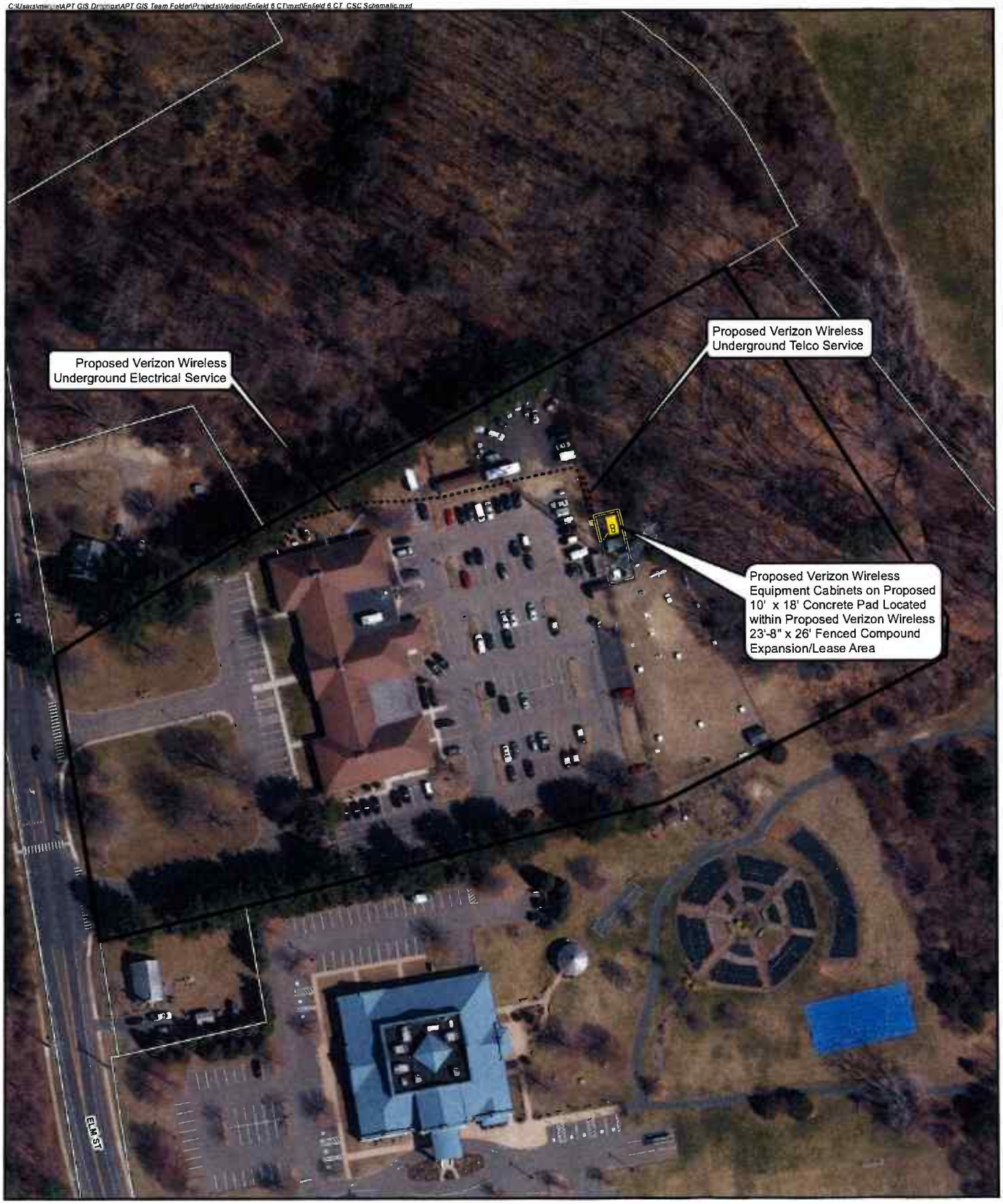
Respectfully submitted,

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

By 

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
One State Street
Hartford, CT 06103
(860) 275-8200
Its Attorneys

ATTACHMENT 1



Legend

- Proposed Verizon Wireless Equipment
- Existing Equipment (By Others)
- Proposed Verizon Wireless Conduit
- Proposed Verizon Wireless Fenced Compound Expansion/Lease Area
- Existing Fence (By Others)
- Subject Property
- Approximate Parcel Boundary

N

125 62.5 0 125 Feet

Map Notes:
Base Map Source: CTECO 2023 Aerial Imagery
Map Scale: 1 inch = 125 feet
Map Date: April 2025

Figure 2 - Site Schematic

Proposed Wireless Telecommunications Facility
Enfield 6 CT
293 Elm Street
Enfield, Connecticut

verizon

ALL-POINTS TECHNOLOGY CORPORATION

ATTACHMENT 2

verizon

WIRELESS COMMUNICATIONS FACILITY

ENFIELD 6 CT
293 ELM STREET
ENFIELD, CT 06082

DRAWING INDEX

POWER PROVIDER: EVERSOURCE: (888) 544-4826

FIBER PROVIDER: TBD

CALL BEFORE YOU DIG: 1(800) 922-4455

SITE DIRECTIONS

START: 20 ALEXANDER DRIVE
WALLINGFORD, CONNECTICUT 06492

END: 293 ELM STREET
ENFIELD, CT 06082

1.	HEAD NORTH ON ALEXANDER DRIVE	0.2 MI
2.	TURN RIGHT ONTO BARNES INDUSTRIAL ROAD	0.1 MI
3.	TURN RIGHT ONTO CT-68 E	1.8 MI
4.	SHARP LEFT TO MERGE ONTO I-91 N	23.5 MI
5.	TAKE EXIT 48 FOR CT-220/ELM ST. TOWARD THOMPSONVILLE	0.2 MI
6.	TURN RIGHT ONTO CT-220/ELM STREET	1.0 MI
7.	TURN RIGHT ONTO ELM STREET	0.6 MI
8.	TURN RIGHT ONTO ELM STREET	0.2 MI
9.	DESTINATION WILL BE LEFT, TURN LEFT INTO DRIVEWAY	207 FT

LOCATION MAP
SCALE : N.T.S.

SITE INFORMATION

VZ SITE NAME: ENFIELD 6 CT
VZ MDG LOCATION CODE: 5000953820
VZ FUZE I.D.: 16737018
VZ PSLC: ----

LOCATION: 293 ELM STREET
ENFIELD, CT 06082

PROJECT SCOPE: INSTALLATION CONSISTS OF (9) ANTENNAS, (9) RRHs, (1) OVP & (3) NEW SECTOR FRAMES MOUNTED TO AN EXIST. 160'± AGL SELF SUPPORT LATTICE TOWER IN ADDITION TO EQUIP. & BATTERY CABINETS, GPS UNIT & A 10'x18' CONC. PAD w/ PROTECTIVE ICE CANOPY LOCATED AT GRADE WITHIN A 23'-8"± x26'± CHAIN-LINK FENCE COMPOUND EXPANSION.

PARCEL ID: 75/103

LATITUDE: 41° 59' 51.871" N (41.997742 N)

LONGITUDE: -72° 33' 10.757" W (-72.552988 W)

GROUND ELEVATION: 152'± AMSL

PROPERTY OWNER: TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX
820 ENFIELD STREET
ENFIELD, CT 06082

TOWER OWNER: TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX
820 ENFIELD STREET
ENFIELD, CT 06082

APPLICANT: CELLCO PARTNERSHIP
d/b/a VERIZON WIRELESS
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

LEGAL/REGULATORY COUNSEL: ROBINSON & COLE, LLP
KENNETH C. BALDWIN, ESQ.
ONE STATE STREET
HARTFORD, CT 06103

ENGINEER CONTACT: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385
860 663-1697

GOVERNING CODES/STANDARDS:

2021 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE 2022 CONNECTICUT STATE BUILDING CODE
2020 NFPA-70, NATIONAL ELECTRIC CODE
ANSI/TIA-222-H

Cellco Partnership d/b/a
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC DRAWINGS

NO	DATE	REVISION
0	04/02/25	FOR REVIEW: JRM
1	04/24/25	FOR FILING: JRM
2		
3		
4		
5		
6		

STATE OF CONNECTICUT
MICHAEL TRODDEN
33313
LICENSED
PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXT. SUITE 311 WATERFORD, CT 06385

OWNER: TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX
ADDRESS: 820 ENFIELD STREET ENFIELD, CT 06082

ENFIELD 6 CT

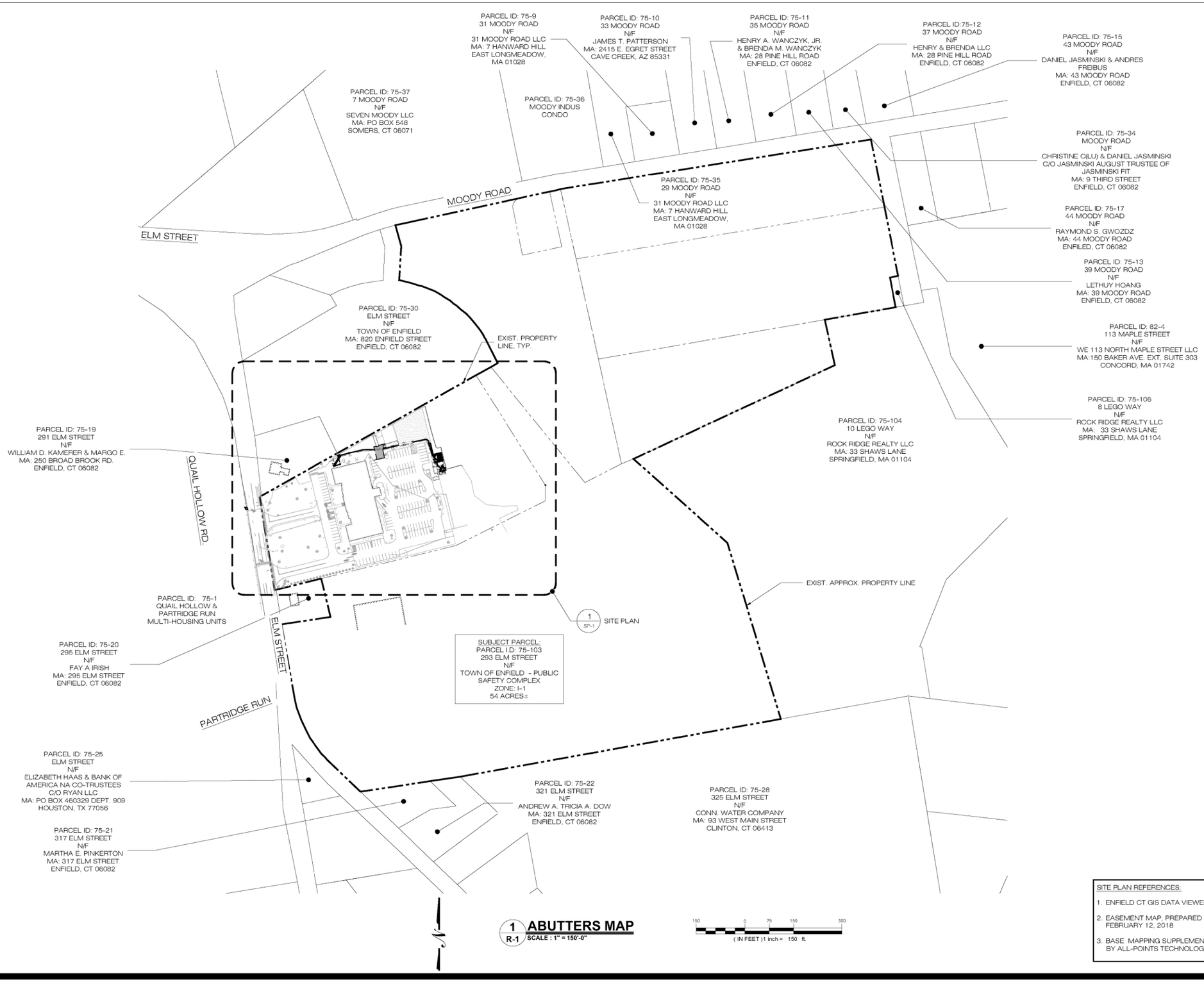
SITE ADDRESS: 293 ELM STREET ENFIELD, CT 06082

APT FILING NUMBER: CT141_14730

DRAWN BY: ELZ/JM
DATE: 04/02/25 **CHECKED BY: JRM**
VZW MDG: 5000953820
VZW PSLC: ----
VZ FUZE ID: 16737018

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1



SITE PLAN REFERENCES:

1. ENFIELD CT GIS DATA VIEWER
2. EASEMENT MAP, PREPARED BY GESICK & ASSOCIATES, P.C.. DATED: FEBRUARY 12, 2018
3. BASE MAPPING SUPPLEMENTED W/ FIELD MEASUREMENTS OBTAINED BY ALL-POINTS TECHNOLOGY CORPORATION, P.C., ON 07/12/24

Cellco Partnership d/b/a

verizon

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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VZW PSLC: ----
VZ FUZE ID: 16737018

SHEET TITLE:

ABUTTERS MAP

SHEET NUMBER:

R-1

LEGEND

- PROPERTY LINE
- PROP. CHAIN LINK FENCE
- PROP. U/G ELEC. SERVICE
- PROP. U/G FIBER SERVICE
- EXIST. TREE LINE
- EXIST. DECIDUOUS TREE
- EXIST. CONIFEROUS TREE

EXIST. APPROX. PROPERTY LINE

PROP CELLCO PARNERSHIP U/G ELECTRIC SERVICE ROUTED IN CONDUIT FROM PROP. MULTI-METER CENTER AT NW CORNER OF BLD'G. FOLLOWING SAME PATH AS EXIST. CARRIER U/G ELEC SERVICE THROUGH LAWN & BIT. PAVEMENT TO PROP CELLCO PARNERSHIP LOAD CENTER LOCATED AT PROP. EQUIP. AREA. (1 / E-2)

EXIST. PAD MOUNTED DIESEL GENERATOR w/ SUB-BASE FUEL TANK

APPROX ROUTE OF EXIST. U/G ELEC & FIBER SERVICES TO AT&T & T-MOBILE EQUIPMENT LOCATED AT TOWER COMPOUND TO REMAIN (V.I.F)

EXIST. SELF-SUPPORT LATTICE TOWER ON CONC. PAD

EXIST. SELF-SUPPORT LATTICE TOWER ON CONC. PAD

EXIST. 8' HIGH CHAIN-LINK FENCE & TREE LINE, TYP

EXIST. T-MOBILE & AT&T ELEC. METERS ON UTILITY SERVICE FRAME TO BE DISCONNECTED & REMOVED. ELEC SERVICES TO BE TRANSFERRED TO PROP. SIX-GANG MULTI-METER CENTER AT NW CORNER OF BLD'G. CONTRACTOR SHALL COORDINATE POWER OUTAGE w/ T-MOBILE & AT&T DURING TEMPORARY POWER OUTAGE.

EXIST. 8' HIGH CHAIN-LINK FENCE, TYP.

EXIST. BUILDING (TYP.)

EXIST. GRAVEL PARKING AREA

EXIST.PAD MOUNTED TRANSFORMER

EXIST. 10' WIDE DOUBLE LEAF ACCESS GATE

NEW 800A, 120/208V, 1Ø MAIN CIRCUIT BREAKER (MCB) & SIX GANG MULTI-METER CENTER w/ 1Ø METERING TO BE RE-FED FROM EXIST. PAD MOUNTED TRANSFORMER, SUPPORTED ON NEW UTILITY SERVICE FRAME TO REPLACE EXIST AT&T & T-MOBILE SERVICE ENTRANCE. (SUBJECT TO LOCAL UTILITY CO. REVIEW & APPROVAL)

EXIST. STORAGE CONTAINER

APPROX. ROUTE OF EXIST. U/G COX COMMUNICATIONS FIBER SERVICE FROM STREET (V.I.F.)

(9) PROP CELLCO PARTNERSHIP ANTENNAS, (9) RRHS & (1) OVP MOUNTED TO (3) NEW SECTOR FRAMES @ 105'± & 106.8'± AGL.

PROP LIMITS OF SAW CUT/ REPLACEMENT AT EXIST. BIT PAVEMENT, TYP.

EXIST. 160'± AGL SELF SUPPORT LATTICE TOWER

PROP. CELLCO PARTNERSHIP EQUIP. & BATTERY CABINETS, PROTECTIVE ICE CANOPY, UTILITY SERVICE FRAME, (1) GPS UNIT ON PROPOSED 10'x18' (180± SF) CONC. PAD LOCATED WITHIN 23'-8"± x 26' (616± SF) CHAIN-LINK FENCE COMPOUND EXPANSION/LEASE AREA TO MATCH EXIST. (1 / C-1)

PROP. CONC. FILLED STEEL BOLLARDS @ 4'-0" O.C., PAINTED TRAFFIC YELLOW, TYP (3PL). (9 / C-3)

EXIST. BUILDING

EXIST. PAVED PARKING AREA

EXIST. EVERSOURCE UTILITY POLE (CL&P #2172) W/ OHD FIBER & RISERS

ELM STREET

EXIST. APPROX. INTERIOR PROPERTY LINE, TYP.

VEHICLE ACCESS ALONG EXIST. BIT DRIVEWAY TO EXIST. COMPOUND (APPROX. 775 L.F.±)

N

1 / SP-1 **SITE PLAN**
SCALE : 1" = 40'-0"

40'-0" 0 20'-0" 40'-0" 80'-0"
40' SCALE: 1 INCH= 40'-0"

SITE PLAN REFERENCES:

1. ENFIELD CT GIS DATA VIEWER
2. EASEMENT MAP, PREPARED BY GESICK & ASSOCIATES, P.C., DATED: FEBRUARY 12, 2018
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CSC DRAWINGS

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COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
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ENFIELD 6 CT

SITE ADDRESS: 293 ELM STREET ENFIELD, CT 06082

APT FILING NUMBER: CT141_14730

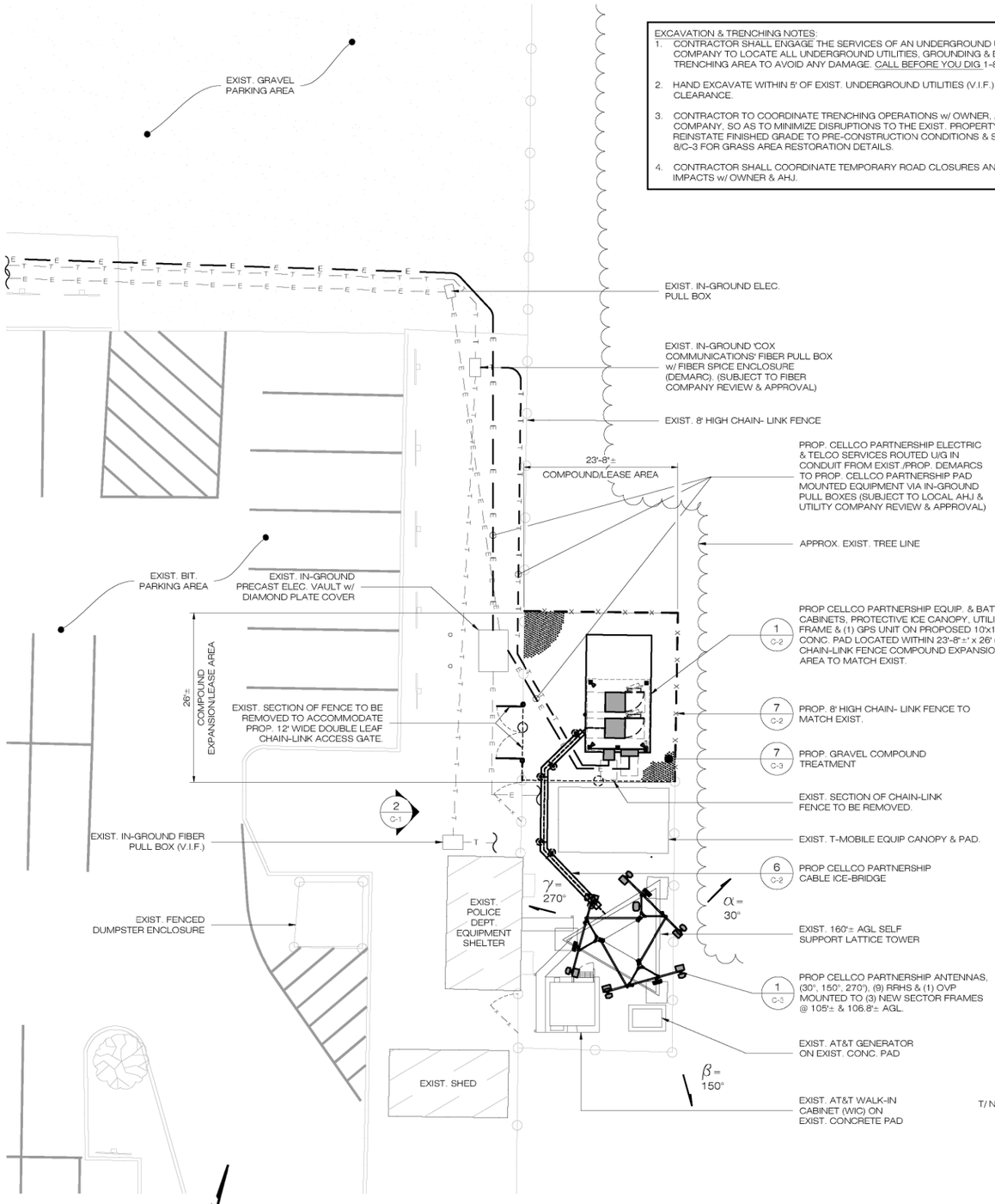
DRAWN BY: ELZ/JM
DATE: 04/02/25 CHECKED BY: JRM

VZW MDG: 5000953820
VZW PSLC: ----
VZ FUZE ID: 16737018

SHEET TITLE: **SITE PLAN**

SHEET NUMBER: **SP-1**

EXCAVATION & TRENCHING NOTES:
1. CONTRACTOR SHALL ENGAGE THE SERVICES OF AN UNDERGROUND UTILITY LOCATING COMPANY TO LOCATE ALL UNDERGROUND UTILITIES, GROUNDING & EQUIPMENT IN THE TRENCHING AREA TO AVOID ANY DAMAGE. CALL BEFORE YOU DIG 1-800-922-4455
2. HAND EXCAVATE WITHIN 5' OF EXIST. UNDERGROUND UTILITIES (V.I.F.). MAINTAIN 18" MIN. CLEARANCE.
3. CONTRACTOR TO COORDINATE TRENCHING OPERATIONS w/ OWNER, AND/OR MANAGEMENT COMPANY, SO AS TO MINIMIZE DISRUPTIONS TO THE EXIST. PROPERTY OPERATIONS. REINSTATE FINISHED GRADE TO PRE-CONSTRUCTION CONDITIONS & STANDARDS. REFER TO 8/C-3 FOR GRASS AREA RESTORATION DETAILS.
4. CONTRACTOR SHALL COORDINATE TEMPORARY ROAD CLOSURES AND/OR PARKING IMPACTS w/ OWNER & AHJ.

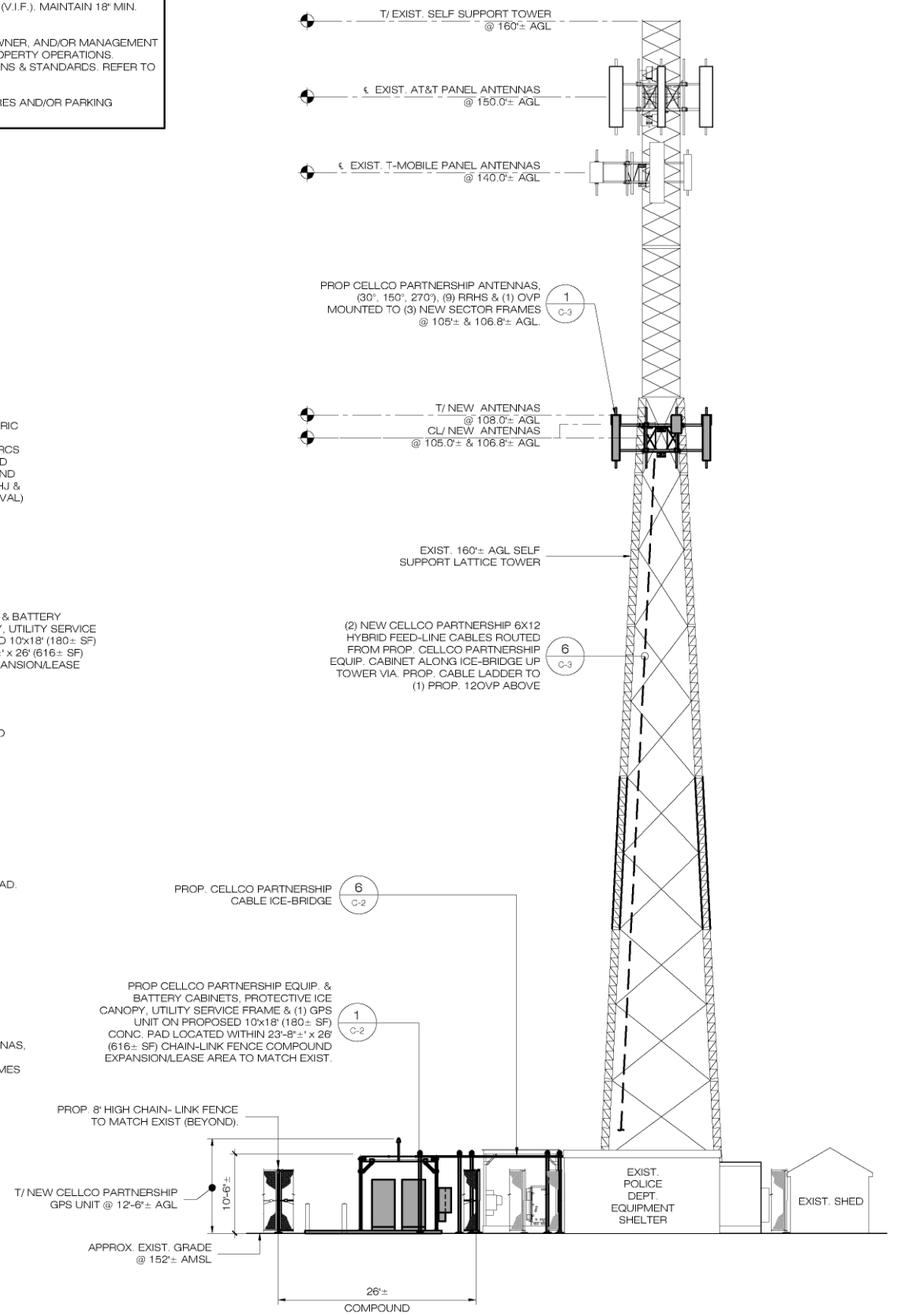


1 C-1 **COMPOUND PLAN**
SCALE : 1" = 10'-0"

10'-0" 0 5'-0" 10'-0" 20'-0"
10' SCALE: 1 INCH= 10'-0"

TOWER ANALYSIS NOTE:
REFER TO STRUCTURAL ANALYSIS & REINFORCEMENT DESIGN REPORT PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION, P.C., APT FILING No. CT141_14730, MARKED REV 1, DATED 07/30/24 AVAILABLE UNDER SEPARATE COVER.

MOUNT ANALYSIS NOTE:
REFER TO NEW/REPLACEMENT ANTENNA MOUNT ANALYSIS REPORT AND PMI REQUIREMENTS PREPARED BY COLLIERS ENGINEERING & DESIGN, PROJECT #: 24777154, DATED 07/24/24 AVAILABLE UNDER SEPARATE COVER.



2 C-1 **WEST TOWER ELEVATION**
SCALE : 1" = 10'-0"

10'-0" 0 5'-0" 10'-0" 20'-0"
10' SCALE: 1 INCH= 10'-0"

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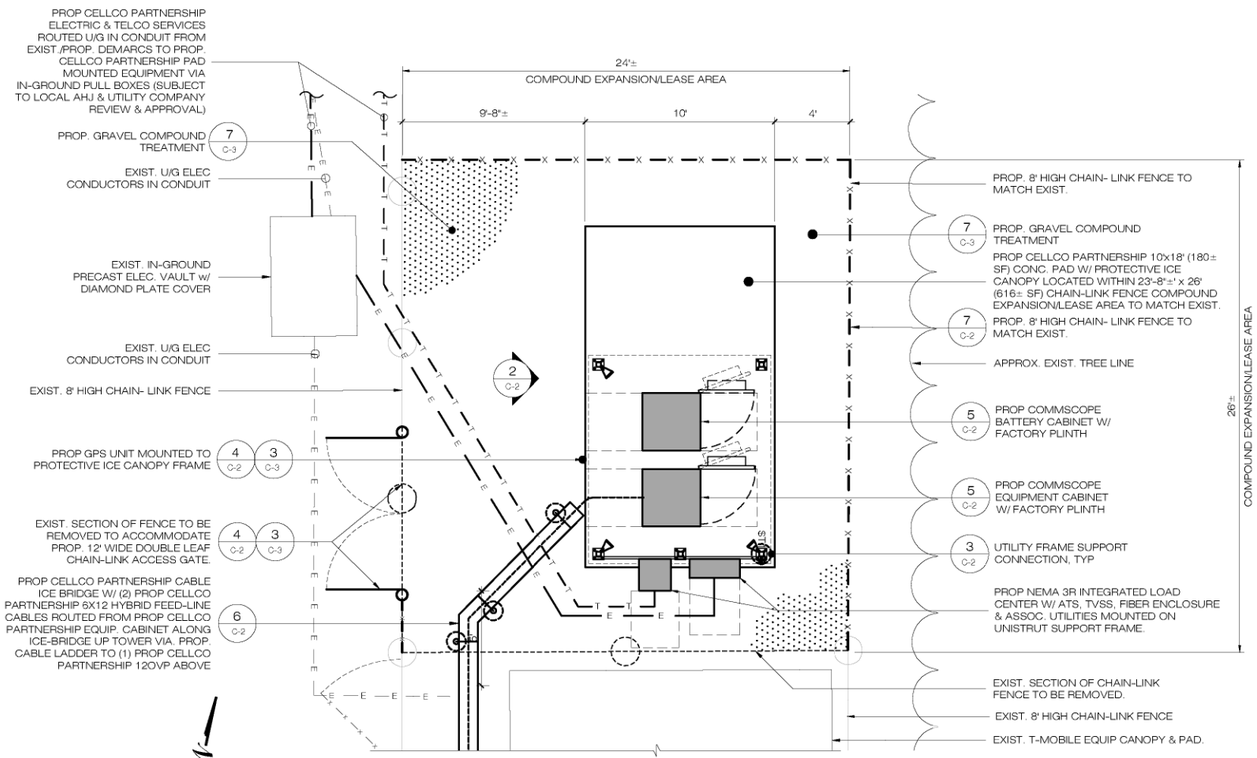
VZW PSLC: ----
VZ FUZE ID: 16737018

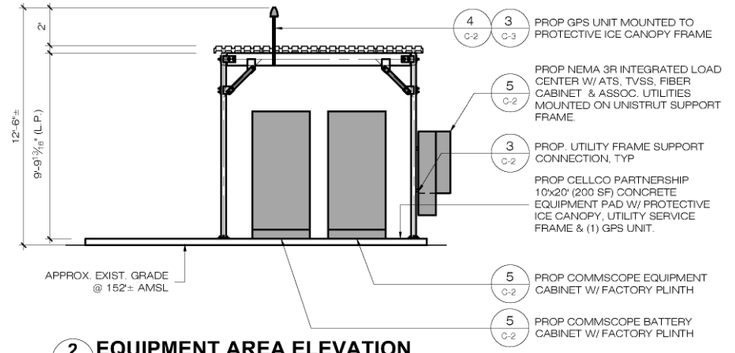
SHEET TITLE:
COMPOUND PLAN, WEST TOWER ELEVATION & NOTES

SHEET NUMBER:
C-1

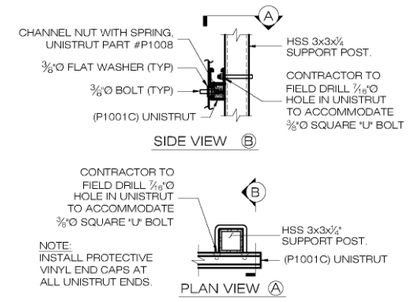


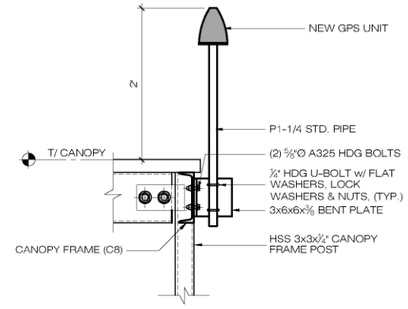
1 EQUIPMENT AREA PLAN
C-2 SCALE : ¼" = 1'-0"

¼" SCALE: 1 INCH= 4'-0"



2 EQUIPMENT AREA ELEVATION
C-2 SCALE : ¼" = 1'-0"

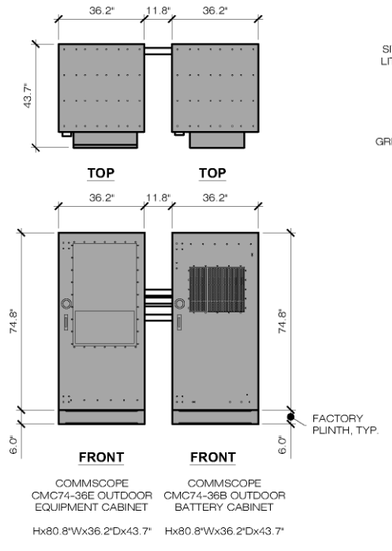




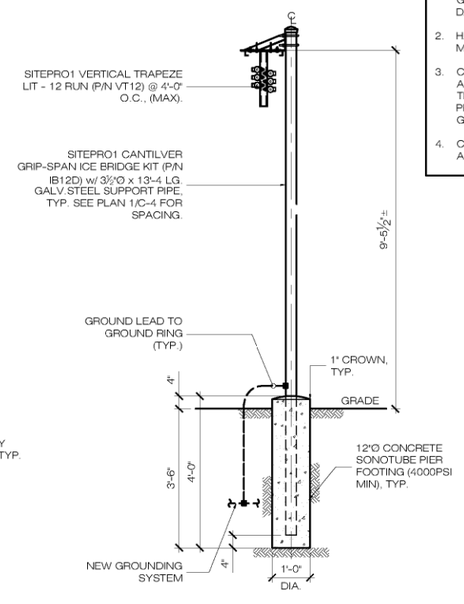
3 SERVICE FRAME CONN. DETAIL
C-2 SCALE : 1½" = 1'-0"

4 GPS MOUNT
C-2 SCALE : N.T.S.

EXCAVATION & TRENCHING NOTES:
1. CONTRACTOR SHALL ENGAGE THE SERVICES OF AN UNDERGROUND UTILITY LOCATING COMPANY TO LOCATE ALL UNDERGROUND UTILITIES, GROUNDING & EQUIPMENT IN THE TRENCHING AREA TO AVOID ANY DAMAGE. CALL BEFORE YOU DIG 1-800-922-4455
2. HAND EXCAVATE WITHIN 5' OF EXIST. UNDERGROUND UTILITIES (V.I.F.). MAINTAIN 18" MIN. CLEARANCE.
3. CONTRACTOR TO COORDINATE TRENCHING OPERATIONS w/ OWNER, AND/OR MANAGEMENT COMPANY, SO AS TO MINIMIZE DISRUPTIONS TO THE EXIST. PROPERTY OPERATIONS. REINSTATE FINISHED GRADE TO PRE-CONSTRUCTION CONDITIONS & STANDARDS. REFER TO 8/C-3 FOR GRASS AREA RESTORATION DETAILS.
4. CONTRACTOR SHALL COORDINATE TEMPORARY ROAD CLOSURES AND/OR PARKING IMPACTS w/ OWNER & AHJ.

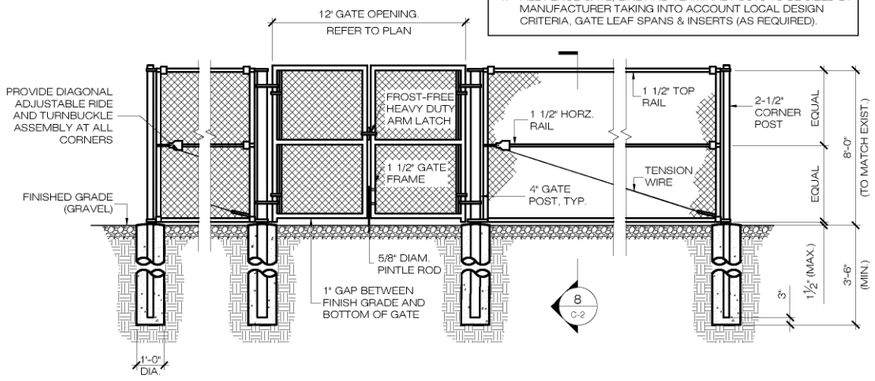


OUTDOOR CABINETS CMC74-36E & CMC74-36B DETAILS
5 C-2 SCALE : ⅜" = 1'-0"

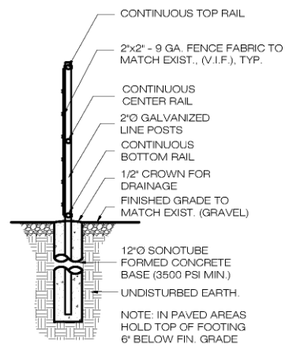


6 ICE BRIDGE DETAIL
C-2 SCALE : ½" = 1'-0"

FENCE NOTES:
1. ATTACH EACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL.
2. FENCE POST SPACING NOT TO EXCEED 10'-0" O.C.
3. REFER TO ELECTRICAL SHEETS FOR GROUNDING.
4. ALL FENCE GATE, LINE AND TERMINAL POSTS TO BE SIZED BY MANUFACTURER TAKING INTO ACCOUNT LOCAL DESIGN CRITERIA, GATE LEAF SPANS & INSERTS (AS REQUIRED).



7 CHAIN-LINK FENCE & GATE DETAIL
C-2 SCALE: N.T.S.



8 SECTION
C-2 SCALE: N.T.S.

Cellco Partnership d/b/a
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC DRAWINGS

NO	DATE	REVISION
0	04/02/25	FOR REVIEW: JRM
1	04/24/25	FOR FILING: JRM
2		
3		
4		
5		
6		

STATE OF CONNECTICUT · MICHAEL TRODDEN · 33313 · LICENSED PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXT. SUITE 311 WATERFORD, CT 06385

OWNER: TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX
ADDRESS: 820 ENFIELD STREET ENFIELD, CT 06082

ENFIELD 6 CT

SITE ADDRESS: 293 ELM STREET ENFIELD, CT 06082

APT FILING NUMBER: CT141_14730
DRAWN BY: ELZ/JM
DATE: 04/02/25 CHECKED BY: JRM
VZW MDG: 5000953820
VZW PSLC: ----
VZ FUZE ID: 16737018

SHEET TITLE:
EQUIPMENT AREA PLAN, ELEVATION & DETAILS

SHEET NUMBER:
C-2

ATTACHMENT 3

C-band 64T64R

SAMSUNG

Gen 2

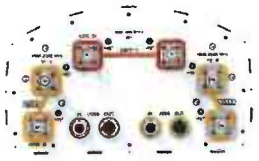
Gen 2 : Higher conducted power radio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features

※ Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions	
Size (WxHxD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Weight	**26kg (57.3 lb)**

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20(HW ready)/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @(1Rx, 18.36MHz with 30kHz,51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Volume	**41.1L**
Weight	**26kg (57.3 lb)**
Operating Temperature	-40°C ~ 55°C (w/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 38.104 FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz <-60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

NHH-65B-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- Separate RS-485 RET input/output for low and high band
- One RET for low band and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 3
Internal RET	High band (1) | Low band (1)
Power Consumption, idle state, maximum	2 W
Power Consumption, normal conditions, maximum	13 W

NHH-65B-R2B

Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	301 mm | 11.85 in
Depth	180 mm | 7.087 in
Length	1828 mm | 71.969 in
Net Weight, without mounting kit	19.8 kg | 43.651 lb

Array Layout

NHH

Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxx1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxx2
Y2	1695-2360	5-6		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz

NHH-65B-R2B

Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	15	17.7	17.9	18.4	18.7
Beamwidth, Horizontal, degrees	65	60	71	69	64	57
Beamwidth, Vertical, degrees	12.4	11.2	5.7	5.2	4.9	4.6
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	13	14	18	18	19	18
Front-to-Back Ratio at 180°, dB	30	29	31	30	29	31
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	300	300	300	300	300	300

Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.5	17.3	17.7	18.1	18.5
Gain by all Beam Tilts Tolerance, dB	±0.6	±1.1	±0.4	±0.4	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0 ° | 14.4 7 ° | 14.6 14 ° | 14.3	0 ° | 14.7 7 ° | 14.7 14 ° | 14.1	0 ° | 17.2 4 ° | 17.3 7 ° | 17.3	0 ° | 17.6 4 ° | 17.7 7 ° | 17.7	0 ° | 18.0 4 ° | 18.2 7 ° | 18.1	0 ° | 18.3 4 ° | 18.5 7 ° | 18.6
Beamwidth, Horizontal Tolerance, degrees	±2	±2.1	±3	±4.1	±6.5	±2.9
Beamwidth, Vertical Tolerance, degrees	±0.7	±0.7	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	13	14	16	16	17	15
Front-to-Back Total Power at 180° ± 30°, dB	23	22	27	27	25	25
CPR at Boresight, dB	22	21	23	23	22	19

NHH-65B-R2B

CPR at Sector, dB	10	7	16	13	11	4

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.26 m² | 2.799 ft²
Effective Projective Area (EPA), lateral	0.22 m² | 2.368 ft²
Wind Loading @ Velocity, frontal	278.0 N @ 150 km/h (62.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	230.0 N @ 150 km/h (51.7 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	537.0 N @ 150 km/h (120.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	282.0 N @ 150 km/h (63.4 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	409 mm | 16.102 in
Depth, packed	299 mm | 11.772 in
Length, packed	1952 mm | 76.85 in
Weight, gross	32.3 kg | 71.209 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant

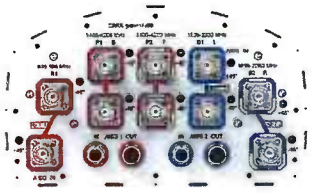
Included Products

BSAMNT-3	–	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

NHHSS-65B-R2BT4



10-port sector antenna, 2x 698–896, 4x 1695–2200 and 4x 3100-4200 MHz, 65° HPBW, 2x RETs and 2x SBTs. Both high bands share the same electrical tilt.

- Perfect antenna to add 3.5GHz CBRS to macro sites
- Low band and mid band performance mirrors the performance of existing NHH hex port antennas
- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One LB RET and one HB RET. Both high bands are controlled by one RET to ensure same tilt level for 4x MIMO

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, mid band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	10

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	4x 8 pin connector as per IEC 60130-9 Daisy chain in: Male / Daisy chain out: Female Pin3: RS485A(AISG_B), Pin5: RS485B(AISG_A), Pin6: DC 10~30V, Pin7: DC_ Return

NHHSS-65B-R2BT4

RET Interface, quantity	2 female | 2 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) | Low band (1)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	301 mm | 11.85 in
Depth	181 mm | 7.126 in
Length	1828 mm | 71.969 in
Net Weight, without mounting kit	23.1 kg | 50.927 lb

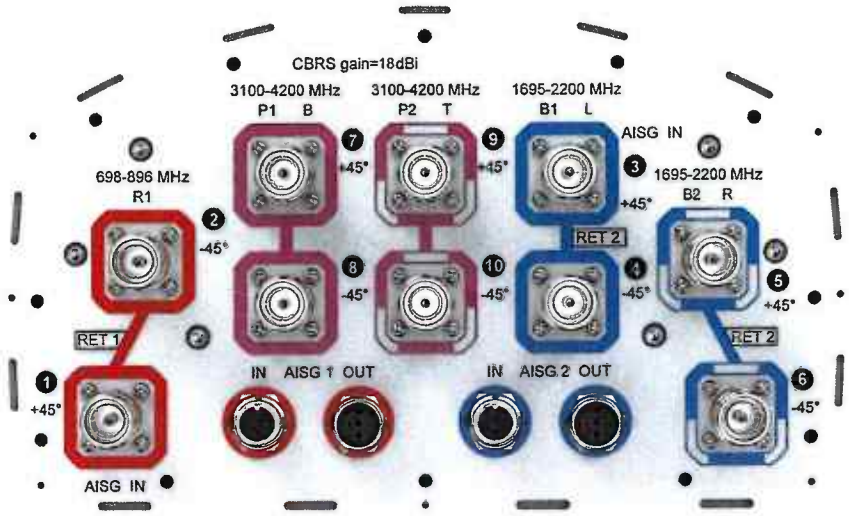
Array Layout

Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
	698-896	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxR1
	1695-2200	3 - 4	2	AISG2	CPxxxxxxxxxxxxxxB1
	1695-2200	5 - 6			
	3100-4200	7 - 8	N/A	NA	N/A
	3100-4200	9 - 10			

(Sizes of colored boxes are not true depictions of array sizes)

Port Configuration

NHHSS-65B-R2BT4



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2200 MHz | 3100 – 4200 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,000 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**3100–3550**	**3550–3700**	**3700–4200**
Gain, dBi	14.8	15.2	17.4	17.8	18	17.7	17.3	17.9
Beamwidth, Horizontal, degrees	65	62	66	61	64	54	64	60
Beamwidth, Vertical, degrees	13	11.6	5.5	5.2	4.9	5.7	5.3	4.9
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	4	4	4
USLS (First Lobe), dB	15	15	16	18	18	16	17	18
Front-to-Back Ratio at 180°, dB	26	29	31	28	27	30	33	29
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	28	28	28
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-140	-140	-140

NHHSS-65B-R2BT4

Input Power per Port at 50°C, maximum, watts	300	300	300	300	300	100	100	100

Electrical Specifications, BASTA

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**3100–3550**	**3550–3700**	**3700–4200**
Gain by all Beam Tilts, average, dBi	14.6	14.8	17	17.5	17.7	17.3	17	17.2
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.6	±0.3	±0.4	±0.6	±0.7	±0.8
Gain by Beam Tilt, average, dBi	0 ° | 14.6 7 ° | 14.6 14 ° | 14.4	0 ° | 15.0 7 ° | 14.9 14 ° | 14.5	0 ° | 16.9 3 ° | 17.0 7 ° | 16.8	0 ° | 17.4 3 ° | 17.5 7 ° | 17.4	0 ° | 17.5 3 ° | 17.8 7 ° | 17.6			
Beamwidth, Horizontal Tolerance, degrees	±1.7	±1.3	±7.2	±3.1	±6.2	±10	±6.7	±10.5
Beamwidth, Vertical Tolerance, degrees	±0.8	±0.8	±0.2	±0.2	±0.4	±0.4	±0.3	±0.4
USLS, beampeak to 20° above beampeak, dB	18	16	14	15	17	14		
Front-to-Back Total Power at 180° ± 30°, dB	22	25	25	25	24	26	25	24
CPR at Boresight, dB	24	17	16	21	19	15	17	14
CPR at Sector, dB	12	6	11	10	8	8	9	7

Mechanical Specifications

Wind Loading @ Velocity, frontal	278.0 N @ 150 km/h (62.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	230.0 N @ 150 km/h (51.7 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	537.0 N @ 150 km/h (120.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	287.0 N @ 150 km/h (64.5 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	1973 mm | 77.677 in
Depth, packed	441 mm | 17.362 in
Length, packed	337 mm | 13.268 in
Weight, gross	35.1 kg | 77.382 lb

Regulatory Compliance/Certifications

Agency	**Classification**
CHINA-ROHS	Above maximum concentration value

NHHSS-65B-R2BT4

ROHS	Compliant/Exempted

Included Products

BSAMNT-3	–	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

SAMSUNG

AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS+PCS 4T4R dual-band radio has 4Tx 4Rx to 2Tx 2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code RF4439d-25A

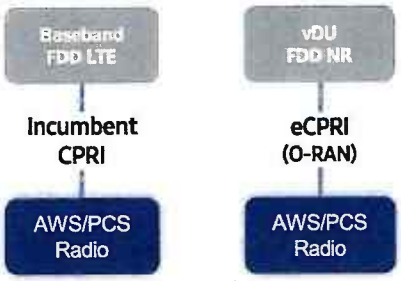
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

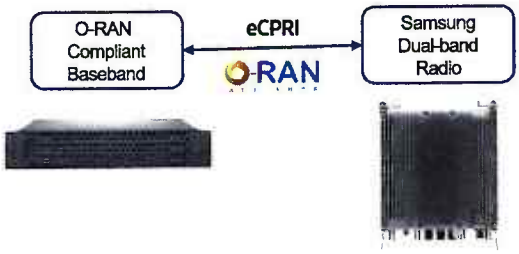
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

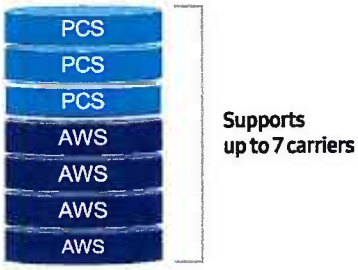
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.

Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

Specifications

Item	Specification	
Air Interface	LTE, NR(HW resource ready)	
Band	Band13 (700MHz)	Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 777~787MHz	DL: 869~894MHz UL: 824~849MHz
IBW	10MHz	25MHz
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5*/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	2C*	3C
Total # of carriers	4C + B13 (SDL) 1C	
RF Chain	4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector	
RF Output Power	Total : 320W	
	4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support	
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)	
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)	
Input Power	-48VDC (-38VDC to -57VDC)	
Power Consumption	1,165 Watt @ 100% RF load, room temperature	
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)	
Volume	37.5 L	
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)	
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)	
Cooling	Natural convection	
Unwanted Emission	3GPP 36.104	3GPP 36.104
	FCC 47 CFR 27.53 c), f)	FCC 47 CFR 22.917
	-	-69 dBm/100 kHz per path @ 896 ~901MHz
CPRI Cascade	Not supported	
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP+, single mode, Duplex (Option. Bi-di)	
RET & TMA Interface	AISG 3.0	
Bias-T	4 ports (2 ports per band)	
Mounting Options	Pole, wall	
NB-IoT	2GB+2IB or 4IB	2SA+2GB or 2GB+2IB or 4GB
PIM Cancellation	Support	
# of antenna port	4	
External Alarm	4	
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)	
CPRI compression	Not Support	

* 5MHz supporting in B13(700MHz) depends on 3GPP std. and UE capability. External filters in interferer and victim sides for Mexican boarder to support 5MHz service need to be considered
** Finger guard is not needed

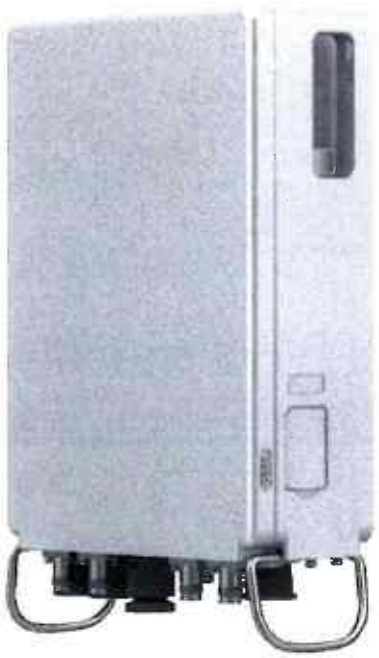
SAMSUNG

Samsung Micro Radio

CBRS(N48) 4T4R Micro Radio

Samsung's CBRS 4T4R Micro Radio provides mobile operators with a cost-effective solution to fill coverage gaps encountered when Macro Radios are in use.

Model Code RT4423-48A(DC)
RT4423-48B(AC)



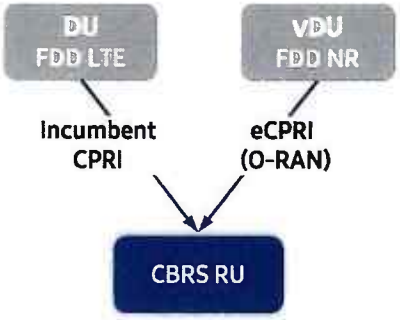
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Dual Personality

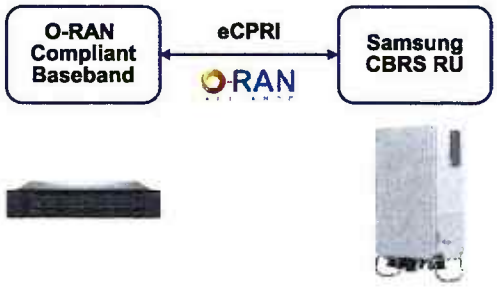
The new CBRS Radio supports existing CPRI and advanced eCPRI interfaces providing installation options for both legacy LTE and NR network equipment.



O-RAN Compliant

A standardized O-RAN radio supports implementing cost-effective networks capable of enhanced data throughput without compromising existing or new network investments.

Samsung O-RAN products ensure state-of-the-art O-RAN technology will accelerate efforts for creating solid O-RAN ecosystems.



High Capacity

The number of carriers required varies according to site(region). Supporting multiple carriers is essential to customers as they seek to utilize all frequencies available to them.

The new CBRS radio can support up to 5 carriers which is and increase of 3 carriers over the capacity of the previous CBRS product.

Compact and Easy Installation

New CBRS RU is compact in it's design with a volume of 6L and weighing only about 7kg.

This compact design allows for various installation options including, tower, rooftop, pole, wall and shroud.

A clip on antenna is available providing flexibility to installation requirements.

w/o Clip-on antenna | w/Clip-on antenna

Technical Specifications

Item	Specification
Tech	LTE / NR
Band	B48, n48 / TDD
Frequency Band	3,550 – 3,700 MHz
RF Power	20 W (5 W x 4 Ports)
IBW/OBW	150MHz / 100MHz
Installation	Pole, Wall, Side by side (max 3 radio)
Size/ Weight	[Radio] w/o Clip-on antenna : 8.7 x 11.8 x 3.6 inch, 5.97L, 7kg w/ Clip-on antenna : 8.7 x 11.8 x 5.0 inch, 8.42L, 8.5kg *AC and DC type have same size and weight [Bracket Weight] Tilting & Swivel (EP97-02038A) : 2.51kg Fixed (EP97-02037A) : 1.31kg Side by side (EP97-02089A) : 8.0kg

ATTACHMENT 4

STRUCTURAL ANALYSIS AND REINFORCEMENT DESIGN FOR PROPOSED WIRELESS EQUIPMENT INSTALLATION EXISTING 160'± SELF-SUPPORT TOWER ENFIELD, CONNECTICUT

Prepared for
Verizon Wireless

Verizon Wireless Site Ref:
Enfield 6 CT

Site Address: 293 Elm Street, Enfield, CT 06082
FUZE ID: 16737018
MDG Location ID: 5000953820
Project Type: New Build

APT Filing No. CT141_14730

~~Rev. 0 ~ July 3, 2024~~
Rev. 1 ~ July 30, 2024

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
567 VAUXHALL STREET EXTENSION · SUITE 311 · WATERFORD, CT 06385 · PHONE 860-663-1697

STRUCTURAL ANALYSIS REPORT
160'± SELF-SUPPORT TOWER
ENFIELD, CONNECTICUT
prepared for
Verizon Wireless

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed a structural analysis and reinforcement design of the subject 160'± self-support lattice tower structure to support a proposed Verizon Wireless equipment installation.

The proposed Verizon antenna and appurtenance installation consists of six (6) panel antennas, three (3) LSub6 antennas with integrated remote radio heads (RRHs), six (6) dual-band RRHs, three (3) CBRS RRHs, and one (1) 12OVP. Equipment shall be installed on three (3) new sector mounts, and be fed by two (2) new 6x12 Low-Inductance (LI) hybrid feed-line cables. Reference can be made to the inventory table on the following page for additional information.

The results of this analysis indicate that with the implementation of the reinforcements detailed within this report, the subject tower structure **meets** the requirements of the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code, and the ANSI/TIA-222-H standard with the existing and proposed equipment loading.

The steel component structure usage is summarized in the table below:

Component/Member	Usage (%)
Legs (60'-80')	88%

Notes:

1. Usage values noted within table above not to exceed 90% per Town of Enfield PD.

INTRODUCTION:

A structural analysis was performed on the above-mentioned communications tower by APT for Verizon Wireless. The subject tower is located at 293 Elm Street, in Enfield, Connecticut.

The following information was utilized in the preparation of this analysis:

- RFDS detailing Verizon's proposed equipment changes, latest version.
- Lease Exhibits prepared by TEP Northeast, marked Rev 2 dated 0/5/07/24.
- Mount Design and Analysis Report, prepared by All Points Technology Corp. (APT Filing No. CT141_14730) marked Rev 0, dated 06/28/24.
- Field notes and photos from APT site visit on 7/2/24.
- Structural Analysis Report prepared by AECOM (Project No. 60629930), marked Rev. 1, dated 12/02/20.
- Construction Drawings prepared by Hudson Design Group, marked Rev 3, dated 12/30/20.
- Structural Analysis Report prepared by Hudson Design Group, dated 11/12/20.

- Construction Drawings prepared by Hudson Design Group, marked Rev 1, dated 11/16/20.
- Structural Analysis prepared by APT (Project No. CT411260), dated 09/29/17.
- Tower installation inspection report, prepared by URS, dated 02/28/13.
- Tower Drawings prepared by Valmont Structures (Project No. A-168131-F-1014089), dated 10/27/11.

The subject host structure is a 160'± galvanized steel self-support lattice tower, designed and manufactured by Valmont Structures. The analysis was conducted using the following inventory (proposed equipment shown in **bold**; reserved/future equipment shown in *italic*). Should the equipment/dimensions listed differ from actual field conditions, APT should be contacted to review the discrepancies.

Carrier	Antenna and Appurtenance Make/Model	Elevation [2,3]	Status [4]	Mount Type	Coax/Feed -Line
-	Lightning rod	172'±	ETR	14' pipe extension	N.A.
Enfield PD	8' omnidirectional whip	160'±	ETR	3' sidearm	7/8"
	3' High-Performance (HP) microwave dish (HPD3-4.7NS), 2' High-Performance (HP) microwave dish (HPD2-4.7NS)	159'±		(2) 3' sidearms	(4) 7/8"
	2' microwave dish (SPD2-5.2NS)	158'±		3' sidearm	(2) 1/4" LMR
AT&T	(6) KMW EPBQ-654L8H8-L2 antennas, (3) CCI HPA65R-BU8A antennas (3) Ericsson 4478 B14 RRHs, (3) Ericsson 4415 B30 RRHs, (3) Ericsson 4449 B5/B12 RRHs, (3) Ericsson 8843 B2/B66A RRHs, (2) Raycap DC6-48-60-18-8COVP, (1) Raycap DC6-48-60-0-8CEV OVP	151'±	ETR	(3) SitePro1 VFA-12-WLL-30120 sector mounts	(2) 0.44" fiber, (6) 0.96" DC Cables
T-Mobile	(3) RFS APXVAARR24_43-U-NA20 antennas, (3) Ericsson AIR6449 B41 antennas, (3) Ericsson AIR32 B66a B2a antennas, (3) Ericsson RRUS-11 B4 RRHs, (3) Ericsson Radio 4449 B71/B85 RRHs (3) Radio 4415 B25 RRHs, (3) Commscope SDX1926Q-43 diplexers	140'±	ETR	(3) 12' T-frame sector mounts	(4) 6x24 hybrid
Enfield PD	2' High-Performance (HP microwave dish (HPD2-4.7NS), 1'-8" square panel	134'±	ETR	(2) 3' sidearms	(2) 7/8", (2) 1/4" LMR
Enfield PD	BA1012-2 omnidirectional whip, (2) SC329-HF2LDF omnidirectional whips	117'±	ETR	(3) 3' sidearms	(3) 7/8"
Verizon Wireless	**(3) Samsung MT6413-77A antennas w/ integrated RRHs**	**106.8'±**	P	**Three (3) SITEPRO1 12'-6" Heavy Duty V-Frame Assembly (P/N VFA-12-HD) w/ two (2) tie-back arms and twelve (12) P2.0 STD x 8'-0"L antenna mounting pipes**	**(2) 6x12 LI hybrid**
	(3) Commscope NHH-65B-R2B antennas [5], (3) Commscope NHHSS-65B-R2B antennas [5], (3) Samsung CBRS RT4423-48A ORAN RRHs, (3) Samsung B2/B66A RF4439d-25A ORAN RRHs, (3) Samsung B5/B13 RF4461d-13A ORAN RRHs, (1) Raycap RVZDC-6627-PF-48 12OVP	**105'±**	P		
Enfield PD	1'-8" square panel	98'±	ETR	Leg	1/4"
Enfield PD	SY307-SF3SNM yagi, (2) SY406-SF1SNM yagis	90'±	ETR	(2) 3' sidearms	(3) 7/8"
Enfield PD	12' omnidirectional whip (DB205-1), (2) 18' omnidirectional whips	60'±	ETR	(3) 3' sidearms	(3) 1/2"
Enfield PD	GPS 1' omnidirectional whip	20'±	ETR	3' sidearm	1/2"

Notes:

2. Panel antennas and MW dish antennas listed at centerline elevations. Omni-whip/dipole antennas listed at base elevation.
3. Elevations are measured above ground level (AGL).
4. ETR = Existing to Remain; ERL= Existing to be Relocated *R*= Reserved/Future; **P** = Proposed.
5. Proposed antennas to utilize Dual Mount Antenna Brackets (Commscope P/N BSAMNT-SBS-2-2)

RIGOROUS STRUCTURAL ANALYSIS:

Methodology:

This analysis has been prepared in accordance with the ANSI/TIA-222-H standard entitled "Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures," the American Institute of Steel Construction (AISC) Manual of Steel Construction, and the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code, utilizing the following criteria:

- Load Case 1: 126 mph (3-second gust), 0" ice
- Load Case 2: 50 mph (3-second gust) w/ 1.5" ice thickness
- Load Case 3: 60 mph (3-second gust) (Service Load)
- Risk Category III
- Exposure Category B
- Topographic Category 1

ANALYSIS RESULTS:

Analysis of the tower was conducted in accordance with the criteria outlined herein with the aforementioned equipment loading. The following table summarizes the results of the analysis based on stresses of individual tower sections:

Elevation	Legs	Bracing
150'-160'	11%	25%
130'-150'	52%	75%
110'-130'	84%	58%
100'-110'	87%	43%
80'-100'	75%	53%
60'-80'	88%	57%
40'-60'	66%	69%
20'-40'	79%	85%
0'-20'	86%	69%

Notes:
6. Usage values noted within table above not to exceed 90% per Town of Enfield PD.

Bracing, Splice and Anchor Bolts:

Bracing, splice, and anchor bolts were evaluated under the proposed loading. All bolts were found to be adequately sized to support the proposed loads.

Foundation:

Evaluation of the existing base foundation was limited to a comparison of the base reactions calculated under the proposed loading against the design reactions indicated within original design documents, prepared by Valmont Structures. Reactions imposed by the proposed installation are less than the published design reactions, indicating that the base foundation is adequately sized.

Factored base reactions imposed with the aforementioned equipment loading were calculated to be as follows:

Load Effect	Original Design (TIA-222-F)	TIA-222-H Equivalent [7]	Calculated Reactions	Result
Leg Compression	226 kips	305.1 kips	265.3 k	PASS
Leg Uplift	207 kips	279.5 kips	235.2 k	PASS
Total Shear	32 kips	43.2 kips	34.3 k	PASS
Overturning Moment	3,008 ft-kip	4,060.8 ft-kips	3,471.4 ft-k	PASS

Notes:
7. Original Allowable Stress design reactions multiplied by factor of 1.35 per ANSI/TIA-222-H section 15.6.2.

Deflection:

Combined twist and sway was evaluated per ANSI/TIA-222-H, Annex D, utilizing a service wind speed of 60 mph, as outlined in the criteria above. Results are summarized as follows:

Load Case	Tilt	Twist	Combined Max
Service Wind – 60-mph	0.3649°	0.1031°	0.3792°

Notes:
8. Twist and sway was evaluated at the highest dish elevation at 159'.

Dish Model	Return Loss (dB)	Dish Diameter (ft)	Dish Frequency (GHz)	TIA-222-H Allowable [9]
3' dish w/ shroud (Radiowaves HPD3-4.7)	-14 dB	3-ft	4.4 – 5.0 GHz	3.54°-4.023°

Notes:
9. Microwave antenna deflection limits based on an allowable 10dB degradation in radio frequency level.

CONCLUSIONS:

In conclusion, the results of this analysis indicate that with the implementation of the reinforcements detailed within this report, the subject tower structure **meets** the requirements of the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code, and the ANSI/TIA-222-H standard with the existing and proposed equipment loading.

Sincerely,
All-Points Technology

Domenic Aversa, PE
Senior Structural Engineer

LIMITATIONS:

This report is based on the following:

1. Tower/structure is properly installed and maintained.
2. All members and components are in a non-deteriorated condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower/structure is in plumb condition.
6. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
7. Material grades as follows:
   Legs: ASTM A572 Gr. 50
   Bracing: ASTM A572 Gr. 50 and ASTM A36

All-Points Technology Corporation, P.C. (APT) is not responsible for any modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

1. Replacing or reinforcing bracing members.
2. Reinforcing members in any manner.
3. Installing antenna mounts or waveguide cables.
4. Adding or relocating antennas.
5. Extending tower/structure.

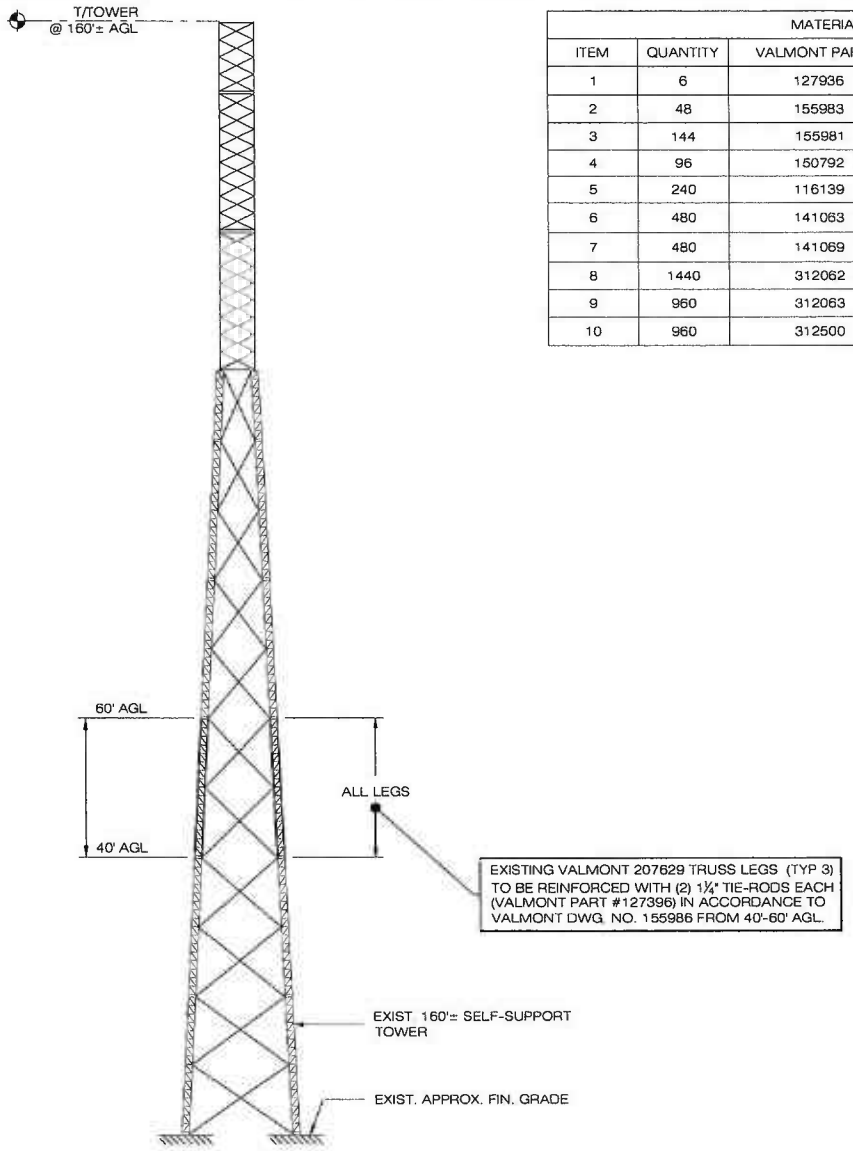
APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which is contrary to that which is contained herein, or you are aware of any defects arising from the original design, material, fabrication and erection deficiencies, you should disregard this report and immediately contact APT. APT disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

Appendix A

Modification Drawings

NOTE:
1 EXIST. TOWER MOUNTED EQUIPMENT NOT SHOWN FOR CLARITY.

LEGEND:
1. AGL = ABOVE GRADE LEVEL
2. ATB = ABOVE TOWER BASE PLATE



1 SK-1 **TOWER ELEVATION**
SCALE : NTS

MATERIALS LIST			
ITEM	QUANTITY	VALMONT PART #	DESCRIPTION
1	6	127936	1¼" TIE ROD
2	48	155983	TIE PLATE
3	144	155981	LEG CLAMP
4	96	150792	TIE-ROD CLAMP
5	240	116139	FLAT CLAMP
6	480	141063	½" GRADE 5 BOLT, 4" LONG
7	480	141069	½" GRADE 5 BOLT, 1¾" LONG
8	1440	312062	½" GALV. FLAT WASHER
9	960	312063	½" GALV. LOCK WASHER
10	960	312500	½" GALV. HEX NUT

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verizon

900 CHELMSFORD STREET
TOWER #2, FLOOR #5
LOWELL, MA 01851

REV 0: 07/31/24 FOR REVIEW: DJA
REV 1:
REV 2:
REV 3:
REV 4:
REV 5:
REV 6:

DATE OF DV: NA
DRAWN BY: DJA
CHECKED BY: MST
APT NO.: CT141_14730
VZ MDG ID: 5000953820
VZ FUZE ID: 16737018
VZ PSLC: -

ENFIELD 6 CT
293 ELM STREET
ENFIELD, CT 06082

TOWER REINFORCEMENT DETAILS

SHEET NUMBER:
SK-1

GENERAL NOTES:

1. REFER TO TOWER ANALYSIS & REINFORCEMENT DESIGN REPORT PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION, P.C. APT FILING NO. CT141_14730, MARKED REV1 DATED 07/30/24.
2. WORK SHALL BE CONDUCTED UNDER 15-MPH OR LESS WIND CONDITIONS. PROVIDE SHORING OR TEMPORARY BRACING AS REQUIRED TO COMPLETE THE WORK.
3. WORK MUST BE PERFORMED BY COMPETENT AND QUALIFIED WORKERS WITH EXPERIENCE PERTINENT TO THE TASKS INDICATED HEREIN.
4. VERIFY DIMENSIONS AND EXISTING CONDITIONS PRIOR TO FABRICATION. BRING DISCREPANCIES TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
5. SPECIAL INSPECTIONS ARE REQUIRED FOR THIS PROJECT. REFER TO SHEET SK-N2 AND SK-N3 FOR MORE INFORMATION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS & METHODS AS WELL AS PROTECTING EXISTING LINES AND FACILITIES FROM CONSTRUCTION DAMAGE.
7. DETAILS SHOWN ON ANY DRAWING ARE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
8. WORK IS TO BE ACCOMPLISHED ON AN EXISTING IN-SERVICE STRUCTURE. COORDINATE WORK TO MINIMIZE DISRUPTION OF EXISTING FACILITIES.
9. MOUNT REMOVAL AND REINSTALLATION MAY BE REQUIRED. WORK MAY REQUIRE TEMPORARY RELOCATION OF UTILITIES/HANGERS.
10. SPRAY A MINIMUM OF TWO COATS OF COLD-GALVANIZING COMPOUND ON ANY FIELD CUT, WELDED OR DRILLED SURFACES.
11. ALL STEEL AND HARDWARE TO BE HOT-DIP GALVANIZED (HDG).
12. INSTALL NUT-LOCKING DEVICE ON ALL TOWER CONNECTIONS UNLESS OTHERWISE NOTED.

05 STEEL:

MATERIALS:

WIDE FLANGE	ASTM A992, GR 50 (50 KSI)
HSS (RECTANGULAR)	ASTM A500, GR B (46 KSI)
HSS (ROUND)	ASTM A500, GR C (42 KSI)
PIPE	ASTM A572-GR50 (50 KSI)
ANGLE	ASTM A36
PLATE	ASTM A36
BOLTS	ASTM F3125 (A325)
SOLID ROD	ASTM A572-GR50 (50 KSI)
ANCHOR/THREADED RODS	ASTM F1554 GR36
U-BOLTS	SAE J429 GR 2
WELDING ELECTRODE	ASTM E 70XX

CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. THE ENGINEER SHALL BE NOTIFIED OF ANY CONDITIONS WHICH PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325, (UNLESS NOTED OTHERWISE)

ALL STEEL MATERIAL EXPOSED TO WEATHER SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIPPED GALVANIZED) COATINGS" ON IRON AND STEEL PRODUCTS WITH A COATING WEIGHT OF 2 OZ/SF.

ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE EXPOSED TO WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE."

TOUCH-UP ALL DAMAGED GALVANIZED STEEL WITH ZINC RICH/COLD GALV. (ZINGA®, ZRC®) OR APPROVED EQUAL, IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. TOUCH-UP DAMAGED NON-GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.

PAINT ALL NEW HARDWARE TO COORDINATE WITH EXISTING TOWER COLORS.

CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES." ALL WELDING SHALL BE DONE USING E 70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION" 16TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED. SEE NOTE ABOVE.

THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.

THE STEEL STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER COMPLETION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO INSURE THE SAFETY OF THE HOST STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION.

SHOP DRAWINGS ARE TO BE CHECKED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

ALL STEEL ELEMENTS SHALL BE INSTALLED PLUMB AND LEVEL.

CONNECTIONS:

ALL WELDS SHALL BE INSPECTED PER AWS D1.1/D1.1M.

ALL CJP WELDS SHALL BE INSPECTED PER AWS D1.1/D1.1M UTILIZING RADIOGRAPHIC TESTING (RT), OR ULTRASONIC TESTING (UT) PROCEDURES.

USE THE LARGER OF 1/4" FILLET WELDS OR MINIMUM SIZE PER AISC REQUIREMENTS WHERE NO WELD SIZE IS SPECIFIED ON THE DRAWINGS.

ALL ARC AND GAS WELDING SHALL BE DONE BY A LICENSED AND CERTIFIED WELDER IN ACCORDANCE WITH AMERICAN WELDING SOCIETY.

ALL WELDING SHALL BE DONE USING E 70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AWS D1.1. UPON THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.

USE PRECAUTIONS AND PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.

TOUCH-UP ALL DAMAGED GALVANIZED STEEL WITH ZINC RICH/COLD GALV. (ZINGA®, ZRC®) OR APPROVED EQUAL, IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. TOUCH-UP DAMAGED NON-GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.

DESIGN BASIS:

GOVERNING CODES/DESIGN STANDARDS:
2021 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE 2022 CONNECTICUT STATE BUILDING CODE
ANSI/TIA-222-H

DESIGN CRITERIA:

RISK CATEGORY	II	(TIA-222-H, TABLE 2-1)
WIND LOADS		
BASIC DESIGN WIND SPEED, (V). (3-SECOND GUST)	126 MPH	(TIA-222-H, ANNEX B)
EXPOSURE CATEGORY	B	(TIA-222-H, SEC. 2.6.5)
ICE LOAD		
BASIC WIND SPEED (V_i) = W/ ICE 3-SEC GUST)	50 MPH	(TIA-222-H, ANNEX B)
DESIGN ICE THICKNESS (T_i) =	1.50"	(TIA-222-H, ANNEX B)

SEISMIC LOAD:

REFER TO SECTION 1613 OF THE 2021 IBC FOR SEISMIC CLASSIFICATION AND LOADING DETERMINATION.

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REV 0: 07/31/24 FOR REVIEW: DJA	DATE OF DV: NA
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REV 4:	VZ MDG ID: 5009953820
REV 5:	VZ FUZE ID: 16737018
REV 6:	VZ PSLC: -

ENFIELD 6 CT
293 ELM STREET
ENFIELD, CT 06082

NOTES & SPECIFICATIONS

SHEET NUMBER:
SK-N1

MODIFICATION INSPECTION NOTES:

GENERAL

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT TO REVIEW THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT ALL-POINTS TECHNOLOGY CORP.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MI OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE GC CHECKLIST.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENTLY AND EFFECTIVENESS OF DELIVERING A MI REPORT:

- GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- IT MAY BE BENEFICIAL TO INSTALL ALL TOWER MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON-SITE.

CANCELLATION OF DELAYS IN SCHEDULED MI

IF THE GC AND MI INSPECTOR AGREE TO A DATE ON WHICH THE MI WILL BE CONDUCTED, AND EITHER PARTY CANCELS OR DELAYS, ALL-POINTS TECHNOLOGY CORP. SHALL NOT BE RESPONSIBLE FOR ANY COSTS, FEES, LOSS OF DEPOSITS AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.). IF ALL-POINTS TECHNOLOGY CORP. CONTRACTS DIRECTLY FOR A THIRD PARTY MI, EXCEPTIONS MAY BE MADE IN THE EVENT THAT THE DELAY/CANCELLATION IS CAUSED BY WEATHER OR OTHER CONDITIONS THAT MAY COMPROMISE THE SAFETY OF THE PARTIES INVOLVED.

CORRECTION OF FAILING MI'S

IF THE MODIFICATION INSPECTOR FAILS THE MI ("FAILED MI"), THE GC SHALL WORK WITH ALL-POINTS TECHNOLOGY CORP. TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATION CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE AN ADDITIONAL MI.
- WITH THE APPROVAL OF ALL-POINTS TECHNOLOGY CORP., THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.
- THE ADDITIONAL COSTS INCURRED IN THE SECOND SUPERVISION PROCESS WOULD BE BORNE BY THE GC.

MI VERIFICATION INSPECTIONS

ALL-POINTS TECHNOLOGY CORP. RESERVES THE RIGHT TO CONDUCT A MI VERIFICATION TO VERIFY THE ACCURACY AND COMPLETENESS OF PREVIOUSLY COMPLETED MI INSPECTION(S) ON TOWER MODIFICATION PROJECTS.

ALL VERIFICATION INSPECTIONS SHALL BE HELD TO THE SAME SPECIFICATIONS AND REQUIREMENTS IN THE CONTRACT DOCUMENTS.

VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDANT FIRM AFTER A MODIFICATION PROJECT IS COMPETED, AS MARKED BY THE DATE OF AN ACCEPTED "PASSING MI" OR "PASS AS NOTED MI" REPORT FOR THE ORIGINAL PROJECT.

REQUIRED IMAGES

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING IMAGES, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- IMAGES DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION, AS APPLICABLE
  - RAW MATERIALS
  - IMAGES OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATION
  - WELD PREPARATION
  - BOLT INSTALLATION AND TORQUE
  - FINAL INSTALLED CONDITION
  - SURFACE COATING REPAIR
- POST CONSTRUCTION IMAGES
  - IMAGES OF MODIFIED SECTIONS INDIVIDUALLY INDICATING ELEVATION
  - FINAL INFIELD CONDITION

IMAGES OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
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WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

verizon

900 CHELMSFORD STREET
TOWER #2, FLOOR #5
LOWELL, MA 01851

DATE OF DV: NA
DRAWN BY: DJA
CHECKED BY: MST
APT NO.: CT141_14730
VZ MDG ID: 5000953820
VZ FUZE ID: 16737018
VZ PSLC: -

REV 0: 07/31/24 FOR REVIEW: DJA
REV 1:
REV 2:
REV 3:
REV 4:
REV 5:
REV 6:

ENFIELD 6 CT
293 ELM STREET
ENFIELD, CT 06082

MI INSPECTION NOTES

SHEET NUMBER:
SK-N2

MI CHECKLIST

REQ'D	REPORT ITEM	BRIEF DESCRIPTION
		PRE-CONSTRUCTION
X	MI CHECKLIST DRAWING	THIS CHECKLIST SHALL BE INCLUDED IN THE MI REPORT
N/A	EOR APPROVED SHOP DRAWINGS	FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (EOR) FOR REVIEW. CONTRACTOR SHALL PROVIDE APPROVED SHOP DRAWINGS TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	ASSEMBLY DRAWINGS	ONCE THE PRE-MODIFICATION MAPPING IS COMPLETE, PRIOR TO FABRICATION, CONTRACTOR SHALL PROVIDE DETAILED ASSEMBLY DRAWINGS. THESE ARE TO INCLUDE, BUT ARE NOT LIMITED TO, A VISUAL LAYOUT OF NEW REINFORCEMENT, EXISTING REINFORCEMENT CONFIGURATION, PORTHOLES, MOUNTS, STEP PEGS, SAFETY CLIMBS AND ANY OTHER MISCELLANEOUS ITEMS WHICH MAY AFFECT SUCCESSFUL INSTALLATION OF MODIFICATIONS ON THE TRUSS. THESE DRAWINGS SHALL BE SUBMITTED TO THE EOR FOR APPROVAL. APPROVED ASSEMBLY DRAWINGS SHALL BE SUBMITTED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FABRICATION INSPECTION	A LETTER FROM THE FABRICATOR STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THE CONTRACT DOCUMENTS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FABRICATOR CERTIFIED WELD INSPECTION	A VISUAL OBSERVATION BY CWI OF A PORTION OF THE WELDING ON THE PROPOSED STRUCTURAL MEMBERS IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT
N/A	MATERIAL TEST REPORT (MTR)	MILL CERTIFICATION SHALL BE PROVIDED FOR ALL STEEL AS SPECIFIED IN THE MODIFICATION DRAWINGS AND THIS DOCUMENTATION SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FABRICATOR NDE INSPECTION	CRITICAL SHOP WELDS THAT REQUIRE TESTING ARE NOTED ON THESE CONTRACT DRAWINGS. A CERTIFIED WELD INSPECTOR SHALL PERFORM NON-DESTRUCTIVE EXAMINATION AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	NDE REPORT OF MONOPOLE BASE PLATE	A NON-DESTRUCTIVE EXAMINATION OF THE POLE TO BASE PLATE CONNECTION IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	PACKING SLIPS	THE MATERIAL SHIPPING LIST SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
		CONSTRUCTION (PERFORMED BY CONTRACTOR)
X	CONSTRUCTION INSPECTIONS	A LETTER FROM THE GENERAL CONTRACTOR STATING THAT THE WORKMANSHIP WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARD AND THESE CONTRACT DRAWINGS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FOUNDATION INSPECTIONS	A VISUAL OBSERVATION OF THE EXCAVATION AND REBAR SHALL BE PERFORMED BEFORE PLACING THE CONCRETE. A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS	THE CONCRETE MIX DESIGN, SLUMP TEST, AND COMPRESSIVE STRENGTH TESTS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	POST INSTALLED ANCHOR ROD VERIFICATION	POST INSTALLED ANCHOR ROD VERIFICATION SHALL BE PERFORMED AS SPECIFIED IN THE MODIFICATION DRAWINGS AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	BASE PLATE GROUT VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE MI INSPECTOR THAT CERTIFIES THAT THE GROUT WAS INSTALLED AS SPECIFIED IN THE MODIFICATION DRAWINGS FOR INCLUSION IN THE MI REPORT.
X	HIGH STRENGTH BOLT INSPECTION	THE MI INSPECTOR TASKS INCLUDE, BUT NOT LIMITED TO, A REVIEW OF CERTIFICATIONS & PROCEDURES, SHALL OBSERVE THE FASTENER ASSEMBLIES, PROPER TIGHTENING SEQUENCE, AND INSPECT THAT PRETENSION MEETS RCSC SPECIFICATIONS.
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION	A CERTIFIED WELD INSPECTOR SHALL INSPECT AND TEST AS NECESSARY ALL FIELD WELDS. A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	EARTHWORK: LIFT AND DENSITY	FOUNDATION AND SUB-GRADES SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	ON SITE COLD GALVANIZING VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDED DOCUMENTATION TO THE MI INSPECTOR VERIFYING THAT ANY ON-SITE COLD GALVANIZING WAS APPLIED AS SPECIFIED IN THE MODIFICATION DRAWINGS.
N/A	GUY WIRE TENSION REPORT	THE GENERAL CONTRACTOR SHALL PROVIDE A REPORT TO THE MI INSPECTOR INDICATING THE TEMPERATURE AND TENSION IN EVERY GUY CABLE AS PART OF PLUMB AND TENSION PROCEDURE FOR INCLUSION IN THE MI REPORT.
N/A	GC AS-BUILT DOCUMENTS	THE GENERAL CONTRACTOR SHALL SUBMIT A COPY OF THE CONTRACT DRAWINGS EITHER STATING "INSTALLED AS DESIGNED" OR NOTING ANY CHANGES THAT WERE REQUIRED AND APPROVED BY THE EOR DUE TO FIELD CONDITIONS.
		POST-CONSTRUCTION
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)	THE MI INSPECTOR SHALL OBSERVE AND REPORT ANY DISCREPANCIES BETWEEN THE CONTRACTOR'S REDLINE DRAWING AND THE ACTUAL COMPLETED INSTALLATION.
N/A	POST INSTALLED ANCHOR ROD PULL-OUT TESTING	POST-INSTALLED ANCHOR RODS SHALL BE TESTED AS SPECIFIED IN THE MODIFICATION DRAWINGS AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT. THE REPORT SHALL CONTAIN DEFLECTION READINGS AT 15% INCREMENTS OF THE TARGET LOAD AFTER BEING HELD FOR A MINIMUM DURATION OF 2 MINUTES. THE GC REPORT SHALL CONTACT THE EOR IMMEDIATELY IF THE RESIDUAL DISPLACEMENT IS GREATER THAN 0.01 INCHES. THE REPORT SHALL ALSO CONTAIN PROOF OF CALIBRATIONS FOR THE EQUIPMENT AND IMAGES OF STEP BY STEP TEST PROCEEDINGS. IT IS THE TESTER'S RESPONSIBILITY TO ENSURE FULL BEARING PRIOR TO TEST INITIATION AND INITIATING STRAIN CRACKING OF EPOXY/GROUT. THE EOR SHALL BE CONTACTED FOR ANY CLARIFICATION.
X	IMAGES	IMAGES SHALL BE SUBMITTED TO THE MI WHICH DOCUMENT ALL PHASES OF THE CONSTRUCTION. THE IMAGES SHALL BE ORGANIZED IN A MANNER THAT EASILY IDENTIFIES THE EXACT LOCATION OF THE PHOTO.

ADDITIONAL TESTING AND INSPECTIONS:

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE MI REPORT AND N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

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REV 4:
REV 5:
REV 6:

ENFIELD 6 CT
293 ELM STREET
ENFIELD, CT 06082

MI CHECKLIST

SHEET NUMBER:
SK-N3

Appendix B

Design Criteria

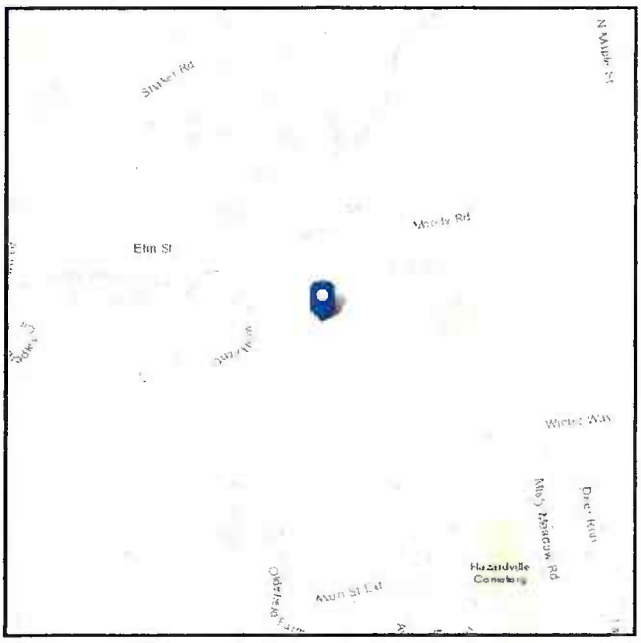
Municipality	Basic Design Wind Speeds, V (mph)				Allowable Stress Design Wind Speeds, V_{asd} (mph)				Ground Snow Load p_g (psf)	MCE Ground Accelerations		Wind-Borne Debris Region[1]		Hurricane-Prone Region
	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV		S_S (g)	S_1 (g)	Risk Cat. III Occup. I-2	Risk Cat. IV	
Cornwall	105	115	125	130	81	89	97	101	40	0.172	0.054			
Coventry	110	120	130	135	85	93	101	105	30	0.188	0.055			Yes
Cromwell	110	120	130	135	85	93	101	105	30	0.207	0.056			Yes
Danbury	110	120	125	130	85	93	97	101	30	0.225	0.056			Yes
Darien	110	120	130	135	85	93	101	105	30	0.250	0.057		Type B	Yes
Deep River	115	125	135	140	89	97	105	108	30	0.210	0.054			Yes
Derby	110	120	130	135	85	93	101	105	30	0.202	0.054			Yes
Durham	110	120	130	135	85	93	101	105	30	0.211	0.055			Yes
East Granby	110	120	125	130	85	93	97	101	35	0.173	0.054			Yes
East Haddam	115	125	135	135	89	97	105	105	30	0.214	0.056			Yes
East Hampton	110	125	130	135	85	97	101	105	30	0.210	0.056			Yes
East Hartford	110	120	130	135	85	93	101	105	30	0.191	0.055			Yes
East Haven	110	125	135	135	85	97	105	105	30	0.200	0.053	Type B	Type B	Yes
East Lyme	120	130	135	140	93	101	105	108	30	0.198	0.053	Type B	Type B	Yes
East Windsor	110	120	130	135	85	93	101	105	30	0.177	0.055			Yes
Eastford	110	120	130	135	85	93	101	105	40	0.180	0.055			Yes
Easton	110	120	130	135	85	93	101	105	30	0.218	0.055			Yes
Ellington	110	120	130	135	85	93	101	105	35	0.178	0.055			Yes
Enfield	110	120	125	130	85	93	97	101	35	0.172	0.055			Yes
Essex	115	125	135	140	89	97	105	108	30	0.207	0.054			Yes
Fairfield	110	120	130	135	85	93	101	105	30	0.219	0.055		Type B	Yes
Farmington	110	120	130	135	85	93	101	105	35	0.188	0.055			Yes
Franklin	115	125	135	140	89	97	105	108	30	0.195	0.054			Yes
Glastonbury	110	120	130	135	85	93	101	105	30	0.200	0.055			Yes
Goshen	110	115	125	130	85	89	97	101	40	0.172	0.054			
Granby	110	120	125	130	85	93	97	101	35	0.171	0.054			Yes
Greenwich	110	120	130	135	85	93	101	105	30	0.274	0.059		Type B	Yes
Griswold	120	125	135	140	93	97	105	108	30	0.189	0.054			Yes
Groton	120	130	140	140	93	101	108	108	30	0.190	0.052	Type B	Type A	Yes
Guilford	115	125	135	140	89	97	105	108	30	0.204	0.054	Type B	Type B	Yes
Haddam	115	125	135	135	89	97	105	105	30	0.214	0.055			Yes
Hamden	110	120	130	135	85	93	101	105	30	0.202	0.054			Yes

ASCE Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: III
Soil Class: undefined

Latitude: 41.997702
Longitude: -72.552983
Elevation: 151.2618876717451 ft (NAVD 88)



Wind

Results:

Wind Speed	126 Vmph
10-year MRI	75 Vmph
25-year MRI	83 Vmph
50-year MRI	90 Vmph
100-year MRI	96 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1C and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Tue Jun 25 2024

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (annual exceedance probability = 0.000588, MRI = 1,700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

Ice

Results:

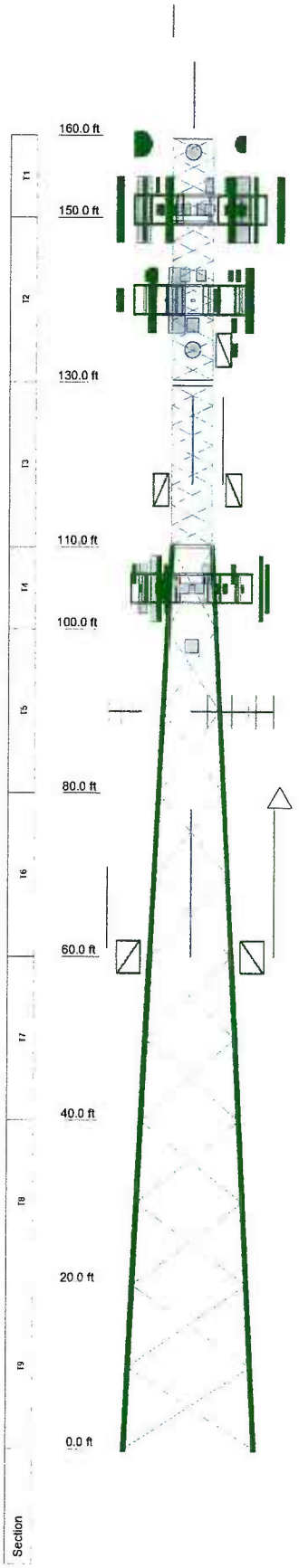
Ice Thickness:	1.50 in.
Concurrent Temperature:	5 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Tue Jun 25 2024

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Appendix C

Tower Schematic

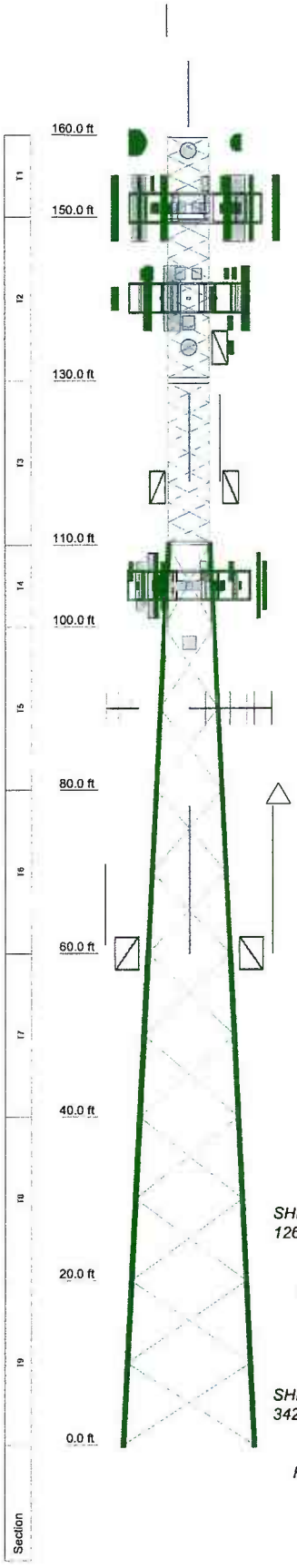


DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Generic Lightning Rod 4' copper	160	12' V-Frame Mount (T-Mobile)	140
14' x 2-7/8" pipe mount	160	12' V-Frame Mount (T-Mobile)	140
8' x 2" omni whip	160	12' V-Frame Mount (T-Mobile)	140
3' Standoff Mount	159	APXVAARR24_43-U-NA20 (T-Mobile)	140
3' Standoff Mount	159	APXVAARR24_43-U-NA20 (T-Mobile)	140
HPD3-4.7	159	APXVAARR24_43-U-NA20 (T-Mobile)	140
HPD2-4.7	159	1'-8" Square Panel	134
3' Standoff Mount	158	3' Standoff Mount	134
SPD2-5.2	158	3' Standoff Mount	134
EPBQ-654L8H8-L2 (ATI)	151	HPD2-4.7	134
EPBQ-654L8H8-L2 (ATI)	151	SC329-HF2LDF	117
EPBQ-654L8H8-L2 (ATI)	151	3' Standoff Mount	117
HPA65R-BU8A (ATI)	151	BA1012-2 omni	117
HPA65R-BU8A (ATI)	151	3' Standoff Mount	117
HPA65R-BU8A (ATI)	151	SC329-HF2LDF	117
Radio 4478 B14 (ATI)	151	3' Standoff Mount	117
Radio 4478 B14 (ATI)	151	MT6413-77A (Verizon)	106.8
Radio 4478 B14 (ATI)	151	MT6413-77A (Verizon)	106.8
Radio 4415 (ATI)	151	MT6413-77A (Verizon)	106.8
Radio 4415 (ATI)	151	NHH-65B-R2B (Verizon)	105
Radio 4415 (ATI)	151	NHH-65B-R2B (Verizon)	105
Radio 4449 B5/B12 (ATI)	151	NHH-65B-R2B (Verizon)	105
Radio 4449 B5/B12 (ATI)	151	NHHSS-65C-R2BT4 (Verizon)	105
Radio 4449 B5/B12 (ATI)	151	NHHSS-65C-R2BT4 (Verizon)	105
Radio 8843 B2/B66A (ATI)	151	NHHSS-65C-R2BT4 (Verizon)	105
Radio 8843 B2/B66A (ATI)	151	Samsung B2/B66A RRH (RF4439d-25A) (Verizon)	105
Radio 8843 B2/B66A (ATI)	151	Samsung B2/B66A RRH (RF4439d-25A) (Verizon)	105
DC6-48-60-0-8F (ATI)	151	Samsung B2/B66A RRH (RF4439d-25A) (Verizon)	105
DC6-48-60-18-8F (ATI)	151	Samsung B5/B13 RRH (RF4461d-13A) (Verizon)	105
DC6-48-60-18-8F (ATI)	151	Samsung B5/B13 RRH (RF4461d-13A) (Verizon)	105
(5) 10'x2.5" Pipe Mount (ATI)	151	Samsung B5/B13 RRH (RF4461d-13A) (Verizon)	105
(5) 10'x2.5" Pipe Mount (ATI)	151	RT4423-48A (Verizon)	105
(5) 10'x2.5" Pipe Mount (ATI)	151	RT4423-48A (Verizon)	105
VFA12-WLL-30120 (ATI)	151	RT4423-48A (Verizon)	105
VFA12-WLL-30120 (ATI)	151	Raycap RVZDC-6627-PF-48 (Verizon)	105
VFA12-WLL-30120 (ATI)	151	VFA12-HD (Verizon)	105
USF-2U Stand-off (ATI)	151	VFA12-HD (Verizon)	105
USF-2U Stand-off (ATI)	151	VFA12-HD (Verizon)	105
EPBQ-654L8H8-L2 (ATI)	151	(4) 8'x2" Pipe Mount (Verizon)	105
EPBQ-654L8H8-L2 (ATI)	151	(4) 8'x2" Pipe Mount (Verizon)	105
EPBQ-654L8H8-L2 (ATI)	151	(4) 8'x2" Pipe Mount (Verizon)	105
AIR 6449 B41 (T-Mobile)	140	1'-8" Square Panel	98
AIR 6449 B41 (T-Mobile)	140	3' Standoff Mount	90
AIR 6449 B41 (T-Mobile)	140	SY307-SF3SNM Yagi	90
AIR 32 B66Aa B2a (T-Mobile)	140	3' Standoff Mount	90
AIR 32 B66Aa B2a (T-Mobile)	140	SY406-SF1SNM Yagi	90
AIR 32 B66Aa B2a (T-Mobile)	140	3' sidearm	90
Radio 4449 B5/B12 (T-Mobile)	140	SY307-SF3SNM Yagi	90
Radio 4449 B5/B12 (T-Mobile)	140	DB205-1	60
Radio 4449 B5/B12 (T-Mobile)	140	6' sidearm	60
Radio 4415 (T-Mobile)	140	18' x 2.5" omni whip	60
Radio 4415 (T-Mobile)	140	6' sidearm	60
Radio 4415 (T-Mobile)	140	6' sidearm	60
RRUS 11 B4 (T-Mobile)	140	18' x 2.5" omni whip	60
RRUS 11 B4 (T-Mobile)	140	12" omni	20
RRUS 11 B4 (T-Mobile)	140	GPS on 3' standoff	20
SDX1926Q-43 Diplexer (T-Mobile)	140		
SDX1926Q-43 Diplexer (T-Mobile)	140		
SDX1926Q-43 Diplexer (T-Mobile)	140		
(4) 8'x2" Pipe Mount (T-Mobile)	140		
(4) 8'x2" Pipe Mount (T-Mobile)	140		
(4) 8'x2" Pipe Mount (T-Mobile)	140		

All-Points Technology Corporation, P.C.
567 Vauxhall Street Ext. Suite 311
Waterford, CT 06385
Phone: (860) 663-1697
FAX:

Job: ***160' Self-Support Tower***			
Project: ***CT141_14730 Enfield 6 CT***			
Client: Verizon	Drawn by: DJA	App'd:	
Code: TIA-222-H	Date: 07/30/24	Scale: NTS	
Path:		Dwg No. E-1	



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi
A570-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 126 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category III.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 87.9%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 265257 lb
SHEAR: 23560 lb

UPLIFT: -235151 lb
SHEAR: 21272 lb

AXIAL 129750 lb
SHEAR 12683 lb
MOMENT 1322468 lb-ft
TORQUE 8942 lb-ft
50 mph WIND - 1.5000 in ICE

AXIAL 44192 lb
SHEAR 34289 lb
MOMENT 3471391 lb-ft
TORQUE 18427 lb-ft
REACTIONS - 126 mph WIND

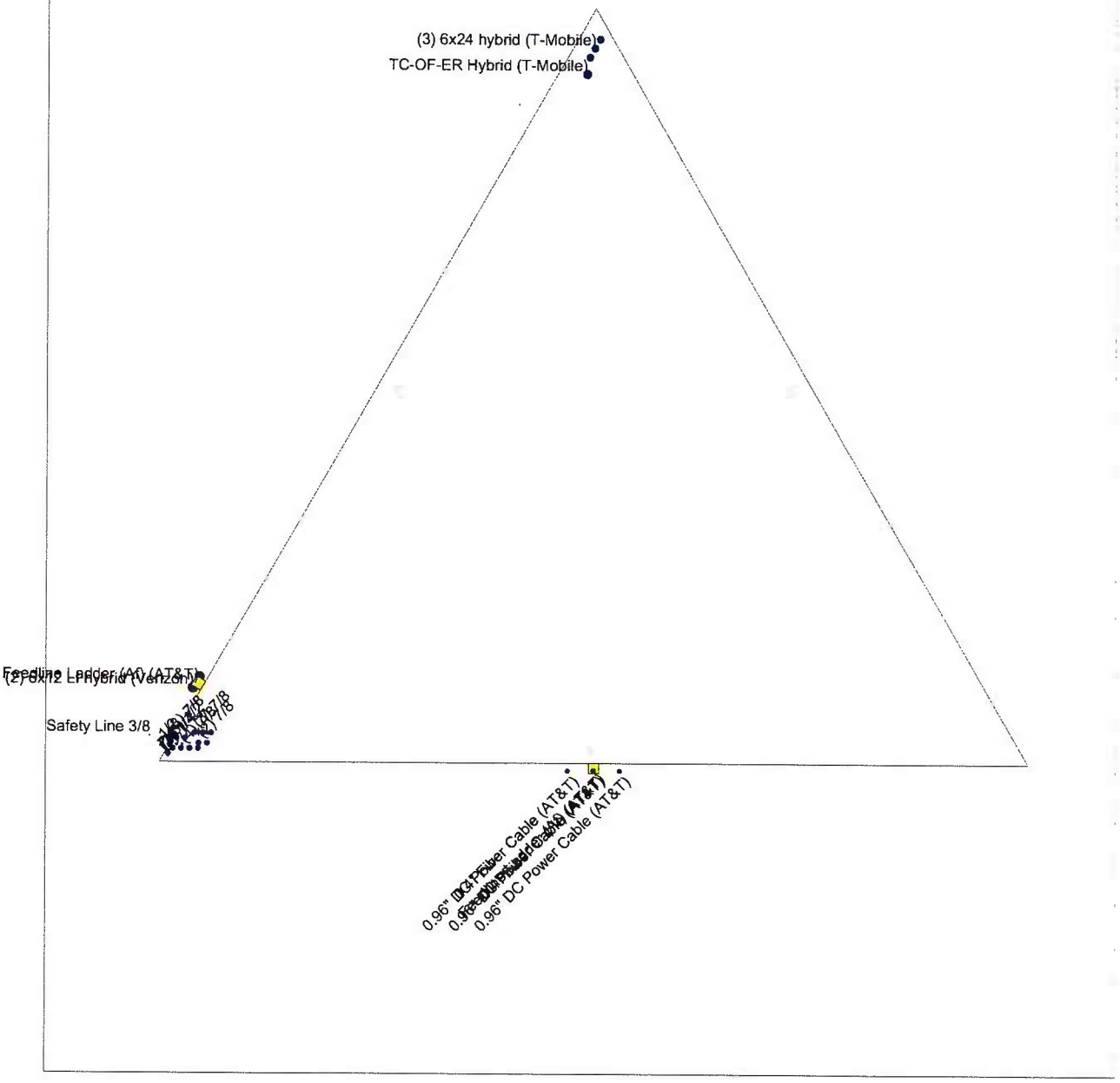
All-Points Technology Corporation, P.C.
567 Vauxhall Street Ext. Suite 311
Waterford, CT 06385
Phone: (860) 663-1697
FAX:

Job: ***160' Self-Support Tower***			
Project: ***CT141_14730 Enfield 6 CT***			
Client: Verizon	Drawn by: DJA	App'd:	
Code: TIA-222-H	Date: 07/30/24	Scale: NTS	
Path:		Dwg No. E-1	

Feed Line Plan
20'

Round Flat App In Face App Out Face Truss-Leg

Section @ 20'



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Job: ***160' Self-Support Tower***			
Project: ***CT141_14730 Enfield 6 CT***			
Client: Verizon	Drawn by: DJA	App'd:	
Code: TIA-222-H	Date: 07/30/24	Scale: NTS	
Path:		Dwg No. E-7	

Appendix D

Calculations

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 160.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 5.00 ft at the top and 16.00 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower base elevation above sea level: 151.00 ft.
Basic wind speed of 126 mph.
Risk Category III.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.5000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	*Face or Leg*	*Allow Shield*	*Exclude From Torque Calculation*	*Component Type*	*Placement ft*	*Face Offset in*	*Lateral Offset (Frac FW)*	*#*	*# Per Row*	*Clear Spacing in*	*Width or Diameter in*	*Perimeter in*	*Weight plf*
7/8	C	No	No	Ar (CaAa)	160.00 - 8.00	-1.0000	0.49	1	1	0.5000	1.1100		0.54
7/8	C	No	No	Ar (CaAa)	159.00 - 8.00	-2.0000	0.47	4	4	0.5000	1.1100		0.54
7/8	C	No	No	Ar (CaAa)	134.00 - 8.00	-3.0000	0.45	2	2	0.5000	1.1100		0.54
7/8	C	No	No	Ar (CaAa)	117.00 - 8.00	-4.0000	0.48	3	3	0.5000	1.1100		0.54
7/8	C	No	No	Ar (CaAa)	90.00 - 8.00	-5.0000	0.45	3	3	0.5000	1.1100		0.54
1/2	C	No	No	Ar (CaAa)	60.00 - 8.00	-3.0000	0.48	3	3	0.5000	0.5800		0.25
1/2	C	No	No	Ar (CaAa)	20.00 - 8.00	-3.0000	0.49	1	1	0.5000	0.5800		0.25
1/4	C	No	No	Ar (CaAa)	98.00 - 8.00	-0.7500	0.49	1	1	0.0000	0.2500		0.05
1/4	C	No	No	Ar (CaAa)	158.00 - 8.00	-1.0000	0.49	2	2	0.0000	0.2500		0.05
1/4	C	No	No	Ar (CaAa)	134.00 - 8.00	-1.2500	0.49	2	2	0.0000	0.2500		0.05
Safety Line 3/8	A	No	No	Ar (CaAa)	160.00 - 0.00	4.0000	-0.48	1	1	0.3750	0.3750		0.22
TC-OF-ER Hybrid (T-Mobile)	A	No	No	Ar (CaAa)	140.00 - 4.00	-4.0000	0.43	1	1	1.7600	1.7600		2.40

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
6x24 hybrid (T-Mobile)	A	No	No	Ar (CaAa)	140.00 - 4.00	-3.0000	0.46	3	3	0.5000	1.4800		1.61
Feedline Ladder (Af) (AT&T)	C	No	No	Af (CaAa)	151.00 - 14.00	0.0000	0	1	1	2.0000	2.0000		8.40
0.96" DC Power Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.0000	-0.03	1	1	0.9570	0.9570		0.88
0.96" DC Power Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.0000	-0.03	1	1	0.9570	0.9570		0.88
0.96" DC Power Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.0000	0	1	1	0.9570	0.9570		0.88
0.96" DC Power Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.0000	0	1	1	0.9570	0.9570		0.88
0.96" DC Power Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.0000	0.03	1	1	0.9570	0.9570		0.88
0.96" DC Power Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.0000	0.03	1	1	0.9570	0.9570		0.88
0.4" Fiber Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.2500	0	1	1	0.4000	0.4000		0.06
0.4" Fiber Cable (AT&T)	C	No	No	Ar (CaAa)	151.00 - 14.00	1.2500	0.03	1	1	0.4000	0.4000		0.06
6x12 LI hybrid (Verizon)	A	No	No	Ar (CaAa)	105.00 - 8.00	0.5000	-0.4	2	2	0.5000	1.9800		1.04
Feedline Ladder (Af) (AT&T)	A	No	No	Af (CaAa)	105.00 - 8.00	0.0000	-0.4	1	1	2.0000	2.0000		8.40

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Generic Lightning Rod 4' copper	C	From Leg	0.00 0.00 14.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.50 1.00 1.50 2.50	0.50 1.00 1.50 2.50	0.00 0.00 0.00 0.00
14' x 2-7/8" pipe mount	C	From Leg	0.00 0.00 6.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.03 5.46 6.91 9.85	4.03 5.46 6.91 9.85	107.00 136.25 174.49 278.58
8' x 2" omni whip	A	From Leg	3.00 0.00 5.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.60 2.42 3.24 4.23	1.60 2.42 3.24 4.23	50.00 62.45 80.14 131.86

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
3' Standoff Mount	A	From Leg	1.00 0.00 0.00	0.0000	159.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
3' Standoff Mount	B	From Leg	1.00 0.00 0.00	0.0000	158.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
3' Standoff Mount	C	From Leg	1.00 0.00 0.00	0.0000	159.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
EPBQ-654L8H8-L2 (AT&T)	A	From Leg	6.00 6.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	18.09 18.72 19.36 20.66	7.03 7.62 8.21 9.42	100.10 193.35 294.78 522.99
EPBQ-654L8H8-L2 (AT&T)	B	From Leg	6.00 6.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	18.09 18.72 19.36 20.66	7.03 7.62 8.21 9.42	100.10 193.35 294.78 522.99
EPBQ-654L8H8-L2 (AT&T)	C	From Leg	4.00 6.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	18.09 18.72 19.36 20.66	7.03 7.62 8.21 9.42	100.10 193.35 294.78 522.99
EPBQ-654L8H8-L2 (AT&T)	A	From Leg	6.00 -6.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	18.09 18.72 19.36 20.66	7.03 7.62 8.21 9.42	100.10 193.35 294.78 522.99
EPBQ-654L8H8-L2 (AT&T)	B	From Leg	6.00 -6.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	18.09 18.72 19.36 20.66	7.03 7.62 8.21 9.42	100.10 193.35 294.78 522.99
EPBQ-654L8H8-L2 (AT&T)	C	From Leg	4.00 -6.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	18.09 18.72 19.36 20.66	7.03 7.62 8.21 9.42	100.10 193.35 294.78 522.99
HPA65R-BU8A (AT&T)	A	From Leg	6.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.23 11.85 12.47 13.72	8.12 8.72 9.32 10.54	54.00 121.05 195.77 369.01
HPA65R-BU8A (AT&T)	B	From Leg	6.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.23 11.85 12.47 13.72	8.12 8.72 9.32 10.54	54.00 121.05 195.77 369.01
HPA65R-BU8A (AT&T)	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.23 11.85 12.47 13.72	8.12 8.72 9.32 10.54	54.00 121.05 195.77 369.01
Radio 4478 B14 (AT&T)	A	From Leg	3.00 -1.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.02 2.20 2.39 2.78	1.25 1.40 1.55 1.89	59.40 77.01 97.40 147.26
Radio 4478 B14 (AT&T)	B	From Leg	3.00 -1.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.02 2.20 2.39 2.78	1.25 1.40 1.55 1.89	59.40 77.01 97.40 147.26
Radio 4478 B14	C	From Leg	1.00	0.0000	151.00	No Ice	2.02	1.25	59.40

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(AT&T)			-1.00				1/2" Ice	2.20	1.40	77.01
			0.00				1" Ice	2.39	1.55	97.40
							2" Ice	2.78	1.89	147.26
Radio 4415	A	From Leg	3.00		0.0000	151.00	No Ice	1.84	0.82	46.00
(AT&T)			-2.00				1/2" Ice	2.01	0.94	60.07
			0.00				1" Ice	2.19	1.07	76.66
							2" Ice	2.57	1.37	118.17
Radio 4415	B	From Leg	3.00		0.0000	151.00	No Ice	1.84	0.82	46.00
(AT&T)			-2.00				1/2" Ice	2.01	0.94	60.07
			0.00				1" Ice	2.19	1.07	76.66
							2" Ice	2.57	1.37	118.17
Radio 4415	C	From Leg	1.00		0.0000	151.00	No Ice	1.84	0.82	46.00
(AT&T)			-2.00				1/2" Ice	2.01	0.94	60.07
			0.00				1" Ice	2.19	1.07	76.66
							2" Ice	2.57	1.37	118.17
Radio 4449 B5/B12	A	From Leg	3.00		0.0000	151.00	No Ice	1.97	1.41	71.00
(AT&T)			1.00				1/2" Ice	2.14	1.56	89.51
			0.00				1" Ice	2.33	1.73	110.84
							2" Ice	2.72	2.07	162.74
Radio 4449 B5/B12	B	From Leg	3.00		0.0000	151.00	No Ice	1.97	1.41	71.00
(AT&T)			1.00				1/2" Ice	2.14	1.56	89.51
			0.00				1" Ice	2.33	1.73	110.84
							2" Ice	2.72	2.07	162.74
Radio 4449 B5/B12	C	From Leg	1.00		0.0000	151.00	No Ice	1.97	1.41	71.00
(AT&T)			1.00				1/2" Ice	2.14	1.56	89.51
			0.00				1" Ice	2.33	1.73	110.84
							2" Ice	2.72	2.07	162.74
Radio 8843 B2/B66A	A	From Leg	3.00		0.0000	151.00	No Ice	1.64	1.35	72.00
(AT&T)			2.00				1/2" Ice	1.80	1.50	89.60
			0.00				1" Ice	1.97	1.65	109.91
							2" Ice	2.32	1.99	159.50
Radio 8843 B2/B66A	B	From Leg	3.00		0.0000	151.00	No Ice	1.64	1.35	72.00
(AT&T)			2.00				1/2" Ice	1.80	1.50	89.60
			0.00				1" Ice	1.97	1.65	109.91
							2" Ice	2.32	1.99	159.50
Radio 8843 B2/B66A	C	From Leg	1.00		0.0000	151.00	No Ice	1.64	1.35	72.00
(AT&T)			2.00				1/2" Ice	1.80	1.50	89.60
			0.00				1" Ice	1.97	1.65	109.91
							2" Ice	2.32	1.99	159.50
DC6-48-60-0-8F	A	From Leg	3.00		0.0000	151.00	No Ice	0.75	0.75	32.80
(AT&T)			2.00				1/2" Ice	1.21	1.21	47.27
			3.00				1" Ice	1.38	1.38	64.01
							2" Ice	1.75	1.75	104.92
DC6-48-60-18-8F	B	From Leg	3.00		0.0000	151.00	No Ice	0.76	0.76	20.00
(AT&T)			2.00				1/2" Ice	1.22	1.22	34.60
			3.00				1" Ice	1.39	1.39	51.48
							2" Ice	1.76	1.76	92.71
DC6-48-60-18-8F	C	From Leg	1.00		0.0000	151.00	No Ice	0.76	0.76	20.00
(AT&T)			2.00				1/2" Ice	1.22	1.22	34.60
			3.00				1" Ice	1.39	1.39	51.48
							2" Ice	1.76	1.76	92.71
(5) 10'x2.5" Pipe Mount	A	From Leg	5.00		0.0000	151.00	No Ice	2.88	2.88	58.00
(AT&T)			0.00				1/2" Ice	3.91	3.91	79.03
			0.00				1" Ice	4.96	4.96	106.62
							2" Ice	6.19	6.19	182.06
(5) 10'x2.5" Pipe Mount	B	From Leg	5.00		0.0000	151.00	No Ice	2.88	2.88	58.00
(AT&T)			0.00				1/2" Ice	3.91	3.91	79.03

tnxTower	Job: 160' Self-Support Tower	Page: 5 of 13
All-Points Technology Corporation, P.C. 567 Vauxhall Street Ext. Suite 311 Waterford, CT 06385 Phone: (860) 663-1697 FAX:	Project: CT141_14730 Enfield 6 CT	Date: 14:12:57 07/25/24
	Client: Verizon	Designed by: DJA

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1" Ice	4.96	4.96	106.62
						2" Ice	6.19	6.19	182.06
(5) 10'x2.5" Pipe Mount (AT&T)	C	From Leg	3.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	2.88 3.91 4.96	2.88 3.91 4.96	58.00 79.03 106.62
						2" Ice	6.19	6.19	182.06
VFA12-WLL-30120 (AT&T)	A	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	13.20 19.50 25.80	9.20 14.60 19.50	658.00 804.00 1015.00
						2" Ice	38.40	30.80	1242.00
VFA12-WLL-30120 (AT&T)	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	13.20 19.50 25.80	9.20 14.60 19.50	658.00 804.00 1015.00
						2" Ice	38.40	30.80	1242.00
VFA12-WLL-30120 (AT&T)	C	From Leg	2.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	13.20 19.50 25.80	9.20 14.60 19.50	658.00 804.00 1015.00
						2" Ice	38.40	30.80	1242.00
USF-2U Stand-off (AT&T)	A	From Leg	1.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	2.50 3.15 3.89	4.04 5.03 6.06	129.00 163.00 212.00
						2" Ice	5.10	8.00	265.00
USF-2U Stand-off (AT&T)	B	From Leg	1.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	2.50 3.15 3.89	4.04 5.03 6.06	129.00 163.00 212.00
						2" Ice	5.10	8.00	265.00
APXVAARR24_43-U-NA20 (T-Mobile)	A	From Leg	4.00 -2.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.54	8.89 9.49 10.09	128.00 240.59 361.72
						2" Ice	22.87	11.33	630.33
APXVAARR24_43-U-NA20 (T-Mobile)	B	From Leg	4.00 -2.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.54	8.89 9.49 10.09	128.00 240.59 361.72
						2" Ice	22.87	11.33	630.33
APXVAARR24_43-U-NA20 (T-Mobile)	C	From Leg	4.00 -2.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.54	8.89 9.49 10.09	128.00 240.59 361.72
						2" Ice	22.87	11.33	630.33
AIR 6449 B41 (T-Mobile)	A	From Leg	4.00 6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.68 5.98 6.29	2.49 2.72 2.95	104.00 143.12 186.46
						2" Ice	6.93	3.44	286.63
AIR 6449 B41 (T-Mobile)	B	From Leg	4.00 6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.68 5.98 6.29	2.49 2.72 2.95	104.00 143.12 186.46
						2" Ice	6.93	3.44	286.63
AIR 6449 B41 (T-Mobile)	C	From Leg	4.00 6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.68 5.98 6.29	2.49 2.72 2.95	104.00 143.12 186.46
						2" Ice	6.93	3.44	286.63
AIR 32 B66Aa B2a (T-Mobile)	A	From Leg	4.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	7.10 7.55 8.02	4.79 5.21 5.65	133.00 178.82 229.91
						2" Ice	8.97	6.55	348.65
AIR 32 B66Aa B2a (T-Mobile)	B	From Leg	4.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	7.10 7.55 8.02	4.79 5.21 5.65	133.00 178.82 229.91

tnxTower	Job: 160' Self-Support Tower	Page: 6 of 13
All-Points Technology Corporation, P.C. 567 Vauxhall Street Ext. Suite 311 Waterford, CT 06385 Phone: (860) 663-1697 FAX:	Project: CT141_14730 Enfield 6 CT	Date: 14:12:57 07/25/24
	Client: Verizon	Designed by: DJA

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						2" Ice	8.97	6.55	348.65
AIR 32 B66Aa B2a (T-Mobile)	C	From Leg	4.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	7.10 7.55 8.02 8.97	4.79 5.21 5.65 6.55	133.00 178.82 229.91 348.65
Radio 4449 B5/B12 (T-Mobile)	A	From Leg	3.00 -1.00 3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.97 2.14 2.33 2.72	1.41 1.56 1.73 2.07	71.00 89.51 110.84 162.74
Radio 4449 B5/B12 (T-Mobile)	B	From Leg	3.00 -1.00 3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.97 2.14 2.33 2.72	1.41 1.56 1.73 2.07	71.00 89.51 110.84 162.74
Radio 4449 B5/B12 (T-Mobile)	C	From Leg	3.00 -1.00 3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.97 2.14 2.33 2.72	1.41 1.56 1.73 2.07	71.00 89.51 110.84 162.74
Radio 4415 (T-Mobile)	A	From Leg	3.00 1.00 3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.84 2.01 2.19 2.57	0.82 0.94 1.07 1.37	46.00 60.07 76.66 118.17
Radio 4415 (T-Mobile)	B	From Leg	3.00 1.00 3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.84 2.01 2.19 2.57	0.82 0.94 1.07 1.37	46.00 60.07 76.66 118.17
Radio 4415 (T-Mobile)	C	From Leg	3.00 1.00 3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.84 2.01 2.19 2.57	0.82 0.94 1.07 1.37	46.00 60.07 76.66 118.17
RRUS 11 B4 (T-Mobile)	A	From Leg	3.00 0.00 -3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.83 3.04 3.26 3.71	1.18 1.33 1.48 1.83	50.00 70.87 94.79 152.54
RRUS 11 B4 (T-Mobile)	B	From Leg	3.00 0.00 -3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.83 3.04 3.26 3.71	1.18 1.33 1.48 1.83	50.00 70.87 94.79 152.54
RRUS 11 B4 (T-Mobile)	C	From Leg	3.00 0.00 -3.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.83 3.04 3.26 3.71	1.18 1.33 1.48 1.83	50.00 70.87 94.79 152.54
SDX1926Q-43 Diplexer (T-Mobile)	A	From Leg	1.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.24 0.31 0.38 0.55	0.10 0.14 0.19 0.32	6.61 9.08 12.66 23.89
SDX1926Q-43 Diplexer (T-Mobile)	B	From Leg	1.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.24 0.31 0.38 0.55	0.10 0.14 0.19 0.32	6.61 9.08 12.66 23.89
SDX1926Q-43 Diplexer (T-Mobile)	C	From Leg	1.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.24 0.31 0.38 0.55	0.10 0.14 0.19 0.32	6.61 9.08 12.66 23.89
(4) 8'x2" Pipe Mount (T-Mobile)	A	From Leg	3.50 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	29.20 43.54 63.16 118.86

tnxTower	Job: 160' Self-Support Tower	Page: 7 of 13
All-Points Technology Corporation, P.C. 567 Vauxhall Street Ext. Suite 311 Waterford, CT 06385 Phone: (860) 663-1697 FAX:	Project: CT141_14730 Enfield 6 CT	Date: 14:12:57 07/25/24
	Client: Verizon	Designed by: DJA

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(4) 8'x2" Pipe Mount (T-Mobile)	B	From Leg	3.50 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	29.20 43.54 63.16 118.86
(4) 8'x2" Pipe Mount (T-Mobile)	C	From Leg	3.50 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	29.20 43.54 63.16 118.86
12' V-Frame Mount (T-Mobile)	A	From Leg	2.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.20 19.50 25.80 38.40	9.20 14.60 20.00 30.80	658.00 804.00 950.00 1242.00
12' V-Frame Mount (T-Mobile)	B	From Leg	2.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.20 19.50 25.80 38.40	9.20 14.60 20.00 30.80	658.00 804.00 950.00 1242.00
12' V-Frame Mount (T-Mobile)	C	From Leg	2.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.20 19.50 25.80 38.40	9.20 14.60 20.00 30.80	658.00 804.00 950.00 1242.00
1'-8" Square Panel	B	From Leg	3.00 0.00 0.00	0.0000	134.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.33 3.56 3.79 4.28	0.65 0.78 0.92 1.22	22.00 40.94 62.90 116.63
3' Standoff Mount	A	From Leg	1.50 0.00 0.00	0.0000	134.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
3' Standoff Mount	B	From Leg	1.50 0.00 0.00	0.0000	134.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
BA1012-2 omni	C	From Leg	3.00 0.00 2.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.41 0.84 1.09 1.63	0.41 0.84 1.09 1.63	2.80 6.66 13.28 35.40
3' Standoff Mount	C	From Leg	1.50 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
SC329-HF2LDF	A	From Leg	3.00 0.00 6.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.14 3.24 4.35 6.27	2.14 3.24 4.35 6.27	8.90 25.48 48.96 117.23
3' Standoff Mount	A	From Leg	1.50 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
SC329-HF2LDF	B	From Leg	1.50 0.00 6.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.14 3.24 4.35 6.27	2.14 3.24 4.35 6.27	8.90 25.48 48.96 117.23
3' Standoff Mount	B	From Leg	3.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.23 8.24 10.25 14.27	7.12 9.32 11.52 15.92	169.00 205.00 241.00 313.00
1'-8" Square Panel	A	From Leg	0.50	0.0000	98.00	No Ice	3.33	0.65	22.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00					1/2" Ice	3.56	0.78	40.94
			0.00					1" Ice	3.79	0.92	62.90
								2" Ice	4.28	1.22	116.63
SY406-SF1SNM Yagi	C	From Leg	3.00			0.0000	90.00	No Ice	0.18	0.18	1.06
			0.00					1/2" Ice	0.53	0.53	4.70
			0.00					1" Ice	0.88	0.88	8.34
								2" Ice	1.58	1.58	15.62
3' sidearm	C	From Leg	1.50			0.0000	90.00	No Ice	1.43	0.72	30.00
			0.00					1/2" Ice	2.18	1.09	65.00
			0.00					1" Ice	2.93	1.47	105.00
								2" Ice	4.43	2.20	170.00
SY307-SF3SNM Yagi	A	From Leg	3.00			0.0000	90.00	No Ice	0.40	0.40	1.45
			0.00					1/2" Ice	1.00	1.00	5.09
			0.00					1" Ice	1.60	1.60	8.73
								2" Ice	2.80	2.80	16.01
3' Standoff Mount	A	From Leg	1.50			0.0000	90.00	No Ice	6.23	7.12	169.00
			0.00					1/2" Ice	8.24	9.32	205.00
			0.00					1" Ice	10.25	11.52	241.00
								2" Ice	14.27	15.92	313.00
SY307-SF3SNM Yagi	B	From Leg	3.00			0.0000	90.00	No Ice	0.40	0.40	1.45
			0.00					1/2" Ice	1.00	1.00	5.09
			0.00					1" Ice	1.60	1.60	8.73
								2" Ice	2.80	2.80	16.01
3' Standoff Mount	B	From Leg	1.50			0.0000	90.00	No Ice	6.23	7.12	169.00
			0.00					1/2" Ice	8.24	9.32	205.00
			0.00					1" Ice	10.25	11.52	241.00
								2" Ice	14.27	15.92	313.00
DB205-1	C	From Leg	6.00			0.0000	60.00	No Ice	0.70	0.70	27.00
			0.00					1/2" Ice	1.71	1.71	34.40
			6.00					1" Ice	2.73	2.73	48.09
								2" Ice	4.83	4.83	94.92
6' sidearm	C	From Leg	3.00			0.0000	60.00	No Ice	4.17	2.09	75.00
			0.00					1/2" Ice	6.17	3.09	125.00
			0.00					1" Ice	8.17	4.09	200.00
								2" Ice	12.17	6.09	275.00
18' x 2.5" omni whip	A	From Leg	6.00			0.0000	60.00	No Ice	4.50	4.50	60.00
			0.00					1/2" Ice	6.33	6.33	93.30
			9.00					1" Ice	8.18	8.18	138.00
								2" Ice	11.92	11.92	262.22
6' sidearm	A	From Leg	3.00			0.0000	60.00	No Ice	4.17	2.09	75.00
			0.00					1/2" Ice	6.17	3.09	125.00
			0.00					1" Ice	8.17	4.09	200.00
								2" Ice	12.17	6.09	275.00
18' x 2.5" omni whip	B	From Leg	6.00			0.0000	60.00	No Ice	4.50	4.50	60.00
			0.00					1/2" Ice	6.33	6.33	93.30
			9.00					1" Ice	8.18	8.18	138.00
								2" Ice	11.92	11.92	262.22
6' sidearm	B	From Leg	3.00			0.0000	60.00	No Ice	4.17	2.09	75.00
			0.00					1/2" Ice	6.17	3.09	125.00
			0.00					1" Ice	8.17	4.09	200.00
								2" Ice	12.17	6.09	275.00
GPS on 3' standoff	B	From Leg	3.00			0.0000	20.00	No Ice	0.60	0.60	50.00
			0.00					1/2" Ice	0.79	0.79	55.81
			0.00					1" Ice	0.99	0.99	63.86
								2" Ice	1.41	1.41	87.29
12" omni	B	From Leg	3.00			0.0000	20.00	No Ice	0.05	0.05	5.00
			0.00					1/2" Ice	0.11	0.11	5.67

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.50			1" Ice	0.19	0.19	7.15
						2" Ice	0.36	0.36	13.17
NHH-65B-R2B (Verizon)	A	From Leg	4.00 -6.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.34 5.79 6.26 7.20	98.75 148.80 204.95 336.30
NHH-65B-R2B (Verizon)	B	From Leg	4.00 -6.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.34 5.79 6.26 7.20	98.75 148.80 204.95 336.30
NHH-65B-R2B (Verizon)	C	From Leg	4.00 -6.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.34 5.79 6.26 7.20	98.75 148.80 204.95 336.30
NHHSS-65C-R2BT4 (Verizon)	A	From Leg	4.00 -4.50 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.35 11.96 12.59 13.83	7.67 8.26 8.86 10.08	76.95 142.47 215.64 385.69
NHHSS-65C-R2BT4 (Verizon)	B	From Leg	4.00 -4.50 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.35 11.96 12.59 13.83	7.67 8.26 8.86 10.08	76.95 142.47 215.64 385.69
NHHSS-65C-R2BT4 (Verizon)	C	From Leg	4.00 -4.50 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.35 11.96 12.59 13.83	7.67 8.26 8.86 10.08	76.95 142.47 215.64 385.69
MT6413-77A (Verizon)	A	From Leg	4.00 2.00 0.00	0.0000	106.80	No Ice 1/2" Ice 1" Ice 2" Ice	3.88 4.13 4.39 4.94	1.50 1.69 1.89 2.31	55.10 79.94 108.26 176.14
MT6413-77A (Verizon)	B	From Leg	4.00 2.00 0.00	0.0000	106.80	No Ice 1/2" Ice 1" Ice 2" Ice	3.88 4.13 4.39 4.94	1.50 1.69 1.89 2.31	55.10 79.94 108.26 176.14
MT6413-77A (Verizon)	C	From Leg	4.00 2.00 0.00	0.0000	106.80	No Ice 1/2" Ice 1" Ice 2" Ice	3.88 4.13 4.39 4.94	1.50 1.69 1.89 2.31	55.10 79.94 108.26 176.14
Samsung B2/B66A RRH (RF4439d-25A) (Verizon)	A	From Leg	1.00 -1.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.87 2.03 2.21 2.59	1.25 1.39 1.54 1.87	74.70 93.02 114.12 165.45
Samsung B2/B66A RRH (RF4439d-25A) (Verizon)	B	From Leg	1.00 -1.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.87 2.03 2.21 2.59	1.25 1.39 1.54 1.87	74.70 93.02 114.12 165.45
Samsung B2/B66A RRH (RF4439d-25A) (Verizon)	C	From Leg	1.00 -1.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.87 2.03 2.21 2.59	1.25 1.39 1.54 1.87	74.70 93.02 114.12 165.45
Samsung B5/B13 RRH (RF4461d-13A) (Verizon)	A	From Leg	1.00 1.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.87 2.03 2.21 2.59	1.28 1.42 1.57 1.89	79.10 97.61 118.91 170.68
Samsung B5/B13 RRH (RF4461d-13A) (Verizon)	B	From Leg	1.00 1.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.28 1.42 1.57	79.10 97.61 118.91

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						2" Ice	2.59	1.89	170.68
Samsung B5/B13 RRH (RF4461d-13A) (Verizon)	C	From Leg	1.00 1.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.87 2.03 2.21 2.59	1.28 1.42 1.57 1.89	79.10 97.61 118.91 170.68
RT4423-48A (Verizon)	A	From Leg	4.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.86 0.97 1.10 1.37	0.42 0.51 0.61 0.83	18.70 25.65 34.40 58.05
RT4423-48A (Verizon)	B	From Leg	4.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.86 0.97 1.10 1.37	0.42 0.51 0.61 0.83	18.70 25.65 34.40 58.05
RT4423-48A (Verizon)	C	From Leg	4.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.86 0.97 1.10 1.37	0.42 0.51 0.61 0.83	18.70 25.65 34.40 58.05
Raycap RVZDC-6627-PF-48 (Verizon)	C	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.06 4.32 4.58 5.14	3.10 3.34 3.58 4.09	32.00 68.49 108.97 202.69
VFA12-HD (Verizon)	A	From Leg	2.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.20 19.50 25.80 38.40	9.20 14.60 19.50 30.80	658.00 804.00 1015.00 1242.00
VFA12-HD (Verizon)	B	From Leg	2.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.20 19.50 25.80 38.40	9.20 14.60 19.50 30.80	658.00 804.00 1015.00 1242.00
VFA12-HD (Verizon)	C	From Leg	2.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.20 19.50 25.80 38.40	9.20 14.60 19.50 30.80	658.00 804.00 1015.00 1242.00
(4) 8'x2" Pipe Mount (Verizon)	A	From Leg	3.50 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	29.20 43.54 63.16 118.86
(4) 8'x2" Pipe Mount (Verizon)	B	From Leg	3.50 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	29.20 43.54 63.16 118.86
(4) 8'x2" Pipe Mount (Verizon)	C	From Leg	3.50 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	29.20 43.54 63.16 118.86

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight lb
HPD3-4.7	C	Paraboloid	From	3.00	Worst		159.00	3.20	No Ice	8.04	50.00

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight lb
		w/Shroud (HP)	Leg	0.00					1/2" Ice	8.47	93.48
				0.00					1" Ice	8.89	136.96
									2" Ice	9.74	223.92
SPD2-5.2	A	Paraboloid w/o Radome	From Leg	3.00	Worst		158.00	2.14	No Ice	3.14	22.00
				0.00					1/2" Ice	3.41	39.49
				0.00					1" Ice	3.67	56.98
									2" Ice	4.21	91.96
HPD2-4.7	B	Paraboloid w/Shroud (HP)	From Leg	3.00	Worst		159.00	2.04	No Ice	3.27	27.00
				0.00					1/2" Ice	3.54	45.17
				0.00					1" Ice	3.81	63.34
									2" Ice	4.36	99.69
HPD2-4.7	A	Paraboloid w/Shroud (HP)	From Leg	3.00	Worst		134.00	2.04	No Ice	3.27	27.00
				0.00					1/2" Ice	3.54	45.17
				0.00					1" Ice	3.81	63.34
									2" Ice	4.36	99.69

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	160 - 150	6.204	54	0.3649	0.1032
T2	150 - 130	5.431	55	0.3637	0.0995
T3	130 - 110	3.916	56	0.3351	0.0718
T4	110 - 100	2.606	62	0.2662	0.0515
T5	100 - 80	2.090	62	0.2198	0.0382
T6	80 - 60	1.278	62	0.1599	0.0226
T7	60 - 40	0.707	62	0.1049	0.0141
T8	40 - 20	0.323	62	0.0697	0.0081
T9	20 - 0	0.086	62	0.0339	0.0034

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
160.00	Generic Lightning Rod 4' copper	54	6.204	0.3649	0.1032	233767
159.00	HPD3-4.7	54	6.127	0.3649	0.1031	233767
158.00	SPD2-5.2	54	6.049	0.3649	0.1030	233767
151.00	EPBQ-654L8H8-L2	55	5.509	0.3641	0.1003	157697
140.00	APXVAARR24_43-U-NA20	56	4.661	0.3543	0.0847	51323
134.00	HPD2-4.7	56	4.210	0.3439	0.0766	29343
117.00	BA1012-2 omni	56	3.027	0.2954	0.0591	13592
106.80	MT6413-77A	62	2.431	0.2511	0.0473	12329
105.00	NHH-65B-R2B	62	2.337	0.2424	0.0448	13049
98.00	1'-8" Square Panel	62	1.997	0.2119	0.0359	15939
90.00	SY406-SF1SNM Yagi	62	1.651	0.1863	0.0286	17464
60.00	DB205-1	62	0.707	0.1049	0.0141	25396
20.00	GPS on 3' standoff	62	0.086	0.0339	0.0034	26103

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	160 - 150	27.248	8	1.5881	0.4558
T2	150 - 130	23.888	12	1.5830	0.4394
T3	130 - 110	17.259	12	1.4669	0.3167
T4	110 - 100	11.508	24	1.1713	0.2273
T5	100 - 80	9.223	24	0.9685	0.1683
T6	80 - 60	5.633	24	0.7064	0.0996
T7	60 - 40	3.114	24	0.4623	0.0620
T8	40 - 20	1.422	24	0.3069	0.0358
T9	20 - 0	0.379	24	0.1492	0.0148

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
160.00	Generic Lightning Rod 4' copper	8	27.248	1.5881	0.4558	62894
159.00	HPD3-4.7	8	26.912	1.5882	0.4553	62894
158.00	SPD2-5.2	8	26.576	1.5883	0.4548	62894
151.00	EPBQ-654L8H8-L2	12	24.224	1.5846	0.4430	43841
140.00	APXVAARR24_43-U-NA20	12	20.528	1.5455	0.3739	12742
134.00	HPD2-4.7	12	18.547	1.5034	0.3379	7037
117.00	BA1012-2 omni	24	13.358	1.2975	0.2609	3166
106.80	MT6413-77A	24	10.733	1.1055	0.2087	2847
105.00	NHH-65B-R2B	24	10.316	1.0678	0.1977	3003
98.00	1'-8" Square Panel	24	8.809	0.9339	0.1580	3623
90.00	SY406-SF1SNM Yagi	24	7.280	0.8220	0.1260	3972
60.00	DB205-1	24	3.114	0.4623	0.0620	5747
20.00	GPS on 3' standoff	24	0.379	0.1492	0.0148	5940

Section Capacity Table

Section No.	Elevation ft	Component Type	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	160 - 150	Leg	3	-8980.43	80225.50	11.2	Pass
		Diagonal	15	-1966.91	7768.85	25.3	Pass
		Top Girt	5	-155.55	3909.80	4.0	Pass
		Bottom Girt	7	-696.94	3909.80	17.8	Pass
T2	150 - 130	Leg	35	-57327.00	110545.00	51.9	Pass
		Diagonal	46	-7110.62	9549.87	74.5	Pass
		Top Girt	38	-1342.35	3943.57	34.0	Pass
		Bottom Girt	42	-1891.34	3943.57	48.0	Pass
T3	130 - 110	Leg	92	-124302.00	147321.00	84.4	Pass
		Diagonal	145	-7665.34	13310.70	57.6	Pass
		Top Girt	95	-2152.98	6785.94	31.7	Pass
		Bottom Girt	98	-2152.98	6785.94	31.7	Pass
T4	110 - 100	Leg	149	-124787.00	142870.00	87.3	Pass
		Diagonal	159	-7476.38	17325.70	43.2	Pass
		Top Girt	151	-2164.07	27094.30	8.0	Pass
T5	100 - 80	Leg	161	-161866.00	215254.00	75.2	Pass
		Diagonal	174	-7920.86	14929.40	53.1	Pass

Section No.	Elevation ft	Component Type	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T6	80 - 60	Leg	176	-189140.00	215254.00	87.9	Pass
		Diagonal	183	-6197.01	10830.60	57.2	Pass
T7	60 - 40	Leg	190	-215222.00	325326.00	66.2	Pass
		Diagonal	197	-5939.00	8657.14	68.6	Pass
T8	40 - 20	Leg	205	-238422.00	301490.00	79.1	Pass
		Diagonal	212	-5942.06	6996.74	84.9	Pass
T9	20 - 0	Leg	220	-258807.00	301490.00	85.8	Pass
		Diagonal	227	-6871.03	10028.80	68.5	Pass
						Summary	
					Leg (T6)	87.9	Pass
					Diagonal (T8)	84.9	Pass
					Top Girt (T2)	34.0	Pass
					Bottom Girt (T2)	48.0	Pass
					Bolt Checks	67.5	Pass
					RATING =	**87.9**	**Pass**

All-Points Technology Corp., P.C.
567 Vauxhall St. Ext., Suite 311
Waterford, CT 06385
(860) 663-1697

Client:	**Verizon Wireless**	Site No.:	**16737018**
Job:	**Enfield 6 CT**	Job No.:	**CT141_14730 Rev. 1**
Calculated By:	**D. Aversa**	Date:	**30-Jul-24**

Program assumes:

Mat is square in plan view.
Water table is below bottom of mat.

Unit weight of concrete =	150 pcf	
Unit weight of soil =	120 pcf	<< Per Geotechnical Study by Dr. Clarence Welti, P.E., P.C. dated 10/3/2011.

Information to be provided:

Pier is round or square in plan dimension ("R" or "S")	Shape =	R	
V = Base Shear	V =	43.3	kips
OTM = Overturning moment at base	OTM =	3471.4	ft-kips
OTM_{Total} = Overturning Moment to be resisted	OTM_{Total} =	3731.2	ft-kips
H = Height from ground surface to top of mat (if buried)	H =	4.00	ft.
P_M = Projection of pier above mat	P_M =	4.50	ft.
y = Thickness of mat	y =	1.50	ft.
x = Width of mat	x =	23.50	ft.
N = Number of piers	N =	3.00	
d = Diameter of round pier	d =	3.5	ft.

Results:

Component	Mass	Moment Arm	Moment Resist.	
Pier (net)	5.6 kips	11.75 ft.	59.5 ft-kips	
Overburden (above mat)	265.1 kips	11.75 ft.	2803.2 ft-kips	
Overburden (outside mat)	52.6 kips	11.75 ft.	463.2 ft-kips	
Mat (self weight)	124.3 kips	11.75 ft.	1314.0 ft-kips	
Tower Dead Load	16.8 kips	11.75 ft.	177.7 ft-kips	
Antenna Dead Load	0.0 kips	11.75 ft.	0.0 ft-kips	(Neglected)

Overturning Moment Resistance =	4817.63 ft-kips	
Foundation Rating =	77.4%	SATISFACTORY
Concrete Quantity =	35.5 c.y.	

verizon

Colliers Engineering & Design

Colliers Engineering & Design
2000 Midlantic Drive Suite 100
Mt. Laurel, NJ 08054
856.797.0412
peter.albano@collierseng.com

New/Replacement Antenna Mount Analysis Report and PMI Requirements

Mount Analysis-N

SMART Tool Project #: 10243257
Colliers Engineering & Design Project #: 24777154

July 24, 2024

Site Information	*Site ID:*	*5000953820-VZW / ENFIELD 6 CT*
	Site Name:	*ENFIELD 6 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*293 Elm Street* *Enfield, Connecticut 06082* *Hartford County*
	Latitude:	*41.997742°*
	Longitude:	*-72.552988°*
Structure Information	*Tower Type:*	*160-Ft Self Support*
	Mount Type:	*12.50-Ft Sector Frame*

FUZE ID # 16737018

Analysis Results

Sector Frame: **44.8% Pass w/ Mount Replacement***
((3) Site Pro 1 VFA12-HD)

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

******Contractor PMI Requirements:***
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Nathan LaPorte

Dejian Xu

Digitally signed by Dejian Xu
Date: 2024.07.24 09:25:32-04'00'

Executive Summary:

The objective of this report is to determine the capacity of the proposed antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. The proposed mount was assumed to be installed properly to the existing tower per the manufacturer's instructions. Colliers Engineering & Design cannot verify that the proposed mount will fit properly and is not liable for any fit-up issues during installation.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS Site ID: 617131535, dated July 23, 2024
Tower Structural Analysis	All-Points Technology Corporation Filing #; CT141_14730, dated July 3, 2024
Mount Specification	Site Pro 1 Part #; VFA12-HD

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	III
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.995
Seismic Parameters:	S_S:	0.172 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V21)	

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
105.00	106.80	3	Samsung	MT6413-77A	Added
	105.00	3	CommScope	NHH-65B-R2B	
		3	CommScope	NHHSS-65B-R2BT4	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		3	Samsung	RT4423-48A	
		1	Raycap	RVZDC-6627-PF-48	

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mount(s).

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.

Analysis Results:

Component	Utilization %	Pass/Fail
Tieback	7.6%	Pass
Antenna Pipe	44.8%	Pass
Standoff Vertical	5.2%	Pass
Standoff Diagonal	7.5%	Pass
Standoff Plate	38.4%	Pass
Standoff Horizontal	20.9%	Pass
Face Horizontal	27.7%	Pass
Mount Connection	13.6%	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**44.8%**

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Bottom Standoff	103.3	N35	471	1453	0.220	0.000	1455	1729	0.604	0.000
Sector A Top Standoff	106.7	N36	465	1876	0.243	0.000	1437	1824	0.591	0.000

Notes:
- Axial loads act along the axis of the tower leg
- Lateral reactions act perpendicular to the tower leg
- Moment loads introduce bending moment to the tower leg
- Torsion loads introduce twisting moment to the tower leg
- Batch solutions by individual load cases are included at the end of this document

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	15.7	9.0	24.9	18.1
0.5	24.6	15.5	37.6	28.5
1	32.8	21.5	49.6	38.3

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The proposed antenna mounts are **SUFFICIENT** for the final loading configuration (attachment 2) upon completion of the mount replacement (attachment 3) and requirements below.

Refer to document at the end of this form for special instructions. Contact EOR if special instructions are not available.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Manufacturer Drawings
4. Existing Mount Photos
5. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – New Mount Passing MA

Electronic pdf version of this can be downloaded at https://pmi.vzwsmart.com
For additional questions and support, please reach out to pmisupport@colliersengineering.com

MDG #: 5000953820 SMART Project #: 10243257 Fuze Project ID: 16737018

Purpose – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide "as built mount drawings" showing contractor's name, contact information, preparer's signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: ***https://pmi.vzwsmart.com***

Photo Requirements:

- *Photos taken at ground level*
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation of mounts. Each entire sector shall be in one photo to show the interconnection of members.

- These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.
- Photos of each installed mount; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the installed mount elevation.

Antenna & Equipment Placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

☐ The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:

Issue:

Refer to document at the end of this form for special instructions. Contact EOR if special instructions are not available.

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Comments:

New Mount Certification:

☐ The contractor certifies that the New Mount installed is as specified in the Passing Mount Analysis.

☐ The contractor notes that the New Mount installed is not as specified and engineering approval was received for the New Mount installed.

Contractor to provide measurement from top of the highest equipment/steel to the bottom of the lowest equipment/steel by documenting it using the most appropriate illustration below along with supporting photos:

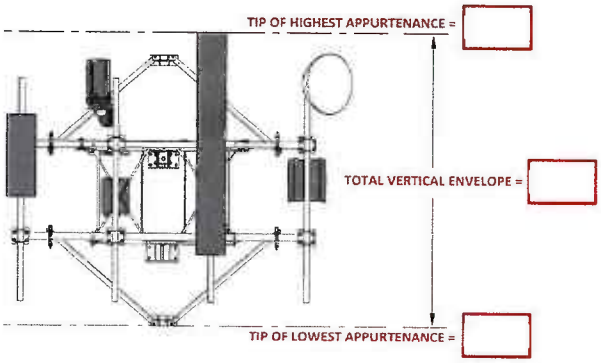


Illustration #1

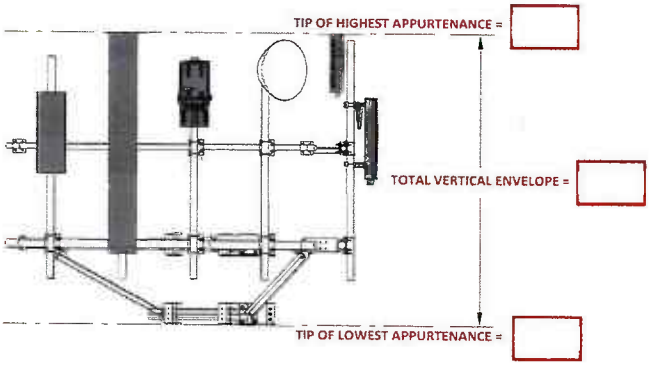


Illustration #2

Certifying Individual:

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

MDG #: **5000953820**
Site Name: **ENFIELD 6 CT**
Fuze ID #: **16737018**
Colliers Engineering & Design Project #: **24777154**

PMI INSTRUCTIONS:

1. Contractor shall install the proposed Site Pro 1 VFA12-HD sector frames in accordance with manufacturer specifications and the Mount Installation Sketch. Contact EOR if these documents are not available.

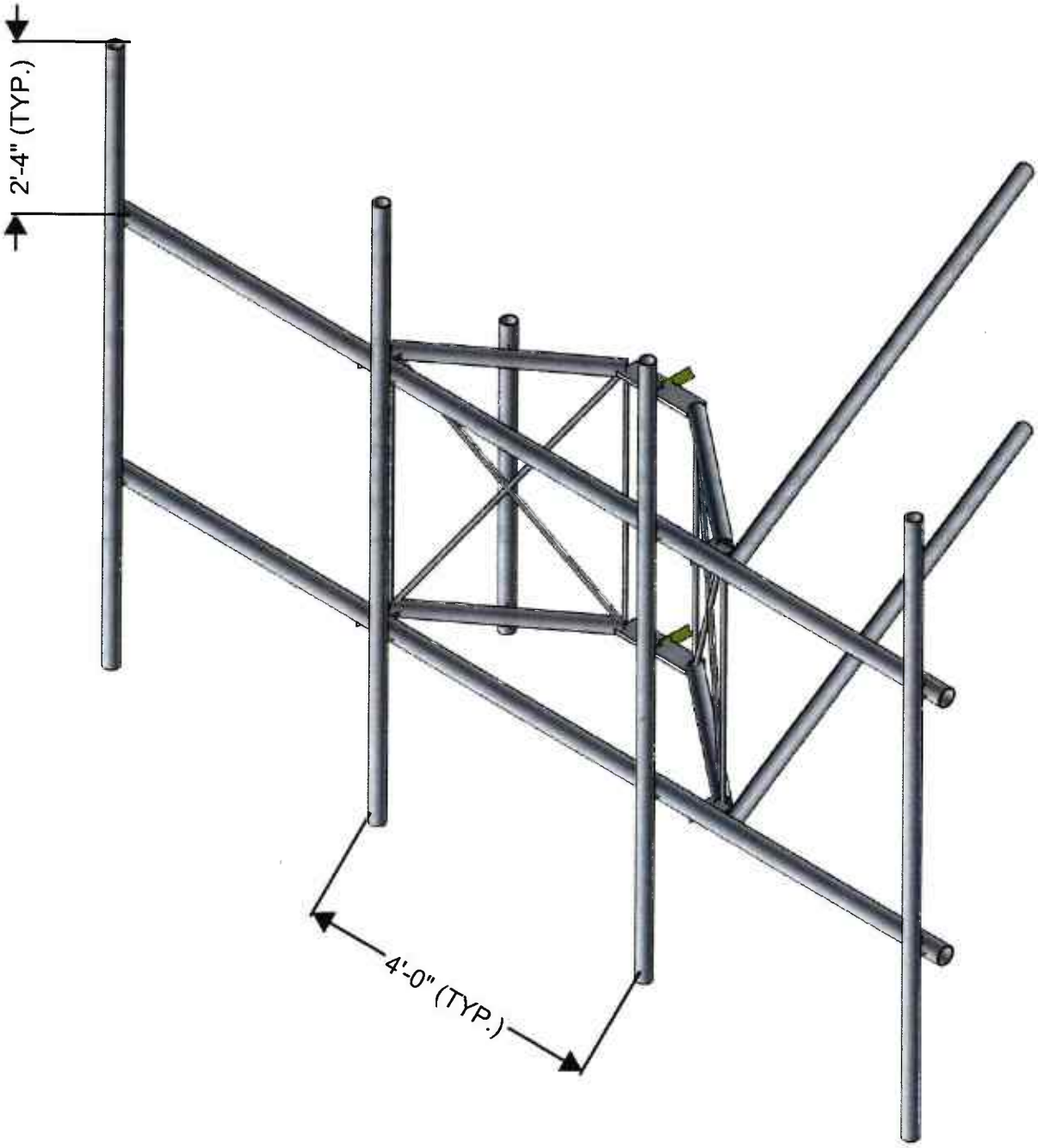
2. Contractor shall install (4) 96" long PIPE 2 SCH40 mount pipes per mount. Refer to placement diagrams and Mount Installation Sketch. Contact EOR if these documents are not available.

3. Attach tiebacks to adjacent tower legs. Proposed tieback shall extend no more than 12" beyond the plane of the tower face. Contractor shall trim as required and protect cut end with two (2) coats of cold galvanization (Zinga or Zinc Kote).

4. Contractor shall install OVP on a new 48" long PIPE 2 SCH 40 pipe connected to the welded tabs of the alpha sector standoff.

5. Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

MOUNT INSTALLATION SKETCH



MOUNT ISOMETRIC VIEW
N.T.S

Structure: 5000953820-VZW - ENFIELD 6 CT

Sector: **A**

Structure Type: Self Support

Mount Elev: 105.00

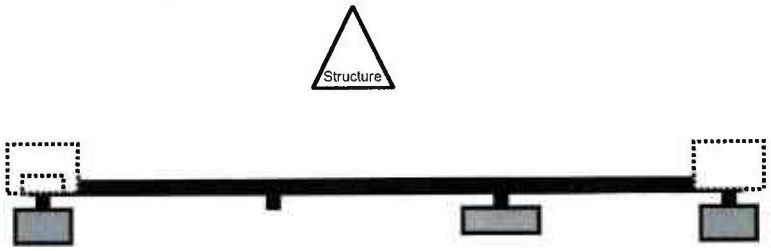
10243257

7/23/2024

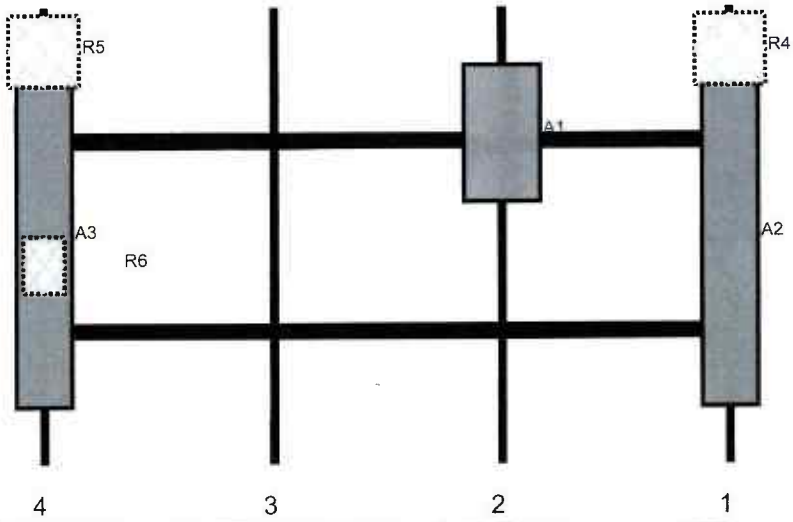
Page: 1

Colliers Engineering & Design

Plan View

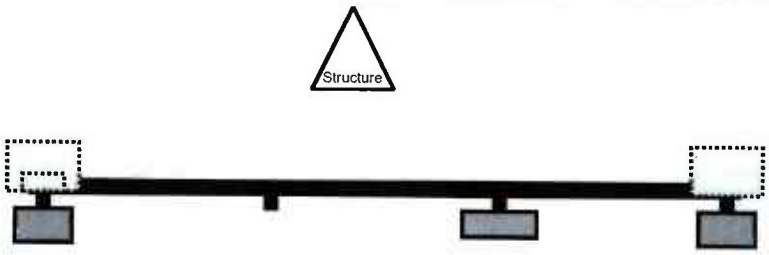


Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	NHH-65B-R2B	72	11.9	147	1	a	Front	48	0	Added	
R4	RF4439d-25A	15	15	147	1	a	Behind	9	0	Added	
A1	MT6413-77A	28.9	15.8	99	2	a	Front	26.4	0	Added	
A3	NHHSS-65B-R2BT4	72	11.9	3	4	a	Front	48	0	Added	
R5	RF4461d-13A	15	15	3	4	a	Behind	9	0	Added	
R6	RT4423-48A	11.8	8.7	3	4	a	Behind	54	0	Added	
OVP	RVZDC-6627-PF-48	29.5	16.5		Member					Added	

Plan View



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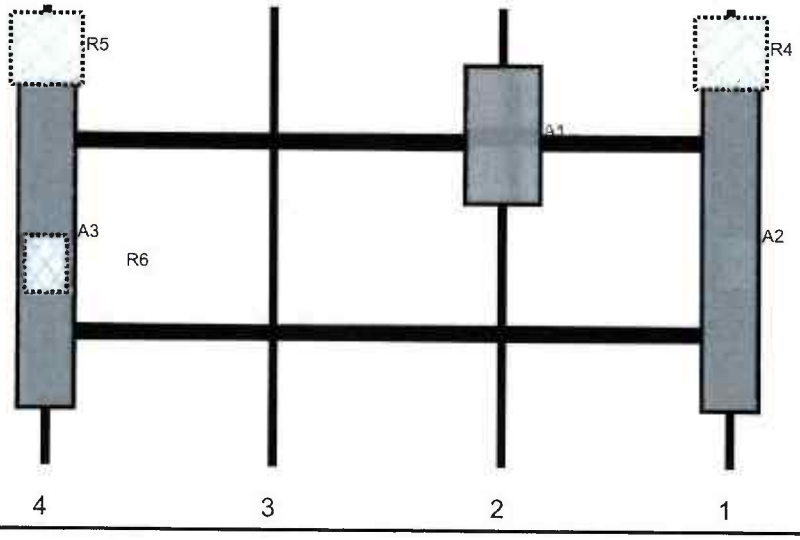

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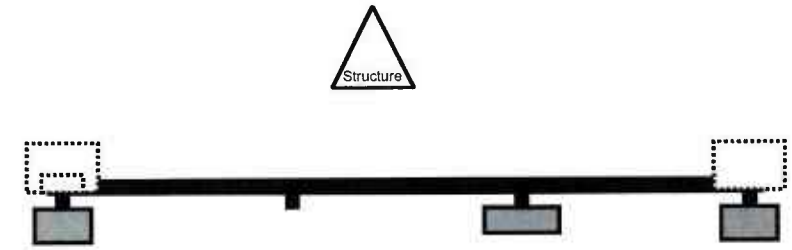
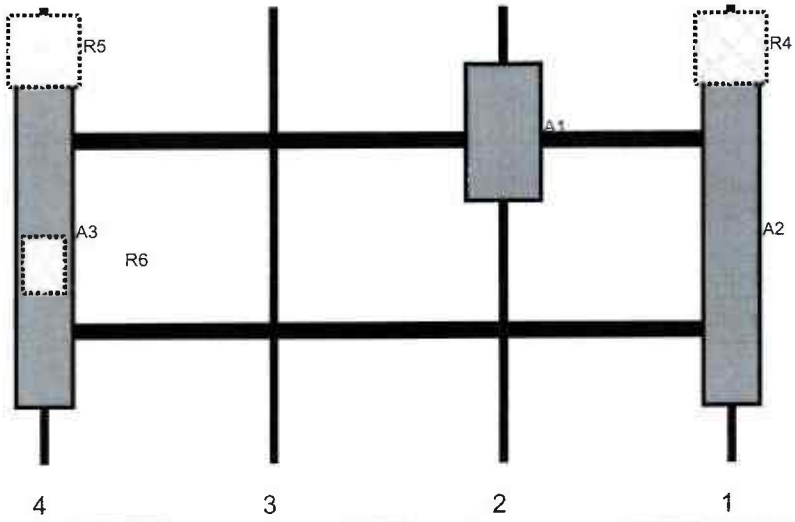
R5	RF4461d-13A	15	15	3	4	a	Behind	9	0	Added	
R6	RT4423-48A	11.8	8.7	3	4	a	Behind	54	0	Added	

Plan View



Front View - Looking at Structure



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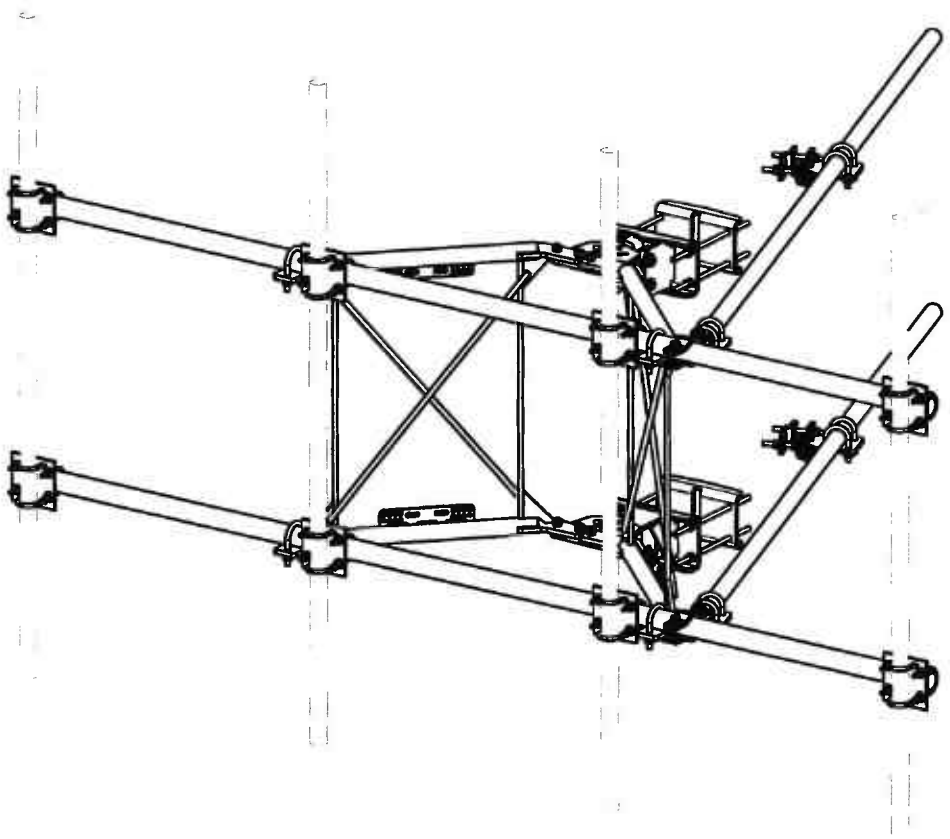
A3	NHHSS-65B-R2BT4	72	11.9	3	4	a	Front	48	0	Added	
R5	RF4461d-13A	15	15	3	4	a	Behind	9	0	Added	
R6	RT4423-48A	11.8	8.7	3	4	a	Behind	54	0	Added	



PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	1	X-HDCAMTBW	CLAMP WELDMENT FOR BCAM-HD		33.86	33.86
3	1	X-MHTPHD	MULTI-HOLE TAPER PLATE WELDMENT		36.24	36.24
4	2	X-VFAPL4	VFA-HD PIVOT PLATE	12 in	15.88	31.77
5	2	X-LCBP4	BENT BACKING PLATE	13 in	19.00	38.01
6	1	X-HDCAMSS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.39	16.39
7	4	X-SPTB	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	23.49
8	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
9	4	X-TBCA	TIE BACK CLIP ANGLE		2.01	8.02
10	8	SCX2	CROSSOVER PLATE	7 in	4.80	38.37
11	4	MCP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	14.37
12	8	DCP	1/2" THICK, 5-3/4" CNTER TO CENTER CLAMP HALF	8 1/8 in	2.36	18.90
13	2	P2126	2-3/8" X 126" (2" SCH. 40) GALVANIZED PIPE	126 in	40.75	81.50
14	2	P30150	2-7/8" X 150" (2-1/2" SCH. 40) GALVANIZED PIPE	150 in	76.94	153.87
15	4	A34212	3/4" x 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	1.92
16	4	G34FW	3/4" HDG USS FLATWASHER		0.06	0.24
17	4	G34LW	3/4" HDG LOCKWASHER		0.04	0.17
18	4	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.85
19	8	G58R-18	5/8" x 18" THREADED ROD (HDG.)	18 in	0.40	3.19
20	4	G58R-12	5/8" x 12" THREADED ROD (HDG.)		1.05	4.18
21	4	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	2.79
22	4	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
23	8	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	8.00
24	2	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	1.41
25	1	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
26	8	G5804	5/8" x 4" HDG HEX BOLT GR5		0.44	3.55
27	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
28	8	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	2.50
29	25	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.76
30	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
31	71	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	9.22
32	32	X-UB1300	1/2" X 3" X 5" X 2" GALV U-BOLT		0.74	23.64
33	16	X-UB1212	1/2" X 2" X 3" X 1-1/4" U-BOLT (HDG.)		0.60	9.56
34	64	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.18
35	64	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.89
36	64	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	4.58
					TOTAL WT. #	738.06

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2		CEK	6/29/2018
C	UPDATED PIN LEG CONNECTION TO B-CAM CONNECTION		CEK	12/7/2017
B	CHANGED TIE-BACK BACK CONNECTION		CEK	7/31/2017
A	CHANGED TIE-BACK FRONT CONNECTION		CEK	2/2/2017

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
12' 6" HEAVY DUTY
V-FRAME ASSEMBLY
WITH TWO STIFF ARMS

SITE PRO 1
A valmont COMPANY

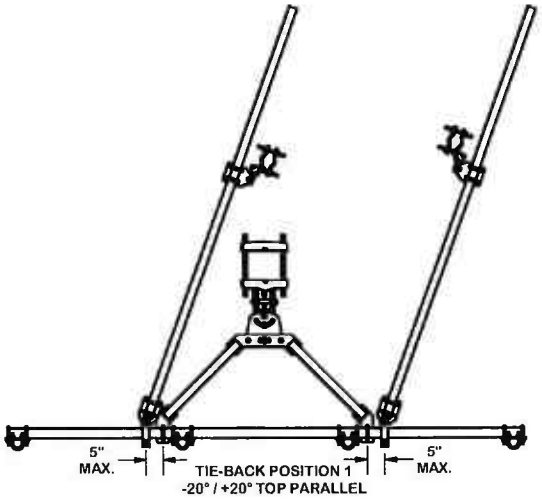
Engineering Support Team: 1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

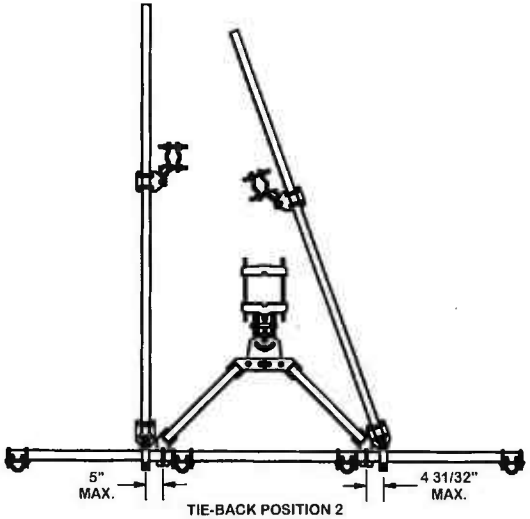
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 1/25/2017		VFA12-HD

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 12/13/2017	VFA12-HD

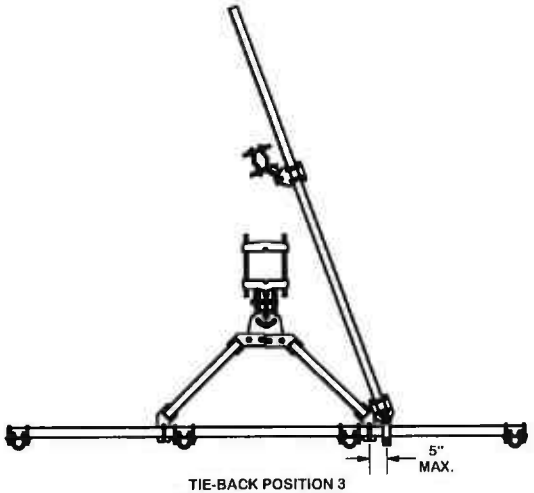
TIE-BACK POSITIONS



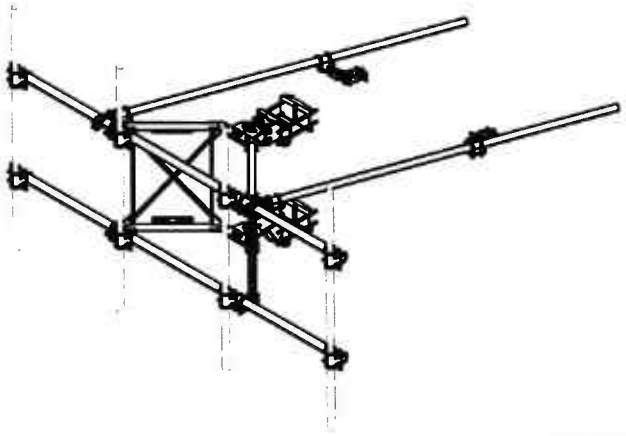
TIE-BACK POSITION 1
-20° / +20° TOP PARALLEL

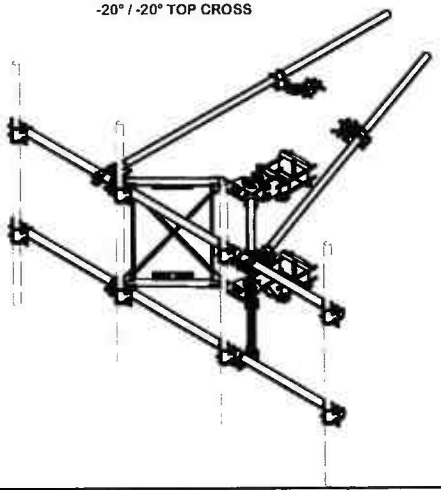


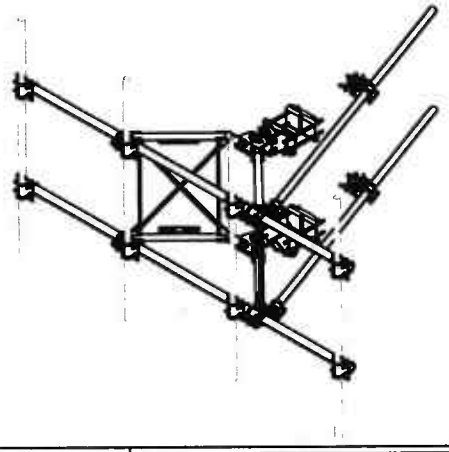
TIE-BACK POSITION 2
-20° / -20° TOP CROSS



TIE-BACK POSITION 3
-20° SAME SIDE STACKED







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REVISION HISTORY

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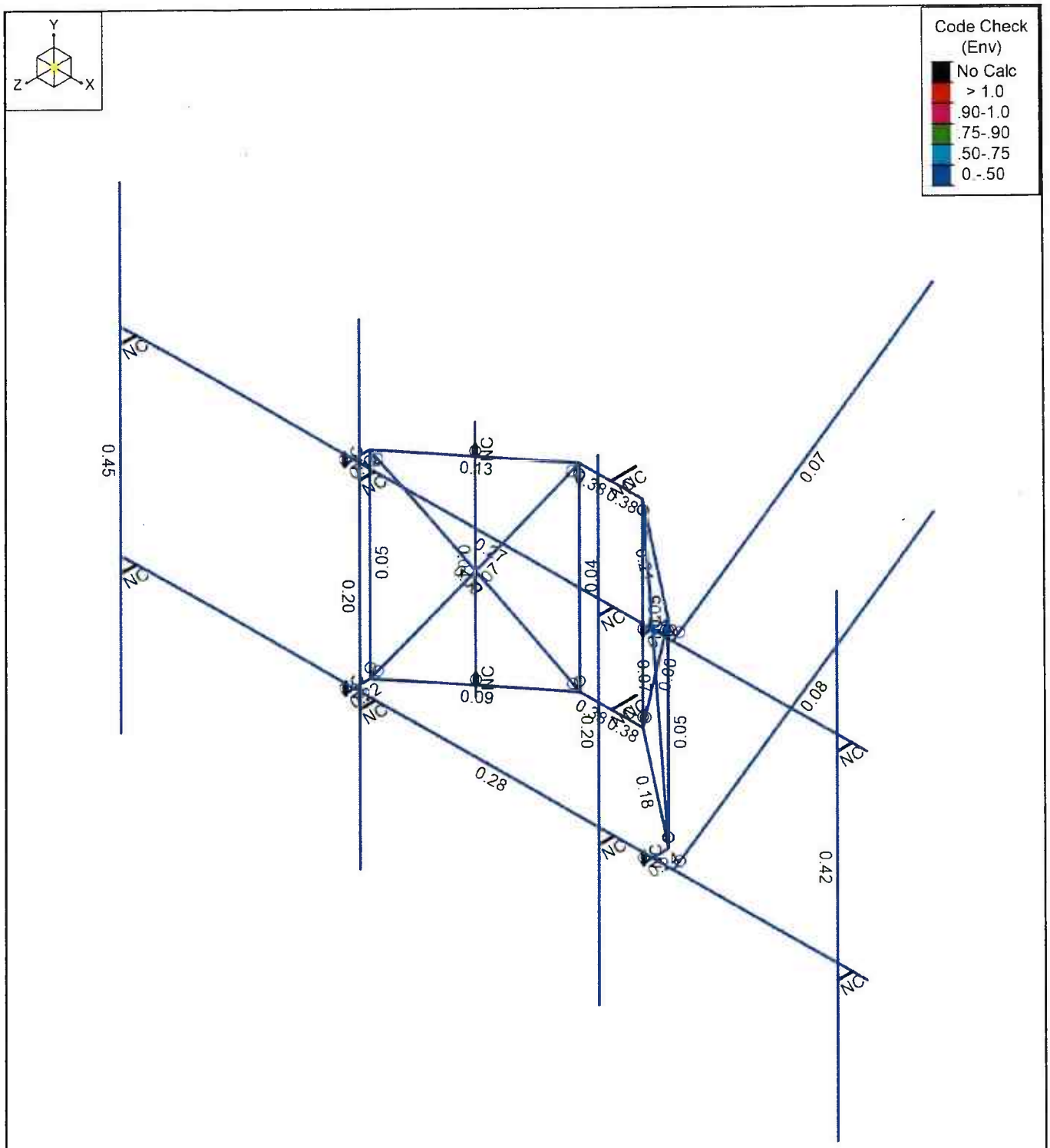
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 1/25/2017		VFA12-HD

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 12/13/2017	VFA12-HD

Envelope Only Solution

RISA	Colliers Engineering & De...	New Mount Spec	SK-1
	NL		Jul 23, 2024 at 12:44 PM
	24777154		5000953820-VZW_MT_LOT...



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

RISA	Colliers Engineering & De...	New Mount Spec	SK-2
	NL		Jul 23, 2024 at 12:44 PM
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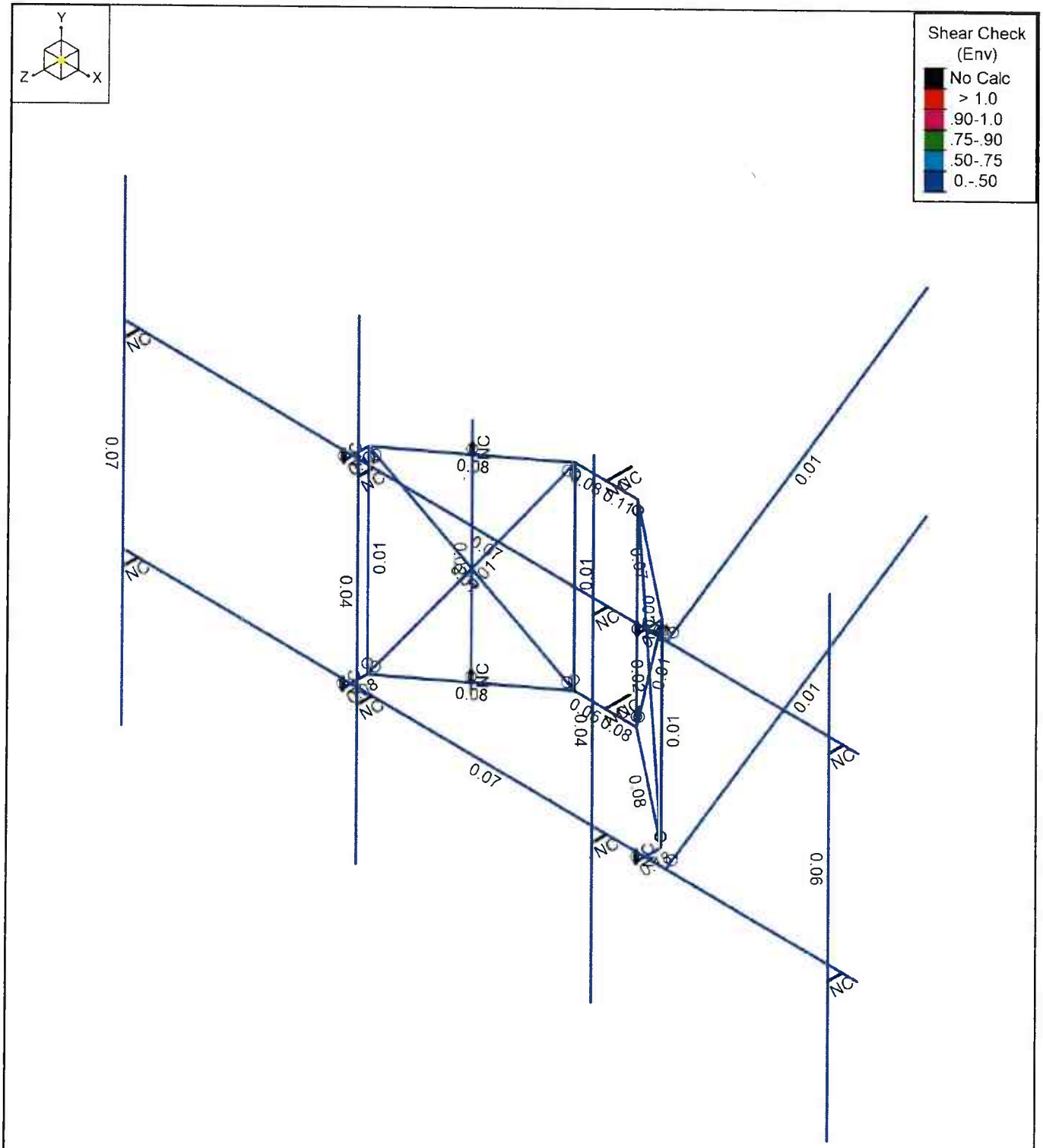


Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

RISA	Colliers Engineering & De...	New Mount Spec	SK-3
	NL		Jul 23, 2024 at 12:44 PM
	24777154		5000953820-VZW_MT_LOT...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
1	Antenna D	None				30	
2	Antenna Di	None				30	
3	Antenna Wo (0 Deg)	None				30	
4	Antenna Wo (30 Deg)	None				30	
5	Antenna Wo (60 Deg)	None				30	
6	Antenna Wo (90 Deg)	None				30	
7	Antenna Wo (120 Deg)	None				30	
8	Antenna Wo (150 Deg)	None				30	
9	Antenna Wo (180 Deg)	None				30	
10	Antenna Wo (210 Deg)	None				30	
11	Antenna Wo (240 Deg)	None				30	
12	Antenna Wo (270 Deg)	None				30	
13	Antenna Wo (300 Deg)	None				30	
14	Antenna Wo (330 Deg)	None				30	
15	Antenna Wi (0 Deg)	None				30	
16	Antenna Wi (30 Deg)	None				30	
17	Antenna Wi (60 Deg)	None				30	
18	Antenna Wi (90 Deg)	None				30	
19	Antenna Wi (120 Deg)	None				30	
20	Antenna Wi (150 Deg)	None				30	
21	Antenna Wi (180 Deg)	None				30	
22	Antenna Wi (210 Deg)	None				30	
23	Antenna Wi (240 Deg)	None				30	
24	Antenna Wi (270 Deg)	None				30	
25	Antenna Wi (300 Deg)	None				30	
26	Antenna Wi (330 Deg)	None				30	
27	Antenna Wm (0 Deg)	None				30	
28	Antenna Wm (30 Deg)	None				30	
29	Antenna Wm (60 Deg)	None				30	
30	Antenna Wm (90 Deg)	None				30	
31	Antenna Wm (120 Deg)	None				30	
32	Antenna Wm (150 Deg)	None				30	
33	Antenna Wm (180 Deg)	None				30	
34	Antenna Wm (210 Deg)	None				30	
35	Antenna Wm (240 Deg)	None				30	
36	Antenna Wm (270 Deg)	None				30	
37	Antenna Wm (300 Deg)	None				30	
38	Antenna Wm (330 Deg)	None				30	
39	Structure D	None		-1			
40	Structure Di	None					29
41	Structure Wo (0 Deg)	None					58
42	Structure Wo (30 Deg)	None					58
43	Structure Wo (60 Deg)	None					58
44	Structure Wo (90 Deg)	None					58
45	Structure Wo (120 Deg)	None					58
46	Structure Wo (150 Deg)	None					58
47	Structure Wo (180 Deg)	None					58
48	Structure Wo (210 Deg)	None					58
49	Structure Wo (240 Deg)	None					58
50	Structure Wo (270 Deg)	None					58
51	Structure Wo (300 Deg)	None					58
52	Structure Wo (330 Deg)	None					58
53	Structure Wi (0 Deg)	None					58
54	Structure Wi (30 Deg)	None					58
55	Structure Wi (60 Deg)	None					58

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
56	Structure Wi (90 Deg)	None					58
57	Structure Wi (120 Deg)	None					58
58	Structure Wi (150 Deg)	None					58
59	Structure Wi (180 Deg)	None					58
60	Structure Wi (210 Deg)	None					58
61	Structure Wi (240 Deg)	None					58
62	Structure Wi (270 Deg)	None					58
63	Structure Wi (300 Deg)	None					58
64	Structure Wi (330 Deg)	None					58
65	Structure Wm (0 Deg)	None					58
66	Structure Wm (30 Deg)	None					58
67	Structure Wm (60 Deg)	None					58
68	Structure Wm (90 Deg)	None					58
69	Structure Wm (120 Deg)	None					58
70	Structure Wm (150 Deg)	None					58
71	Structure Wm (180 Deg)	None					58
72	Structure Wm (210 Deg)	None					58
73	Structure Wm (240 Deg)	None					58
74	Structure Wm (270 Deg)	None					58
75	Structure Wm (300 Deg)	None					58
76	Structure Wm (330 Deg)	None					58
77	Lm1	None				1	
78	Lm2	None				1	
79	Lv1	None				1	
80	Lv2	None				1	
81	Antenna Ev	None				30	
82	Antenna Eh (0 Deg)	None				20	
83	Antenna Eh (90 Deg)	None				20	
84	Structure Ev	ELY		-0.037			
85	Structure Eh (0 Deg)	ELZ			-0.115		
86	Structure Eh (90 Deg)	ELX	0.115				

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.2D+1.0Wo (0 Deg)	Yes	Y	1	1.2	39	1.2	3	1	41	1								
2	1.2D+1.0Wo (30 Deg)	Yes	Y	1	1.2	39	1.2	4	1	42	1								
3	1.2D+1.0Wo (60 Deg)	Yes	Y	1	1.2	39	1.2	5	1	43	1								
4	1.2D+1.0Wo (90 Deg)	Yes	Y	1	1.2	39	1.2	6	1	44	1								
5	1.2D+1.0Wo (120 Deg)	Yes	Y	1	1.2	39	1.2	7	1	45	1								
6	1.2D+1.0Wo (150 Deg)	Yes	Y	1	1.2	39	1.2	8	1	46	1								
7	1.2D+1.0Wo (180 Deg)	Yes	Y	1	1.2	39	1.2	9	1	47	1								
8	1.2D+1.0Wo (210 Deg)	Yes	Y	1	1.2	39	1.2	10	1	48	1								
9	1.2D+1.0Wo (240 Deg)	Yes	Y	1	1.2	39	1.2	11	1	49	1								
10	1.2D+1.0Wo (270 Deg)	Yes	Y	1	1.2	39	1.2	12	1	50	1								
11	1.2D+1.0Wo (300 Deg)	Yes	Y	1	1.2	39	1.2	13	1	51	1								
12	1.2D+1.0Wo (330 Deg)	Yes	Y	1	1.2	39	1.2	14	1	52	1								
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	15	1	53	1				
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	16	1	54	1				
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	17	1	55	1				
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	18	1	56	1				
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	19	1	57	1				
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	20	1	58	1				
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	21	1	59	1				
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	22	1	60	1				
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	23	1	61	1				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	24	1	62	1				
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	25	1	63	1				
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	26	1	64	1				
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	27	1	65	1						
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	28	1	66	1						
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	29	1	67	1						
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	30	1	68	1						
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1						
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1						
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1						
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1						
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1						
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1						
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1						
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1						
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1						
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1						
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1						
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1						
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1						
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1						
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1						
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1						
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1						
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1						
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1						
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	38	1	76	1						
49	1.2D + 1.5Lv1	Yes	Y	1	1.2	39	1.2	79	1.5										
50	1.2D + 1.5Lv2	Yes	Y	1	1.2	39	1.2	80	1.5										
51	1.4D	Yes	Y	1	1.4	39	1.4												
52	1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX	
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Antenna Pipe	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	0.627	0.627	1.25
2	Horizontal mount pipe	PIPE 2.5	Beam	Pipe	Q235	Typical	1.61	1.45	1.45	2.89
3	Standoff Horizontal	PIPE 2.0	Beam	Pipe	Q235	Typical	1.02	0.627	0.627	1.25
4	Standoff Diagonal	SR 0.75	Beam	BAR	Q235	Typical	0.442	0.016	0.016	0.031
5	Tieback	PIPE 2.0	Beam	Pipe	Q235	Typical	1.02	0.627	0.627	1.25
6	Standoff Vertical	SR 0.625	Beam	BAR	Q235	Typical	0.307	0.007	0.007	0.015
7	Standoff Plate	PL5/8X3.5	Beam	BAR	Q235	Typical	2.188	0.071	2.233	0.253
8	tower pipe	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [k/ft^3]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	0.3	0.65	0.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	0.3	0.65	0.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	0.3	0.65	0.49	46	1.4	58	1.3
7	Q235	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N2	N1		Horizontal mount pipe	Beam	Pipe	Q235	Typical
2	M2	N4	N3		Horizontal mount pipe	Beam	Pipe	Q235	Typical
3	M3	N5	N13		RIGID	None	None	RIGID	Typical
4	M4	N6	N14		RIGID	None	None	RIGID	Typical
5	M5	N8	N16		RIGID	None	None	RIGID	Typical
6	M6	N7	N15		RIGID	None	None	RIGID	Typical
7	M9	N10	N18		RIGID	None	None	RIGID	Typical
8	M10	N9	N17		RIGID	None	None	RIGID	Typical
9	M11	N12	N20		RIGID	None	None	RIGID	Typical
10	M12	N11	N19		RIGID	None	None	RIGID	Typical
11	M13	N22	N26	90	Standoff Plate	Beam	BAR	Q235	Typical
12	M14	N21	N25	90	Standoff Plate	Beam	BAR	Q235	Typical
13	M15	N23	N27	90	Standoff Plate	Beam	BAR	Q235	Typical
14	M16	N24	N28	90	Standoff Plate	Beam	BAR	Q235	Typical
15	M17	N26	N32		Standoff Horizontal	Beam	Pipe	Q235	Typical
16	M18	N25	N31		Standoff Horizontal	Beam	Pipe	Q235	Typical
17	M19	N27	N33		Standoff Horizontal	Beam	Pipe	Q235	Typical
18	M20	N28	N34		Standoff Horizontal	Beam	Pipe	Q235	Typical
19	M21	N32	N30	90	Standoff Plate	Beam	BAR	Q235	Typical
20	M22	N34	N30	90	Standoff Plate	Beam	BAR	Q235	Typical
21	M23	N31	N29	90	Standoff Plate	Beam	BAR	Q235	Typical
22	M24	N33	N29	90	Standoff Plate	Beam	BAR	Q235	Typical
23	M25	N31	N26		Standoff Diagonal	Beam	BAR	Q235	Typical
24	M26	N32	N25		Standoff Diagonal	Beam	BAR	Q235	Typical
25	M27	N33	N28		Standoff Diagonal	Beam	BAR	Q235	Typical
26	M28	N27	N34		Standoff Diagonal	Beam	BAR	Q235	Typical
27	M29	N29	N35		RIGID	None	None	RIGID	Typical
28	M30	N30	N36		RIGID	None	None	RIGID	Typical
29	MP4A	N39	N43		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
30	MP3A	N40	N44		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
31	MP2A	N41	N45		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
32	MP1A	N42	N46		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
33	M44	N25	N26		Standoff Vertical	Beam	BAR	Q235	Typical
34	M45	N31	N32		Standoff Vertical	Beam	BAR	Q235	Typical
35	M46	N33	N34		Standoff Vertical	Beam	BAR	Q235	Typical
36	M47	N27	N28		Standoff Vertical	Beam	BAR	Q235	Typical
37	M47B	N22	N60		RIGID	None	None	RIGID	Typical
38	M48A	N21	N59		RIGID	None	None	RIGID	Typical
39	M49A	N24	N62		RIGID	None	None	RIGID	Typical
40	M50A	N23	N61		RIGID	None	None	RIGID	Typical
41	M51A	N72	N36		RIGID	None	None	RIGID	Typical
42	M52A	N71	N35		RIGID	None	None	RIGID	Typical
43	M44A	N60A	N73		Tieback	Beam	Pipe	Q235	Typical
44	OVP	N69	N70		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
45	M49	N66	N67		RIGID	None	None	RIGID	Typical
46	M50	N65	N68		RIGID	None	None	RIGID	Typical
47	M48	N29	N71		RIGID	None	None	RIGID	Typical
48	M51	N30	N72		RIGID	None	None	RIGID	Typical
49	M52	N75	N84		Tieback	Beam	Pipe	Q235	Typical

Member Advanced Data

	Label	I Release	J Release	T/C Only	Physical	Deflection Ratio Options	Activation	Seismic DR
1	M1				Yes	N/A		None
2	M2				Yes	N/A		None
3	M3				Yes	** NA **		None
4	M4				Yes	** NA **		None
5	M5				Yes	** NA **		None
6	M6				Yes	** NA **		None
7	M9				Yes	** NA **		None
8	M10				Yes	** NA **		None
9	M11				Yes	** NA **		None
10	M12				Yes	** NA **		None
11	M13				Yes	Default		None
12	M14				Yes	Default		None
13	M15				Yes	N/A		None
14	M16				Yes	N/A		None
15	M17				Yes	Default		None
16	M18				Yes	N/A		None
17	M19				Yes	N/A		None
18	M20				Yes	Default		None
19	M21				Yes	Default		None
20	M22				Yes	N/A		None
21	M23				Yes	N/A		None
22	M24				Yes	N/A		None
23	M25	BenPIN	BenPIN	Euler Buckling	Yes	Default		None
24	M26	BenPIN	BenPIN	Euler Buckling	Yes	Default		None
25	M27	BenPIN	BenPIN	Euler Buckling	Yes	N/A		None
26	M28	BenPIN	BenPIN	Euler Buckling	Yes	N/A		None
27	M29				Yes	** NA **	Inactive	None
28	M30				Yes	** NA **	Inactive	None
29	MP4A				Yes	N/A		None
30	MP3A				Yes	N/A		None
31	MP2A				Yes	N/A		None
32	MP1A				Yes	N/A		None
33	M44	BenPIN	BenPIN		Yes	N/A		None
34	M45	BenPIN	BenPIN		Yes	N/A		None

Member Advanced Data (Continued)

	Label	I Release	J Release	T/C Only	Physical	Deflection Ratio Options	Activation	Seismic DR
35	M46	BenPIN	BenPIN		Yes	N/A		None
36	M47	BenPIN	BenPIN		Yes	Default		None
37	M47B		OOOXOX		Yes	** NA **		None
38	M48A		OOOXOX		Yes	** NA **		None
39	M49A		OOOXOX		Yes	** NA **		None
40	M50A		OOOXOX		Yes	** NA **		None
41	M51A				Yes	** NA **		None
42	M52A				Yes	** NA **		None
43	M44A	BenPIN			Yes	Default		None
44	OVP				Yes	Default		None
45	M49		OOOXOX		Yes	** NA **		None
46	M50		OOOXOX		Yes	** NA **		None
47	M48				Yes	** NA **		None
48	M51				Yes	** NA **		None
49	M52	BenPIN			Yes	Default		None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Y	-28.65	1.2
2	MP2A	My	-0.014	1.2
3	MP2A	Mz	0	1.2
4	MP2A	Y	-28.65	3.2
5	MP2A	My	-0.014	3.2
6	MP2A	Mz	0	3.2
7	MP1A	Y	-21.85	1.5
8	MP1A	My	-0.011	1.5
9	MP1A	Mz	0	1.5
10	MP1A	Y	-21.85	6.5
11	MP1A	My	-0.011	6.5
12	MP1A	Mz	0	6.5
13	MP4A	Y	-32.3	1.5
14	MP4A	My	-0.016	1.5
15	MP4A	Mz	0	1.5
16	MP4A	Y	-32.3	6.5
17	MP4A	My	-0.016	6.5
18	MP4A	Mz	0	6.5
19	MP1A	Y	-74.7	0.75
20	MP1A	My	0.025	0.75
21	MP1A	Mz	0	0.75
22	MP4A	Y	-79.1	0.75
23	MP4A	My	0.026	0.75
24	MP4A	Mz	0	0.75
25	MP4A	Y	-21	4.5
26	MP4A	My	0.007	4.5
27	MP4A	Mz	0	4.5
28	OVP	Y	-32	1.25
29	OVP	My	0	1.25
30	OVP	Mz	0	1.25

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Y	-54.167	1.2
2	MP2A	My	-0.027	1.2

Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
3	MP2A	Mz	0	1.2
4	MP2A	Y	-54.167	3.2
5	MP2A	My	-0.027	3.2
6	MP2A	Mz	0	3.2
7	MP1A	Y	-109.03	1.5
8	MP1A	My	-0.055	1.5
9	MP1A	Mz	0	1.5
10	MP1A	Y	-109.03	6.5
11	MP1A	My	-0.055	6.5
12	MP1A	Mz	0	6.5
13	MP4A	Y	-109.03	1.5
14	MP4A	My	-0.055	1.5
15	MP4A	Mz	0	1.5
16	MP4A	Y	-109.03	6.5
17	MP4A	My	-0.055	6.5
18	MP4A	Mz	0	6.5
19	MP1A	Y	-82.161	0.75
20	MP1A	My	0.027	0.75
21	MP1A	Mz	0	0.75
22	MP4A	Y	-82.991	0.75
23	MP4A	My	0.028	0.75
24	MP4A	Mz	0	0.75
25	MP4A	Y	-32.339	4.5
26	MP4A	My	0.011	4.5
27	MP4A	Mz	0	4.5
28	OVP	Y	-157.217	1.25
29	OVP	My	0	1.25
30	OVP	Mz	0	1.25

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	1.2
2	MP2A	Z	-53.853	1.2
3	MP2A	Mx	0	1.2
4	MP2A	X	0	3.2
5	MP2A	Z	-53.853	3.2
6	MP2A	Mx	0	3.2
7	MP1A	X	0	1.5
8	MP1A	Z	-92.539	1.5
9	MP1A	Mx	0	1.5
10	MP1A	X	0	6.5
11	MP1A	Z	-92.539	6.5
12	MP1A	Mx	0	6.5
13	MP4A	X	0	1.5
14	MP4A	Z	-137.19	1.5
15	MP4A	Mx	0	1.5
16	MP4A	X	0	6.5
17	MP4A	Z	-137.19	6.5
18	MP4A	Mx	0	6.5
19	MP1A	X	0	0.75
20	MP1A	Z	-52.831	0.75
21	MP1A	Mx	0	0.75
22	MP4A	X	0	0.75
23	MP4A	Z	-63.738	0.75
24	MP4A	Mx	0	0.75

Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
25	MP4A	X	0	4.5
26	MP4A	Z	-25.904	4.5
27	MP4A	Mx	0	4.5
28	OVP	X	0	1.25
29	OVP	Z	-88.62	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	22.56	1.2
2	MP2A	Z	-39.074	1.2
3	MP2A	Mx	-0.011	1.2
4	MP2A	X	22.56	3.2
5	MP2A	Z	-39.074	3.2
6	MP2A	Mx	-0.011	3.2
7	MP1A	X	39.666	1.5
8	MP1A	Z	-68.703	1.5
9	MP1A	Mx	-0.02	1.5
10	MP1A	X	39.666	6.5
11	MP1A	Z	-68.703	6.5
12	MP1A	Mx	-0.02	6.5
13	MP4A	X	62.825	1.5
14	MP4A	Z	-108.817	1.5
15	MP4A	Mx	-0.031	1.5
16	MP4A	X	62.825	6.5
17	MP4A	Z	-108.817	6.5
18	MP4A	Mx	-0.031	6.5
19	MP1A	X	24.243	0.75
20	MP1A	Z	-41.989	0.75
21	MP1A	Mx	0.008	0.75
22	MP4A	X	29.334	0.75
23	MP4A	Z	-50.808	0.75
24	MP4A	Mx	0.01	0.75
25	MP4A	X	11.589	4.5
26	MP4A	Z	-20.072	4.5
27	MP4A	Mx	0.004	4.5
28	OVP	X	50.786	1.25
29	OVP	Z	-87.964	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	23.946	1.2
2	MP2A	Z	-13.826	1.2
3	MP2A	Mx	-0.012	1.2
4	MP2A	X	23.946	3.2
5	MP2A	Z	-13.826	3.2
6	MP2A	Mx	-0.012	3.2
7	MP1A	X	45.827	1.5
8	MP1A	Z	-26.458	1.5
9	MP1A	Mx	-0.023	1.5
10	MP1A	X	45.827	6.5
11	MP1A	Z	-26.458	6.5

Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
12	MP1A	Mx	-0.023	6.5
13	MP4A	X	88.831	1.5
14	MP4A	Z	-51.286	1.5
15	MP4A	Mx	-0.044	1.5
16	MP4A	X	88.831	6.5
17	MP4A	Z	-51.286	6.5
18	MP4A	Mx	-0.044	6.5
19	MP1A	X	34.462	0.75
20	MP1A	Z	-19.897	0.75
21	MP1A	Mx	0.011	0.75
22	MP4A	X	42.026	0.75
23	MP4A	Z	-24.264	0.75
24	MP4A	Mx	0.014	0.75
25	MP4A	X	15.349	4.5
26	MP4A	Z	-8.862	4.5
27	MP4A	Mx	0.005	4.5
28	OVP	X	93.572	1.25
29	OVP	Z	-54.024	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	18.917	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	-0.009	1.2
4	MP2A	X	18.917	3.2
5	MP2A	Z	0	3.2
6	MP2A	Mx	-0.009	3.2
7	MP1A	X	39.708	1.5
8	MP1A	Z	0	1.5
9	MP1A	Mx	-0.02	1.5
10	MP1A	X	39.708	6.5
11	MP1A	Z	0	6.5
12	MP1A	Mx	-0.02	6.5
13	MP4A	X	91.034	1.5
14	MP4A	Z	0	1.5
15	MP4A	Mx	-0.046	1.5
16	MP4A	X	91.034	6.5
17	MP4A	Z	0	6.5
18	MP4A	Mx	-0.046	6.5
19	MP1A	X	35.448	0.75
20	MP1A	Z	0	0.75
21	MP1A	Mx	0.012	0.75
22	MP4A	X	43.458	0.75
23	MP4A	Z	0	0.75
24	MP4A	Mx	0.014	0.75
25	MP4A	X	14.997	4.5
26	MP4A	Z	0	4.5
27	MP4A	Mx	0.005	4.5
28	OVP	X	101.572	1.25
29	OVP	Z	0	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	23.946	1.2
2	MP2A	Z	13.826	1.2
3	MP2A	Mx	-0.012	1.2
4	MP2A	X	23.946	3.2
5	MP2A	Z	13.826	3.2
6	MP2A	Mx	-0.012	3.2
7	MP1A	X	45.827	1.5
8	MP1A	Z	26.458	1.5
9	MP1A	Mx	-0.023	1.5
10	MP1A	X	45.827	6.5
11	MP1A	Z	26.458	6.5
12	MP1A	Mx	-0.023	6.5
13	MP4A	X	88.831	1.5
14	MP4A	Z	51.286	1.5
15	MP4A	Mx	-0.044	1.5
16	MP4A	X	88.831	6.5
17	MP4A	Z	51.286	6.5
18	MP4A	Mx	-0.044	6.5
19	MP1A	X	34.462	0.75
20	MP1A	Z	19.897	0.75
21	MP1A	Mx	0.011	0.75
22	MP4A	X	42.026	0.75
23	MP4A	Z	24.264	0.75
24	MP4A	Mx	0.014	0.75
25	MP4A	X	15.349	4.5
26	MP4A	Z	8.862	4.5
27	MP4A	Mx	0.005	4.5
28	OVP	X	76.747	1.25
29	OVP	Z	44.31	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	22.56	1.2
2	MP2A	Z	39.074	1.2
3	MP2A	Mx	-0.011	1.2
4	MP2A	X	22.56	3.2
5	MP2A	Z	39.074	3.2
6	MP2A	Mx	-0.011	3.2
7	MP1A	X	39.666	1.5
8	MP1A	Z	68.703	1.5
9	MP1A	Mx	-0.02	1.5
10	MP1A	X	39.666	6.5
11	MP1A	Z	68.703	6.5
12	MP1A	Mx	-0.02	6.5
13	MP4A	X	62.825	1.5
14	MP4A	Z	108.817	1.5
15	MP4A	Mx	-0.031	1.5
16	MP4A	X	62.825	6.5
17	MP4A	Z	108.817	6.5
18	MP4A	Mx	-0.031	6.5
19	MP1A	X	24.243	0.75
20	MP1A	Z	41.989	0.75
21	MP1A	Mx	0.008	0.75

Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	X	29.334	0.75
23	MP4A	Z	50.808	0.75
24	MP4A	Mx	0.01	0.75
25	MP4A	X	11.589	4.5
26	MP4A	Z	20.072	4.5
27	MP4A	Mx	0.004	4.5
28	OVP	X	41.072	1.25
29	OVP	Z	71.138	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	1.2
2	MP2A	Z	53.853	1.2
3	MP2A	Mx	0	1.2
4	MP2A	X	0	3.2
5	MP2A	Z	53.853	3.2
6	MP2A	Mx	0	3.2
7	MP1A	X	0	1.5
8	MP1A	Z	92.539	1.5
9	MP1A	Mx	0	1.5
10	MP1A	X	0	6.5
11	MP1A	Z	92.539	6.5
12	MP1A	Mx	0	6.5
13	MP4A	X	0	1.5
14	MP4A	Z	137.19	1.5
15	MP4A	Mx	0	1.5
16	MP4A	X	0	6.5
17	MP4A	Z	137.19	6.5
18	MP4A	Mx	0	6.5
19	MP1A	X	0	0.75
20	MP1A	Z	52.831	0.75
21	MP1A	Mx	0	0.75
22	MP4A	X	0	0.75
23	MP4A	Z	63.738	0.75
24	MP4A	Mx	0	0.75
25	MP4A	X	0	4.5
26	MP4A	Z	25.904	4.5
27	MP4A	Mx	0	4.5
28	OVP	X	0	1.25
29	OVP	Z	88.62	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-22.56	1.2
2	MP2A	Z	39.074	1.2
3	MP2A	Mx	0.011	1.2
4	MP2A	X	-22.56	3.2
5	MP2A	Z	39.074	3.2
6	MP2A	Mx	0.011	3.2
7	MP1A	X	-39.666	1.5
8	MP1A	Z	68.703	1.5

Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP1A	Mx	0.02	1.5
10	MP1A	X	-39.666	6.5
11	MP1A	Z	68.703	6.5
12	MP1A	Mx	0.02	6.5
13	MP4A	X	-62.825	1.5
14	MP4A	Z	108.817	1.5
15	MP4A	Mx	0.031	1.5
16	MP4A	X	-62.825	6.5
17	MP4A	Z	108.817	6.5
18	MP4A	Mx	0.031	6.5
19	MP1A	X	-24.243	0.75
20	MP1A	Z	41.989	0.75
21	MP1A	Mx	-0.008	0.75
22	MP4A	X	-29.334	0.75
23	MP4A	Z	50.808	0.75
24	MP4A	Mx	-0.01	0.75
25	MP4A	X	-11.589	4.5
26	MP4A	Z	20.072	4.5
27	MP4A	Mx	-0.004	4.5
28	OVP	X	-50.786	1.25
29	OVP	Z	87.964	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-23.946	1.2
2	MP2A	Z	13.826	1.2
3	MP2A	Mx	0.012	1.2
4	MP2A	X	-23.946	3.2
5	MP2A	Z	13.826	3.2
6	MP2A	Mx	0.012	3.2
7	MP1A	X	-45.827	1.5
8	MP1A	Z	26.458	1.5
9	MP1A	Mx	0.023	1.5
10	MP1A	X	-45.827	6.5
11	MP1A	Z	26.458	6.5
12	MP1A	Mx	0.023	6.5
13	MP4A	X	-88.831	1.5
14	MP4A	Z	51.286	1.5
15	MP4A	Mx	0.044	1.5
16	MP4A	X	-88.831	6.5
17	MP4A	Z	51.286	6.5
18	MP4A	Mx	0.044	6.5
19	MP1A	X	-34.462	0.75
20	MP1A	Z	19.897	0.75
21	MP1A	Mx	-0.011	0.75
22	MP4A	X	-42.026	0.75
23	MP4A	Z	24.264	0.75
24	MP4A	Mx	-0.014	0.75
25	MP4A	X	-15.349	4.5
26	MP4A	Z	8.862	4.5
27	MP4A	Mx	-0.005	4.5
28	OVP	X	-93.572	1.25
29	OVP	Z	54.024	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-18.917	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	0.009	1.2
4	MP2A	X	-18.917	3.2
5	MP2A	Z	0	3.2
6	MP2A	Mx	0.009	3.2
7	MP1A	X	-39.708	1.5
8	MP1A	Z	0	1.5
9	MP1A	Mx	0.02	1.5
10	MP1A	X	-39.708	6.5
11	MP1A	Z	0	6.5
12	MP1A	Mx	0.02	6.5
13	MP4A	X	-91.034	1.5
14	MP4A	Z	0	1.5
15	MP4A	Mx	0.046	1.5
16	MP4A	X	-91.034	6.5
17	MP4A	Z	0	6.5
18	MP4A	Mx	0.046	6.5
19	MP1A	X	-35.448	0.75
20	MP1A	Z	0	0.75
21	MP1A	Mx	-0.012	0.75
22	MP4A	X	-43.458	0.75
23	MP4A	Z	0	0.75
24	MP4A	Mx	-0.014	0.75
25	MP4A	X	-14.997	4.5
26	MP4A	Z	0	4.5
27	MP4A	Mx	-0.005	4.5
28	OVP	X	-101.572	1.25
29	OVP	Z	0	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-23.946	1.2
2	MP2A	Z	-13.826	1.2
3	MP2A	Mx	0.012	1.2
4	MP2A	X	-23.946	3.2
5	MP2A	Z	-13.826	3.2
6	MP2A	Mx	0.012	3.2
7	MP1A	X	-45.827	1.5
8	MP1A	Z	-26.458	1.5
9	MP1A	Mx	0.023	1.5
10	MP1A	X	-45.827	6.5
11	MP1A	Z	-26.458	6.5
12	MP1A	Mx	0.023	6.5
13	MP4A	X	-88.831	1.5
14	MP4A	Z	-51.286	1.5
15	MP4A	Mx	0.044	1.5
16	MP4A	X	-88.831	6.5
17	MP4A	Z	-51.286	6.5
18	MP4A	Mx	0.044	6.5
19	MP1A	X	-34.462	0.75
20	MP1A	Z	-19.897	0.75
21	MP1A	Mx	-0.011	0.75

Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	X	-42.026	0.75
23	MP4A	Z	-24.264	0.75
24	MP4A	Mx	-0.014	0.75
25	MP4A	X	-15.349	4.5
26	MP4A	Z	-8.862	4.5
27	MP4A	Mx	-0.005	4.5
28	OVP	X	-76.747	1.25
29	OVP	Z	-44.31	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-22.56	1.2
2	MP2A	Z	-39.074	1.2
3	MP2A	Mx	0.011	1.2
4	MP2A	X	-22.56	3.2
5	MP2A	Z	-39.074	3.2
6	MP2A	Mx	0.011	3.2
7	MP1A	X	-39.666	1.5
8	MP1A	Z	-68.703	1.5
9	MP1A	Mx	0.02	1.5
10	MP1A	X	-39.666	6.5
11	MP1A	Z	-68.703	6.5
12	MP1A	Mx	0.02	6.5
13	MP4A	X	-62.825	1.5
14	MP4A	Z	-108.817	1.5
15	MP4A	Mx	0.031	1.5
16	MP4A	X	-62.825	6.5
17	MP4A	Z	-108.817	6.5
18	MP4A	Mx	0.031	6.5
19	MP1A	X	-24.243	0.75
20	MP1A	Z	-41.989	0.75
21	MP1A	Mx	-0.008	0.75
22	MP4A	X	-29.334	0.75
23	MP4A	Z	-50.808	0.75
24	MP4A	Mx	-0.01	0.75
25	MP4A	X	-11.589	4.5
26	MP4A	Z	-20.072	4.5
27	MP4A	Mx	-0.004	4.5
28	OVP	X	-41.072	1.25
29	OVP	Z	-71.138	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	1.2
2	MP2A	Z	-12.87	1.2
3	MP2A	Mx	0	1.2
4	MP2A	X	0	3.2
5	MP2A	Z	-12.87	3.2
6	MP2A	Mx	0	3.2
7	MP1A	X	0	1.5
8	MP1A	Z	-25.972	1.5

Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP1A	Mx	0	1.5
10	MP1A	X	0	6.5
11	MP1A	Z	-25.972	6.5
12	MP1A	Mx	0	6.5
13	MP4A	X	0	1.5
14	MP4A	Z	-25.972	1.5
15	MP4A	Mx	0	1.5
16	MP4A	X	0	6.5
17	MP4A	Z	-25.972	6.5
18	MP4A	Mx	0	6.5
19	MP1A	X	0	0.75
20	MP1A	Z	-13.704	0.75
21	MP1A	Mx	0	0.75
22	MP4A	X	0	0.75
23	MP4A	Z	-13.704	0.75
24	MP4A	Mx	0	0.75
25	MP4A	X	0	4.5
26	MP4A	Z	-7.168	4.5
27	MP4A	Mx	0	4.5
28	OVP	X	0	1.25
29	OVP	Z	-23.02	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	5.548	1.2
2	MP2A	Z	-9.609	1.2
3	MP2A	Mx	-0.003	1.2
4	MP2A	X	5.548	3.2
5	MP2A	Z	-9.609	3.2
6	MP2A	Mx	-0.003	3.2
7	MP1A	X	12.036	1.5
8	MP1A	Z	-20.847	1.5
9	MP1A	Mx	-0.006	1.5
10	MP1A	X	12.036	6.5
11	MP1A	Z	-20.847	6.5
12	MP1A	Mx	-0.006	6.5
13	MP4A	X	12.036	1.5
14	MP4A	Z	-20.847	1.5
15	MP4A	Mx	-0.006	1.5
16	MP4A	X	12.036	6.5
17	MP4A	Z	-20.847	6.5
18	MP4A	Mx	-0.006	6.5
19	MP1A	X	6.362	0.75
20	MP1A	Z	-11.019	0.75
21	MP1A	Mx	0.002	0.75
22	MP4A	X	6.381	0.75
23	MP4A	Z	-11.052	0.75
24	MP4A	Mx	0.002	0.75
25	MP4A	X	3.177	4.5
26	MP4A	Z	-5.502	4.5
27	MP4A	Mx	0.001	4.5
28	OVP	X	12.917	1.25
29	OVP	Z	-22.374	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	6.536	1.2
2	MP2A	Z	-3.773	1.2
3	MP2A	Mx	-0.003	1.2
4	MP2A	X	6.536	3.2
5	MP2A	Z	-3.773	3.2
6	MP2A	Mx	-0.003	3.2
7	MP1A	X	17.556	1.5
8	MP1A	Z	-10.136	1.5
9	MP1A	Mx	-0.009	1.5
10	MP1A	X	17.556	6.5
11	MP1A	Z	-10.136	6.5
12	MP1A	Mx	-0.009	6.5
13	MP4A	X	17.556	1.5
14	MP4A	Z	-10.136	1.5
15	MP4A	Mx	-0.009	1.5
16	MP4A	X	17.556	6.5
17	MP4A	Z	-10.136	6.5
18	MP4A	Mx	-0.009	6.5
19	MP1A	X	9.32	0.75
20	MP1A	Z	-5.381	0.75
21	MP1A	Mx	0.003	0.75
22	MP4A	X	9.422	0.75
23	MP4A	Z	-5.44	0.75
24	MP4A	Mx	0.003	0.75
25	MP4A	X	4.091	4.5
26	MP4A	Z	-2.362	4.5
27	MP4A	Mx	0.001	4.5
28	OVP	X	23.592	1.25
29	OVP	Z	-13.621	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	5.772	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	-0.003	1.2
4	MP2A	X	5.772	3.2
5	MP2A	Z	0	3.2
6	MP2A	Mx	-0.003	3.2
7	MP1A	X	18.372	1.5
8	MP1A	Z	0	1.5
9	MP1A	Mx	-0.009	1.5
10	MP1A	X	18.372	6.5
11	MP1A	Z	0	6.5
12	MP1A	Mx	-0.009	6.5
13	MP4A	X	18.372	1.5
14	MP4A	Z	0	1.5
15	MP4A	Mx	-0.009	1.5
16	MP4A	X	18.372	6.5
17	MP4A	Z	0	6.5
18	MP4A	Mx	-0.009	6.5
19	MP1A	X	9.782	0.75
20	MP1A	Z	0	0.75
21	MP1A	Mx	0.003	0.75

Member Point Loads (BLC 18 : Antenna Wi (90 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	X	9.939	0.75
23	MP4A	Z	0	0.75
24	MP4A	Mx	0.003	0.75
25	MP4A	X	3.91	4.5
26	MP4A	Z	0	4.5
27	MP4A	Mx	0.001	4.5
28	OVP	X	25.835	1.25
29	OVP	Z	0	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	6.536	1.2
2	MP2A	Z	3.773	1.2
3	MP2A	Mx	-0.003	1.2
4	MP2A	X	6.536	3.2
5	MP2A	Z	3.773	3.2
6	MP2A	Mx	-0.003	3.2
7	MP1A	X	17.556	1.5
8	MP1A	Z	10.136	1.5
9	MP1A	Mx	-0.009	1.5
10	MP1A	X	17.556	6.5
11	MP1A	Z	10.136	6.5
12	MP1A	Mx	-0.009	6.5
13	MP4A	X	17.556	1.5
14	MP4A	Z	10.136	1.5
15	MP4A	Mx	-0.009	1.5
16	MP4A	X	17.556	6.5
17	MP4A	Z	10.136	6.5
18	MP4A	Mx	-0.009	6.5
19	MP1A	X	9.32	0.75
20	MP1A	Z	5.381	0.75
21	MP1A	Mx	0.003	0.75
22	MP4A	X	9.422	0.75
23	MP4A	Z	5.44	0.75
24	MP4A	Mx	0.003	0.75
25	MP4A	X	4.091	4.5
26	MP4A	Z	2.362	4.5
27	MP4A	Mx	0.001	4.5
28	OVP	X	19.936	1.25
29	OVP	Z	11.51	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 20 : Antenna Wi (150 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	5.548	1.2
2	MP2A	Z	9.609	1.2
3	MP2A	Mx	-0.003	1.2
4	MP2A	X	5.548	3.2
5	MP2A	Z	9.609	3.2
6	MP2A	Mx	-0.003	3.2
7	MP1A	X	12.036	1.5
8	MP1A	Z	20.847	1.5

Member Point Loads (BLC 20 : Antenna Wi (150 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP1A	Mx	-0.006	1.5
10	MP1A	X	12.036	6.5
11	MP1A	Z	20.847	6.5
12	MP1A	Mx	-0.006	6.5
13	MP4A	X	12.036	1.5
14	MP4A	Z	20.847	1.5
15	MP4A	Mx	-0.006	1.5
16	MP4A	X	12.036	6.5
17	MP4A	Z	20.847	6.5
18	MP4A	Mx	-0.006	6.5
19	MP1A	X	6.362	0.75
20	MP1A	Z	11.019	0.75
21	MP1A	Mx	0.002	0.75
22	MP4A	X	6.381	0.75
23	MP4A	Z	11.052	0.75
24	MP4A	Mx	0.002	0.75
25	MP4A	X	3.177	4.5
26	MP4A	Z	5.502	4.5
27	MP4A	Mx	0.001	4.5
28	OVP	X	10.806	1.25
29	OVP	Z	18.717	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 21 : Antenna Wi (180 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	1.2
2	MP2A	Z	12.87	1.2
3	MP2A	Mx	0	1.2
4	MP2A	X	0	3.2
5	MP2A	Z	12.87	3.2
6	MP2A	Mx	0	3.2
7	MP1A	X	0	1.5
8	MP1A	Z	25.972	1.5
9	MP1A	Mx	0	1.5
10	MP1A	X	0	6.5
11	MP1A	Z	25.972	6.5
12	MP1A	Mx	0	6.5
13	MP4A	X	0	1.5
14	MP4A	Z	25.972	1.5
15	MP4A	Mx	0	1.5
16	MP4A	X	0	6.5
17	MP4A	Z	25.972	6.5
18	MP4A	Mx	0	6.5
19	MP1A	X	0	0.75
20	MP1A	Z	13.704	0.75
21	MP1A	Mx	0	0.75
22	MP4A	X	0	0.75
23	MP4A	Z	13.704	0.75
24	MP4A	Mx	0	0.75
25	MP4A	X	0	4.5
26	MP4A	Z	7.168	4.5
27	MP4A	Mx	0	4.5
28	OVP	X	0	1.25
29	OVP	Z	23.02	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-5.548	1.2
2	MP2A	Z	9.609	1.2
3	MP2A	Mx	0.003	1.2
4	MP2A	X	-5.548	3.2
5	MP2A	Z	9.609	3.2
6	MP2A	Mx	0.003	3.2
7	MP1A	X	-12.036	1.5
8	MP1A	Z	20.847	1.5
9	MP1A	Mx	0.006	1.5
10	MP1A	X	-12.036	6.5
11	MP1A	Z	20.847	6.5
12	MP1A	Mx	0.006	6.5
13	MP4A	X	-12.036	1.5
14	MP4A	Z	20.847	1.5
15	MP4A	Mx	0.006	1.5
16	MP4A	X	-12.036	6.5
17	MP4A	Z	20.847	6.5
18	MP4A	Mx	0.006	6.5
19	MP1A	X	-6.362	0.75
20	MP1A	Z	11.019	0.75
21	MP1A	Mx	-0.002	0.75
22	MP4A	X	-6.381	0.75
23	MP4A	Z	11.052	0.75
24	MP4A	Mx	-0.002	0.75
25	MP4A	X	-3.177	4.5
26	MP4A	Z	5.502	4.5
27	MP4A	Mx	-0.001	4.5
28	OVP	X	-12.917	1.25
29	OVP	Z	22.374	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 23 : Antenna Wi (240 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-6.536	1.2
2	MP2A	Z	3.773	1.2
3	MP2A	Mx	0.003	1.2
4	MP2A	X	-6.536	3.2
5	MP2A	Z	3.773	3.2
6	MP2A	Mx	0.003	3.2
7	MP1A	X	-17.556	1.5
8	MP1A	Z	10.136	1.5
9	MP1A	Mx	0.009	1.5
10	MP1A	X	-17.556	6.5
11	MP1A	Z	10.136	6.5
12	MP1A	Mx	0.009	6.5
13	MP4A	X	-17.556	1.5
14	MP4A	Z	10.136	1.5
15	MP4A	Mx	0.009	1.5
16	MP4A	X	-17.556	6.5
17	MP4A	Z	10.136	6.5
18	MP4A	Mx	0.009	6.5
19	MP1A	X	-9.32	0.75
20	MP1A	Z	5.381	0.75
21	MP1A	Mx	-0.003	0.75

Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	X	-9.422	0.75
23	MP4A	Z	5.44	0.75
24	MP4A	Mx	-0.003	0.75
25	MP4A	X	-4.091	4.5
26	MP4A	Z	2.362	4.5
27	MP4A	Mx	-0.001	4.5
28	OVP	X	-23.592	1.25
29	OVP	Z	13.621	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 24 : Antenna Wi (270 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-5.772	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	0.003	1.2
4	MP2A	X	-5.772	3.2
5	MP2A	Z	0	3.2
6	MP2A	Mx	0.003	3.2
7	MP1A	X	-18.372	1.5
8	MP1A	Z	0	1.5
9	MP1A	Mx	0.009	1.5
10	MP1A	X	-18.372	6.5
11	MP1A	Z	0	6.5
12	MP1A	Mx	0.009	6.5
13	MP4A	X	-18.372	1.5
14	MP4A	Z	0	1.5
15	MP4A	Mx	0.009	1.5
16	MP4A	X	-18.372	6.5
17	MP4A	Z	0	6.5
18	MP4A	Mx	0.009	6.5
19	MP1A	X	-9.782	0.75
20	MP1A	Z	0	0.75
21	MP1A	Mx	-0.003	0.75
22	MP4A	X	-9.939	0.75
23	MP4A	Z	0	0.75
24	MP4A	Mx	-0.003	0.75
25	MP4A	X	-3.91	4.5
26	MP4A	Z	0	4.5
27	MP4A	Mx	-0.001	4.5
28	OVP	X	-25.835	1.25
29	OVP	Z	0	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-6.536	1.2
2	MP2A	Z	-3.773	1.2
3	MP2A	Mx	0.003	1.2
4	MP2A	X	-6.536	3.2
5	MP2A	Z	-3.773	3.2
6	MP2A	Mx	0.003	3.2
7	MP1A	X	-17.556	1.5
8	MP1A	Z	-10.136	1.5

Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP1A	Mx	0.009	1.5
10	MP1A	X	-17.556	6.5
11	MP1A	Z	-10.136	6.5
12	MP1A	Mx	0.009	6.5
13	MP4A	X	-17.556	1.5
14	MP4A	Z	-10.136	1.5
15	MP4A	Mx	0.009	1.5
16	MP4A	X	-17.556	6.5
17	MP4A	Z	-10.136	6.5
18	MP4A	Mx	0.009	6.5
19	MP1A	X	-9.32	0.75
20	MP1A	Z	-5.381	0.75
21	MP1A	Mx	-0.003	0.75
22	MP4A	X	-9.422	0.75
23	MP4A	Z	-5.44	0.75
24	MP4A	Mx	-0.003	0.75
25	MP4A	X	-4.091	4.5
26	MP4A	Z	-2.362	4.5
27	MP4A	Mx	-0.001	4.5
28	OVP	X	-19.936	1.25
29	OVP	Z	-11.51	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 26 : Antenna Wi (330 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-5.548	1.2
2	MP2A	Z	-9.609	1.2
3	MP2A	Mx	0.003	1.2
4	MP2A	X	-5.548	3.2
5	MP2A	Z	-9.609	3.2
6	MP2A	Mx	0.003	3.2
7	MP1A	X	-12.036	1.5
8	MP1A	Z	-20.847	1.5
9	MP1A	Mx	0.006	1.5
10	MP1A	X	-12.036	6.5
11	MP1A	Z	-20.847	6.5
12	MP1A	Mx	0.006	6.5
13	MP4A	X	-12.036	1.5
14	MP4A	Z	-20.847	1.5
15	MP4A	Mx	0.006	1.5
16	MP4A	X	-12.036	6.5
17	MP4A	Z	-20.847	6.5
18	MP4A	Mx	0.006	6.5
19	MP1A	X	-6.362	0.75
20	MP1A	Z	-11.019	0.75
21	MP1A	Mx	-0.002	0.75
22	MP4A	X	-6.381	0.75
23	MP4A	Z	-11.052	0.75
24	MP4A	Mx	-0.002	0.75
25	MP4A	X	-3.177	4.5
26	MP4A	Z	-5.502	4.5
27	MP4A	Mx	-0.001	4.5
28	OVP	X	-10.806	1.25
29	OVP	Z	-18.717	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 27 : Antenna Wm (0 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	1.2
2	MP2A	Z	-3.102	1.2
3	MP2A	Mx	0	1.2
4	MP2A	X	0	3.2
5	MP2A	Z	-3.102	3.2
6	MP2A	Mx	0	3.2
7	MP1A	X	0	1.5
8	MP1A	Z	-5.33	1.5
9	MP1A	Mx	0	1.5
10	MP1A	X	0	6.5
11	MP1A	Z	-5.33	6.5
12	MP1A	Mx	0	6.5
13	MP4A	X	0	1.5
14	MP4A	Z	-7.902	1.5
15	MP4A	Mx	0	1.5
16	MP4A	X	0	6.5
17	MP4A	Z	-7.902	6.5
18	MP4A	Mx	0	6.5
19	MP1A	X	0	0.75
20	MP1A	Z	-3.043	0.75
21	MP1A	Mx	0	0.75
22	MP4A	X	0	0.75
23	MP4A	Z	-3.671	0.75
24	MP4A	Mx	0	0.75
25	MP4A	X	0	4.5
26	MP4A	Z	-1.492	4.5
27	MP4A	Mx	0	4.5
28	OVP	X	0	1.25
29	OVP	Z	-5.104	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	1.299	1.2
2	MP2A	Z	-2.251	1.2
3	MP2A	Mx	-0.00065	1.2
4	MP2A	X	1.299	3.2
5	MP2A	Z	-2.251	3.2
6	MP2A	Mx	-0.00065	3.2
7	MP1A	X	2.285	1.5
8	MP1A	Z	-3.957	1.5
9	MP1A	Mx	-0.001	1.5
10	MP1A	X	2.285	6.5
11	MP1A	Z	-3.957	6.5
12	MP1A	Mx	-0.001	6.5
13	MP4A	X	3.619	1.5
14	MP4A	Z	-6.268	1.5
15	MP4A	Mx	-0.002	1.5
16	MP4A	X	3.619	6.5
17	MP4A	Z	-6.268	6.5
18	MP4A	Mx	-0.002	6.5
19	MP1A	X	1.396	0.75
20	MP1A	Z	-2.419	0.75
21	MP1A	Mx	0.000465	0.75

Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	X	1.69	0.75
23	MP4A	Z	-2.927	0.75
24	MP4A	Mx	0.000563	0.75
25	MP4A	X	0.668	4.5
26	MP4A	Z	-1.156	4.5
27	MP4A	Mx	0.000223	4.5
28	OVP	X	2.925	1.25
29	OVP	Z	-5.067	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	1.379	1.2
2	MP2A	Z	-0.796	1.2
3	MP2A	Mx	-0.00069	1.2
4	MP2A	X	1.379	3.2
5	MP2A	Z	-0.796	3.2
6	MP2A	Mx	-0.00069	3.2
7	MP1A	X	2.64	1.5
8	MP1A	Z	-1.524	1.5
9	MP1A	Mx	-0.001	1.5
10	MP1A	X	2.64	6.5
11	MP1A	Z	-1.524	6.5
12	MP1A	Mx	-0.001	6.5
13	MP4A	X	5.117	1.5
14	MP4A	Z	-2.954	1.5
15	MP4A	Mx	-0.003	1.5
16	MP4A	X	5.117	6.5
17	MP4A	Z	-2.954	6.5
18	MP4A	Mx	-0.003	6.5
19	MP1A	X	1.985	0.75
20	MP1A	Z	-1.146	0.75
21	MP1A	Mx	0.000662	0.75
22	MP4A	X	2.421	0.75
23	MP4A	Z	-1.398	0.75
24	MP4A	Mx	0.000807	0.75
25	MP4A	X	0.884	4.5
26	MP4A	Z	-0.51	4.5
27	MP4A	Mx	0.000295	4.5
28	OVP	X	5.39	1.25
29	OVP	Z	-3.112	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	1.09	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	-0.000545	1.2
4	MP2A	X	1.09	3.2
5	MP2A	Z	0	3.2
6	MP2A	Mx	-0.000545	3.2
7	MP1A	X	2.287	1.5
8	MP1A	Z	0	1.5

Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP1A	Mx	-0.001	1.5
10	MP1A	X	2.287	6.5
11	MP1A	Z	0	6.5
12	MP1A	Mx	-0.001	6.5
13	MP4A	X	5.244	1.5
14	MP4A	Z	0	1.5
15	MP4A	Mx	-0.003	1.5
16	MP4A	X	5.244	6.5
17	MP4A	Z	0	6.5
18	MP4A	Mx	-0.003	6.5
19	MP1A	X	2.042	0.75
20	MP1A	Z	0	0.75
21	MP1A	Mx	0.000681	0.75
22	MP4A	X	2.503	0.75
23	MP4A	Z	0	0.75
24	MP4A	Mx	0.000834	0.75
25	MP4A	X	0.864	4.5
26	MP4A	Z	0	4.5
27	MP4A	Mx	0.000288	4.5
28	OVP	X	5.851	1.25
29	OVP	Z	0	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	1.379	1.2
2	MP2A	Z	0.796	1.2
3	MP2A	Mx	-0.00069	1.2
4	MP2A	X	1.379	3.2
5	MP2A	Z	0.796	3.2
6	MP2A	Mx	-0.00069	3.2
7	MP1A	X	2.64	1.5
8	MP1A	Z	1.524	1.5
9	MP1A	Mx	-0.001	1.5
10	MP1A	X	2.64	6.5
11	MP1A	Z	1.524	6.5
12	MP1A	Mx	-0.001	6.5
13	MP4A	X	5.117	1.5
14	MP4A	Z	2.954	1.5
15	MP4A	Mx	-0.003	1.5
16	MP4A	X	5.117	6.5
17	MP4A	Z	2.954	6.5
18	MP4A	Mx	-0.003	6.5
19	MP1A	X	1.985	0.75
20	MP1A	Z	1.146	0.75
21	MP1A	Mx	0.000662	0.75
22	MP4A	X	2.421	0.75
23	MP4A	Z	1.398	0.75
24	MP4A	Mx	0.000807	0.75
25	MP4A	X	0.884	4.5
26	MP4A	Z	0.51	4.5
27	MP4A	Mx	0.000295	4.5
28	OVP	X	4.421	1.25
29	OVP	Z	2.552	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	1.299	1.2
2	MP2A	Z	2.251	1.2
3	MP2A	Mx	-0.00065	1.2
4	MP2A	X	1.299	3.2
5	MP2A	Z	2.251	3.2
6	MP2A	Mx	-0.00065	3.2
7	MP1A	X	2.285	1.5
8	MP1A	Z	3.957	1.5
9	MP1A	Mx	-0.001	1.5
10	MP1A	X	2.285	6.5
11	MP1A	Z	3.957	6.5
12	MP1A	Mx	-0.001	6.5
13	MP4A	X	3.619	1.5
14	MP4A	Z	6.268	1.5
15	MP4A	Mx	-0.002	1.5
16	MP4A	X	3.619	6.5
17	MP4A	Z	6.268	6.5
18	MP4A	Mx	-0.002	6.5
19	MP1A	X	1.396	0.75
20	MP1A	Z	2.419	0.75
21	MP1A	Mx	0.000465	0.75
22	MP4A	X	1.69	0.75
23	MP4A	Z	2.927	0.75
24	MP4A	Mx	0.000563	0.75
25	MP4A	X	0.668	4.5
26	MP4A	Z	1.156	4.5
27	MP4A	Mx	0.000223	4.5
28	OVP	X	2.366	1.25
29	OVP	Z	4.098	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	1.2
2	MP2A	Z	3.102	1.2
3	MP2A	Mx	0	1.2
4	MP2A	X	0	3.2
5	MP2A	Z	3.102	3.2
6	MP2A	Mx	0	3.2
7	MP1A	X	0	1.5
8	MP1A	Z	5.33	1.5
9	MP1A	Mx	0	1.5
10	MP1A	X	0	6.5
11	MP1A	Z	5.33	6.5
12	MP1A	Mx	0	6.5
13	MP4A	X	0	1.5
14	MP4A	Z	7.902	1.5
15	MP4A	Mx	0	1.5
16	MP4A	X	0	6.5
17	MP4A	Z	7.902	6.5
18	MP4A	Mx	0	6.5
19	MP1A	X	0	0.75
20	MP1A	Z	3.043	0.75
21	MP1A	Mx	0	0.75

Member Point Loads (BLC 33 : Antenna Wm (180 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	X	0	0.75
23	MP4A	Z	3.671	0.75
24	MP4A	Mx	0	0.75
25	MP4A	X	0	4.5
26	MP4A	Z	1.492	4.5
27	MP4A	Mx	0	4.5
28	OVP	X	0	1.25
29	OVP	Z	5.104	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-1.299	1.2
2	MP2A	Z	2.251	1.2
3	MP2A	Mx	0.00065	1.2
4	MP2A	X	-1.299	3.2
5	MP2A	Z	2.251	3.2
6	MP2A	Mx	0.00065	3.2
7	MP1A	X	-2.285	1.5
8	MP1A	Z	3.957	1.5
9	MP1A	Mx	0.001	1.5
10	MP1A	X	-2.285	6.5
11	MP1A	Z	3.957	6.5
12	MP1A	Mx	0.001	6.5
13	MP4A	X	-3.619	1.5
14	MP4A	Z	6.268	1.5
15	MP4A	Mx	0.002	1.5
16	MP4A	X	-3.619	6.5
17	MP4A	Z	6.268	6.5
18	MP4A	Mx	0.002	6.5
19	MP1A	X	-1.396	0.75
20	MP1A	Z	2.419	0.75
21	MP1A	Mx	-0.000465	0.75
22	MP4A	X	-1.69	0.75
23	MP4A	Z	2.927	0.75
24	MP4A	Mx	-0.000563	0.75
25	MP4A	X	-0.668	4.5
26	MP4A	Z	1.156	4.5
27	MP4A	Mx	-0.000223	4.5
28	OVP	X	-2.925	1.25
29	OVP	Z	5.067	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-1.379	1.2
2	MP2A	Z	0.796	1.2
3	MP2A	Mx	0.00069	1.2
4	MP2A	X	-1.379	3.2
5	MP2A	Z	0.796	3.2
6	MP2A	Mx	0.00069	3.2
7	MP1A	X	-2.64	1.5
8	MP1A	Z	1.524	1.5

Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP1A	Mx	0.001	1.5
10	MP1A	X	-2.64	6.5
11	MP1A	Z	1.524	6.5
12	MP1A	Mx	0.001	6.5
13	MP4A	X	-5.117	1.5
14	MP4A	Z	2.954	1.5
15	MP4A	Mx	0.003	1.5
16	MP4A	X	-5.117	6.5
17	MP4A	Z	2.954	6.5
18	MP4A	Mx	0.003	6.5
19	MP1A	X	-1.985	0.75
20	MP1A	Z	1.146	0.75
21	MP1A	Mx	-0.000662	0.75
22	MP4A	X	-2.421	0.75
23	MP4A	Z	1.398	0.75
24	MP4A	Mx	-0.000807	0.75
25	MP4A	X	-0.884	4.5
26	MP4A	Z	0.51	4.5
27	MP4A	Mx	-0.000295	4.5
28	OVP	X	-5.39	1.25
29	OVP	Z	3.112	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-1.09	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	0.000545	1.2
4	MP2A	X	-1.09	3.2
5	MP2A	Z	0	3.2
6	MP2A	Mx	0.000545	3.2
7	MP1A	X	-2.287	1.5
8	MP1A	Z	0	1.5
9	MP1A	Mx	0.001	1.5
10	MP1A	X	-2.287	6.5
11	MP1A	Z	0	6.5
12	MP1A	Mx	0.001	6.5
13	MP4A	X	-5.244	1.5
14	MP4A	Z	0	1.5
15	MP4A	Mx	0.003	1.5
16	MP4A	X	-5.244	6.5
17	MP4A	Z	0	6.5
18	MP4A	Mx	0.003	6.5
19	MP1A	X	-2.042	0.75
20	MP1A	Z	0	0.75
21	MP1A	Mx	-0.000681	0.75
22	MP4A	X	-2.503	0.75
23	MP4A	Z	0	0.75
24	MP4A	Mx	-0.000834	0.75
25	MP4A	X	-0.864	4.5
26	MP4A	Z	0	4.5
27	MP4A	Mx	-0.000288	4.5
28	OVP	X	-5.851	1.25
29	OVP	Z	0	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-1.379	1.2
2	MP2A	Z	-0.796	1.2
3	MP2A	Mx	0.00069	1.2
4	MP2A	X	-1.379	3.2
5	MP2A	Z	-0.796	3.2
6	MP2A	Mx	0.00069	3.2
7	MP1A	X	-2.64	1.5
8	MP1A	Z	-1.524	1.5
9	MP1A	Mx	0.001	1.5
10	MP1A	X	-2.64	6.5
11	MP1A	Z	-1.524	6.5
12	MP1A	Mx	0.001	6.5
13	MP4A	X	-5.117	1.5
14	MP4A	Z	-2.954	1.5
15	MP4A	Mx	0.003	1.5
16	MP4A	X	-5.117	6.5
17	MP4A	Z	-2.954	6.5
18	MP4A	Mx	0.003	6.5
19	MP1A	X	-1.985	0.75
20	MP1A	Z	-1.146	0.75
21	MP1A	Mx	-0.000662	0.75
22	MP4A	X	-2.421	0.75
23	MP4A	Z	-1.398	0.75
24	MP4A	Mx	-0.000807	0.75
25	MP4A	X	-0.884	4.5
26	MP4A	Z	-0.51	4.5
27	MP4A	Mx	-0.000295	4.5
28	OVP	X	-4.421	1.25
29	OVP	Z	-2.552	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-1.299	1.2
2	MP2A	Z	-2.251	1.2
3	MP2A	Mx	0.00065	1.2
4	MP2A	X	-1.299	3.2
5	MP2A	Z	-2.251	3.2
6	MP2A	Mx	0.00065	3.2
7	MP1A	X	-2.285	1.5
8	MP1A	Z	-3.957	1.5
9	MP1A	Mx	0.001	1.5
10	MP1A	X	-2.285	6.5
11	MP1A	Z	-3.957	6.5
12	MP1A	Mx	0.001	6.5
13	MP4A	X	-3.619	1.5
14	MP4A	Z	-6.268	1.5
15	MP4A	Mx	0.002	1.5
16	MP4A	X	-3.619	6.5
17	MP4A	Z	-6.268	6.5
18	MP4A	Mx	0.002	6.5
19	MP1A	X	-1.396	0.75
20	MP1A	Z	-2.419	0.75
21	MP1A	Mx	-0.000465	0.75

Member Point Loads (BLC 38 : Antenna Wm (330 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	X	-1.69	0.75
23	MP4A	Z	-2.927	0.75
24	MP4A	Mx	-0.000563	0.75
25	MP4A	X	-0.668	4.5
26	MP4A	Z	-1.156	4.5
27	MP4A	Mx	-0.000223	4.5
28	OVP	X	-2.366	1.25
29	OVP	Z	-4.098	1.25
30	OVP	Mx	0	1.25

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M3	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M12	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M1	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M1	Y	-250	0

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Y	-1.051	1.2
2	MP2A	My	-0.000526	1.2
3	MP2A	Mz	0	1.2
4	MP2A	Y	-1.051	3.2
5	MP2A	My	-0.000526	3.2
6	MP2A	Mz	0	3.2
7	MP1A	Y	-0.802	1.5
8	MP1A	My	-0.000401	1.5
9	MP1A	Mz	0	1.5
10	MP1A	Y	-0.802	6.5
11	MP1A	My	-0.000401	6.5
12	MP1A	Mz	0	6.5
13	MP4A	Y	-1.185	1.5
14	MP4A	My	-0.000593	1.5
15	MP4A	Mz	0	1.5
16	MP4A	Y	-1.185	6.5
17	MP4A	My	-0.000593	6.5
18	MP4A	Mz	0	6.5
19	MP1A	Y	-2.741	0.75
20	MP1A	My	0.000914	0.75
21	MP1A	Mz	0	0.75

Member Point Loads (BLC 81 : Antenna Ev) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	MP4A	Y	-2.902	0.75
23	MP4A	My	0.000967	0.75
24	MP4A	Mz	0	0.75
25	MP4A	Y	-0.771	4.5
26	MP4A	My	0.000257	4.5
27	MP4A	Mz	0	4.5
28	OVP	Y	-1.174	1.25
29	OVP	My	0	1.25
30	OVP	Mz	0	1.25

Member Point Loads (BLC 82 : Antenna Eh (0 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Z	-3.285	1.2
2	MP2A	Mx	0	1.2
3	MP2A	Z	-3.285	3.2
4	MP2A	Mx	0	3.2
5	MP1A	Z	-2.505	1.5
6	MP1A	Mx	0	1.5
7	MP1A	Z	-2.505	6.5
8	MP1A	Mx	0	6.5
9	MP4A	Z	-3.704	1.5
10	MP4A	Mx	0	1.5
11	MP4A	Z	-3.704	6.5
12	MP4A	Mx	0	6.5
13	MP1A	Z	-8.566	0.75
14	MP1A	Mx	0	0.75
15	MP4A	Z	-9.07	0.75
16	MP4A	Mx	0	0.75
17	MP4A	Z	-2.408	4.5
18	MP4A	Mx	0	4.5
19	OVP	Z	-3.669	1.25
20	OVP	Mx	0	1.25

Member Point Loads (BLC 83 : Antenna Eh (90 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	3.285	1.2
2	MP2A	Mx	-0.002	1.2
3	MP2A	X	3.285	3.2
4	MP2A	Mx	-0.002	3.2
5	MP1A	X	2.505	1.5
6	MP1A	Mx	-0.001	1.5
7	MP1A	X	2.505	6.5
8	MP1A	Mx	-0.001	6.5
9	MP4A	X	3.704	1.5
10	MP4A	Mx	-0.002	1.5
11	MP4A	X	3.704	6.5
12	MP4A	Mx	-0.002	6.5
13	MP1A	X	8.566	0.75
14	MP1A	Mx	0.003	0.75
15	MP4A	X	9.07	0.75
16	MP4A	Mx	0.003	0.75
17	MP4A	X	2.408	4.5
18	MP4A	Mx	0.000803	4.5

Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
19	OVP	X	3.669	1.25
20	OVP	Mx	0	1.25

Member Area Loads

No Data to Print...

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
0	N35	max	1254.517	47	1454.906	19	1729.05	24	-0.136	67	0	75	0.205	41
1		min	-1416.814	29	331.215	75	-466.772	6	-0.603	23	0	1	-0.229	35
2	N36	max	1433.565	35	1437.249	13	854.537	12	-0.129	6	0	75	0.196	41
3		min	-1271.57	41	326.3	69	-1823.16	18	-0.59	24	0	1	-0.216	35
4	N73	max	219.226	5	57.463	21	557.79	5	0	75	0	75	0	75
5		min	-264.885	11	11.934	67	-673.078	11	0	1	0	1	0	1
6	N84	max	283.107	6	57.232	23	702.406	5	0	75	0	75	0	75
7		min	-233.93	12	11.923	68	-582.987	11	0	1	0	1	0	1
8	Totals:	max	996.314	9	3001.974	13	1458.431	1						
9		min	-996.314	3	683.467	70	-1458.433	7						

Node Reactions

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
0	1	N35	39.701	451.872	1203.539	-0.205	0	-0.019
1	1	N36	104.499	464.908	601.361	-0.23	0	-0.017
2	1	N73	-51.206	16.612	-121.704	0	0	0
3	1	N84	-93.011	16.628	-224.765	0	0	0
4	1	Totals:	-0.018	950.022	1458.431			
5	1	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
6	2	N35	-366.184	454.696	705.112	-0.186	0	-0.005
7	2	N36	-530.334	462.247	-85.405	-0.201	0	-0.003
8	2	N73	118.092	16.532	332.869	0	0	0
9	2	N84	84.288	16.546	249.656	0	0	0
10	2	Totals:	-694.139	950.022	1202.232			
11	2	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
12	3	N35	-556.072	459.031	278.516	-0.175	0	0.001
13	3	N36	-775.293	458.003	-693.474	-0.175	0	0.003
14	3	N73	167.014	16.497	493.795	0	0	0
15	3	N84	168.037	16.491	496.377	0	0	0
16	3	Totals:	-996.314	950.021	575.213			
17	3	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
18	4	N35	-591.084	462.531	6.734	-0.17	0	0.003
19	4	N36	-779.052	454.536	-1094.118	-0.158	0	0.005
20	4	N73	178.633	16.488	506.774	0	0	0
21	4	N84	208.652	16.466	580.618	0	0	0
22	4	Totals:	-982.851	950.021	0.009			
23	4	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
24	5	N35	-625.568	466.089	-278.532	-0.164	0	0.006
25	5	N36	-783.725	451.027	-1508.179	-0.141	0	0.008
26	5	N73	219.226	16.473	557.79	0	0	0
27	5	N84	278.085	16.432	702.406	0	0	0
28	5	Totals:	-911.983	950.021	-526.515			
29	5	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
30	6	N35	-536.712	469.965	-466.772	-0.163	0	0.004
31	6	N36	-571.653	447.127	-1787.142	-0.129	0	0.006

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
32	6	N73	179.827	16.497	441.279	0	0	0
33	6	N84	283.107	16.432	694.734	0	0	0
34	6	Totals:	-645.43	950.021	-1117.901			
35	6	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
36	7	N35	-184.338	471.361	-266.139	-0.177	0	-0.007
37	7	N36	43.817	445.551	-1528.076	-0.14	0	-0.006
38	7	N73	1.406	16.59	-1.121	0	0	0
39	7	N84	139.133	16.518	336.904	0	0	0
40	7	Totals:	0.018	950.021	-1458.433			
41	7	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
42	8	N35	222.209	468.666	233.157	-0.196	0	-0.021
43	8	N36	679.529	448.066	-840.906	-0.169	0	-0.02
44	8	N73	-168.495	16.676	-456.286	0	0	0
45	8	N84	-39.103	16.613	-138.198	0	0	0
46	8	Totals:	694.139	950.021	-1202.234			
47	8	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
48	9	N35	410.354	464.368	656.306	-0.207	0	-0.027
49	9	N36	922.143	452.3	-237.494	-0.195	0	-0.026
50	9	N73	-215.221	16.7	-613.072	0	0	0
51	9	N84	-120.962	16.653	-380.955	0	0	0
52	9	Totals:	996.314	950.021	-575.215			
53	9	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
54	10	N35	444.052	460.846	925.554	-0.212	0	-0.029
55	10	N36	924.127	455.809	160.028	-0.211	0	-0.028
56	10	N73	-225.266	16.701	-623.18	0	0	0
57	10	N84	-160.062	16.666	-462.411	0	0	0
58	10	Totals:	982.852	950.021	-0.01			
59	10	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
60	11	N35	477.672	457.202	1209.583	-0.218	0	-0.032
61	11	N36	927.622	459.433	572.996	-0.229	0	-0.031
62	11	N73	-264.885	16.706	-673.078	0	0	0
63	11	N84	-228.426	16.681	-582.987	0	0	0
64	11	Totals:	911.983	950.021	526.514			
65	11	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
66	12	N35	389.377	453.218	1399.369	-0.218	0	-0.03
67	12	N36	716.322	463.443	854.537	-0.241	0	-0.029
68	12	N73	-226.339	16.684	-558.722	0	0	0
69	12	N84	-233.93	16.677	-577.284	0	0	0
70	12	Totals:	645.43	950.022	1117.9			
71	12	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
72	13	N35	-117.355	1450.257	1659.228	-0.598	0	-0.038
73	13	N36	125.136	1437.249	-1164.078	-0.586	0	-0.034
74	13	N73	-67.538	57.327	-164.323	0	0	0
75	13	N84	59.753	57.14	148.998	0	0	0
76	13	Totals:	-0.004	3001.974	479.825			
77	13	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
78	14	N35	-258.827	1450.801	1499.03	-0.592	0	-0.035
79	14	N36	-75.666	1436.878	-1373.316	-0.577	0	-0.03
80	14	N73	-15.579	57.245	-20.666	0	0	0
81	14	N84	115.354	57.051	301.48	0	0	0
82	14	Totals:	-234.718	3001.974	406.527			
83	14	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
84	15	N35	-327.827	1451.838	1362.556	-0.588	0	-0.033
85	15	N36	-162.63	1435.914	-1555.864	-0.57	0	-0.029
86	15	N73	-3.258	57.216	26.885	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
87	15	N84	137.171	57.006	372.268	0	0	0
88	15	Totals:	-356.543	3001.974	205.844			
89	15	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
90	16	N35	-334.337	1452.932	1283.684	-0.586	0	-0.033
91	16	N36	-162.203	1434.818	-1665.728	-0.565	0	-0.028
92	16	N73	-8.146	57.223	8.508	0	0	0
93	16	N84	140.303	57.001	373.535	0	0	0
94	16	Totals:	-364.383	3001.974	-0.001			
95	16	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
96	17	N35	-325.326	1453.911	1212.395	-0.585	0	-0.033
97	17	N36	-140.927	1433.833	-1764.698	-0.561	0	-0.028
98	17	N73	-7.481	57.232	-10.086	0	0	0
99	17	N84	149.156	56.997	374.996	0	0	0
100	17	Totals:	-324.577	3001.974	-187.393			
101	17	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
102	18	N35	-274.633	1454.677	1170.626	-0.585	0	-0.033
103	18	N36	-54.627	1433.012	-1823.16	-0.558	0	-0.029
104	18	N73	-27.293	57.268	-66.993	0	0	0
105	18	N84	140.297	57.017	344.959	0	0	0
106	18	Totals:	-216.257	3001.974	-374.567			
107	18	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
108	19	N35	-147.128	1454.906	1240.723	-0.59	0	-0.036
109	19	N36	140.014	1432.623	-1734.233	-0.562	0	-0.032
110	19	N73	-83.724	57.352	-207.748	0	0	0
111	19	N84	90.842	57.092	221.424	0	0	0
112	19	Totals:	0.005	3001.974	-479.833			
113	19	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
114	20	N35	-5.633	1454.371	1400.956	-0.596	0	-0.04
115	20	N36	340.855	1432.985	-1524.977	-0.571	0	-0.036
116	20	N73	-135.703	57.435	-351.434	0	0	0
117	20	N84	35.2	57.182	68.92	0	0	0
118	20	Totals:	234.719	3001.974	-406.535			
119	20	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
120	21	N35	63.243	1453.334	1537.244	-0.6	0	-0.041
121	21	N36	427.657	1433.951	-1342.682	-0.579	0	-0.038
122	21	N73	-147.871	57.463	-398.761	0	0	0
123	21	N84	13.517	57.225	-1.653	0	0	0
124	21	Totals:	356.544	3001.974	-205.852			
125	21	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
126	22	N35	69.662	1452.237	1615.958	-0.601	0	-0.042
127	22	N36	427.105	1435.052	-1233.019	-0.584	0	-0.038
128	22	N73	-142.874	57.456	-380.199	0	0	0
129	22	N84	10.49	57.229	-2.746	0	0	0
130	22	Totals:	364.384	3001.974	-0.007			
131	22	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
132	23	N35	60.599	1451.252	1687.165	-0.603	0	-0.042
133	23	N36	405.756	1436.045	-1134.133	-0.588	0	-0.038
134	23	N73	-143.48	57.446	-361.522	0	0	0
135	23	N84	1.704	57.232	-4.125	0	0	0
136	23	Totals:	324.578	3001.974	187.385			
137	23	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
138	24	N35	9.969	1450.481	1729.05	-0.602	0	-0.041
139	24	N36	319.534	1436.871	-1075.498	-0.59	0	-0.037
140	24	N73	-123.75	57.41	-304.762	0	0	0
141	24	N84	10.505	57.213	25.77	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
142	24	Totals:	216.258	3001.974	374.56			
143	24	COG (ft):	X: -2.92	Y: 2.302	Z: 7.638			
144	25	N35	-1378.533	828.982	737.257	-0.339	0	-0.228
145	25	N36	1386.144	837.852	-634.679	-0.349	0	-0.215
146	25	N73	-112.057	16.622	-275.626	0	0	0
147	25	N84	104.445	16.564	257.055	0	0	0
148	25	Totals:	0	1700.021	84.007			
149	25	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
150	26	N35	-1401.988	829.141	708.576	-0.338	0	-0.227
151	26	N36	1349.617	837.699	-674.286	-0.348	0	-0.214
152	26	N73	-102.319	16.619	-249.464	0	0	0
153	26	N84	114.709	16.561	284.427	0	0	0
154	26	Totals:	-39.982	1700.021	69.252			
155	26	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
156	27	N35	-1412.893	829.384	684.146	-0.338	0	-0.227
157	27	N36	1335.589	837.459	-709.219	-0.346	0	-0.214
158	27	N73	-99.585	16.618	-240.342	0	0	0
159	27	N84	119.5	16.56	298.55	0	0	0
160	27	Totals:	-57.388	1700.02	33.134			
161	27	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
162	28	N35	-1414.865	829.579	668.591	-0.337	0	-0.227
163	28	N36	1335.416	837.264	-732.229	-0.345	0	-0.214
164	28	N73	-98.972	16.618	-239.695	0	0	0
165	28	N84	121.807	16.559	303.335	0	0	0
166	28	Totals:	-56.613	1700.02	0.003			
167	28	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
168	29	N35	-1416.814	829.78	652.228	-0.337	0	-0.227
169	29	N36	1335.171	837.065	-756.067	-0.344	0	-0.214
170	29	N73	-96.674	16.618	-236.808	0	0	0
171	29	N84	125.786	16.558	310.323	0	0	0
172	29	Totals:	-52.531	1700.02	-30.324			
173	29	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
174	30	N35	-1411.671	829.997	641.371	-0.337	0	-0.227
175	30	N36	1347.327	836.847	-772.227	-0.343	0	-0.214
176	30	N73	-98.926	16.618	-243.472	0	0	0
177	30	N84	126.093	16.558	309.938	0	0	0
178	30	Totals:	-37.177	1700.02	-64.39			
179	30	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
180	31	N35	-1391.373	830.068	652.788	-0.338	0	-0.227
181	31	N36	1382.606	836.771	-757.445	-0.344	0	-0.215
182	31	N73	-109.098	16.621	-268.794	0	0	0
183	31	N84	117.867	16.56	289.45	0	0	0
184	31	Totals:	0.002	1700.02	-84.002			
185	31	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
186	32	N35	-1367.915	829.909	681.472	-0.339	0	-0.228
187	32	N36	1419.137	836.924	-717.837	-0.346	0	-0.215
188	32	N73	-118.839	16.624	-294.958	0	0	0
189	32	N84	107.6	16.563	262.076	0	0	0
190	32	Totals:	39.983	1700.02	-69.247			
191	32	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
192	33	N35	-1357.017	829.667	705.89	-0.34	0	-0.228
193	33	N36	1433.157	837.164	-682.92	-0.347	0	-0.216
194	33	N73	-121.566	16.625	-304.066	0	0	0
195	33	N84	102.815	16.565	247.966	0	0	0
196	33	Totals:	57.39	1700.02	-33.129			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
197	33	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
198	34	N35	-1355.048	829.471	721.437	-0.34	0	-0.229
199	34	N36	1433.324	837.359	-659.921	-0.348	0	-0.216
200	34	N73	-122.173	16.625	-304.704	0	0	0
201	34	N84	100.513	16.566	243.19	0	0	0
202	34	Totals:	56.615	1700.02	0.002			
203	34	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
204	35	N35	-1353.102	829.27	737.796	-0.34	0	-0.229
205	35	N36	1433.565	837.558	-636.085	-0.349	0	-0.216
206	35	N73	-124.468	16.625	-307.587	0	0	0
207	35	N84	96.537	16.567	236.206	0	0	0
208	35	Totals:	52.532	1700.02	30.328			
209	35	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
210	36	N35	-1358.243	829.053	748.658	-0.34	0	-0.229
211	36	N36	1421.411	837.777	-619.918	-0.35	0	-0.216
212	36	N73	-122.219	16.624	-300.93	0	0	0
213	36	N84	96.229	16.567	236.585	0	0	0
214	36	Totals:	37.178	1700.021	64.395			
215	36	COG (ft):	X: -5.591	Y: 1.497	Z: 7.889			
216	37	N35	1229.107	850.121	1128.015	-0.369	0	0.204
217	37	N36	-1220.394	816.7	-1022.925	-0.331	0	0.194
218	37	N73	47.036	16.503	115.911	0	0	0
219	37	N84	-55.75	16.697	-137	0	0	0
220	37	Totals:	-0.001	1700.021	84			
221	37	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
222	38	N35	1205.716	850.279	1099.206	-0.368	0	0.205
223	38	N36	-1256.988	816.582	-1062.408	-0.33	0	0.195
224	38	N73	56.812	16.483	142.096	0	0	0
225	38	N84	-45.524	16.676	-109.648	0	0	0
226	38	Totals:	-39.983	1700.021	69.246			
227	38	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
228	39	N35	1194.872	850.53	1074.678	-0.367	0	0.205
229	39	N36	-1271.08	816.35	-1097.259	-0.328	0	0.195
230	39	N73	59.588	16.476	151.275	0	0	0
231	39	N84	-40.77	16.665	-95.567	0	0	0
232	39	Totals:	-57.389	1700.021	33.127			
233	39	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
234	40	N35	1192.936	850.734	1059.069	-0.367	0	0.205
235	40	N36	-1271.294	816.151	-1120.231	-0.327	0	0.195
236	40	N73	60.231	16.475	151.974	0	0	0
237	40	N84	-38.487	16.661	-90.816	0	0	0
238	40	Totals:	-56.614	1700.021	-0.004			
239	40	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
240	41	N35	1191.014	850.944	1042.646	-0.366	0	0.205
241	41	N36	-1271.57	815.949	-1144.024	-0.326	0	0.196
242	41	N73	62.556	16.472	154.905	0	0	0
243	41	N84	-34.532	16.655	-83.858	0	0	0
244	41	Totals:	-52.532	1700.021	-30.33			
245	41	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
246	42	N35	1196.167	851.175	1031.751	-0.366	0	0.205
247	42	N36	-1259.426	815.713	-1160.16	-0.325	0	0.195
248	42	N73	60.327	16.478	148.292	0	0	0
249	42	N84	-34.246	16.656	-84.279	0	0	0
250	42	Totals:	-37.178	1700.021	-64.397			
251	42	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
252	43	N35	1216.434	851.258	1043.226	-0.367	0	0.205
253	43	N36	-1224.117	815.594	-1145.449	-0.326	0	0.195
254	43	N73	50.148	16.497	123.001	0	0	0
255	43	N84	-42.464	16.672	-104.787	0	0	0
256	43	Totals:	0.001	1700.021	-84.008			
257	43	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
258	44	N35	1239.827	851.101	1072.038	-0.368	0	0.204
259	44	N36	-1187.52	815.712	-1105.965	-0.328	0	0.194
260	44	N73	40.369	16.516	96.814	0	0	0
261	44	N84	-52.694	16.692	-132.141	0	0	0
262	44	Totals:	39.982	1700.021	-69.254			
263	44	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
264	45	N35	1250.666	850.851	1096.554	-0.369	0	0.203
265	45	N36	-1173.436	815.944	-1071.13	-0.329	0	0.194
266	45	N73	37.601	16.523	87.648	0	0	0
267	45	N84	-57.442	16.703	-146.209	0	0	0
268	45	Totals:	57.389	1700.021	-33.136			
269	45	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
270	46	N35	1252.597	850.646	1112.155	-0.369	0	0.203
271	46	N36	-1173.228	816.143	-1048.168	-0.33	0	0.193
272	46	N73	36.964	16.524	86.959	0	0	0
273	46	N84	-59.719	16.707	-150.951	0	0	0
274	46	Totals:	56.614	1700.021	-0.005			
275	46	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
276	47	N35	1254.517	850.435	1128.573	-0.369	0	0.203
277	47	N36	-1172.956	816.346	-1024.378	-0.331	0	0.193
278	47	N73	34.641	16.527	84.031	0	0	0
279	47	N84	-63.671	16.713	-157.905	0	0	0
280	47	Totals:	52.531	1700.021	30.322			
281	47	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
282	48	N35	1249.366	850.205	1139.474	-0.369	0	0.203
283	48	N36	-1185.098	816.582	-1008.233	-0.332	0	0.193
284	48	N73	36.868	16.522	90.637	0	0	0
285	48	N84	-63.959	16.712	-157.49	0	0	0
286	48	Totals:	37.177	1700.021	64.388			
287	48	COG (ft):	X: -0.297	Y: 1.497	Z: 7.889			
288	49	N35	-82.248	643.765	666.529	-0.267	0	-0.012
289	49	N36	82.275	648.073	-666.465	-0.268	0	-0.009
290	49	N73	-32.03	16.609	-78.796	0	0	0
291	49	N84	32.004	16.575	78.731	0	0	0
292	49	Totals:	0	1325.021	-0.002			
293	49	COG (ft):	X: -2.976	Y: 1.88	Z: 7.834			
294	50	N35	-759.559	644.718	570.724	-0.263	0	-0.124
295	50	N36	759.348	647.121	-571.106	-0.267	0	-0.116
296	50	N73	-71.381	16.617	-175.666	0	0	0
297	50	N84	71.592	16.566	176.05	0	0	0
298	50	Totals:	0	1325.021	0.001			
299	50	COG (ft):	X: -4.745	Y: 1.88	Z: 7.834			
300	51	N35	-85.317	538.598	544.351	-0.223	0	-0.015
301	51	N36	85.335	531.049	-544.305	-0.216	0	-0.013
302	51	N73	-27.825	19.371	-68.451	0	0	0
303	51	N84	27.807	19.341	68.404	0	0	0
304	51	Totals:	0	1108.358	-0.001			
305	51	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
306	52	N35	-68.401	474.861	515.974	-0.196	0	-0.014

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
307	52	N36	72.017	470.012	-419.467	-0.193	0	-0.013
308	52	N73	-21.407	17.108	-51.084	0	0	0
309	52	N84	17.79	17.089	45.354	0	0	0
310	52	Totals:	-0.001	979.071	90.777			
311	52	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
312	53	N35	-87.817	475.196	492.398	-0.196	0	-0.013
313	53	N36	26.836	469.687	-458.785	-0.191	0	-0.011
314	53	N73	-11.137	17.103	-24.075	0	0	0
315	53	N84	26.727	17.085	69.075	0	0	0
316	53	Totals:	-45.39	979.071	78.613			
317	53	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
318	54	N35	-103.897	475.7	465.725	-0.195	0	-0.011
319	54	N36	-5.341	469.191	-504.006	-0.189	0	-0.01
320	54	N73	-4.464	17.099	-6.812	0	0	0
321	54	N84	35.087	17.08	90.482	0	0	0
322	54	Totals:	-78.615	979.071	45.388			
323	54	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
324	55	N35	-112.335	476.239	443.1	-0.195	0	-0.011
325	55	N36	-15.895	468.655	-543.019	-0.188	0	-0.009
326	55	N73	-3.179	17.099	-3.921	0	0	0
327	55	N84	40.63	17.077	103.839	0	0	0
328	55	Totals:	-90.779	979.071	0			
329	55	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
330	56	N35	-110.864	476.669	430.596	-0.195	0	-0.011
331	56	N36	-1.984	468.224	-565.356	-0.187	0	-0.009
332	56	N73	-7.632	17.101	-16.187	0	0	0
333	56	N84	41.866	17.077	105.558	0	0	0
334	56	Totals:	-78.614	979.071	-45.389			
335	56	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
336	57	N35	-99.879	476.873	431.562	-0.196	0	-0.012
337	57	N36	32.656	468.013	-565.034	-0.187	0	-0.01
338	57	N73	-16.628	17.106	-40.322	0	0	0
339	57	N84	38.463	17.079	95.18	0	0	0
340	57	Totals:	-45.389	979.071	-78.614			
341	57	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
342	58	N35	-82.324	476.798	445.738	-0.197	0	-0.013
343	58	N36	78.748	468.078	-542.144	-0.188	0	-0.011
344	58	N73	-27.756	17.111	-69.858	0	0	0
345	58	N84	31.334	17.083	75.486	0	0	0
346	58	Totals:	0.001	979.071	-90.778			
347	58	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
348	59	N35	-62.906	476.464	469.322	-0.198	0	-0.014
349	59	N36	123.933	468.403	-502.821	-0.19	0	-0.013
350	59	N73	-38.029	17.117	-96.874	0	0	0
351	59	N84	22.392	17.088	51.758	0	0	0
352	59	Totals:	45.391	979.071	-78.615			
353	59	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
354	60	N35	-46.829	475.959	495.988	-0.198	0	-0.016
355	60	N36	156.102	468.9	-457.61	-0.192	0	-0.014
356	60	N73	-44.693	17.12	-114.128	0	0	0
357	60	N84	14.036	17.092	30.36	0	0	0
358	60	Totals:	78.615	979.071	-45.39			
359	60	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
360	61	N35	-38.398	475.42	518.599	-0.198	0	-0.016
361	61	N36	166.643	469.436	-418.614	-0.193	0	-0.014

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
362	61	N73	-45.968	17.12	-117.003	0	0	0
363	61	N84	8.502	17.095	17.016	0	0	0
364	61	Totals:	90.779	979.071	-0.002			
365	61	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
366	62	N35	-39.873	474.991	531.096	-0.198	0	-0.016
367	62	N36	152.729	469.867	-396.283	-0.194	0	-0.014
368	62	N73	-41.512	17.118	-104.729	0	0	0
369	62	N84	7.271	17.095	15.304	0	0	0
370	62	Totals:	78.615	979.071	45.387			
371	62	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
372	63	N35	-50.853	474.786	530.136	-0.197	0	-0.015
373	63	N36	118.096	470.078	-396.593	-0.194	0	-0.014
374	63	N73	-32.524	17.114	-80.605	0	0	0
375	63	N84	10.67	17.093	25.674	0	0	0
376	63	Totals:	45.389	979.071	78.612			
377	63	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
378	64	N35	-45.629	331.29	370.806	-0.137	0	-0.01
379	64	N36	49.241	328.305	-274.309	-0.135	0	-0.009
380	64	N73	-13.989	11.94	-32.833	0	0	0
381	64	N84	10.376	11.932	27.112	0	0	0
382	64	Totals:	-0.001	683.467	90.777			
383	64	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
384	65	N35	-65.047	331.625	347.225	-0.136	0	-0.009
385	65	N36	4.06	327.977	-313.626	-0.134	0	-0.008
386	65	N73	-3.716	11.937	-5.818	0	0	0
387	65	N84	19.312	11.929	50.833	0	0	0
388	65	Totals:	-45.39	683.467	78.613			
389	65	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
390	66	N35	-81.134	332.129	320.545	-0.136	0	-0.007
391	66	N36	-28.112	327.477	-358.845	-0.132	0	-0.006
392	66	N73	2.96	11.934	11.451	0	0	0
393	66	N84	27.671	11.926	72.238	0	0	0
394	66	Totals:	-78.615	683.467	45.389			
395	66	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
396	67	N35	-89.581	332.669	297.912	-0.136	0	-0.007
397	67	N36	-38.659	326.94	-397.854	-0.13	0	-0.006
398	67	N73	4.248	11.934	14.348	0	0	0
399	67	N84	33.213	11.924	85.595	0	0	0
400	67	Totals:	-90.779	683.467	0			
401	67	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
402	68	N35	-88.119	333.099	285.4	-0.136	0	-0.007
403	68	N36	-24.741	326.509	-420.187	-0.129	0	-0.006
404	68	N73	-0.203	11.935	2.085	0	0	0
405	68	N84	34.448	11.923	87.314	0	0	0
406	68	Totals:	-78.614	683.467	-45.389			
407	68	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
408	69	N35	-77.141	333.304	286.361	-0.137	0	-0.007
409	69	N36	9.906	326.3	-419.862	-0.13	0	-0.006
410	69	N73	-9.199	11.938	-22.049	0	0	0
411	69	N84	31.045	11.925	76.936	0	0	0
412	69	Totals:	-45.389	683.467	-78.614			
413	69	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
414	70	N35	-59.588	333.229	300.537	-0.138	0	-0.009
415	70	N36	56.001	326.367	-396.97	-0.131	0	-0.008
416	70	N73	-20.328	11.943	-51.588	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
417	70	N84	23.917	11.927	57.243	0	0	0
418	70	Totals:	0.001	683.467	-90.778			
419	70	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
420	71	N35	-40.167	332.894	324.125	-0.138	0	-0.01
421	71	N36	101.186	326.695	-357.647	-0.132	0	-0.009
422	71	N73	-30.604	11.946	-78.609	0	0	0
423	71	N84	14.976	11.931	33.517	0	0	0
424	71	Totals:	45.391	683.467	-78.614			
425	71	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
426	72	N35	-24.084	332.39	350.798	-0.139	0	-0.011
427	72	N36	133.35	327.195	-312.439	-0.134	0	-0.01
428	72	N73	-37.272	11.948	-95.869	0	0	0
429	72	N84	6.621	11.934	12.119	0	0	0
430	72	Totals:	78.615	683.467	-45.39			
431	72	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
432	73	N35	-15.644	331.85	373.418	-0.139	0	-0.012
433	73	N36	143.884	327.732	-273.446	-0.136	0	-0.011
434	73	N73	-38.549	11.949	-98.75	0	0	0
435	73	N84	1.088	11.936	-1.223	0	0	0
436	73	Totals:	90.779	683.467	-0.001			
437	73	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
438	74	N35	-17.109	331.42	385.922	-0.139	0	-0.012
439	74	N36	129.962	328.164	-251.119	-0.136	0	-0.011
440	74	N73	-34.096	11.947	-86.48	0	0	0
441	74	N84	-0.143	11.936	-2.936	0	0	0
442	74	Totals:	78.614	683.467	45.388			
443	74	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			
444	75	N35	-28.083	331.215	384.967	-0.138	0	-0.011
445	75	N36	95.323	328.373	-251.433	-0.136	0	-0.01
446	75	N73	-25.107	11.944	-62.356	0	0	0
447	75	N84	3.256	11.935	7.434	0	0	0
448	75	Totals:	45.389	683.467	78.612			
449	75	COG (ft):	X: -3.032	Y: 2.564	Z: 7.736			

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
0	M1	PIPE 2.5	0.277	3.776	36	0.066	8.724		18	14558.792	50715	3.596	3.596	1	H1-1b
1	M2	PIPE 2.5	0.268	3.776	7	0.069	8.854		12	14558.792	50715	3.596	3.596	1	H1-1b
2	M13	PL5/8X3.5	0.187	0.422	19	0.122	0.422	y	7	66184.77	68906.25	0.897	5.024	1.667	H1-1b
3	M14	PL5/8X3.5	0.215	0	32	0.082	0.422	y	1	66184.77	68906.25	0.897	5.024	1.667	H1-1b
4	M15	PL5/8X3.5	0.235	0	45	0.184	0.422	y	6	66184.77	68906.25	0.897	5.024	1.667	H1-1b
5	M16	PL5/8X3.5	0.19	0.422	42	0.21	0.422	y	12	66184.77	68906.25	0.897	5.024	1.667	H1-1b
6	M17	PIPE 2.0	0.128	0	7	0.081	0		13	31128.25	32130	1.872	1.872	1	H1-1b
7	M18	PIPE 2.0	0.09	2.501	30	0.083	0		22	31128.25	32130	1.872	1.872	1	H1-1b
8	M19	PIPE 2.0	0.182	0	6	0.081	0		48	31128.25	32130	1.872	1.872	1	H1-1b
9	M20	PIPE 2.0	0.209	0	6	0.074	0		23	31128.25	32130	1.872	1.872	1	H1-1b
10	M21	PL5/8X3.5	0.384	0.531	19	0.08	0.531	y	19	67591.76	68906.25	0.897	5.024	1.646	H1-1b
11	M22	PL5/8X3.5	0.377	0.531	42	0.105	0.531	y	6	67591.76	68906.25	0.897	5.024	1.65	H1-1b
12	M23	PL5/8X3.5	0.384	0.531	24	0.048	0.133	y	23	67591.76	68906.25	0.897	5.024	1.61	H1-1b
13	M24	PL5/8X3.5	0.384	0.531	48	0.077	0.437	y	12	67591.76	68906.25	0.897	5.024	1.643	H1-1b
14	M25	SR 0.75	0	4.167	75	0.01	4.167		33	2863.854	13916.274	0.174	0.174	1	H1-1a
15	M26	SR 0.75	0.075	0	32	0.014	4.167		26	2863.854	13916.274	0.174	0.174	1	H1-1b*
16	M27	SR 0.75	0	4.167	75	0.01	4.167		16	2863.854	13916.274	0.174	0.174	1	H1-1a
17	M28	SR 0.75	0.075	4.167	42	0.016	4.167		47	2863.854	13916.274	0.174	0.174	1	H1-1b*
18	MP4A	PIPE 2.0	0.448	2.333	33	0.068	5.667		25	14916.096	32130	1.872	1.872	1	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
19	MP3A	PIPE 2.0	0.201	2.333	19	0.042	5.667		25	14916.096	32130	1.872	1.872	1	H1-1b
20	MP2A	PIPE 2.0	0.201	2.333	18	0.037	3.25		42	14916.096	32130	1.872	1.872	1	H1-1b
21	MP1A	PIPE 2.0	0.423	2.333	41	0.062	5.667		37	14916.096	32130	1.872	1.872	1	H1-1b
22	M44	SR 0.625	0.046	1.667	1	0.013	3.333		32	2158.31	9664.079	0.101	0.101	1	H1-1b
23	M45	SR 0.625	0.042	1.667	7	0.006	3.333		18	2158.31	9664.079	0.101	0.101	1	H1-1b
24	M46	SR 0.625	0.052	1.667	6	0.002	3.333		1	2158.31	9664.079	0.101	0.101	1	H1-1b
25	M47	SR 0.625	0.045	1.667	2	0.014	3.333		33	2158.31	9664.079	0.101	0.101	1	H1-1b
26	M44A	PIPE 2.0	0.069	3.983	21	0.006	7.967		21	15011.638	32130	1.872	1.872	1	H1-1b
27	OVP	PIPE 2.0	0.042	1.292	9	0.023	0.333		42	26521.424	32130	1.872	1.872	1	H1-1b
28	M52	PIPE 2.0	0.076	3.983	15	0.006	7.967		21	15011.638	32130	1.872	1.872	1	H1-1b

VzW SMART Tool© Vendor

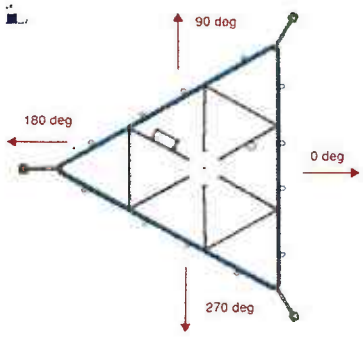
Client:	Verizon Wireless	Date:	7/23/2024
Site Name:	ENFIELD 6 CT		
MDG #:	5000953820		
Fuze ID #:	16737018	Page:	1

Version 2.00

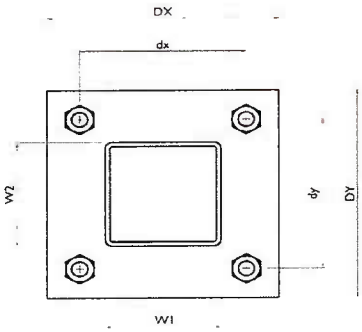
I. Mount-to-Tower Connection Check

Custom Orientation Required	Yes

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N36	0
N35	0



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	9.5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	3.5
Bolt Type:	A307
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	1.4
Required Shear Strength / bolt (kips):	0.4
Tensile Capacity / bolt (kips):	10.4
Shear Capacity / bolt (kips):	6.2
Bolt Overall Utilization:	13.6%
Tower Connection Baseplate Checks	No



ATTACHMENT 5

ALL-POINTS
TECHNOLOGY CORPORATION

PHOTOGRAPHIC DOCUMENTATION & SIMULATIONS

ENFIELD 6 CT
293 ELM STREET
ENFIELD, CT

PREPARED FOR:

verizon

PREPARED BY:
All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06385

PHOTO-DOCUMENTATION & SIMULATIONS

Verizon intends to collocate antennas and appurtenances to an existing wireless communications facility (the "Facility") at 293 Elm Street in Enfield, Connecticut (the "Host Property"). All-Points Technology Corporation, P.C. ("APT") has prepared photographic simulations of the proposed collocation, presented herein, to evaluate future conditions of the proposed collocation.

Project Setting

The ±54-acre Host Property is developed with the Town's Public Safety Complex. The Facility is located in the east-central portion of the parcel and includes a 160-foot-tall self-support tower that hosts multiple commercial and public safety antennas and appurtenances. Based on information contained in Site Plan Drawings ("Drawings"; prepared by APT dated April 2, 2025), Verizon would install nine (9) antennas and one (1) over-voltage protection mechanism on three (3) new sector frames at approximately 105 feet above ground level. Associated equipment and battery cabinets would be located at grade within a chain-link fence enclosure.

Methodology

APT conducted a Study Area reconnaissance by driving publicly accessible locations and obtaining photographs to document existing conditions. Photographs were taken with a Canon EOS 6D digital camera body[1] and Canon EF 24 to 105 millimeter ("mm") zoom lens. The coordinates of the Facility were entered as a "waypoint" into a handheld global positioning system ("GPS") device, with the "find" tool on the GPS unit then used to provide the distance and orientation to the Facility. The geographic coordinates of each photo location were recorded as meta data using GPS technology internal to the camera. APT used a standard focal length of 50 mm to present a consistent field of view.

Photographic simulations were generated to portray scaled renderings of the Facility from four (4) locations representative locations where the Facility is visible and prepared photo-simulations as a basis of comparison to future conditions. Using field data, Site plan information and 3-dimensional (3D) modeling software, spatially referenced models of the Facility and proposed collocation equipment were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo-simulations were created by

[1] The Canon EOS 6D is a full-framed camera which includes a lens receptor of the same size as the film used in 35 mm cameras. As such, the images produced are comparable to those taken with a conventional 35 mm camera.

combining a 3D-generated rendering with a corresponding "existing conditions" photo and merging the two using Adobe Photoshop image editing software. The resulting "proposed conditions" image provides the viewer with an accurate representation of the Facility's visual profile by ensuring consistency in scale, perspective, and alignment between the photograph and the 3D model. This is achieved by matching focal lengths, camera angles, and geographic reference points, allowing for a precise overlay of the rendered elements onto the real-world imagery.

For presentation purposes in this report, the photographs were produced in an approximate 6.75-inch by 10-inch format. Reproducing the images in this format size presents sufficiently large views while also providing key contextual landscape elements so that the viewer can interpret the proportionate scale of each object within the scene. Photo-documentation of the field reconnaissance and photo-simulations of the proposed Facility are presented in the attachments at the end of this report. Photographs were taken from publicly accessible areas and unobstructed view lines were chosen wherever possible.

A photolog depicting the location of each photograph, and the corresponding photographs and simulations are provided in the attachments.

Limitations

The photo-simulations provide a representation of the Facility under similar settings as those encountered during the field review and reconnaissance. Views of the Facility can change throughout the seasons and the time of day, and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle, and intensity of the sun; and the specific viewer location. Weather conditions on the day of the field review included overcast to clear skies.

ATTACHMENTS

PHOTO LOG

Legend

Site Photographic Location

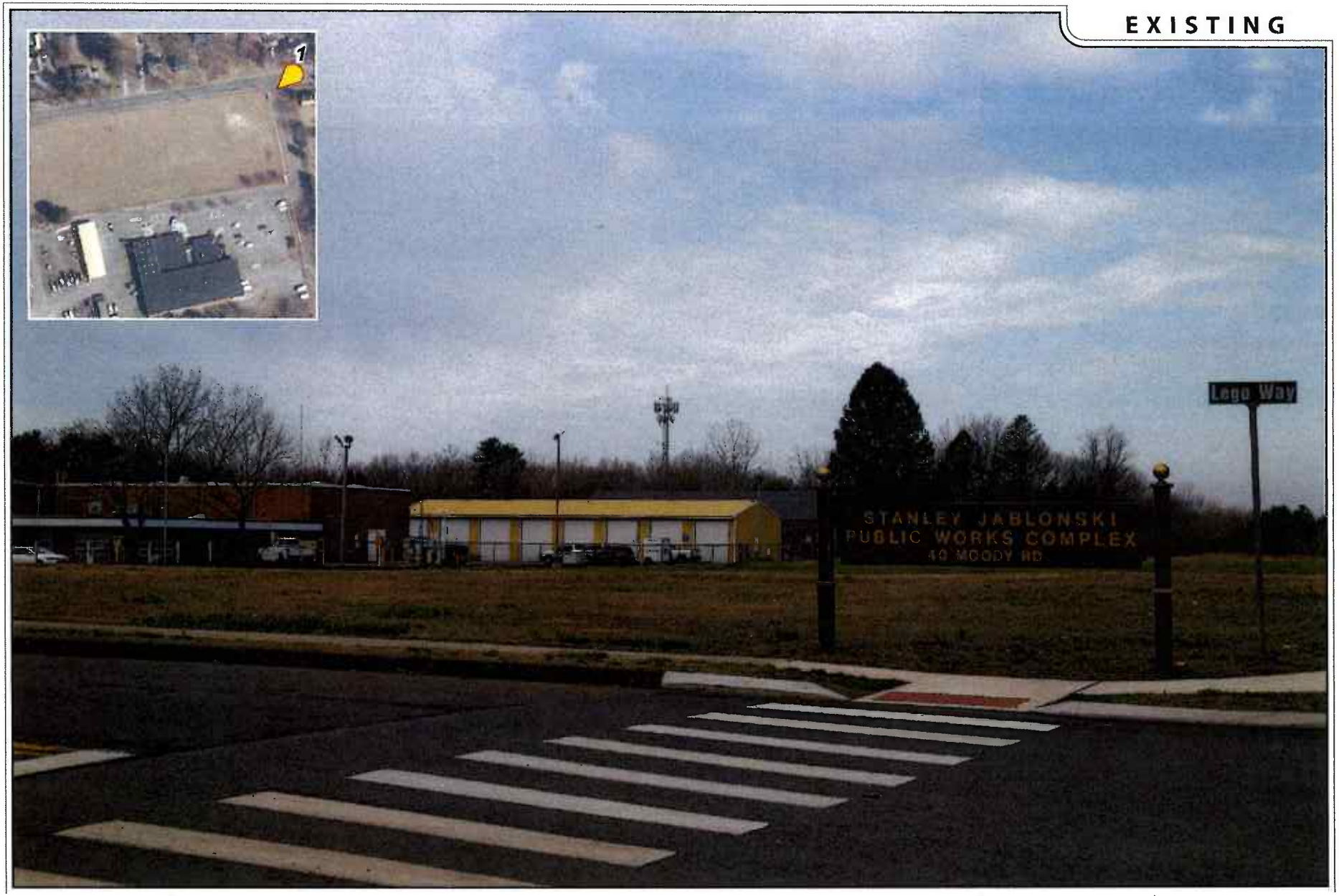
N
W E
S

400 200 0 400 Feet

ALL-POINTS TECHNOLOGY CORPORATION

verizon

EXISTING



PHOTOGRAPHED ON 4/15/2025

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**MOODY ROAD AT LEGO WAY**	**SW**	**+/- 0.34 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**MOODY ROAD AT LEGO WAY**	**SW**	**+/- 0.34 MILE**

EXISTING

PHOTOGRAPHED ON 4/15/2025

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**MOODY ROAD**	**SSW**	**+/- 0.19 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

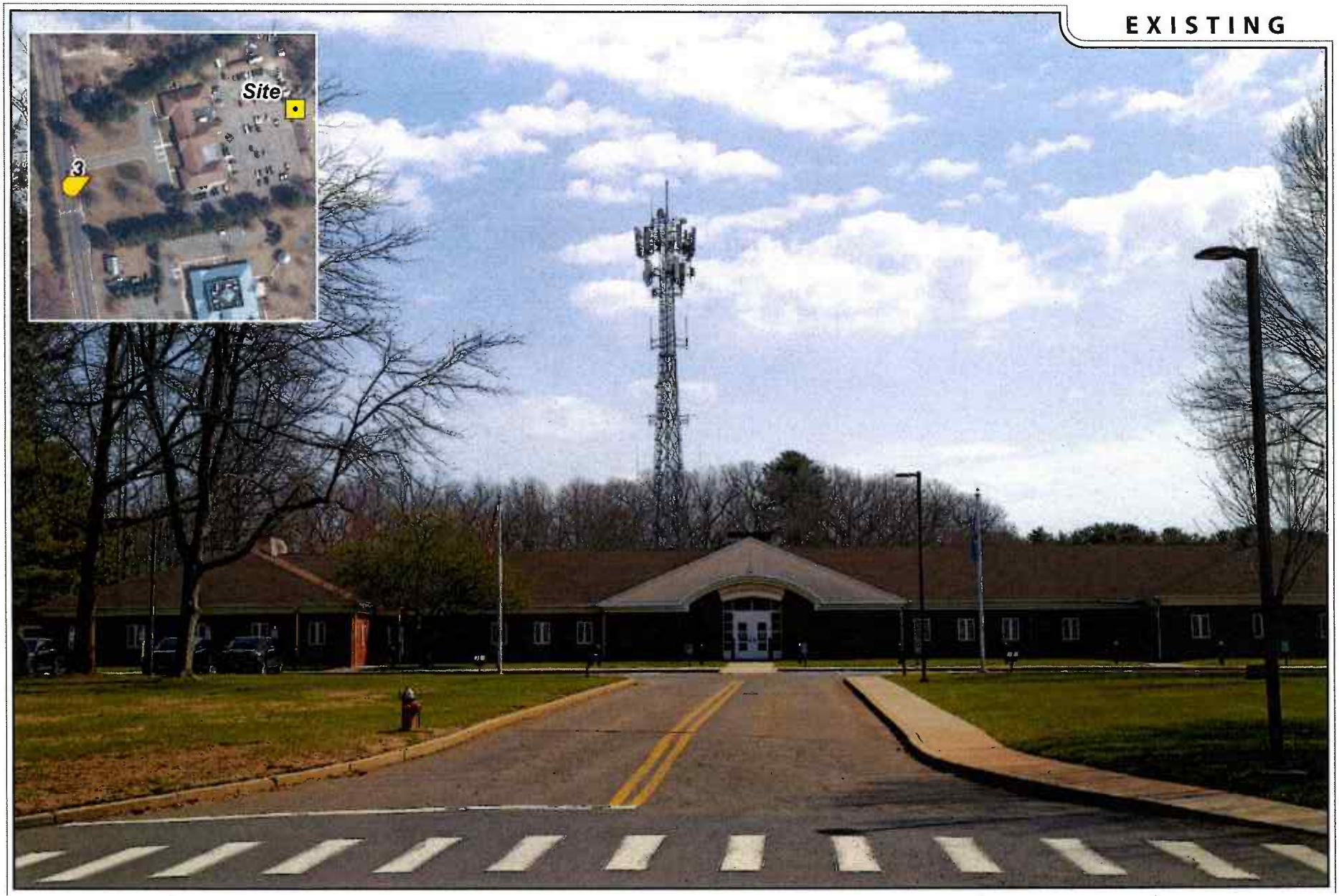
PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	MOODY ROAD	SSW	+/- 0.19 MILE

ALL-POINTS TECHNOLOGY CORPORATION

verizon

EXISTING



PHOTOGRAPHED ON 11/5/2025

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
3	**ELM STREET**	**ENE**	**+/- 0.11 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

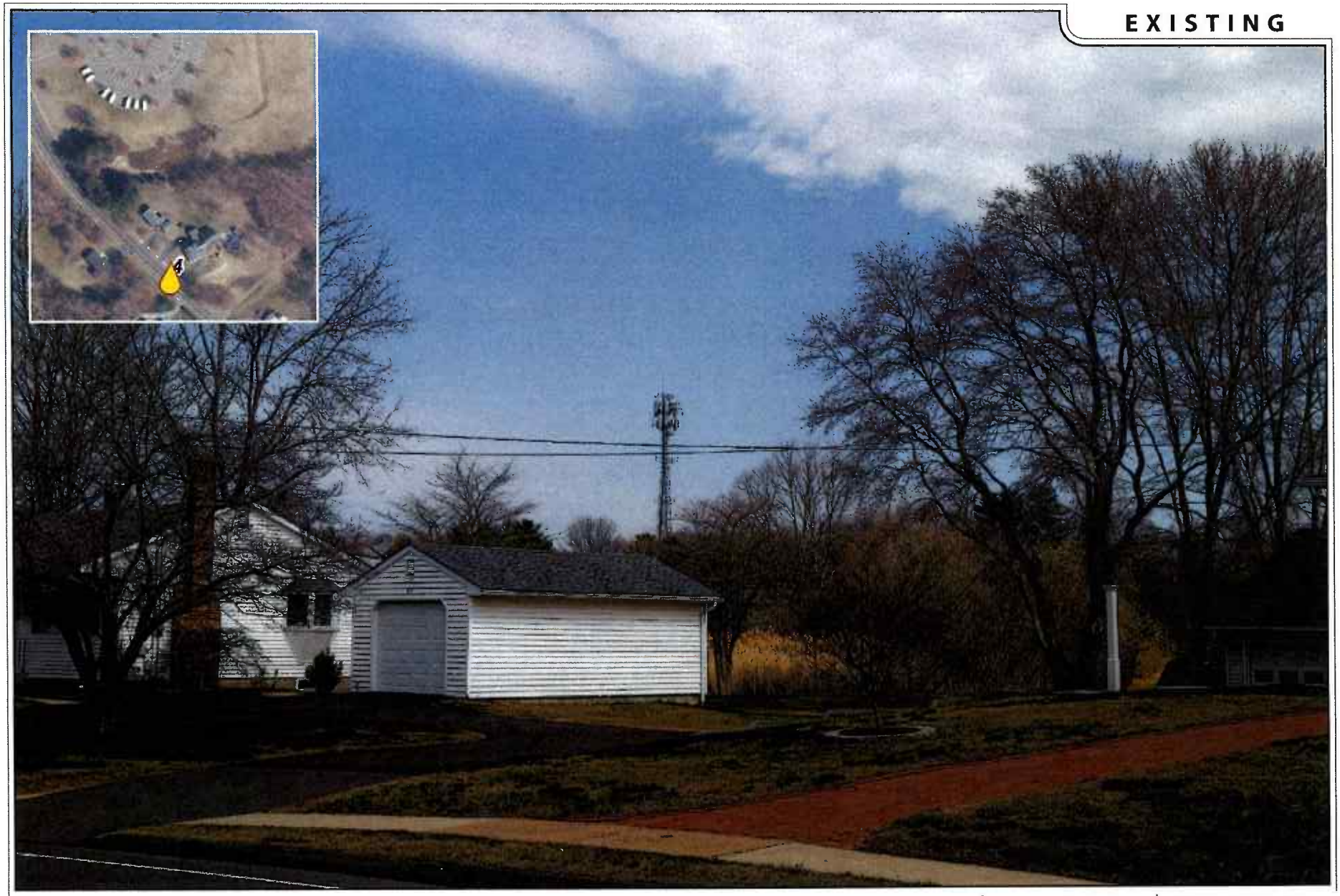
PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
3	ELM STREET	ENE	+/- 0.11 MILE

ALL-POINTS TECHNOLOGY CORPORATION

verizon

EXISTING



PHOTOGRAPHED ON 4/15/2025

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	**ELM STREET**	**N**	**+/- 0.22 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	ELM STREET	N	+/- 0.22 MILE

ALL-POINTS TECHNOLOGY CORPORATION

verizon

ATTACHMENT 6

C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions Report

verizon

Enfield 6 CT

293 Elm Street, Enfield, CT 06082

April 14, 2025

Table of Contents

List of Figures

List of Tables

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of Verizon's antenna arrays to be mounted at 105' on the existing self-support tower located at 293 Elm Street in Enfield, CT. The coordinates of the tower are 41° 59' 51.7" N, 72° 33' 10.72" W.

Verizon is proposing the following:

1) Install six (6) multi-band antennas, two (2) per sector to support its commercial LTE network.
2) Install three (3) C-Band antenna (one (1) antenna per sector to support its 5G network.

This report considers the proposed antenna configuration for Verizon[1] as well as existing antenna configuration[2][3] for AT&T, T-Mobile and Town of Enfield (Enfield PD) to calculate the resulting % Maximum Permissible Exposure (MPE) at ground level around the existing facility.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the documents referenced in Attachment A of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

---

[1] As referenced to Verizon's Radio Frequency Design Sheet dated 07/23/2024.

[2] As referenced to AT&T's Connecticut Siting Council Tower Share Request – 293 Elm Street, Enfield, CT dated 04/07/2021.

[3] As referenced to T-Mobile's Connecticut Siting Council Notice of Exempt Modification - 293 Elm Street Enfield, CT 06082, dated 12/03/2020.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{GRF}^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2}\right) \text{X Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

These calculations assume that the antennas are operating at full power and 100 percent capacity, and that all antenna channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not considered. The calculations assume even terrain in the area of study and do not account for actual terrain elevations which could attenuate the signal. As a result, the calculated power density and corresponding % MPE levels reported below are much higher than the actual signal levels will be from the final installation.

The percent of MPE values presented in this report reflect levels that one may encounter from one sector of a carrier's antennas. Most carriers use 3 or 4 sectors per site with azimuths approximately 90 or 120 degrees apart, respectively; therefore, one could not be standing in the main beam of multiple sectors at the same time. In cases where antenna models are not uniform across all sectors, the antenna model with the highest gain was used for the calculations. This results in a conservative or "worst case" assumption for percent of MPE calculations.

4. Antenna Inventory

Table 1 below outlines Verizon's proposed antenna configuration for the site. The associated data model and antenna patterns for these specific antenna models are included in Attachments C.

Operator	Sector / Azimuth	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha / 30°	700	160	14.9	4944	NHH-65B-R2B	65	0	6	105
		850	160	15	5060		60			
		1900	320	17.9	19731		69			
		2100	400	18	25238	NHHSS-65B-R2BT4	64	0	6	105
		3500	5	17.3	269		64			
		3700	320	25.5	113540	MT6413-77A	-	0	-	106.8
	Beta / 150°	700	160	14.9	4944	NHH-65B-R2B	65	0	6	105
		850	160	15	5060		60			
		1900	320	17.9	19731		69			
		2100	400	18	25238	NHHSS-65B-R2BT4	64	0	6	105
		3500	5	17.3	269		64			
		3700	320	25.5	113540	MT6413-77A	-	0	-	106.8
	Gamma / 270°	700	160	14.9	4944	NHH-65B-R2B	65	0	6	105
		850	160	15	5060		60			
		1900	320	17.9	19731		69			
		2100	400	18	25238	NHHSS-65B-R2BT4	64	0	6	105
		3500	5	17.3	269		64			
		3700	320	25.5	113540	MT6413-77A	-	0	-	106.8

Table 1: Proposed Antenna Inventory[4] [5]

[4] Antenna configuration is in reference to Verizon's Radio Frequency Design Sheet dated 07/23/2024.

[5] Transmit power assumes 0 dB of cable loss.

5. Calculation Results

The calculated % MPE results for the proposed and existing antenna configuration are shown in Figure 1 below. Each frequency band and technology is calculated as well as the resulting cumulative percent of MPE. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

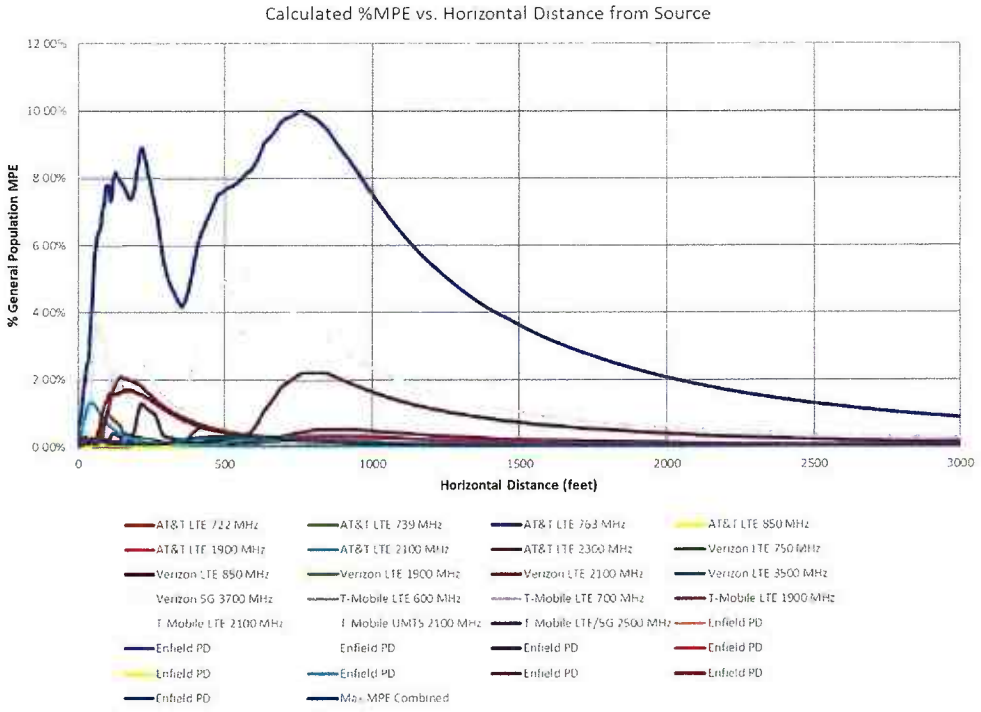


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (**9.99%** of the General Population limit) is calculated to occur at a horizontal distance of 760 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 900 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, and that all antenna channels are transmitting simultaneously. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. Additionally, a six-foot height offset was considered in this analysis to account for the height of a person standing at ground level. As a result, the calculated % MPE levels are significantly higher than the actual signal levels will be from the final installation. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the site out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm^2)	Limit (mW/cm^2)	% MPE
AT&T LTE 1900 MHz	1	160.0	151.0	760	0.001000	1.000	0.10%
AT&T LTE 2100 MHz	1	240.0	151.0	760	0.002420	1.000	0.24%
AT&T LTE 2300 MHz	1	100.0	151.0	760	0.000419	1.000	0.04%
AT&T LTE 722 MHz	1	160.0	151.0	760	0.001294	0.481	0.27%
AT&T LTE 739 MHz	1	160.0	151.0	760	0.000764	0.493	0.15%
AT&T LTE 763 MHz	1	160.0	151.0	760	0.000764	0.509	0.15%
AT&T LTE 850 MHz	1	160.0	151.0	760	0.002041	0.567	0.36%
Enfield PD	1	100.0	160.0	760	0.000150	0.300	0.05%
Enfield PD	1	1.0	158.0	760	0.000012	0.300	0.00%
Enfield PD	1	1.0	159.0	760	0.000034	1.000	0.00%
Enfield PD	1	1.0	159.0	760	0.000012	1.000	0.00%
Enfield PD	1	1.0	134.0	760	0.000022	1.000	0.00%
Enfield PD	1	22.0	117.0	760	0.000007	0.200	0.00%
Enfield PD	1	100.0	60.0	760	0.000035	0.200	0.02%
Enfield PD	2	100.0	90.0	760	0.001245	0.560	0.22%
Enfield PD	1	100.0	90.0	760	0.000608	0.300	0.20%
Enfield PD	2	100.0	117.0	760	0.000432	0.200	0.22%
T-Mobile LTE 1900 MHz	4	60.0	140.0	760	0.003209	1.000	0.32%
T-Mobile LTE 2100 MHz	2	60.0	140.0	760	0.001366	1.000	0.14%
T-Mobile LTE 600 MHz	1	140.0	140.0	760	0.001200	0.400	0.30%
T-Mobile LTE 700 MHz	2	30.0	140.0	760	0.000489	0.467	0.10%
T-Mobile LTE/5G 2500 MHz	1	240.0	140.0	760	0.022098	1.000	2.21%
T-Mobile UMTS 2100 MHz	2	30.0	140.0	760	0.000154	1.000	0.02%
Verizon 5G 3700 MHz	1	320.0	106.8	760	0.038437	1.000	3.84%
Verizon LTE 1900 MHz	1	320.0	105.0	760	0.002260	1.000	0.23%
Verizon LTE 2100 MHz	1	400.0	105.0	760	0.004466	1.000	0.45%
Verizon LTE 3500 MHz	1	5.0	105.0	760	0.000063	1.000	0.01%
Verizon LTE 750 MHz	1	160.0	105.0	760	0.000894	0.500	0.18%
Verizon LTE 850 MHz	1	160.0	105.0	760	0.000934	0.567	0.16%
						Total	**9.99%**

Table 2: Maximum Percent of General Population Exposure Values[6] [7] [8] [9]

[6] Frequencies listed are representative of the operating band and are not the specific operating frequency.

[7] The total % MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

[8] In the case where antenna pattern data was unavailable from the manufacturer, generic antenna pattern was used based on the frequency, bandwidth and gain of the antenna.

[9] The technical operating information for the Municipal antennas is based on Verizon Wireless' Structural Analysis and Reinforcement Design - Enfield, CT dated July 30, 2024, and the FCC Universal Licensing System.

6. Conclusion

The above analysis concludes that RF exposure levels from the existing site with Verizon's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **9.99% of the FCC limit (General Population/Uncontrolled).** This maximum cumulative percent of MPE value is calculated to occur 760 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Report Prepared By: Cory Goulet
RF Engineer
C Squared Systems, LLC

April 11, 2025
Date

Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

April 14, 2025
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2019, IEEE Standard Safety Levels With Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2021, IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[10]

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

(B) Limits for General Population/Uncontrolled Exposure[11]

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

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

[10] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

[11] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

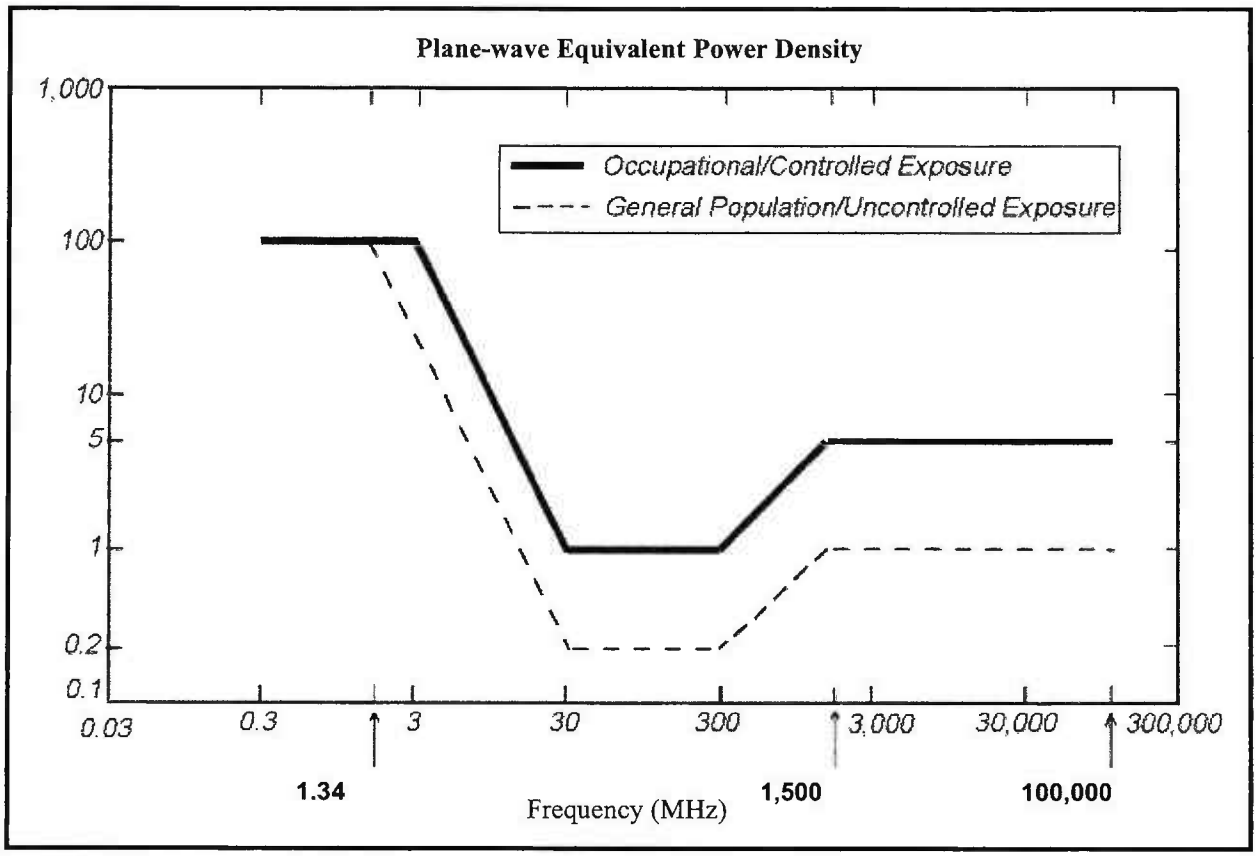
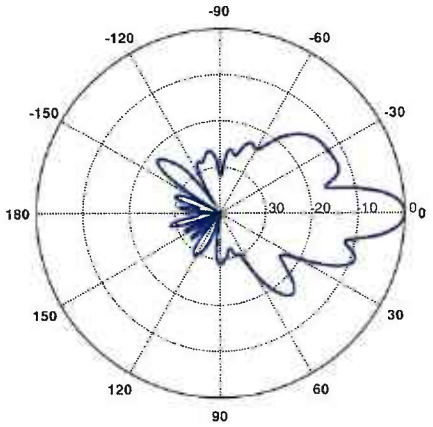


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Model Data and Electrical Patterns

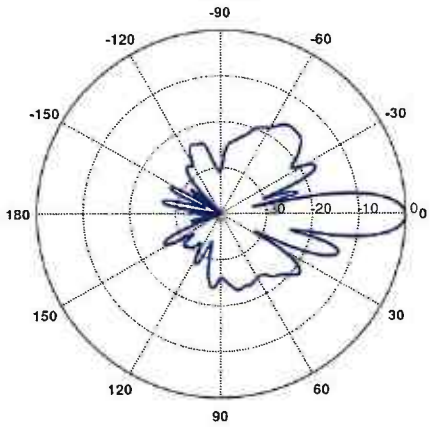
750 MHz

Manufacturer:	COMMSCOPE
Model #:	NHH-65B-R2B
Frequency Band:	698-806 MHz
Gain:	14.9 dBi
Electrical Down-Tilt:	0°
Vertical Beamwidth:	12.4°
Horizontal Beamwidth:	65°
Polarization:	±45°
Dimensions (L x W x D):	72" x 11.85" x 7.1"



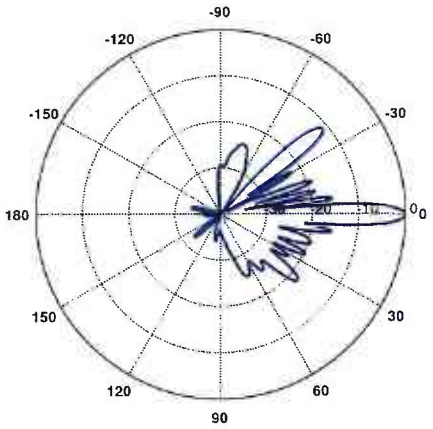
885 MHz

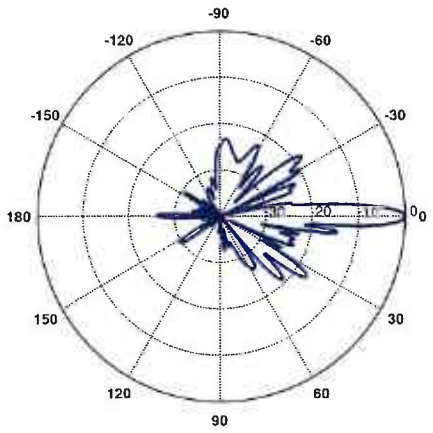
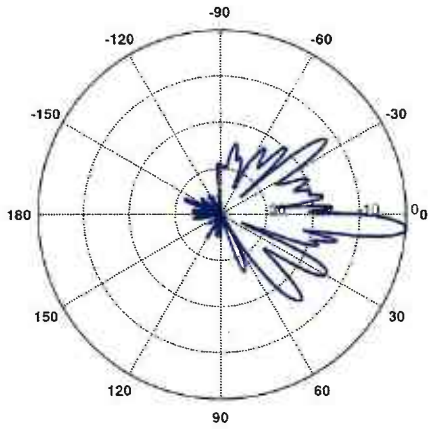
Manufacturer:	COMMSCOPE
Model #:	NHH-65B-R2B
Frequency Band:	824-896 MHz
Gain:	15.0 dBi
Electrical Down-Tilt:	0°
Vertical Beamwidth:	11.2°
Horizontal Beamwidth:	60°
Polarization:	±45°
Dimensions (L x W x D):	72" x 11.85" x 7.1"



1900 MHz

Manufacturer:	COMMSCOPE
Model #:	NHH-65B-R2B
Frequency Band:	1850-1990 MHz
Gain:	17.9 dBi
Electrical Down-Tilt:	2°
Vertical Beamwidth:	5.2°
Horizontal Beamwidth:	69°
Polarization:	±45°
Dimensions (L x W x D):	72" x 11.85" x 7.1"



2100 MHz Manufacturer: COMMSCOPE Model #: NHHSS-65B-R2BT4 Frequency Band: 1920-2200 MHz Gain: 18.2 dBi Electrical Down-Tilt: 0° Vertical Beamwidth: 5.5° Horizontal Beamwidth: 55.5° Polarization: ±45° Dimensions (L x W x D): 72" x 11.85" x 7.1"	
3500 MHz Manufacturer: COMMSCOPE Model #: NHHSS-65B-R2BT4 Frequency Band: 3550-3700 MHz Gain: 17.3 dBi Electrical Down-Tilt: 4° Vertical Beamwidth: 5.3° Horizontal Beamwidth: 64° Polarization: ±45° Dimensions (L x W x D): 72" x 11.85" x 7.1"	
3700 MHz Manufacturer: SAMSUNG Model #: MT6413-77A Frequency Band: 3700-3980 MHz Gain: 25.5 dBi Vertical Beamwidth: N/A° Horizontal Beamwidth: N/A° Polarization: N/A° Dimensions (L x W x D): N/A	N/A

ATTACHMENT 7

Robinson+Cole

KENNETH C. BALDWIN

One State Street
Hartford, CT 06103
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

May 5, 2025

Via Certificate of Mailing

Ken Nelson, Jr, Mayor
Town of Enfield
820 Enfield Street
Enfield, CT 06082

Re: **Cellco Partnership d/b/a Verizon Wireless – Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Wireless Telecommunications Facility at 293 Elm Street, Enfield, Connecticut**

Dear Mayor Nelson:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the Town's Public Safety Complex at 293 Elm Street in Enfield (the "Property").

The proposed Cellco facility will consist of the installation of nine (9) panel type antennas and nine (9) remote radio heads at the 105-foot level on the existing 160-foot public safety tower. Equipment associated with the antennas will be placed on the ground in an expanded facility compound.

A copy of the full Petition is attached for your review. If you have any questions regarding this Petition, please contact me or the Siting Council directly at (860) 827-2935.

Sincerely,

Kenneth C. Baldwin

Attachment

32104085-v1

Robinson+Cole

KENNETH C. BALDWIN

One State Street
Hartford, CT 06103
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

May 5, 2025

Via Certificate of Mailing

Christopher W. Bromson, Town Manager
Town of Enfield
820 Enfield Street
Enfield, CT 06082

Re: **Cellco Partnership d/b/a Verizon Wireless – Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Wireless Telecommunications Facility at 293 Elm Street, Enfield, Connecticut**

Dear Mr. Bromson:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the Town's Public Safety Complex at 293 Elm Street in Enfield (the "Property").

The proposed Cellco facility will consist of the installation of nine (9) panel type antennas and nine (9) remote radio heads at the 105-foot level on the existing 160-foot public safety tower. Equipment associated with the antennas will be placed on the ground in an expanded facility compound.

A copy of the full Petition is attached for your review. If you have any questions regarding this Petition, please contact me or the Siting Council directly at (860) 827-2935.

Sincerely,

Kenneth C. Baldwin

Attachment

31586909-v1

Robinson+Cole

KENNETH C. BALDWIN

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Hartford, CT 06103
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Direct (860) 275-8345

Also admitted in Massachusetts
and New York

May 5, 2025

Via Certificate of Mailing

Lauren Whitten, Director of Planning
Town of Enfield
820 Enfield Street
Enfield, CT 06082

Re: **Cellco Partnership d/b/a Verizon Wireless – Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Wireless Telecommunications Facility at 293 Elm Street, Enfield, Connecticut**

Dear Ms. Whitten:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the Town's Public Safety Complex at 293 Elm Street in Enfield (the "Property").

The proposed Cellco facility will consist of the installation of nine (9) panel type antennas and nine (9) remote radio heads at the 105-foot level on the existing 160-foot public safety tower. Equipment associated with the antennas will be placed on the ground in an expanded facility compound.

A copy of the full Petition is attached for your review. If you have any questions regarding this Petition, please contact me or the Siting Council directly at (860) 827-2935.

Sincerely,

Kenneth C. Baldwin

Attachment

31586942-v1

ATTACHMENT 8

Robinson+Cole

KENNETH C. BALDWIN

One State Street
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kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

May 5, 2025

Via Certificate of Mailing

«Name_and_Address»

Re: **Cellco Partnership d/b/a Verizon Wireless – Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Wireless Telecommunications Facility at 293 Elm Street, Enfield, Connecticut**

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the Town's Public Safety Complex at 293 Elm Street in Enfield (the "Property").

The proposed Cellco facility will consist of the installation of nine (9) panel type antennas and nine (9) remote radio heads at the 105-foot level on the existing 160-foot public safety tower. Equipment associated with the antennas will be placed on the ground in an expanded facility compound.

This notice is being sent to you because you are identified on the Town Assessor's records as an owner of land that abuts the Property. If you have any questions regarding the Petition, the Council's process for reviewing the Petition or the details of the filing itself, please feel free to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Sincerely,

Kenneth C. Baldwin

Attachment

31586958-v1

verizon

WIRELESS COMMUNICATIONS FACILITY

ENFIELD 6 CT
293 ELM STREET
ENFIELD, CT 06082

DRAWING INDEX

POWER PROVIDER	EVERSOURCE (888) 544-4826
FIBER PROVIDER	TBD
CALL BEFORE YOU DIG	1(800) 922-4455

SITE DIRECTIONS

START: 20 ALEXANDER DRIVE
WALLINGFORD, CONNECTICUT 06492

END: 293 ELM STREET
ENFIELD, CT 06082

1	HEAD NORTH ON ALEXANDER DRIVE	0.2 MI
2	TURN RIGHT ONTO BARNES INDUSTRIAL ROAD	0.1 MI
3	TURN RIGHT ONTO CT-68 E	1.8 MI
4	SHARP LEFT TO MERGE ONTO I-91 N	23.5 MI
5	TAKE EXIT 48 FOR CT-220/ELM ST. TOWARD THOMPSONVILLE	0.2 MI
6	TURN RIGHT ONTO CT-220/ELM STREET	1.0 MI
7	TURN RIGHT ONTO ELM STREET	0.5 MI
8	TURN RIGHT ONTO ELM STREET	0.2 MI
9	DESTINATION WILL BE LEFT, TURN LEFT INTO DRIVEWAY	207 FT

LOCATION MAP
SCALE: N.T.S.

SITE INFORMATION

VZ SITE NAME	ENFIELD 6 CT
VZ MDG LOCATION CODE	5000953820
VZ FUZE I D	16737018
VZ PSLC	----
LOCATION	293 ELM STREET ENFIELD, CT 06082
PROJECT SCOPE	INSTALLATION CONSISTS OF (9) ANTENNAS, (9) RRHs, (1) OVP & (3) NEW SECTOR FRAMES MOUNTED TO AN EXIST 150'± AGL SELF SUPPORT LATTICE TOWER IN ADDITION TO EQUIP & BATTERY CABINETS, GPS UNIT & A 10'x18' CONC PAD W/ PROTECTIVE ICE CANOPY LOCATED AT GRADE WITHIN A 23'-8"± x26'± CHAIN-LINK FENCE COMPOUND EXPANSION
PARCEL ID	75/103
LATITUDE	41° 59' 51.871" N (41.997742 N)
LONGITUDE	-72° 33' 10.757" W (-72.552988 W)
GROUND ELEVATION	152'± AMSL
PROPERTY OWNER	TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX 820 ENFIELD STREET ENFIELD, CT 06082
TOWER OWNER	TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX 820 ENFIELD STREET ENFIELD, CT 06082
APPLICANT	CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
LEGAL/REGULATORY COUNSEL	ROBINSON & COLE, LLP KENNETH C. BALDWIN, ESQ ONE STATE STREET HARTFORD, CT 06103
ENGINEER CONTACT	ALL-POINTS TECHNOLOGY CORPORATION, P.C. 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385 860-663-1697

GOVERNING CODES/STANDARDS

2021 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE 2022 CONNECTICUT STATE BUILDING CODE
2020 NFPA-70, NATIONAL ELECTRIC CODE
ANSI/TIA-222-H

Cellco Partnership d/b/a
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION SUITE 311
WATERFORD, CT 06385 PHONE: (860) 663-1697
WWW.ALLPOINTSTECH.COM FAX: (860) 663-0935

C&C DRAWINGS

NO	DATE	REVISION
0	04/02/25	FOR REVIEW, JRM
1	04/24/25	FOR FILING, JRM
2		
3		
4		
5		
6		

STATE OF CONNECTICUT
MICHAEL TRODDEN
33313
LICENSED
PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXT SUITE 311 WATERFORD, CT 06385

OWNER: TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX
ADDRESS: 820 ENFIELD STREET ENFIELD, CT 06082

ENFIELD 6 CT

SITE ADDRESS: 293 ELM STREET ENFIELD, CT 06082

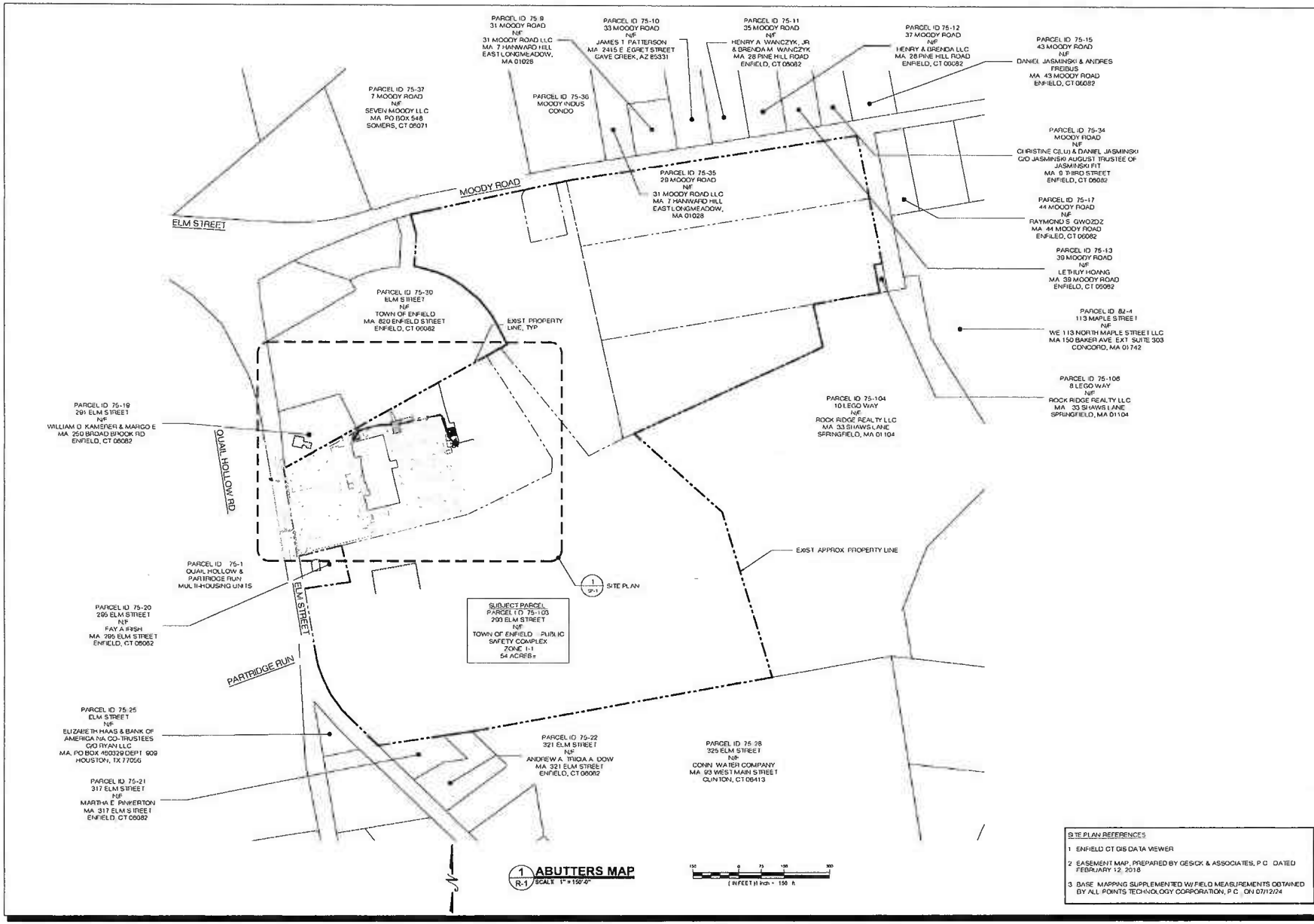
APT FILING NUMBER: CT141_14730

DRAWN BY: ELZ/JM
DATE: 04/02/25
CHECKED BY: JRM

VZW MDG: 5000953820
VZW PSLC: ---
VZ FUZE ID: 16737018

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1



Cellco Partnership d/b/a

verizon

76 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION SUITE 311
WATERFORD, CT 06385 PHONE: (860) 663-1697
WWW.ALLPOINTSTECH.COM FAX: (800) 663-0935

CSC DRAWINGS

NO	DATE	REVISION
0	04/02/25	FOR REVIEW, JRM
1	04/24/25	FOR FILING, JRM
2		
3		
4		
5		
6		

STATE OF CONNECTICUT
MICHAEL TRODDEN
33313
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DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
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ADD: 567 VAUXHALL STREET EXT. SUITE 311 WATERFORD, CT 06385

OWNER: TOWN OF ENFIELD - PUBLIC SAFETY COMPLEX
ADDRESS: 820 ENFIELD STREET ENFIELD, CT 06082

ENFIELD 6 CT

SITE ADDRESS: 293 ELM STREET ENFIELD, CT 06082

APT FILING NUMBER: CT141_14730

DRAWN BY: ELZ/JM
DATE: 04/02/25 CHECKED BY: JRM

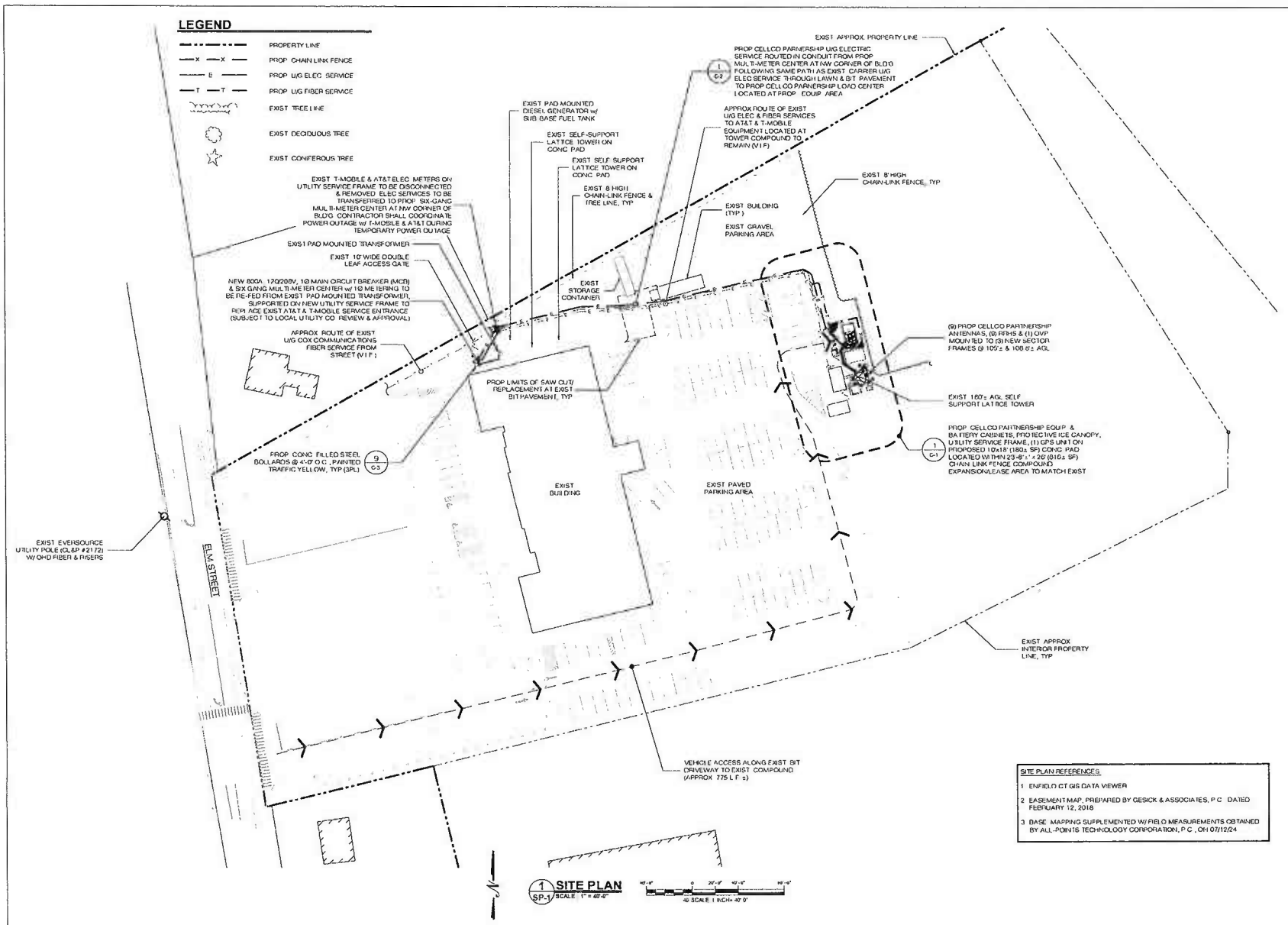
VZW MDG: 5000953820
VZW PSLC: ----
VZ FUZE ID: 16737018

SHEET TITLE:

ABUTTERS MAP

SHEET NUMBER:

R-1



Cellco Partnership d/b/a

verizon

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
587 VAUXHALL STREET EXTENSION SUITE 111
WATERFORD, CT 06385 PHONE: (860) 663 1697
WWW.ALLPOINTSTECH.COM FAX: (860) 663 0935

CSC DRAWINGS

NO	DATE	REVISION
0	04/02/25	FOR REVIEW: JRM
1	04/24/25	FOR FILING: JRM
2		
3		
4		
5		
6		

STATE OF CONNECTICUT
MICHAEL TRODDEN
33313
LICENSED
PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 587 VAUXHALL STREET EXT. SUITE 311
WATERFORD, CT 06385

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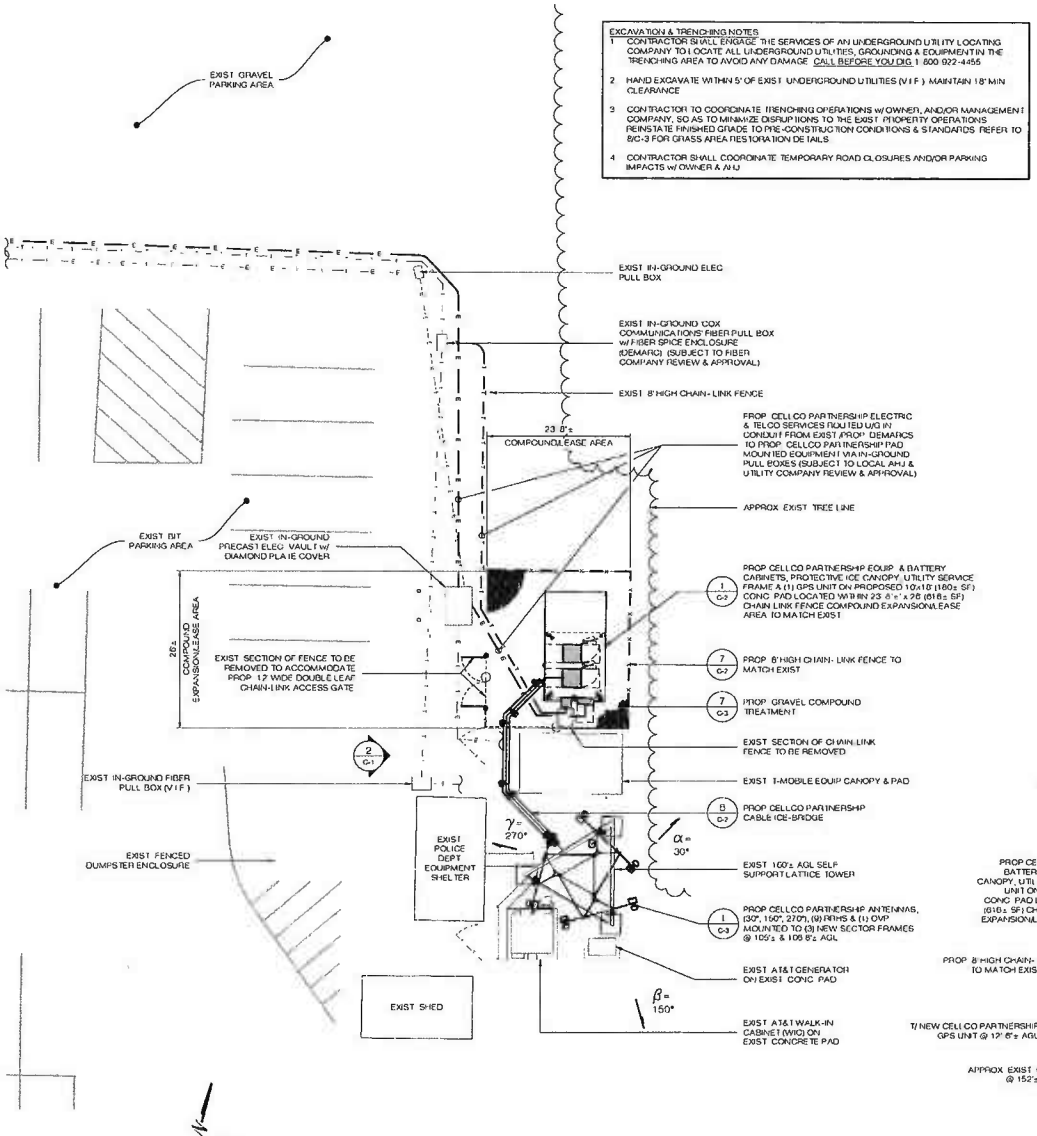
VZW MDG: 5080953520
VZW PBLC: ---
VZ FUZE ID: 16737018

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
SP-1

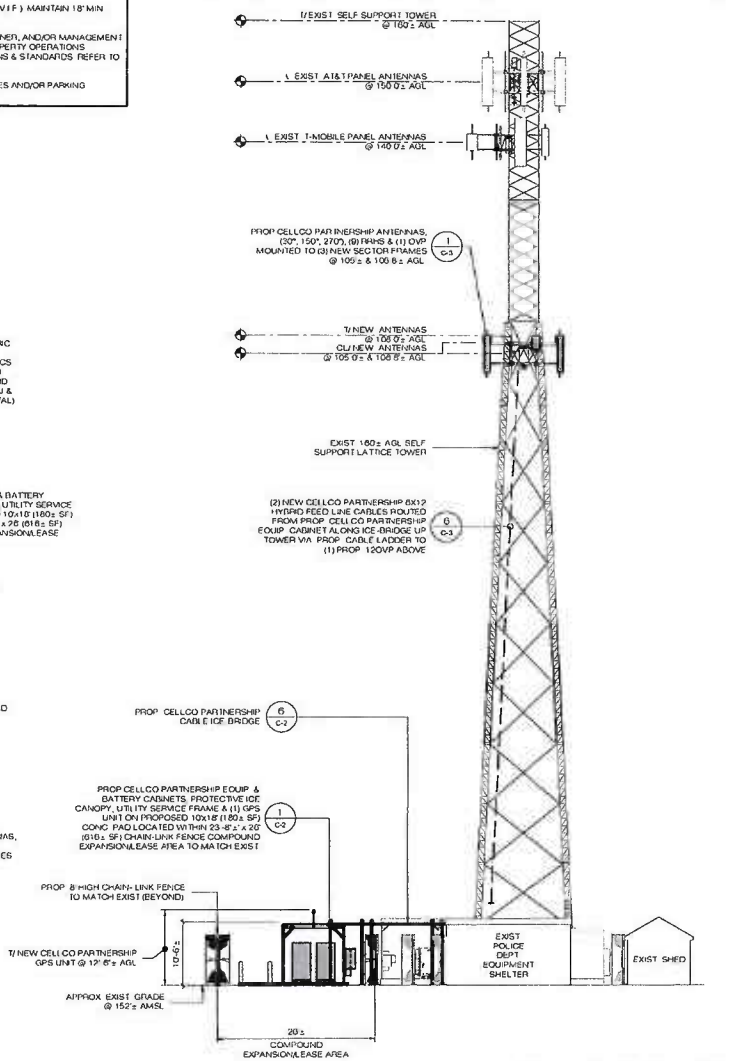


EXCAVATION & TRENCHING NOTES

1. CONTRACTOR SHALL ENGAGE THE SERVICES OF AN UNDERGROUND UTILITY LOCATING COMPANY TO LOCATE ALL UNDERGROUND UTILITIES, GROUNDING & EQUIPMENT IN THE TRENCHING AREA TO AVOID ANY DAMAGE. CALL BEFORE YOU DIG 1-800-922-4455
2. HAND EXCAVATE WITHIN 5' OF EXIST. UNDERGROUND UTILITIES (V.I.F.) MAINTAIN 18" MIN. CLEARANCE
3. CONTRACTOR TO COORDINATE TRENCHING OPERATIONS w/ OWNER, AND/OR MANAGEMENT COMPANY, SO AS TO MINIMIZE DISRUPTIONS TO THE EXIST. PROPERTY OPERATIONS. REINSTATE FINISHED GRADE TO PRE-CONSTRUCTION CONDITIONS & STANDARDS. REFER TO S/C-3 FOR GRASS AREA RESTORATION DETAILS.
4. CONTRACTOR SHALL COORDINATE TEMPORARY ROAD CLOSURES AND/OR PARKING IMPACTS w/ OWNER & AHJ.

TOWER ANALYSIS NOTE
REFER TO STRUCTURAL ANALYSIS & REINFORCEMENT DESIGN REPORT PREPARED BY ALL POINTS TECHNOLOGY CORPORATION, P.C., APT FILING No. CT141_14730, MARKED REV 1, DATED 07/30/24 AVAILABLE UNDER SEPARATE COVER

MOUNT ANALYSIS NOTE
REFER TO NEW/REPLACEMENT ANTENNA MOUNT ANALYSIS REPORT AND PMI REQUIREMENTS PREPARED BY COLLIERS ENGINEERING & DESIGN, PROJECT # 24777154, DATED 07/24/24 AVAILABLE UNDER SEPARATE COVER



1 C-1 **COMPOUND PLAN** SCALE: 1" = 10'-0"

10' SCALE: 1 INCH = 10'-0"

2 C-1 **WEST TOWER ELEVATION** SCALE: 1" = 10'-0"

10' SCALE: 1 INCH = 10'-0"

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STATE OF CONNECTICUT · MICHAEL TRODDEN · 33313 · LICENSED PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
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ENFIELD 5 CT

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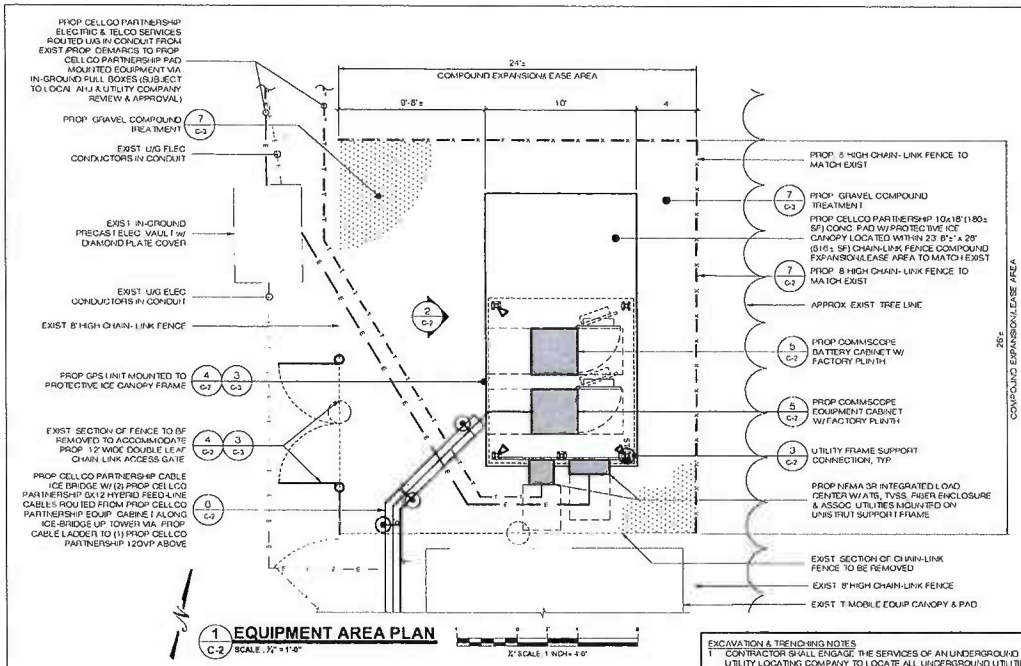
VZW PBLC: ---
VZ FUZE ID: 16737018

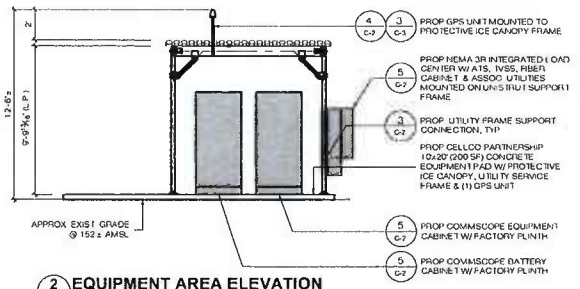
SHEET TITLE:
COMPOUND PLAN, WEST TOWER ELEVATION & NOTES

SHEET NUMBER:
C-1

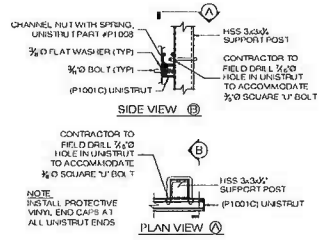


1 EQUIPMENT AREA PLAN
C-2 SCALE : 3/16" = 1'-0"

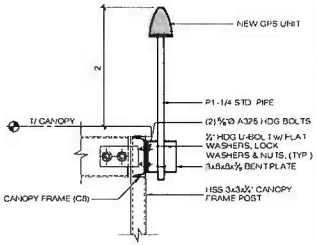
1/8" SCALE: 1 INCH= 4'-0"



2 EQUIPMENT AREA ELEVATION
C-2 SCALE : 3/4" = 1'-0"

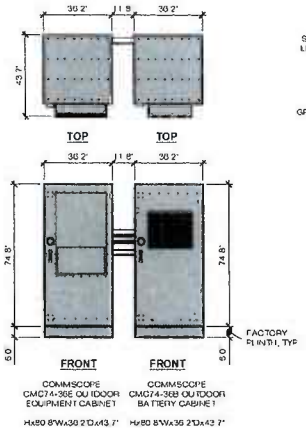


3 SERVICE FRAME CONN. DETAIL
C-2 SCALE : 1½" = 1'-0"

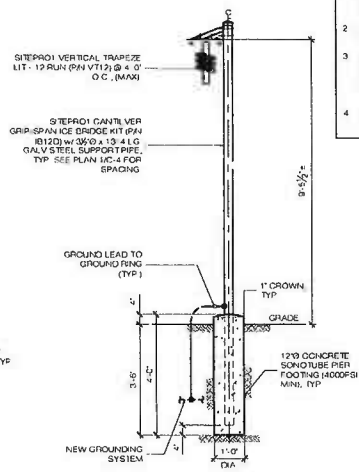


4 GPS MOUNT
C-2 SCALE : N.T.S

EXCAVATION & TRENCHING NOTES
1. CONTRACTOR SHALL ENGAGE THE SERVICES OF AN UNDERGROUND UTILITY LOCATING COMPANY TO LOCATE ALL UNDERGROUND UTILITIES, GROUNDING & EQUIPMENT IN THE TRENCHING AREA TO AVOID ANY DAMAGE. CALL BEFORE YOU DIG ! 800-922-4455
2. HAND EXCAVATE WITHIN 5' OF EXIST. UNDERGROUND UTILITIES (V I F) MAINTAIN 18" MIN. CLEARANCE
3. CONTRACTOR TO COORDINATE TRENCHING OPERATIONS w/ OWNER, AND/OR MANAGEMENT COMPANY, SO AS TO MINIMIZE DISRUPTIONS TO THE EXIST. PROPERTY OPERATIONS. REINSTATE FINISHED GRADE TO PRE CONSTRUCTION CONDITIONS & STANDARDS. REFER TO 6/C-3 FOR GRASS AREA RESTORATION DETAILS
4. CONTRACTOR SHALL COORDINATE TEMPORARY ROAD CLOSURES AND/OR PARKING IMPACTS w/ OWNER & AHJ

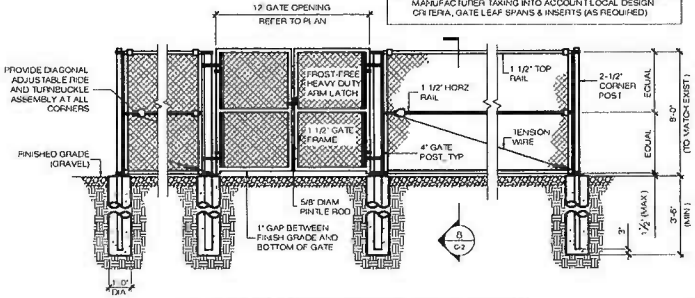


5 OUTDOOR CABINETS CMC74-36E & CMC74-36B DETAILS
C-2 SCALE : 3/4" = 1'-0"

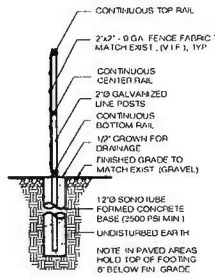


6 ICE BRIDGE DETAIL
C-2 SCALE : 3/4" = 1'-0"

FENCE NOTES
1. ATTACH EACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON FORGING, PIN TYPE HINGES ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL
2. FENCE POST SPACING NOT TO EXCEED 10'-0" O.C.
3. REFER TO ELECTRICAL SHEETS FOR GROUNDING
4. ALL FENCE GATE LINE AND TERMINAL POSTS TO BE SIZED BY MANUFACTURER TAKING INTO ACCOUNT LOCAL DESIGN CRITERIA, GATE LEAF SPANS & INSERTS (AS REQUIRED)



7 CHAIN-LINK FENCE & GATE DETAIL
C-2 SCALE: N.T.S



8 SECTION
C-2 SCALE: N.T.S

Cellco Partnership d/b/a
verizon
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VZ FUZE ID: 16737018

SHEET TITLE:
EQUIPMENT AREA PLAN, ELEVATION & DETAILS

SHEET NUMBER:
C-2

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

ABUTTING PROPERTY OWNERS

293 ELM STREET
ENFIELD, CONNECTICUT

	Property Address	Owner's and Mailing Address
1.	295 Elm Street	Fay Irish 295 Elm Street Enfield, CT 06082
2.	291 Elm Street	Raymond Meunier 291 Elm Street Enfield, CT 06082
3.	Elm Street	Town of Enfield 820 Enfield Street Enfield, CT 06082
4.	12 Moody Road	12 Moody Road, LLC 12 Moody Road Enfield, CT 06082
5.	7 Moody Road	Seven Moody, LLC P.O. Box 548 Somers, CT 06071
6.	9 Moody Industrial Condo	Brian A. and Susan J. Torkington 9 Kreyssig Road Broad Brook, CT 06016
7.	12 Moody Industrial Condo	Lessard Builders, LLC 190 Abbe Road Enfield, CT 06082
8.	15 Moody Industrial Condo	12 Moody Road, LLC 12 Moody Road Enfield, CT 06082
9.	10 Moody Industrial Condo	Brian A. and Susan J. Torkington 9 Kreyssig Road Broad Brook, CT 06016

	Property Address	Owner's and Mailing Address
10.	2 Moody Industrial Condo	Anderson Properties, LLC 189 West Oak Street Basking Ridge, NJ 07920
11.	13 Moody Industrial Condo	Frank and Pamela Neves, LLC c/o All Sports 9 Moody Road, Unit C-13 Enfield, CT 06082
12.	14 Moody Industrial Condo	Randy and Stacy Daigle 55 Cottage Road Enfield, CT 06082
13.	3 Moody Industrial Condo	Anderson Properties, LLC 189 West Oak Street Basking Ridge, NJ 07920
14.	5 Moody Industrial Condo	Anderson Properties, LLC 189 West Oak Street Basking Ridge, NJ 07920
15.	6 Moody Industrial Condo	Jims Floor Covering, LLC 9 Moody Road, Unit 6 Enfield, CT 06082
16.	8 Moody Industrial Condo	Brian A. and Susan J. Torkington 9 Kreyssig Road Broad Brook, CT 06016
17.	1 Moody Industrial Condo	Anderson Properties, LLC 189 West Oak Street Basking Ridge, NJ 07920
18.	4 Moody Industrial Condo	Anderson Properties, LLC 189 West Oak Street Basking Ridge, NJ 07920
19.	7 Moody Industrial Condo	Brian A. and Susan J. Torkington 9 Kreyssig Road Broad Brook, CT 06016
20.	11 Moody Industrial Condo	AMOLAB, LLC 9 Moody Road, Unit 11 Enfield, CT 06082

	Property Address	Owner's and Mailing Address
21.	16 Moody Industrial Condo	Pie in the Sky Realty, LLC 9 Moody Road, Unit 18 Enfield, CT 06082
22.	17 Moody Industrial Condo	Pie in the Sky Realty, LLC 9 Moody Road, Unit 18 Enfield, CT 06082
23.	18 Moody Industrial Condo	Pie in the Sky Realty, LLC 9 Moody Road, Unit 18 Enfield, CT 06082
24.	13A Moody Industrial Condo	Drew R. Boynton 64 Carriage House Enfield, CT 06082
25.	13B Moody Industrial Condo	Marguerite E. French 19 Hillside Avenue Enfield, CT 06082
26.	29 Moody Road	29 Moody Road, LLC 2 Center Square East Longmeadow, MA 01028
27.	31 Moody Road	31 Moody Road, LLC 7 Henward Hill East Longmeadow, MA 01028
28.	33 Moody Road	Volts Investment Group, LLC 615 Parker Street Manchester, CT 06042
29.	35 Moody Road	Brenda and Henry Wanczyk, Jr. 28 Pine Hill Road Enfield, CT 06082
30.	37 Moody Road	Henry and Brenda, LLC 28 Pine Hill Road Enfield, CT 06082
31.	39 Moody Road	Lethuy Hoang 39 Moody Road Enfield, CT 06082

	Property Address	Owner's and Mailing Address
32.	Moody Road	Daniel M. Jaminski and August Jaminski Family Trust 43 Moody Road Enfield, CT 06082
33.	43 Moody Road	Daniel Jaminski and Andres Freibus 43 Moody Road Enfield, CT 06082
34.	44 Moody Road	Raymond Gwozoz 44 Moody Road Enfield, CT 06082
35.	113 Maple Street	PPF WE 113 North Maple Street, LLC 150 Baker Avenue, Extension, Suite 303 Conrad, MA 01742
36.	10 Lego Way	Rock Ridge Realty, LLC 33 Shaws Lane Springfield, MA 01104
37.	8 Lego Way	Rock Ridge Realty, LLC 33 Shaws Lane Springfield, MA 01104
38.	325 Elm Street	Connecticut Water Company 93 West Main Street Clinton, CT 06413
39.	321 Elm Street	Andrew and Tricia Dow 321 Elm Street Enfield, CT 06082
40.	317 Elm Street	Martha Pinkerton and James Martocchio Jr. Trustee – Pinkerton Family Irrev Trust 317 Elm Street Enfield, CT 06082
41.	320 Elm Street	Michael and Laura Sheehan 320 Elm Street Enfield, CT 06082
42.	Elm Street	Elizabeth Haas and Bank of American NA Trustee c/o Ryan, LLC P.O. Box 46039, Dept. 909 Houston, TX 77056

	Property Address	Owner's and Mailing Address
43.	Autumn Fields Condominium Association	Autumn Fields Condominium Association c/o Classic Management 15 Benton Street East Longmeadow, MA 01028