

One State Street
Hartford, CT 06103
Main (860) 275-8200
Fax (860) 275-8299
jschaefer@rc.com
Direct (860) 275-8349

Also admitted in Massachusetts
and Vermont

May 29, 2026

Via Electronic and U.S. Mail

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

Re: Request of Cellco Partnership d/b/a Verizon Wireless for an Order to Approve the Shared Use of an Existing Tower at 421 (a/k/a 419) Ekonk Hill Road, Sterling, Connecticut

Dear Attorney Bachman:

Pursuant to Connecticut General Statutes (“C.G.S.”) §16-50aa, as amended, Cellco Partnership d/b/a Verizon Wireless (“Cellco”) hereby requests an order from the Siting Council (“Council”) approving the shared use of an existing telecommunications tower at 421 Ekonk Hill Road in Sterling, Connecticut (the “Property”). The tower is currently owned by SBA Towers VIII, LLC (“SBA”) and was approved by the Town of Sterling¹. Cellco identifies this site as its “Oneco CT Facility”.

Cellco requests that the Council find that the proposed shared use of the SBA tower satisfies the criteria of C.G.S. § 16-50aa and issue an order approving this request. A copy of this filing is being sent to Sterling’s First Selectman, Myron “Jack” Joslyn, and Zoning Enforcement Agent, John Guskowski. A copy of this letter is also being sent to SBA, the tower/property owner.

¹ According to past filings with the Siting Council, no copies of the original tower approvals were available from Town Officials.

Melanie A. Bachman, Esq.

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Background

Cellco is licensed by the Federal Communications Commission (“FCC”) to provide wireless services throughout the State of Connecticut. Cellco and SBA have agreed to the proposed shared use of the SBA tower pursuant to mutually acceptable terms and conditions. Likewise, SBA and Cellco have agreed to the proposed installation of equipment on the ground near the base of the tower within the existing facility compound. SBA has authorized Cellco to apply for all necessary permits and approvals that may be required to share the approved tower. (See Attachment 1).

Cellco proposes to install twelve (12) antennas and three (3) remote radio heads (“RRHs”) on the tower at a centerline height of 160 feet above ground level (“AGL”). Cellco will also install a combination equipment/battery cabinet and generator on a concrete pad within the existing fenced facility compound. Included in Attachment 2 is a set of Project Plans showing the location of Cellco’s antennas and related equipment. Attachment 3 contains specifications for Cellco’s proposed antennas and RRHs.

C.G.S. § 16-50aa(c)(1) provides that, upon written request for approval of a proposed shared use, “if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the council shall issue an order approving such shared use.” Cellco respectfully submits that the shared use of the tower satisfies these criteria.

A. Technical Feasibility. The SBA tower is structurally capable of supporting Cellco’s antennas, RRHs, and antenna mounting system. The proposed shared use of this tower is, therefore, technically feasible. A Structural Analysis Report (“SA”) dated May 19, 2026, confirms that the tower and foundation can support Cellco’s proposed shared use. Likewise, a New Antenna Mount Analysis Report (“MA”) dated March 17, 2026, confirms that the proposed antenna and RRH and mounting system can support Cellco’s shared use. Copies of the SA and MA are included in Attachment 4.

B. Legal Feasibility. Under C.G.S. § 16-50aa, the Council has been authorized to issue orders approving the shared use of an existing tower. This authority complements the Council’s prior-existing authority under C.G.S. § 16-50p to issue orders approving the construction of new towers that are subject to the Council’s jurisdiction. In addition, § 16-50x(a) directs the Council to “give such consideration to other state laws and municipal regulations as it shall deem appropriate” in ruling on requests for the shared use of approved tower facilities. Under the statutory authority vested in the Council, an order by the Council approving the requested shared use would permit Cellco to obtain a building permit for the proposed installations.

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C. Environmental Feasibility. The proposed shared use of the tower would have minimal environmental effects, for the following reasons:

1. The proposed installation of twelve (12) antennas and three (3) RRHs at the 160 foot level on the 200-foot tower, below the existing T-Mobile antennas, would have an insignificant incremental visual impact on the area around the Property. All of Cellco's ground-based equipment will be located within the existing fenced facility compound near the base of the tower. Cellco's shared use of the tower would, therefore, not cause any significant change or alteration in the physical or environmental characteristics of the existing facility.
2. Noise associated with Cellco's proposed facility will comply with State and local noise standards.
3. Operation of Cellco's antennas at this site would not exceed the RF emissions standards adopted by the Federal Communications Commission ("FCC"). Included in Attachment 5 of this filing is a Calculated Radio Frequency Emissions Report that demonstrates that the modified facility will operate well within the FCC's safety standards.
4. Under ordinary operating conditions, the proposed installation would not require the use of any water or sanitary facilities and would not generate air emissions or discharges to water bodies or sanitary facilities. After construction is complete the proposed installations would not generate any increased traffic to the facility other than periodic maintenance visits to the cell site.

The proposed shared use of the tower would, therefore, have a minimal environmental effect, and is environmentally feasible.

D. Economic Feasibility. As previously mentioned, Cellco has entered into an agreement with SBA for the shared use of the tower subject to mutually agreeable terms. The proposed tower sharing is, therefore, economically feasible.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Cellco's antennas and RRHs and all related equipment. Cellco is not aware of any public safety concerns relative to the proposed sharing of the tower. In fact, the provision of new and improved wireless service through Cellco's shared use of the SBA tower would enhance the safety and welfare of area residents and members of the general public traveling through the Town of Sterling.

Robinson+Cole

Melanie A. Bachman, Esq.

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Page 4

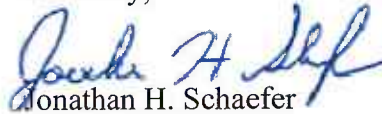
A Certificate of Mailing verifying that a copy of this filing was sent to the municipal officials, and SBA, the tower/Property owner is included in Attachment 6.

Conclusion

For the reasons discussed above, the proposed shared use of the tower at the Property satisfies the criteria stated in C.G.S. § 16-50aa and advances the General Assembly's and the Council's goal of preventing the unnecessary proliferation of towers in Connecticut. Cellco, therefore, respectfully requests that the Council issue an order approving the proposed shared use.

Thank you for your consideration of this matter.

Sincerely,



Jonathan H. Schaefer

Enclosures

Copy to:

Myron "Jack" Joslyn, First Selectman

John Guskowski, Zoning Enforcement Official

Catherine Ware, SBA Communications, Tower and Property Owner (via email)

Alex Tyurin, Verizon Wireless (via email)

ATTACHMENT 1



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

T + 561.995.7670
F + 561.995.7626

sbasite.com

LETTER OF AUTHORIZATION

SBA Site ID: CT20001-A, STERLING CT TOWER

Property Located at: 419 Ekonk Hill Road (Rt-49), Sterling, CT, 06377

THE CITY/COUNTY OF: Sterling / Windham/Sterling

APPLICATION FOR ZONING/USE/BUILDING PERMIT

This letter authorizes Verizon Wireless and its authorized agents to file for all necessary zoning, planning and building permits (local, state and federal) for the purposes of installing, operating and maintaining a telecommunications facility on the existing tower on the property referenced above on behalf of SBA Structures, LLC.

All approval conditions that may be granted to Verizon Wireless in connection with above referenced facility relating to this specific application are the sole responsibility of Verizon Wireless.

SBA Structures, LLC

Donald Day

Executive VP, Site Leasing

Date: 4/22/2026

ATTACHMENT 2



- | | |
|--------------------------------------|---|
| INSTALL | |
| (G) GUARDIAN SECTOR FRAMES | * |
| (H) ANTENNAS | * |
| (I) 12X20 REINFORCED CONCRETE PAD | * |
| (J) POWER AND WATER CABINET | * |
| (K) SLOW PULLER, GENERATOR | * |
| (L) TELCO CABLE | * |
| (M) FUNCTION BOX (12-CHP) | * |
| (N) HYBRID CABLES & ASSOCIATED JUMPS | * |
| (O) CABLE ICE BRIDGE | * |
| (P) GPS ANTENNA & ASSOCIATED CABLE | * |
| (Q) POWER TRANSFER LOAD CENTER | * |
| (R) 200A METER & CIRCUIT BREAKER | * |

verizon

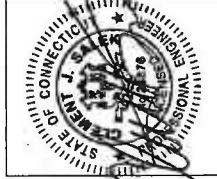
VERIZON WIRELESS
20 ALAMOGADO DRIVE, 2ND FLOOR
STERLING, CT 06377
(203) 741-7238



SBA COMMERCIAL CORP
134 HANOVER ROAD, SUITE 125
WESTPORT, MA 01881
(508) 231-0725



CHAPPELL
ENGINEERING &
ASSOCIATES, LLC
R/E ENGINEERING
100 WEST STREET, SUITE 203
WATERBURY, MA 05672
(508) 481-7400
www.chapell-engineering.com



DRAWN BY: JAE

APPROVED BY: JAE

SUBMITTALS	
REV	DATE DESCRIPTION
1	04/27/15 ISSUED FOR CONSTRUCTION
2	05/27/15 CONSTRUCTION PERIOD
3	06/27/15 ISSUED FOR CONSTRUCTION
4	07/27/15 ISSUED FOR CONSTRUCTION
5	08/27/15 ISSUED FOR CONSTRUCTION
6	09/27/15 ISSUED FOR CONSTRUCTION
7	10/27/15 ISSUED FOR CONSTRUCTION
8	11/27/15 ISSUED FOR CONSTRUCTION
9	12/27/15 ISSUED FOR CONSTRUCTION

PROJECT NAME & ADDRESS
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419 BROWN HILL ROAD (ROUTE 49)
STERLING, CT 06377

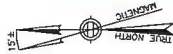
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TYPE PROJECT ID: 170000000

SHEET TITLE
SITE PLAN

SHEET NUMBER
A01



SITE PLAN
SCALE: 1" = 30'-0"
0 30' 60' 90'



verizon

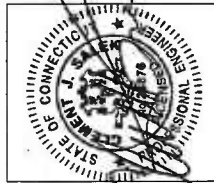
VERIZON WIRELESS
20 ALAMARCK DRIVE, 2ND FLOOR
STERLING, CT 06377
(203) 744-7338



SBA COMMUNICATIONS CORP.
134 PARKERS ROAD, SUITE 125
WESTPORT, MA 01881
(508) 231-9775



CHAPPELL
ENGINEERING
ASSOCIATES, LLC
R/K EXCUSE CENTRE
301 BOSTON ROAD
PROF. METER BANK & NOTARY
HAYMAN TELECOM/ITER
100 WESTPORT AVENUE
WESTPORT, MA 01881
(508) 481-7100
www.chapell-engineering.com



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APPROVED BY: JMT

SUBMITTALS	
REV	DATE DESCRIPTION
1	10/12/17
2	10/12/17
3	10/12/17
4	10/12/17
5	10/12/17
6	10/12/17
7	10/12/17
8	10/12/17
9	10/12/17
10	10/12/17

PROJECT NAME & ADDRESS
ONECO CT
419 EKONK HILL ROAD (ROUTE 48)
STERLING, CT 06377

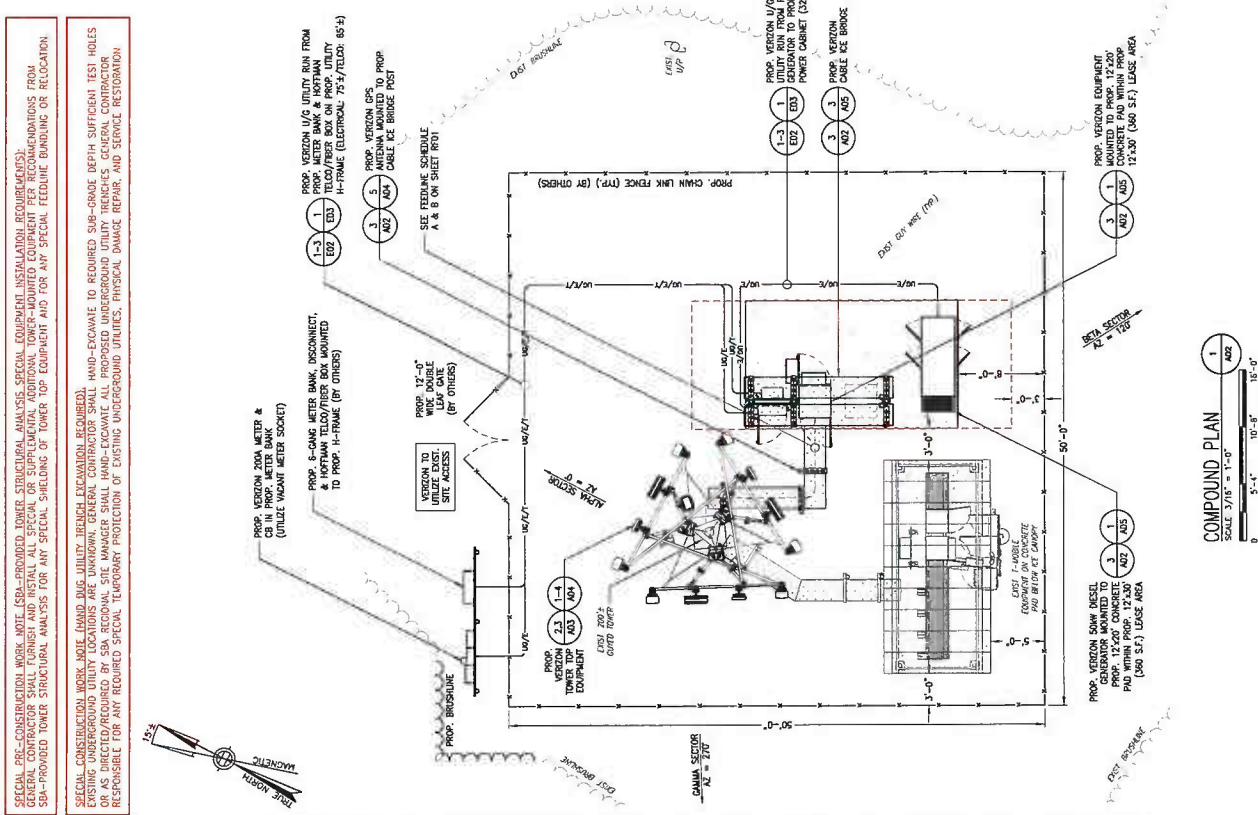
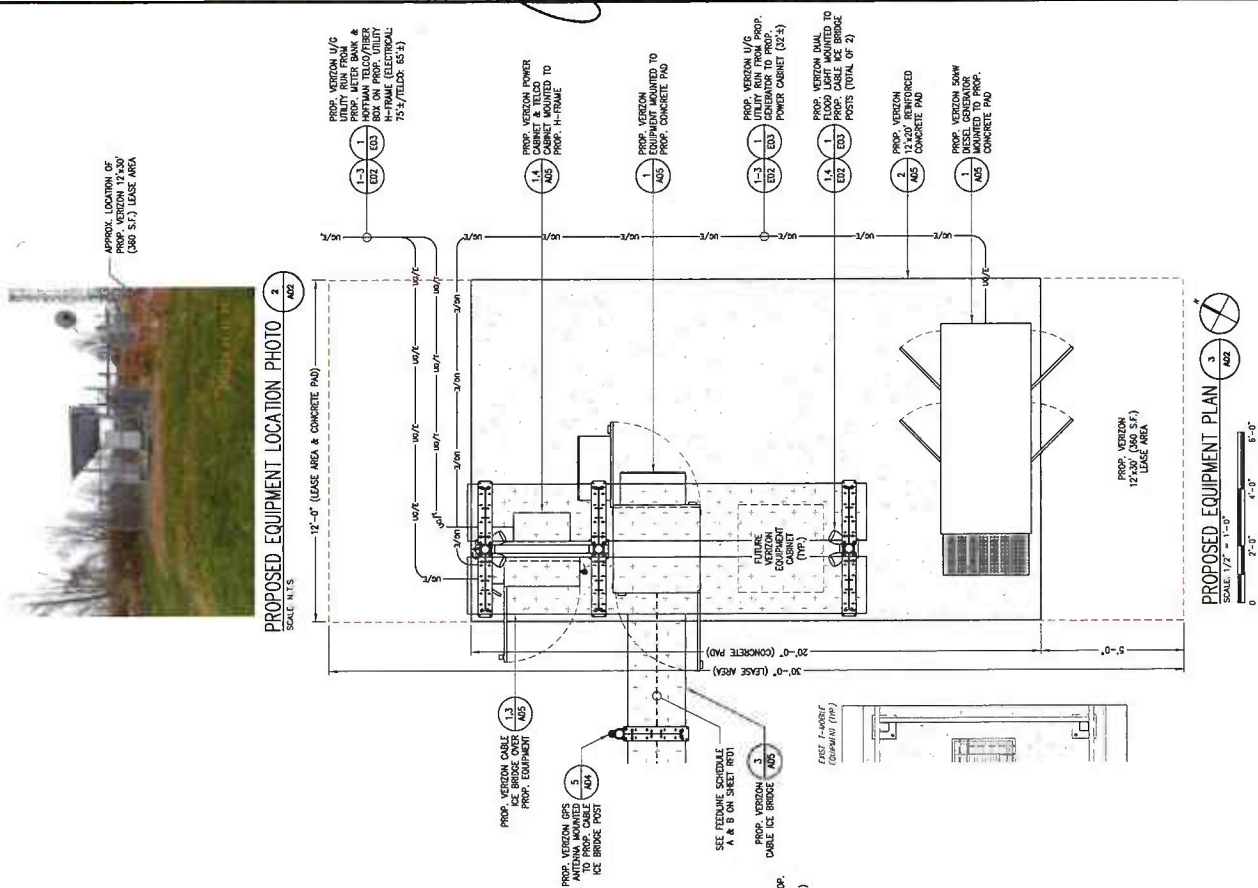
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TRUE PROJECT ID: 1702466

SHEET TITLE
COMPOUND & EQUIPMENT PLANS

SHEET NUMBER
A02

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL FEEDLINE BANDING OR RELOCATION.

SPECIAL CONSTRUCTION WORK NOTE (HARD-DUG DUG UTILITY TRENCH EXCAVATION REQUIRED):
EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH SUFFICIENT TEST HOLES RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF EXISTING UNDERGROUND UTILITIES, PHYSICAL DAMAGE REPAIR, AND SERVICE RESTORATION.



verizon

VERIZON WIRELESS
20 ALBANY DRIVE, 2ND FLOOR
ALBANY, NY 12207-0001
(518) 462-1000



SBA COMMUNICATIONS CORP.
134 JAMES STREET, SUITE 125
NEW BRIDGE, NJ 08101
(201) 237-0000



CHAPPELL
ENGINEERING
ASSOCIATES, LLC
R.E. EXECUTIVE CENTRE
301 BROADWAY ROAD, SUITE 200
NEW BRIDGE, NJ 08101
(609) 481-7000
www.chappell-engineering.com



CHECKED BY: JMT
DATE: 10/1/13
APPROVED BY: JMT
DATE: 10/1/13

REV.	DATE	DESCRIPTION	BY
1	10/1/13	ISSUED FOR CONSTRUCTION	JMT
2	10/1/13	CONSTRUCTION REVISION	JMT
3	10/1/13	ISSUED FOR CONSTRUCTION	JMT

PROJECT NAME & ADDRESS
ONECO CT
419 ECKONK HILL ROAD (ROUTE 49)
STERLING, CT 06377

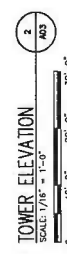
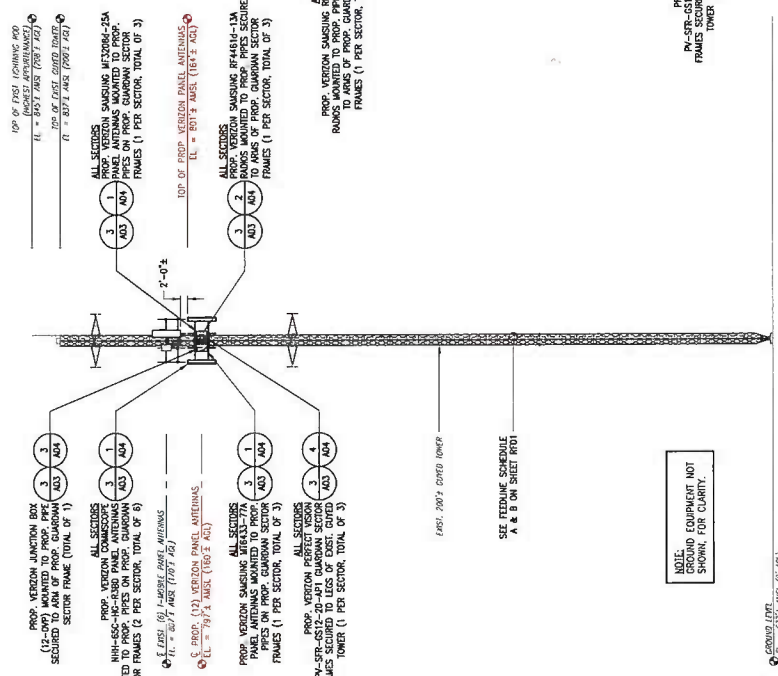
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TOWER PROJECT ID: 1700000000

SHEET TITLE
TOWER ELEVATIONS & ANTENNA PLAN

SHEET NUMBER
A03

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS)
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

RAD CENTER NOTE:
VERIZON ANTENNA AND MOUNT RAD CENTER SHOWN IN ELEVATION PHOTO. CONTRACTOR SHALL VERIFY THAT THE ANTENNA CENTER OF GRAVITY (COG) DOES NOT DIFFER FROM RAD CENTER ON RDS PROVIDED BY VERIZON.



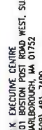
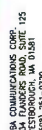
NOTE:
VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

ANTENNA STATUS LEGEND:
EMPTY - EMPTY PPE
(E) - EXISTING
(P) - INSTALL
(I) - FUTURE

PROPOSED ANTENNA PLAN
SCALE: N.T.S.

TOWER ELEVATION
SCALE: 1/8" = 1'-0"

EXISTING TOWER PHOTO
SCALE: N.T.S.



CHECKED BY:	JMT
APPROVED BY:	JMT

REV	DATE	DESCRIPTION	BY
1	05/26/28	CONSTRUCTION REVISED	CMC
2	04/21/28	ISSUED FOR CONSTRUCTION	CMC
3	04/13/28	ISSUED FOR REVIEW	CMC

ONECO CT
419 EKONK HILL ROAD (ROUTE 49)
STERLING, CT 06377

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FUZE PROJECT ID:	17602466

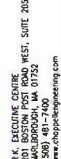
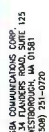
EQUIPMENT DETAILS

A05

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CLASS II (FIBRONS)	6000	50
CLASS III (FIBRONS)	10000	50
CLASS IV (LIMITED SLIPS & WALLS)	4000	50
CLASS V (LIMITED SLIPS & WALLS)	6000	50
CLASS VI (OTHER WALLS)	10000	50
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CHECKED BY:	JMT
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APPROVED BY:	JMT
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SUBMITTALS				
NO	REV	DATE	DESCRIPTION	BY
1		05/24/28	CONSTRUCTION REQUEST	CAC
2		04/21/28	ISSUED FOR CONSTRUCTION	CAC
3		04/13/25	ISSUED FOR REVIEW	CAC

STADY & SMITH (2006)

ONECO CT

419 EKONK HILL ROAD (ROUTE 49)
STERLING, CT 06377

VIEW LOCATION CODE	TBD
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1. 姓名	2. 性别	3. 年龄	4. 职业	5. 住址	6. 电话	7. 邮编	8. 电子邮箱	9. 其他

— **WEST VIRG.**

5 DATA

1007 MARCH 1994

RF01

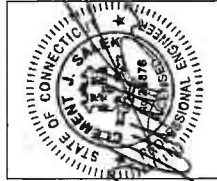
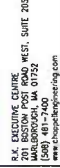
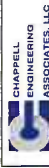
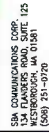
SECTOR	EQUIPMENT MAKE & MODEL	QTY	POS	AZIMUTH (TRUE NORTH)	ANTENNA RAD	BAND	MECHANICAL DOWNWELL	ELECTRICAL DOWNWELL	EQUIPMENT STATUS	H (IN)	W (IN)	D (IN)	WEIGHT (LBS)	HYBRID CABLE SIZE & QTY
ALPHA	COMSCORP NHH-55C-HC-R300 PANEL ANTENNA	1	1	0°	160°± AGL	LTE 700/850 5G B50	0°/0°	2°/2°	NEW	96.0	13.8	8.2	79.4	
	SAMSUNG WIF6433-77A PANEL ANTENNA	1	2	0°	160°± AGL	LTE 1900/850	0°/0°	1°/1°	NEW	36.2	15.8	5.9	63.5	
	SAMSUNG WIF20086-25A PANEL ANTENNA	1	3	0°	160°± AGL	LTE 1500/AMS	0°/0°	0°/0°	NEW	39.0	25.5	8.5	127.2	
	COMSCORP NHH-55C-HC-R300 PANEL ANTENNA	1	4	0°	160°± AGL	LTE 700/850 5G B50	0°/0°	2°/2°	NEW	96.0	13.8	8.2	79.4	
BETA	COMSCORP NHH-55C-HC-R300 PANEL ANTENNA	1	1	120°	160°± AGL	LTE 700/850 5G B50	0°/0°	3°/3°	NEW	96.0	13.8	8.2	79.4	
	SAMSUNG WIF6433-77A PANEL ANTENNA	1	2	120°	160°± AGL	LTE 1900/850	0°/0°	1°/1°	NEW	36.2	15.8	5.9	63.5	
	SAMSUNG WIF20086-25A PANEL ANTENNA	1	3	120°	160°± AGL	5G L56	0°/0°	0°/0°	NEW	39.0	25.5	8.5	127.2	
	COMSCORP NHH-55C-HC-R300 PANEL ANTENNA	1	4	120°	160°± AGL	LTE 700/850 5G B50	0°/0°	3°/3°	NEW	96.0	13.8	8.2	79.4	
GAMMA	COMSCORP NHH-55C-HC-R300 PANEL ANTENNA	1	1	240°	160°± AGL	LTE 700/850 5G B50	0°/0°	1°/1°	NEW	96.0	13.8	8.2	79.4	
	SAMSUNG WIF6433-77A PANEL ANTENNA	1	2	240°	160°± AGL	LTE 1900/850	0°/0°	0°/0°	NEW	36.2	15.8	5.9	63.5	
	SAMSUNG WIF20086-25A PANEL ANTENNA	1	3	240°	160°± AGL	LTE 1500/AMS	0°/0°	0°/0°	NEW	39.0	25.5	8.5	127.2	
	COMSCORP NHH-55C-HC-R300 PANEL ANTENNA	1	4	240°	160°± AGL	LTE 700/850 5G B50	0°/0°	1°/1°	NEW	96.0	13.8	8.2	79.4	
ALL	JUNCTION BOX (12-009)	3	—	—	—	—	—	—	NEW	29.6	16.5	12.6	32.0	PROP. (3) 346 HYBRID CABLES (180'±)

1. "ETR" DENOTES "EXISTING TO REMAIN".
2. "ETRE" DENOTES "EXISTING TO BE REMOVED".
3. "NEW" DENOTES "NEW TO BE INSTALLED".
4. WEIGHTS LISTED ARE WITHOUT MOUNTING BRACKETS.
5. INFORMATION IS BASED ON RFDS DATED 03/03/26.

FEEDLINE SCHEDULE			LOCATION
SCHEDULE	FEEDLINES		
A	CHANGING TO REMAIN: <i>N/A</i> EXISTING TO BE REMOVED: <i>N/A</i>		ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (1) 1/2" COAXIAL CABLE FOR GPS ANTENNA (2) GAS TIGHT CABLES (100 F)		

NOTE: THIS WORKSHEET COMPLETES INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RPTS AND FEEDLINE LEASING SITUATIONS MAY VARY.

NOTE: EXISTING VERZON EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER



CHECKED BY:	JMT
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APPROVED BY:	JMT
--------------	-----

SUBMITTALS				
REV	DATE	DESCRIPTION	BY	
2	05/26/78	CONSTRUCTION RENEG		CAC
1	04/21/78	ISSUED FOR CONSTRUCTION		CAC
0	04/13/78	ISSUED FOR REVIEW		CAC

PROJECT NAME & ADDRESS

ONECO CT

419 EKONK HILL ROAD (ROUTE 49)
STERLING, CT 06377

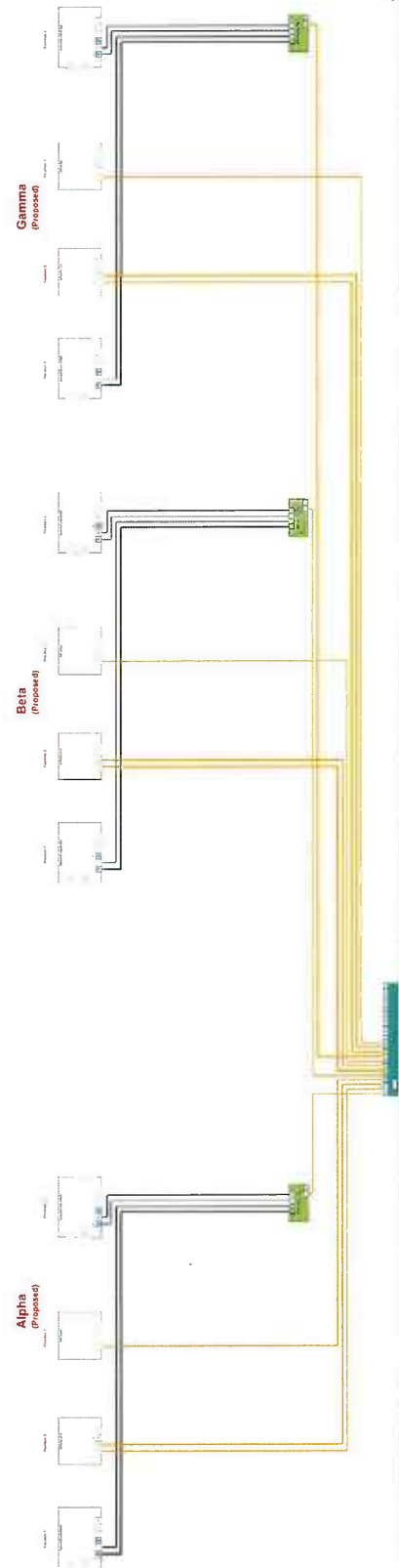
VZW LOCATION CODE:	1780
WDC LOCATION ID	5000992832
FUZE PROJECT ID	17802466

7/11/13/16

RF PLUMBING DIAGRAM

SHEET NUMBER

RF02



RF PLUMBING DIAGRAM
SCALE N.T.S.

1 / RF02



VERIZON WIRELESS
20 ALEXANDER DRIVE, 2ND FLOOR
STURLING, CT 06377
(203) 741-7235



520 COMMERCIAL CORP
134 FARMERS ROAD, SUITE 125
WESSINGBOROUGH, MA 01581
(413) 517-0760



CHAPPELL
ENGINEERING
ASSOCIATES, LLC
P.O. BOX 1000
WEST, SUITE 205
WESSINGBOROUGH, MA 01581
(413) 517-0760
www.chapellengineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV. DATE DESCRIPTION BY

1 01/15/15 ISSUED FOR DISTRIBUTION JMT

2 01/15/15 CONSTRUCTION RATED JMT

3 01/15/15 ISSUED FOR REVIEW JMT

PROJECT NAME & ADDRESS

ONECO CT

419 EXONK HILL ROAD (ROUTE 49)
STERLING, CT 06377

VIEW LOCATION CODE

WSS LOCATION ID: 500000000

FILE PRODUCT ID: 17000000

SHEET TITLE

RF COLOR CODE SPECIFICATIONS

SHEET NUMBER

RF03

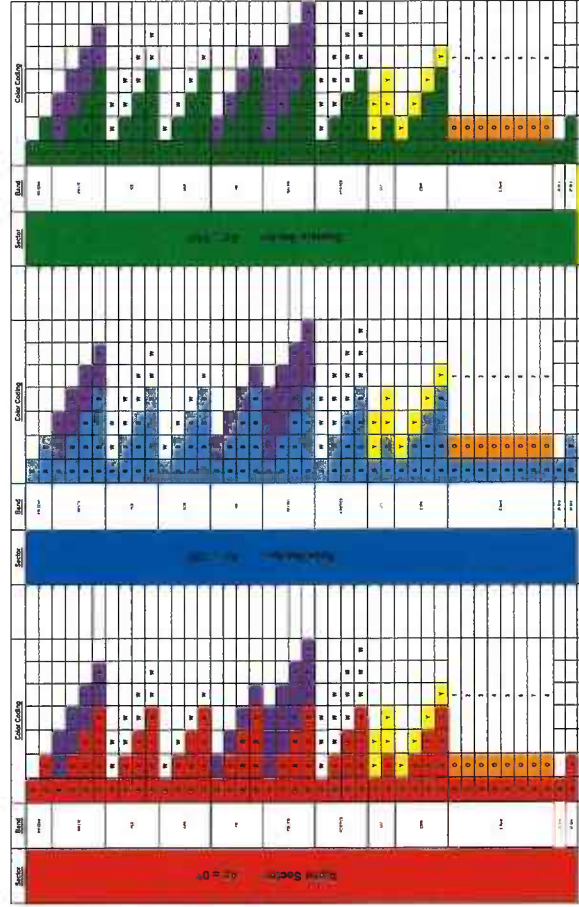
2125-242

Hybrid Cable on Towers

Sector	Identification Color	-48V	RTN
700 Alpha	Blue	Blue	Blue
AWS Alpha	Purple	Purple	Purple
PCS Alpha	Green	Green	Green
850 Alpha	Brown	Brown	Brown
Spare	Yellow	Yellow	Yellow
Spare	White	White	White

Sector	Identification Color	-48V	RTN
700 Beta	Blue	Blue	Blue
AWS Beta	Purple	Purple	Purple
PCS Beta	Green	Green	Green
850 Beta	Brown	Brown	Brown
Spare	Yellow	Yellow	Yellow
Spare	White	White	White

Sector	Identification Color	-48V	RTN
700 Gamma	Blue	Blue	Blue
AWS Gamma	Purple	Purple	Purple
PCS Gamma	Green	Green	Green
850 Gamma	Brown	Brown	Brown
Spare	Yellow	Yellow	Yellow
Spare	White	White	White



CABLE NOTE:
SEE FEEDLINE SCHEDULE A & B ON SHEET RF01
FOR EXISTING & PROPOSED CABLE QUANTITIES.

LINE COLOR CODE SPECIFICATIONS

1

RF03

HYBRID CABLE COLOR CODE SPECIFICATIONS

2

RF03

SCALE: N.T.S.

verizon

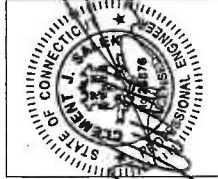
VERIZON WIRELESS
250 ALABAMA DRIVE, 2ND FLOOR
ANN ARBOR, MI 48106-0642
(734) 744-7234



SBA COMMUNICATIONS CORP
124 PARKSIDE ROAD, SUITE 125
ANN ARBOR, MI 48106-0642
(734) 753-8775



CHAPPELL & ASSOCIATES, LLC
R.E. EXECUTIVE CENTRE
301 BROADWAY, SUITE 205
ANN ARBOR, MI 48106-0742
(734) 481-1000
www.chappell-engineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV	DATE	DESCRIPTION	BY
1	06/27/19	ISSUED FOR CONSTRUCTION	JMT
2	06/27/19	CONSTRUCTION REVISION	JMT
3	06/27/19	ISSUED FOR CONSTRUCTION	JMT
4	06/27/19	ISSUED FOR CONSTRUCTION	JMT

PROJECT NAME & ADDRESS

ONECO CT
419 EXONK HILL ROAD (ROUTE 49)
STERLING, CT 06377

KEY LOCATION CODE

KEY LOCATION CODE

TRUE PROJECT ID

TRUE PROJECT ID

EQUIPMENT

PLAN & DETAILS

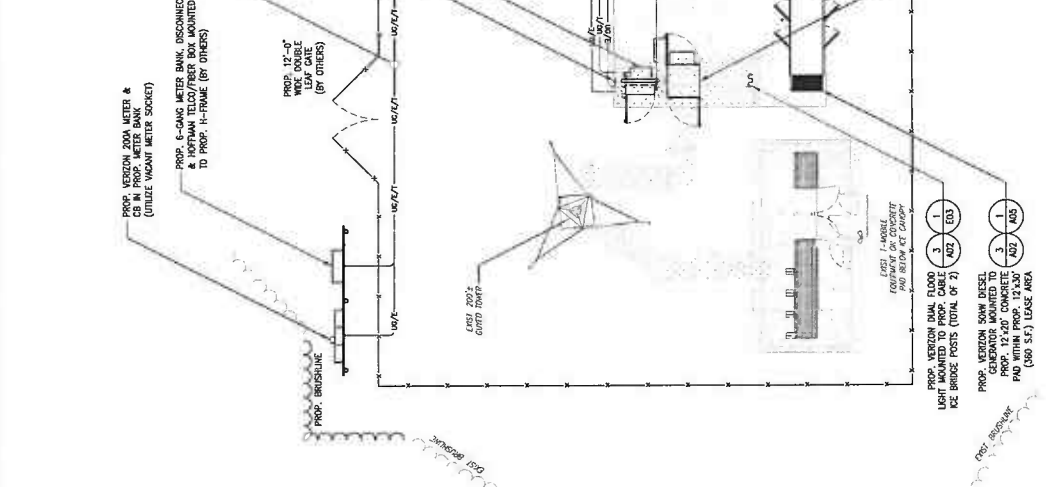
SHEET NUMBER

E02

FILE NO.

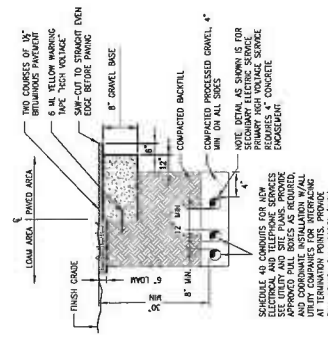
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED) LOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS.
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM
SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FLOODING BUILDING OR RELOCATION.

SPECIAL CONSTRUCTION WORK NOTE (HAND-DIG DUG UTILITY TRENCH EXCAVATION REQUIRED).
EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH SUFFICIENT TEST HOLES
BEING IDENTIFIED/ACQUIRED BY SBA-PROVIDED TOWER STRUCTURAL ANALYSIS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF EXISTING UNDERGROUND UTILITIES, PHYSICAL DAMAGE, REPAIR, AND SERVICE RESTORATION.

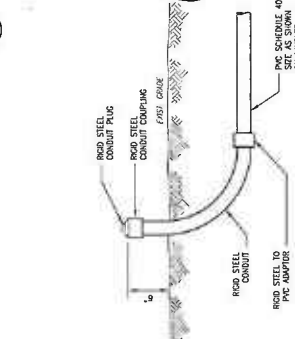


EQUIPMENT COMPOUND UTILITY PLAN

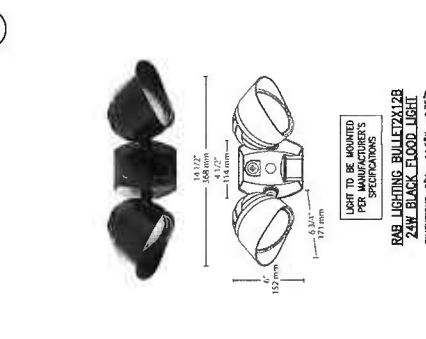
SCALE: 3/16" = 1'-0"



TYPICAL BURIED CONDUIT DETAIL



TYPICAL CONDUIT STUB-UP DETAIL



TYPICAL LED FLOOD LIGHT DETAIL

SCALE: N.T.S.



VERIZON WIRELESS
20 ALEXANDER DRIVE, 2ND FLOOR
MILWAUKEE, WI 53212
(414) 224-1234



SBA COMMUNICATIONS CORP.
134 DANDLER ROAD, SUITE 125
DANDLER, WI 53115
(262) 231-9175



CHAPPELL ASSOCIATES, LLC
R/E EXECUTIVE CENTER
300 WISCONSIN DRIVE, SUITE 203
MILWAUKEE, WI 53212
(414) 481-7400
www.chapellassociates.com



CHECKED BY: JMT

APPROVED BY: JMT

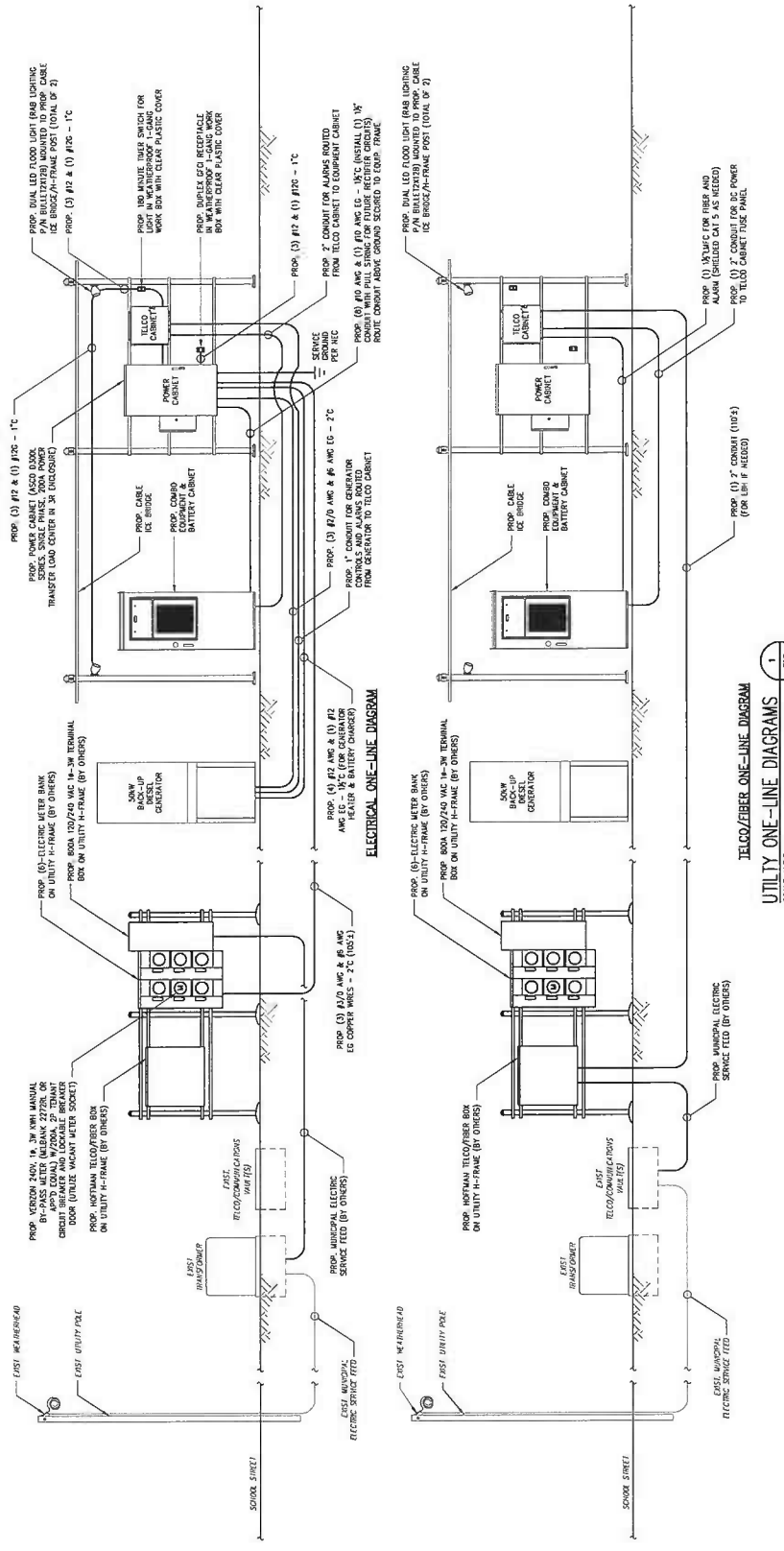
SUBMITTALS		
REV	DATE	DESCRIPTION
1	05/27/15	ISSUED FOR CONSTRUCTION
2	05/27/15	CONSTRUCTION REVISION
3	06/15/15	ISSUED FOR REVIEW

PROJECT NAME & ADDRESS
ONECO CT
419 EXONK HILL ROAD (ROUTE 49)
STERLING, CT 06377

DATE: 05/27/15
PROJECT NO.: 5000000320
SHEET NO.: 1782406

SHEET TITLE
**ELECTRIC/TELECOM
DIAGRAMS & PANEL
SCHEDULE**

SHEET NUMBER
E03



UTILITY CONTACTS

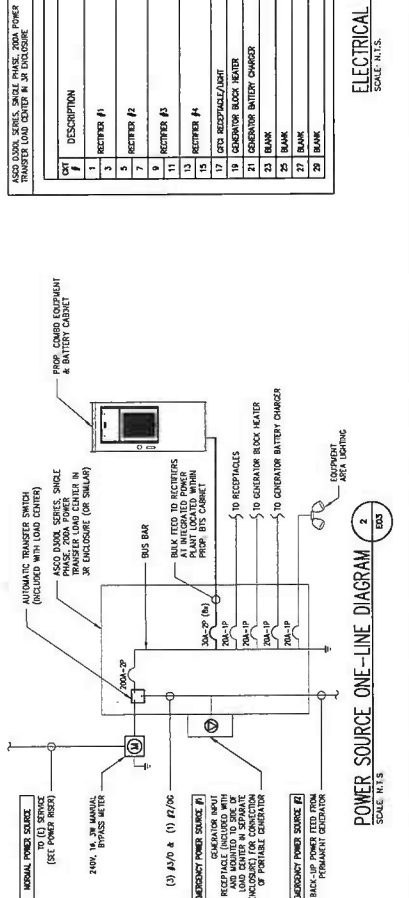
ELECTRICAL: PERKSOURCE ENERGY
247 SANDY DRIVE, SE 210
MILWAUKEE, WI 53208
(414) 441-5810

TELEPHONE: VERIZON
134 DANDLER ROAD, SUITE 125
DANDLER, WI 53115
(262) 231-9175

MAKE ALL CONNECTIONS AS PER UTILITY COMPANY'S REQUIREMENTS

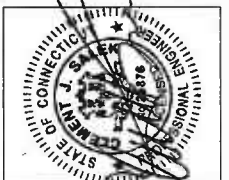
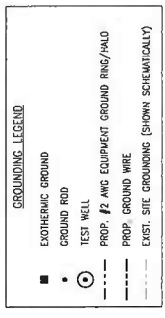
ELECTRICAL PANEL SCHEDULE

NO.	DESCRIPTION	AMP	TYPE	NO.	DESCRIPTION	AMP	TYPE
1	RECEPT #1	30	RECEPT #1	11	RECEPT #1	30	RECEPT #1
2	RECEPT #2	30	RECEPT #2	12	RECEPT #1	30	RECEPT #1
3	RECEPT #3	30	RECEPT #3	13	RECEPT #1	30	RECEPT #1
4	RECEPT #4	30	RECEPT #4	14	RECEPT #1	30	RECEPT #1
5	RECEPT #5	30	RECEPT #5	15	RECEPT #1	30	RECEPT #1
6	RECEPT #6	30	RECEPT #6	16	RECEPT #1	30	RECEPT #1
7	RECEPT #7	30	RECEPT #7	17	RECEPT #1	30	RECEPT #1
8	RECEPT #8	30	RECEPT #8	18	RECEPT #1	30	RECEPT #1
9	RECEPT #9	30	RECEPT #9	19	RECEPT #1	30	RECEPT #1
10	RECEPT #10	30	RECEPT #10	20	RECEPT #1	30	RECEPT #1
11	RECEPT #11	30	RECEPT #11	21	RECEPT #1	30	RECEPT #1
12	RECEPT #12	30	RECEPT #12	22	RECEPT #1	30	RECEPT #1
13	RECEPT #13	30	RECEPT #13	23	RECEPT #1	30	RECEPT #1
14	RECEPT #14	30	RECEPT #14	24	RECEPT #1	30	RECEPT #1
15	RECEPT #15	30	RECEPT #15	25	RECEPT #1	30	RECEPT #1
16	RECEPT #16	30	RECEPT #16	26	RECEPT #1	30	RECEPT #1
17	RECEPT #17	30	RECEPT #17	27	RECEPT #1	30	RECEPT #1
18	RECEPT #18	30	RECEPT #18	28	RECEPT #1	30	RECEPT #1
19	RECEPT #19	30	RECEPT #19	29	RECEPT #1	30	RECEPT #1
20	RECEPT #20	30	RECEPT #20	30	RECEPT #1	30	RECEPT #1



SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS, SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL CONSTRUCTION WORK NOTE (HAND-DIG DUE TO UTILITY BREACH EXCAVATION REQUIRED):
EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH SUFFICIENT TEST HOLES OR AS DIRECTED/REQUIRED BY SBA. GENERAL CONTRACTOR SHALL HAND-EXCAVATE AND REPAIR ALL UNDERGROUND UTILITIES, PHYSICAL DAMAGE, REPAIR, AND SERVICE RESTORATION RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF EXISTING UNDERGROUND UTILITIES, PHYSICAL DAMAGE, REPAIR, AND SERVICE RESTORATION.



ELECTRICAL AND GROUNDING NOTES:

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT OBSCURED.
- SERVICE TO CMP SHALL BE 1/2" O.D. MC, 200 AMP, 14, 60 Hz.
- THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING AND SCHEDULING ALL WORK TO PREVENT ANY LOSS OF COMMUNITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- GROUNDING
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (WELDED) CONNECTIONS.
- ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (WELDED).
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE EXOTHERMIC (WELDED).
- ALL EXTERIOR CONNECTIONS TO THE GROUND RING SHALL START AT THE TOP & MAKE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE #2 AWG SOLID TINNED COPPER WELDED TOGETHER.
- DOWN LEADS SHALL BE COPPER CLAD STEEL, 6/19, 10'-12' LONG, AND SHALL BE GROUND VERTICALLY WITH THEIR WPS 48" BELOW FINAL GRADE.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR SPACED OUT. THE PROPOSED GROUNDING CONDUCTORS SHALL BE ADDED WHEN 45' BENDS CAN BE ACCURATELY SUPPORTED.
- USE OF 90° BENDS IN THE PROPOSED GROUNDING CONDUCTORS SHALL BE ADDED WHEN 45' BENDS CAN BE ACCURATELY SUPPORTED.
- MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL BE 5 OHMS. THE SUBCONTRACTOR SHALL VERIFY THIS BY MEANS OF AN ACCURATE MEASUREMENT IN ACCORDANCE WITH PROJECT SPECIFICATION FOR FACILITY GROUNDING, LONG FALL OF POTENTIAL METHOD.
- ANTENNA GROUND RINGS SHALL BE FURNISHED BY VERIZON AND INSTALLED BY CONNOR.

CHECKED BY: JAT
APPROVED BY: JAT

SUBMITTALS

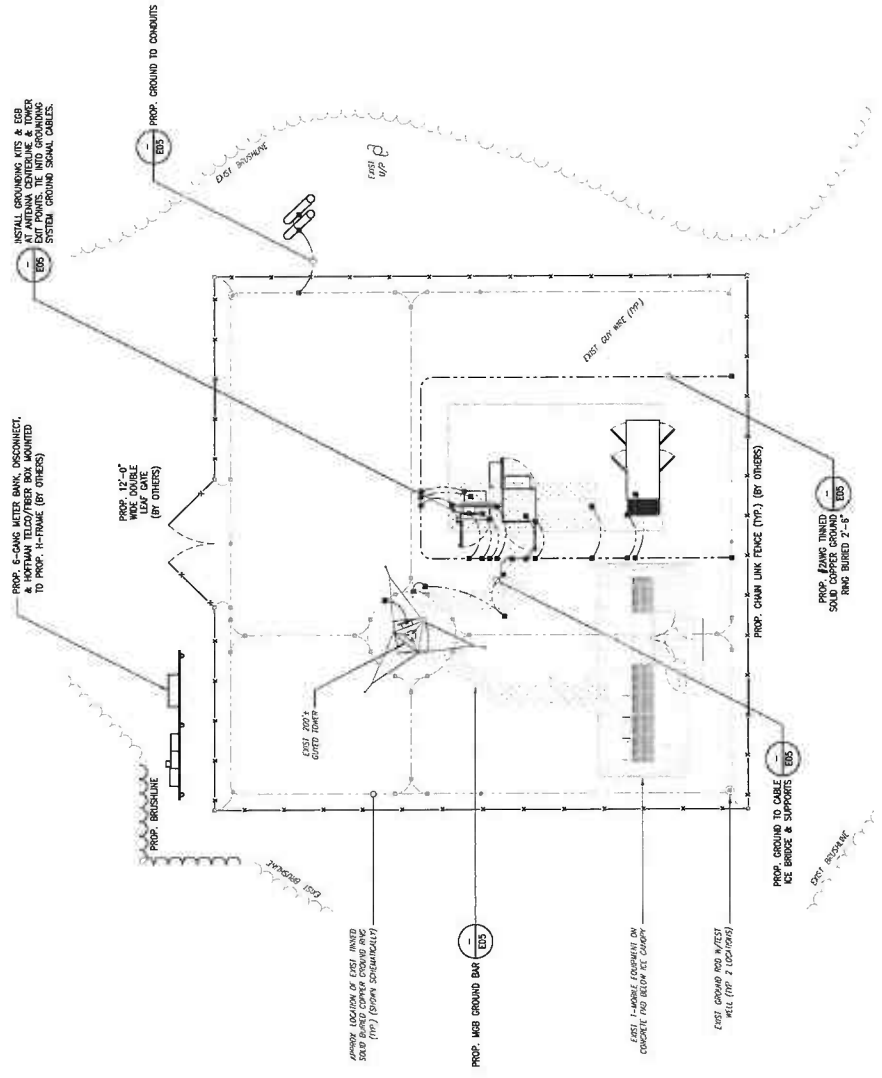
REV	DATE	DESCRIPTION	BY
1	06/27/20	ISSUED FOR CONSTRUCTION	JAT
2	06/29/20	CONSTRUCTION REVISED	JAT
3	06/29/20	ISSUED FOR REVIEW	JAT

PROJECT NAME & ADDRESS
ONECO CT
419 ECHO HILL ROAD (ROUTE 49)
STEAMING, CT 06377

1/2" LOCATION CODE: 100
1/2" LOCATION ID: 5000000000
1/2" PROJECT ID: 170000000

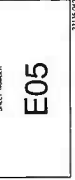
SHEET TITLE
SCHEMATIC GROUNDING PLAN & RISER DIAGRAM

SHEET NUMBER
E04

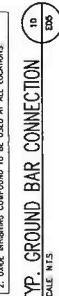
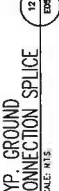
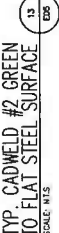
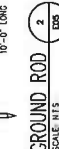


SCHEMATIC GROUNDING DIAGRAM
SCALE: 3/16" = 1'-0"
10'-0"

TYP. ANTENNA GROUNDING RISER
SCALE: N.T.S.

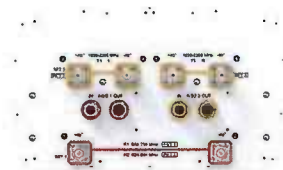


TYP. INTERIOR &
EXTERIOR GROUND BAR



ATTACHMENT 3

NHH-65C-HG-R3BD



6-port Next Generation PerforMax™ sector antenna, 2x 698-894 and 4x 1695-2360 MHz, 65° HPBW, 3x RETs and 2x SBTs

- Powered by Andrew's SEED® technology (Sustainable Energy Efficient Design)
- Antenna optimized for higher gain with superior radiation efficiency
- Designed to reduce SUB 1 alarm triggers with pattern consistency between low band and mid band
- Superior patterns for enhanced interference mitigation resulting in improved SINR, higher throughput, and more capacity
- Interleaved dipole technology results into an attractive, low wind load mechanical package
- Internal SBTs allow remote RET control from the radio over the RF jumper cable
- The low band array is internally duplexed for an independent tilt at 700 MHz and 850 MHz
- Best in class PIM immunity

General Specifications

Antenna Type	Sector with internal RET and bias tee
Band	Multiband
Color	Light Gray (RAL 7035)
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	Aluminum Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, mid band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male
Input Voltage	10-30 Vdc

NHH-65C-HG-R3BD

Internal Bias Tee	Port 1 Port 3
Internal RET	Low band (2) Mid band (1)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0

Dimensions

Width	350 mm 13.78 in
Depth	208 mm 8.189 in
Length	2438 mm 95.984 in
Net Weight, without mounting kit	36 kg 79.366 lb

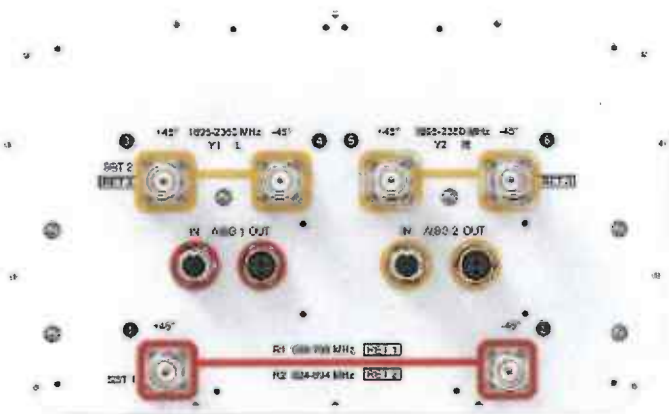
Array Layout

Array ID	Frequency (MHz)	RF Connector	RET	AISG Freq.	SST Ref. Port	SST No.	REF UID
R1	700-756	1 - 2	1	AISG1	1	1	CPxxxxxxxxxxxxxxxxR1
R2	804	1 - 2	2	AISG2	1	1	CPxxxxxxxxxxxxxxxxR2
V1	1605-2000	3 - 4	3	AISG2	3	2	CPxxxxxxxxxxxxxxxxR1
V2	1605-2160	5 - 6					

PLEASE CONSULT THE SPECIFICATIONS FOR OUR REVISIONS OF THE CODE

Port Configuration

NHH-65C-HG-R3BD



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz 698 – 798 MHz 824 – 894 MHz
Polarization	±45°
Total Input Power, maximum	800 W @ 50 °C

Electrical Specifications

	R1	R2	Y1,Y2	Y1,Y2	Y1,Y2	Y1,Y2
Frequency Band, MHz	698–798	824–894	1695–1880	1850–1990	1920–2200	2200–2360
RF Port	1,2	1,2	3,4,5,6	3,4,5,6	3,4,5,6	3,4,5,6
Gain, Maximum, dBi	16.7	16.3	19.5	19.9	19.9	19.9
Gain, dBi	16.3	16.1	19.1	19.6	19.6	19.7
Beamwidth, Horizontal, degrees	62	60	61	59	61	61
Beamwidth, Vertical, degrees	8.7	7.6	5.1	4.8	4.5	4.2
Beam Tilt, degrees	0–11	0–11	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	16	15	15	18	19	20
Front-to-Back Ratio at 180°, dB	29	32	30	40	37	36
CPR at Boresight, dB	21	19	22	26	23	22
Isolation, Cross Polarization,	25	25	25	25	25	25

NHH-65C-HG-R3BD

dB						
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	150	150	250	250	250	200

Mechanical Specifications

Wind Loading @ Velocity, frontal	425.0 N @ 150 km/h (95.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	361.0 N @ 150 km/h (81.2 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	900.0 N @ 150 km/h (202.3 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	451.0 N @ 150 km/h (101.4 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	456 mm 17.953 in
Depth, packed	357 mm 14.055 in
Length, packed	2585 mm 101.772 in
Weight, gross	50.2 kg 110.672 lb

Regulatory Compliance/Certifications

Agency	Classification
UK-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.
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* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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Gen 3 C-band 64T64R MMU

Specifications



SAMSUNG

Item		Gen.3 C-Band 480W 64T64R
Part Number		MT6433-77A
Air Technology		SFG-ARM4AT01VZ
Band		5G NR
Frequency		n77 (C-band)
IBW		3,700 ~ 3,980 MHz
OBW		200 MHz
Carrier configuration	Ch. BW	200 MHz
	# of carriers per band	20/40/60/80/100 MHz
	# of carriers (per unit)	2 CC
TRX path configuration		Max 2CC
Antenna configuration		64T64R
Conductive power		4V16H, 256AE (4 x 1 sub-array) H 0.54A, V 0.71A @ 3.84GHz
EIRP		480 W
EVM		83.41 dBm @ 56.81 dBm (480W) + 26.6 dBi
Modulation		3.5 % (256 QAM)
Ref. sensitivity		DL 256 QAM support (DL 1024 QAM with 1~2 dB power back-off) Typical -98dBm @ (1Rx, 18.36MHz with 30kHz, 51RBs)
Unwanted emission	3GPP	38.104 Wide Area, Cat. B
	Local regulation	FCC 47 CFR 27.53 : <-13dBm/MHz,
	Operator's request	<-40 dBm /MHz @ 4,000 ~ 4,040 MHz, less than 3,680 MHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz, <-60 dBm /MHz @ above 4,050 MHz
MIMO capacity		DL 16L, UL 64R / 16R / 8R PUSCH Receiver Dimension Adaptation (RDA) supported in 7-2x split option (default: 16Rx)
Function split		Opt. 7-2x Cat. B (ULPI support : 27B)
Optic interface		25/50 Gbps x 3 port (15/30km Bi-di or 15km tunable DWDM Duplex)
Input voltage		-48 VDC (-38 VDC ~ -58 VDC)
Power consumption (w/o ALD)		Typical 1,465W (100% load, room temp.) ~ 7-2x Typical 1,472W (100% load, room temp.) ~ ULPI Typical 1,524W (100% load, overall temp.) ~ ULPI
Volume / Dimension (W x H x D)		55.2 L / 15.75 x 36.22 x 5.9 inch (400 x 920 x 149.8 mm)
Weight		63.49 lb (28.8kg)
Operating temperature		-40°C (-40°F) ~ 55°C (131°F) (w/o solar load)
Cooling scheme		Natural convection
Installation		Pole, Wall
UDA		4 Rx
Misc. features		Spectrum analyzer (TX / RX)

AWS/PCS 32T32R 320W MMU
Antenna/Remote Radio Head Model No. MF3208d-25A
Specifications

SAMSUNG



* HW ready
** power booster is required (not supplied by Samsung)

AWS/PCS 32T32R MMU	
Air Technology	LTE / NR
Band	B25, n25 (PCS) B66, n66 (AWS)
Frequency	DL: 1930 – 1995 MHz, UL: 1850 – 1915 MHz DL: 2110 – 2200 MHz, UL: 1710 – 1780 MHz
IBW	65 MHz
OBW	30 MHz
Carrier Bandwidth	LTE: 5/10/15/20 MHz, NR: 5/10/15/20/25/30/40 MHz
# of Carriers	Max 3 CC
Total # of Carriers	Max 6 CC (CBW ≥ 30 MHz; max 1 CC)
MIMO Capacity	DL 8L, UL 8RX
RF Chain	32T32R
Antenna Configuration	2Y16H with 128 AE (4 x 1 sub-array)
Beam gain	LTE (Common / UE beam) 16.5 dBi / 19.5 dBi NR (Common / UE beam) 16.5 dBi / 23.7 dBi
Conductive Power Spectrum Analyzer	320 W (shareable between AWS & PCS)
RX Sensitivity	LTE: Typical -104 dBm @1Rx (15 kHz, 25 RBs, room temp), -103.5 dBm (all temp) NR: Typical -103.8 dBm @1Rx (15 kHz, 25 RBs, room temp), -103.3 dBm (all temp)
Modulation	DL 256 QAM support (DL 1024QAM with 1~2 dB power back-off)
Function Split	DL/UL Option 7-2x (ULPI support : 26B)
Input Power	-48 VDC (-42 ~ -58 VDC)**
Power Consumption	Typ. 1.688 W @100% load, room temp. Typ. 1.793 W @100% load, all temp.
Size (WHD)	25.50 x 38.98 x 8.46 inch (647.6 x 990 x 215 mm)
Volume	137.85 L
Weight	127.2 lb (57.7 kg)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (w/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104, 38.104 FCC CFR 47.24.238
Optic Interface	[BAS]-35 dBm/100 kHz@2109.45 MHz per port
Mounting Options	25 Gbps x 4 port (15/30km Bi-di or 15km tunable DWDM Duplex)
NB-IoT	Pole, wall, tower
External Alarm	4 IB
Fronthaul Interface	4RX eCPRI
Compression	8FFC 9bit

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

SAMSUNG

Specifications



Item	Specification
Air Interface	LTE NR(HW resource ready)
Band	Band5 (850MHz)
Frequency	DL: 869~894MHz UL: 824~849MHz
IBW	25MHz
OBW	25MHz
Carrier Bandwidth	LTE 5/10MHz
# of carriers	NR 5/10/15/20MHz
Total # of carriers	3C
RF Chain	4C + B13 (SDL) 1C 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 FCC 47 CFR 27.53 (c), (f) -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	Not supported
Bias-T	Also 3.0
Mounting Options	4 ports (2 ports per band) Pole, wall
PIM Cancellation	2GB+2IB or 4IB
# of antenna port	Support 4
External Alarm	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)
Fronthaul Interface	Not 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

ATTACHMENT 4



TES

A **CONGRUEX**® COMPANY

Tower Engineering Solutions, LLC
1320 Greenway Drive, Suite 600, Irving, Texas 75038
Phone: (972) 483-0607, Fax: (972) 975-9615

Structural Analysis Report

<u>Structure Information</u>	Tower Type	Existing 200 ft Pirod Guyed Tower
<u>Customer Information</u>	Name	SBA Communications Corp
	Site Number	CT20001-A
	Site Name	STERLING CT TOWER
<u>Carrier Information</u>	Name	Verizon
	Site ID / Name	5000992832 / Oneco_CT
	App #	304583-3,
<u>Site Information</u>	Address:	419 Ekonk Hill Road (Rt-49) Sterling, Connecticut 06377, WINDHAM County
	Latitude:	41.662222°
	Longitude:	-71.846944°

Analysis Result:

Max Structural Usage: **83.0% [Pass]**

Max Foundation Usage: **60.0% [Pass]**

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Tawfeeq Alajaj

Cesar
Rojas,
PE

Digitally signed
by Cesar Rojas,
PE
Date:
2026.05.19
13:32:38 -05'00'



Introduction

The purpose of this report is to summarize the analysis results on the 200 ft Pirod Guyed Tower to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Document Type	Remarks
Tower Drawings	Original design drawings prepared by PiROD, Inc. Dated 11-04-1988. Drawing No 112268-B. Job No A-106,708.
Foundation Drawing	Original foundation drawings prepared by PiROD, Inc. Dated 11-04-1988. Drawing No 112268-B. Job No A-106,708.
Geotechnical Report	Geotechnical report prepared by FDH Engineering, Inc. Dated 08-09-2012. Project No 1207123EG1.
Modification Drawings	N/A
Mount Analysis	Colliers Engineering & Design Project #: 25777809 (Rev 1). Dated 03/17/2026.

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. In accordance with this standard, the structure was analyzed using TESTowers, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Codes and Standards	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code	
Wind Parameters	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} :	125.0 mph
	Ice Wind Speed (3-sec. Gust):	50.0
	Design Ice Thickness:	1.00"
	Service Load Wind Speed:	60 mph + 0" Radial ice
	Exposure Category:	C
	Risk Category:	II
	Ground Elevation Factor (K_e):	0.978
Topographic Parameters	Method:	Method 1
	Feature Type:	Flat
	Crest Height (H):	0 ft
	Length of Feature (L):	0.0 ft
	Distance to crest (x):	0.0 ft
Seismic Parameters:	S_s	0.187 g
	S_1	0.054 g

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

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	195.0	1	120" Omni	(1) Side Arm	(1) 7/8"	Marc Dodge
2	178.0	1	Decibel DB809 Omni	(1) Side Arm	(1) 7/8"	American Messaging
3	170.0	3	RFS APXVAALL24_43-U-NA20 - Panel	(3) SitePro VFA12-HD Sector Frames	(3) 1.9" Hybrid	T-Mobile Sprint
4		3	Ericsson AIR6449 B41 - Panel			
5		3	Ericsson 4480 B71 + B85 RRU			
6		6	ALU 800 MHz RRUs			
7		3	Ericsson 4460 B25 + B66 RRU			
13	150.0	3	JMA Wireless MX08FRO665-21 - Panel	(1) Commscope MTC3975083	(1) 1.6" Hybrid	Dish Wireless
14		3	Fujitsu TA08025-B604 RRU			
15		3	Fujitsu TA08025-B605 RRU			
16		1	Raycap RDIDC-9181-PF-48 - OVP			
17	140.0	1	Decibel DB809 Omni	(1) Side Arm	(2) 1/4"	Arch Wireless
18	99.0	1	ASPC680 (96") Omni	(1) Side Arm	(1) 1/2"	Plainfield Municipal
19	41.0	1	Larsen YA2-540 (36") - Yagi	Direct	(1) 7/8"	
20	39.0	1	Larsen YA2-540 (36") - Yagi	Direct	(1) 3/8"	
21	25.0	1	36" - Dish	(1) Pipe Mount	(2) 1/4"	American Messaging
22	14.0	1	36" - Dish	(1) Pipe Mount	(1) 7/8"	Arch Wireless

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
8	160.0	6	Andrew / Commscope- NHH-65C-HG-R3BD - Panel	(3) Sector Frame PV-SFR-GS12-20-AP1	(3) 1 1/2" Hybrid	Verizon
9		3	Samsung - MT6433-77A - Panel			
10		3	Samsung - MF3208d-25A - Panel			
11		3	Samsung RF4461d-13A - RRU			
12		1	12 OVP - OVP			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

Tower Component	Utilization %	Pass / Fail
Max Leg	72.4%	Pass
Max Diagonal	69.6%	Pass
Max Horizontal	40.3%	Pass
Max Cable	83.0%	Pass
Structure Rating – (Controlling Utilization of all Components)		83.0%

Foundations

	Base Reactions		Inner Anchors	
	Axial	Shear	Uplift	Shear
Reactions (kips)				
Analysis Reactions	81.5	1.0	32.1	29.8

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Service Load Condition (Rigidity)

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.1405 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a comprehensive structural analysis.

Structure: CT20001-A-SBA

Site Name: STERLING CT TOWER

Type: Guyed

Height: 200.00 (ft)

Base Elev: 0.00 (ft)

Base Shape: Triangle

Base Width: 0.00

Top Width: 3.00

Code: TIA-222-H

Basic WS: 125.00

Basic Ice WS: 50.00

Operational WS: 60.00

Ice Thickness: 1.00

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Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1-11	SOL 1 3/4" SOLID	SOL 3/4" SOLID	SOL 3/4" SOLID

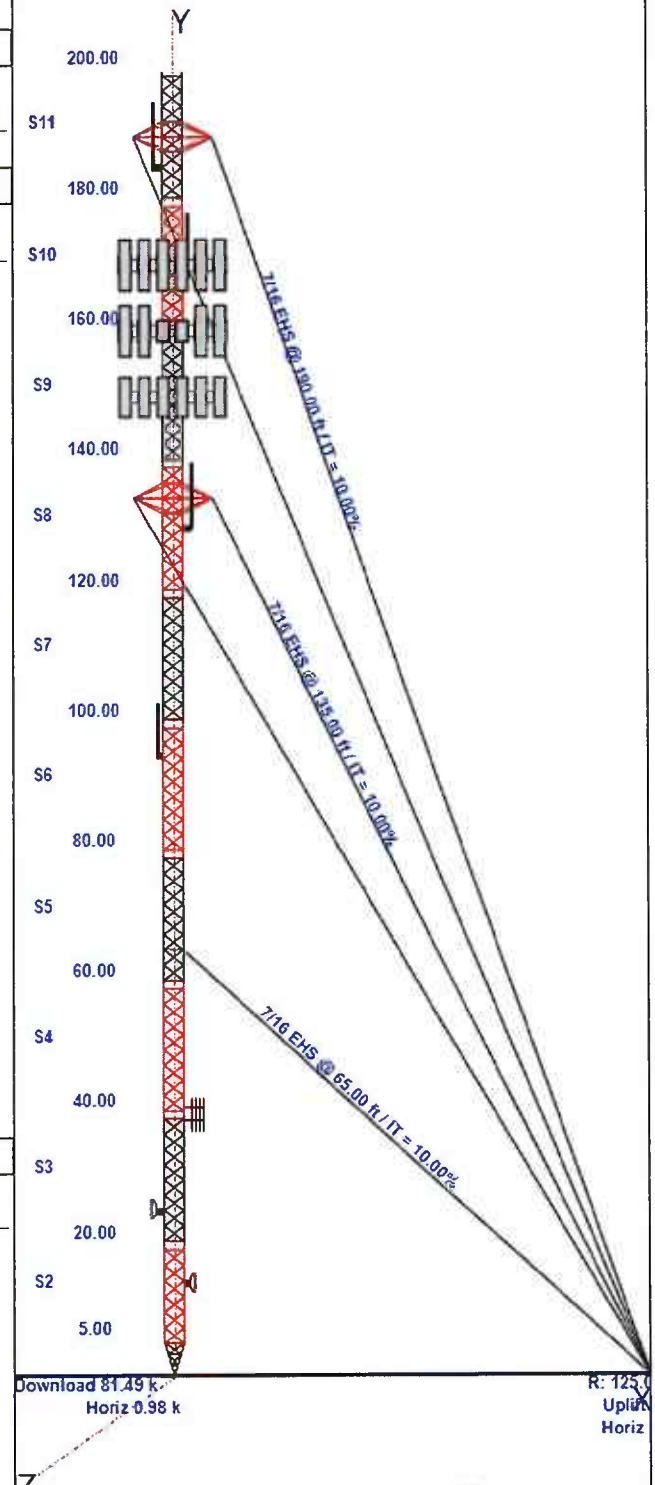
Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description
200.00	200.00	1	Beacon
185.00	190.00	1	120" Omni
185.00	185.00	1	Side Arm
170.00	170.00	1	(3) SitePro VFA12-HD Sector Frames
170.00	170.00	3	RFS APXVAALL24_43-U-NA20
170.00	170.00	3	Ericsson AIR6449 B41
170.00	170.00	3	Ericsson 4480 B71 + B85 RRU
170.00	170.00	6	ALU 800 MHz RRUs
170.00	170.00	3	Ericsson 4460 B25 + B66 RRU
168.00	173.00	1	Decibel DB809
168.00	168.00	1	Side Arm
160.00	160.00	6	NHH-65C-HG-R3BD
160.00	160.00	3	MT6433-77A
160.00	160.00	3	MF3208d-25A
160.00	160.00	3	PV-SFR-GS12-20-AP1
160.00	160.00	3	RF4461d-13A
160.00	160.00	1	OVP
150.00	150.00	3	JMA Wireless MX08FRO665-21
150.00	150.00	3	Fujitsu TA08025-B604
150.00	150.00	3	Fujitsu TA08025-B605
150.00	150.00	1	Raycap RDIDC-9181-PF-48
150.00	150.00	1	Commscope MTC3975083
130.00	135.00	1	Decibel DB809
130.00	130.00	1	Side Arm
95.00	99.00	1	ASPC680 (96")
95.00	95.00	1	Side Arm
41.00	41.00	1	Larsen YA2-540 (36")
39.00	39.00	1	Larsen YA2-540 (36")
25.00	25.00	1	36" Dish
25.00	25.00	1	Pipe Mount
14.00	14.00	1	36" Dish
14.00	14.00	1	Pipe Mount

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Qty	Description
3.00	185.00	1	7/8" Coax
3.00	170.00	3	1.9" Hybrid
3.00	168.00	1	7/8" Coax
3.00	160.00	3	1 1/2" Hybrid
3.00	150.00	1	1.6" Hybrid
3.00	130.00	2	1/4" Coax
3.00	95.00	1	1/2" Coax
3.00	41.00	1	7/8" Coax
3.00	39.00	1	3/8" Coax
3.00	25.00	2	1/4" Coax
3.00	14.00	1	7/8" Coax

Max Guy Wire



Structure: CT20001-A-SBA

Site Name: STERLING CT TOWER

Type: Guyed

Base Shape: Triangle

Height: 200.00 (ft)

Base Width: 0.00

Base Elev: 0.00 (ft)

Top Width: 3.00

Code: TIA-222-H

Basic WS: 125.00

Basic Ice WS: 50.00

Operational WS: 60.00

Ice Thickness: 1.00

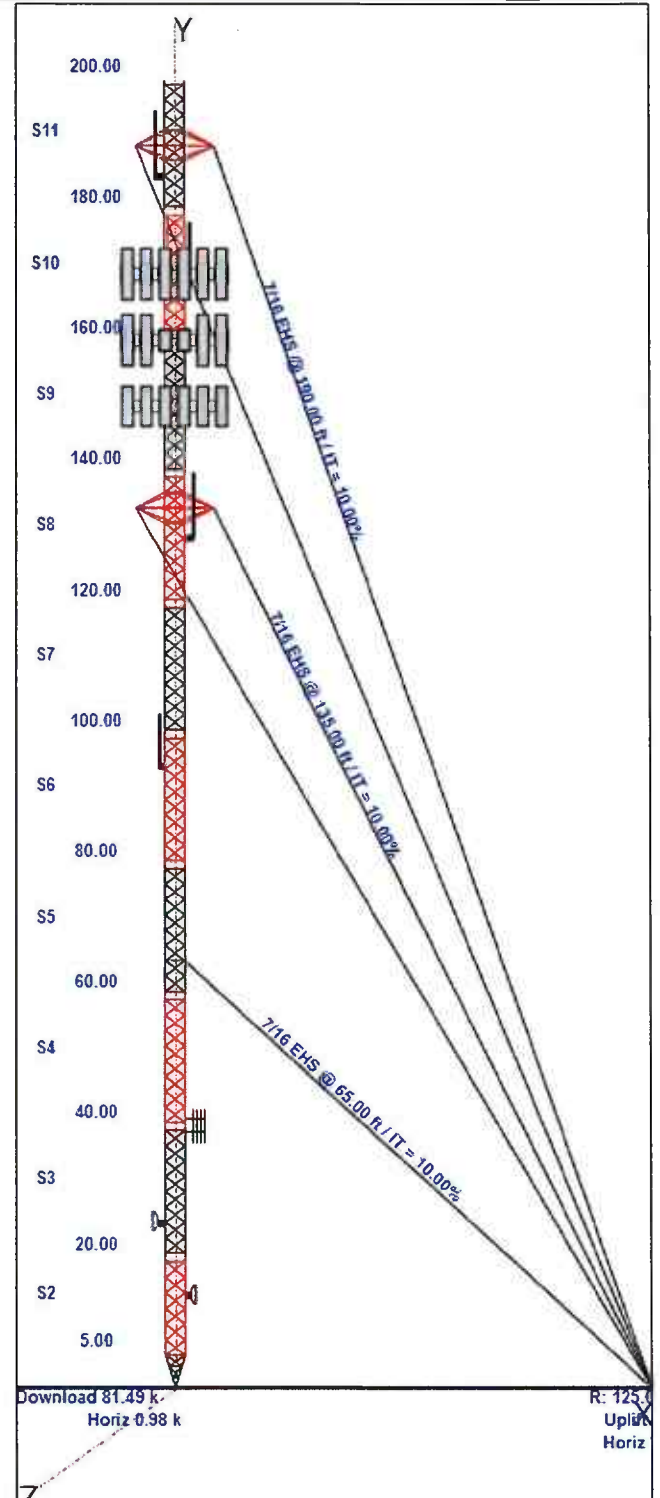
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82.98% @ 134.6665 ft - 7/16 EHS



Structure: CT20001-A-SBA

Site Name: STERLING CT TOWER

Type: Guyed

Height: 200.00 (ft)

Base Elev: 0.00 (ft)

Base Shape: Triangle

Base Width: 0.00

Top Width: 3.00

Code: TIA-222-H

Basic WS: 125.00

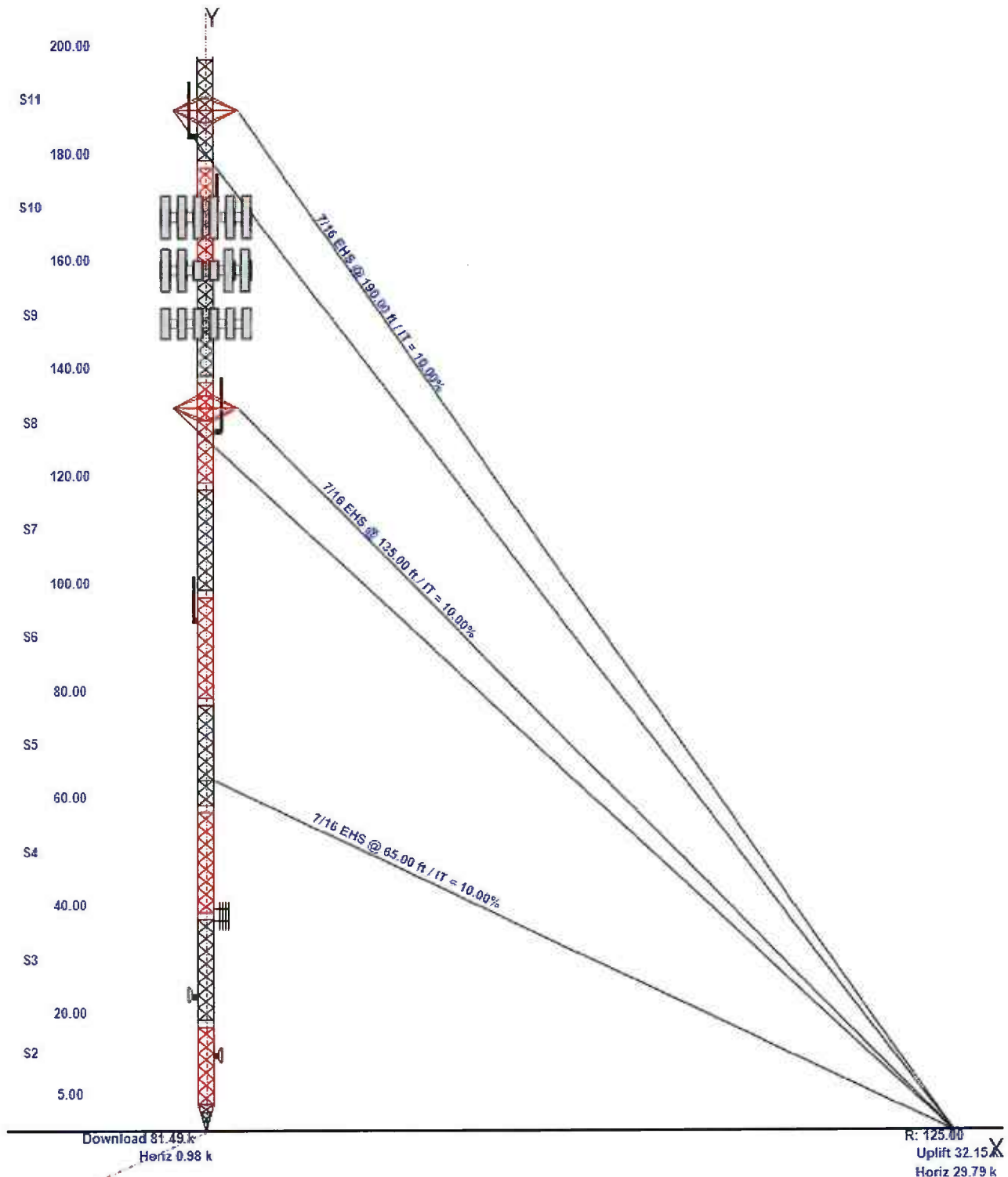
Basic Ice WS: 50.00

Operational WS: 60.00

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Anchor Drops with Guy Radius - Structure: CT20001-A-SBA

Site Name: STERLING CT TOWER

Type: Guyed

Height: 200.00 (ft)

Base Elev: 0.00 (ft)

Base Shape: Triangle

Base Width: 0.00

Top Width: 3.00

Code: EIA_H

Basic WS: 125.00

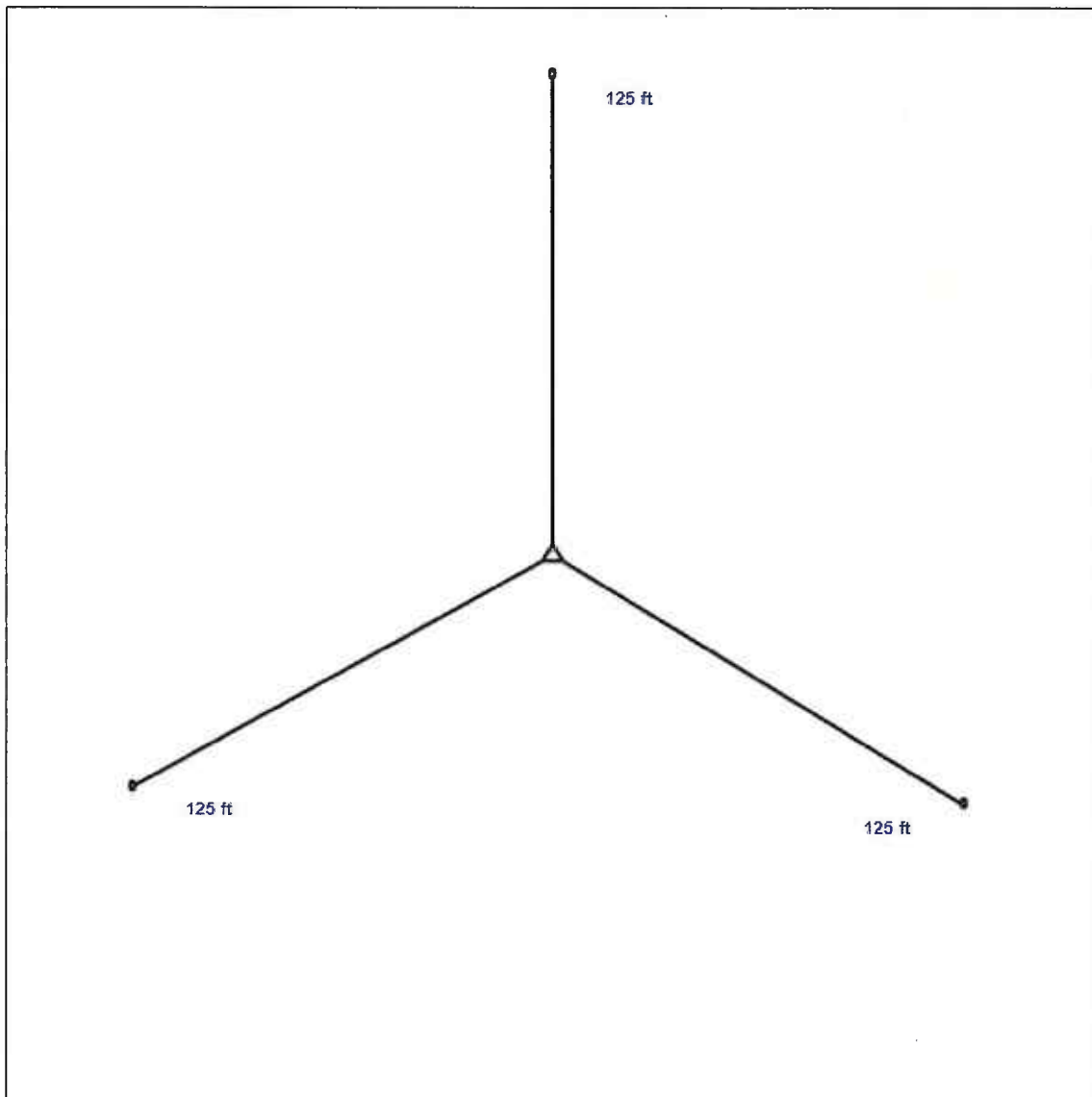
Basic Ice WS: 50.00

Operational WS: 60.00

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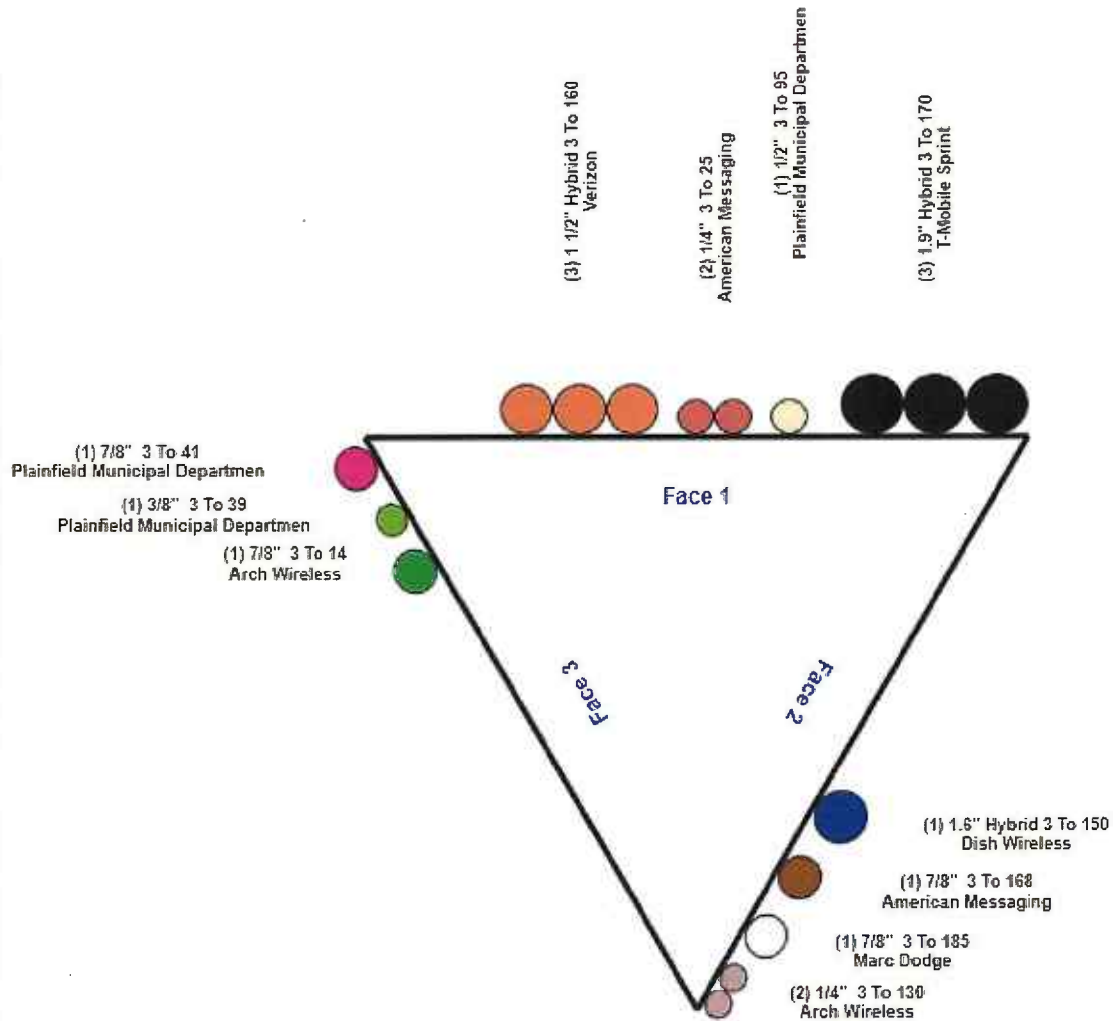
Page: 4



Structure: CT20001-A-SBA - Coax Line Placement

Type: Guyed
Site Name: STERLING CT TOWER
Height: 200.00 (ft)

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Loading Summary

Structure: CT20001-A-SBA	Code: TIA-222-H	4/2/2026
Site Name: STERLING CT TOWER	Exposure: C	1.9.2.9.447
Height: 200.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 6



Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice		Ice					Orientation Factor	Vert Ecc (ft)	
			Weight (lb)	CaAa (sf)	Weight (lb)	CaAa (sf)	Len (in)	Width (in)	Depth (in)			
200.00	Beacon	1	15.00	2.400	26.91	2.400	0.000	0.000	0.000	1.00	1.00	0.000
185.00	120" Omni	1	30.00	3.000	106.17	6.268	120.000	3.000	3.000	1.00	1.00	5.000
185.00	Side Arm	1	40.00	2.630	94.80	6.704	20.000	0.000	0.000	1.00	1.00	0.000
170.00	(3) SitePro VFA12-HD Sector	1	2322.0	50.700	3853.95	93.707	0.000	0.000	0.000	0.75	1.00	0.000
170.00	RFS APXVAALL24_43-U-NA20	3	128.00	20.240	405.10	21.507	95.900	24.000	8.500	0.80	0.72	0.000
170.00	Ericsson AIR6449 B41	3	103.00	5.650	195.56	6.292	33.100	20.500	8.300	0.80	0.71	0.000
170.00	Ericsson 4480 B71 + B85 RRU	3	93.00	2.850	141.56	3.305	21.800	15.700	7.500	0.80	0.67	0.000
170.00	ALU 800 MHz RRUs	6	61.80	2.910	123.05	3.731	19.700	13.000	15.200	0.80	0.67	0.000
170.00	Ericsson 4460 B25 + B66 RRU	3	109.00	2.850	157.54	3.305	21.800	15.700	7.500	0.80	0.67	0.000
168.00	Decibel DB809	1	30.00	3.000	91.61	5.434	120.000	3.000	3.000	1.00	1.00	5.000
168.00	Side Arm	1	40.00	2.630	94.19	6.659	10.000	0.000	0.000	1.00	1.00	0.000
160.00	NHH-65C-HG-R3BD	6	81.60	12.860	267.61	13.883	96.000	13.800	8.200	0.80	0.83	0.000
160.00	MT6433-77A	3	63.00	4.800	124.13	5.470	36.000	18.000	7.900	0.80	0.76	0.000
160.00	MF3208d-25A	3	127.00	6.500	250.23	7.407	40.000	25.000	9.000	0.80	0.76	0.000
160.00	PV-SFR-GS12-20-AP1	3	802.91	26.600	1326.04	48.883	0.000	0.000	0.000	0.75	0.75	0.000
160.00	RF4461d-13A	3	84.40	1.870	131.42	2.241	15.000	15.000	10.000	0.80	0.67	0.000
160.00	OVP	1	32.00	4.060	107.95	4.608	29.500	16.500	12.600	0.80	1.00	0.000
150.00	JMA Wireless MX08FRO665-21	3	64.50	12.490	258.41	13.466	72.000	20.000	8.000	0.80	0.74	0.000
150.00	Fujitsu TA08025-B604	3	63.90	1.960	97.65	2.334	15.800	15.000	7.900	0.80	0.67	0.000
150.00	Fujitsu TA08025-B605	3	75.00	1.960	109.87	2.334	15.800	15.000	9.100	0.80	0.67	0.000
150.00	Raycap RDIDC-9181-PF-48	1	21.90	2.010	57.40	2.389	16.600	14.600	8.500	0.80	1.00	0.000
150.00	Commscope MTC3975083	1	1242.0	28.050	2051.22	51.548	0.000	0.000	0.000	0.75	1.00	0.000
130.00	Decibel DB809	1	25.00	3.000	74.98	5.370	120.000	3.000	3.000	1.00	1.00	5.000
130.00	Side Arm	1	40.00	2.630	92.76	6.553	20.000	0.000	0.000	1.00	1.00	0.000
95.00	ASPC680 (96")	1	25.00	2.400	63.72	4.144	96.000	3.000	3.000	1.00	1.00	4.000
95.00	Side Arm	1	40.00	2.630	90.85	6.411	10.000	0.000	0.000	1.00	1.00	0.000
41.00	Larsen YA2-540 (36")	1	10.00	2.980	63.77	6.730	36.000	36.000	3.000	1.00	1.00	0.000
39.00	Larsen YA2-540 (36")	1	10.00	2.980	61.09	6.543	36.000	36.000	3.000	1.00	1.00	0.000
25.00	36" Dish	1	100.00	11.760	199.05	13.158	0.000	0.000	0.000	1.00	1.00	0.000
25.00	Pipe Mount	1	50.00	1.600	106.95	3.661	10.000	0.000	0.000	1.00	1.00	0.000
14.00	36" Dish	1	100.00	11.760	190.75	13.041	0.000	0.000	0.000	1.00	1.00	0.000
14.00	Pipe Mount	1	50.00	1.600	102.18	3.488	10.000	0.000	0.000	1.00	1.00	0.000
Totals:		64	10,224.43		19,466.81		Number of Appurtenances :					32

Loading Summary

Structure: CT20001-A-SBA	Code: TIA-222-H	4/2/2026
Site Name: STERLING CT TOWER	Exposure: C	1.9.2.9.447
Height: 200.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Page: 7
	Struct Class: II	



Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
3.00	185.00	7/8" Coax	1	1.11	0.52	100.00	2	Individual NR		N	1.00	1.00	
3.00	170.00	1.9" Hybrid	3	1.99	1.10	100.00	1	Individual IR		N	0.50	1.00	
3.00	168.00	7/8" Coax	1	1.11	0.52	100.00	2	Individual NR		N	1.00	1.00	
3.00	160.00	1 1/2" Hybrid	3	1.50	0.66	100.00	1	Individual NR		N	1.00	1.00	
3.00	150.00	1.6" Hybrid	1	1.60	1.00	100.00	2	Individual NR		N	1.00	1.00	
3.00	130.00	1/4" Coax	2	0.25	0.04	100.00	2	Individual IR		N	0.25	1.00	
3.00	95.00	1/2" Coax	1	0.65	0.16	100.00	1	Individual NR		N	1.00	1.00	
3.00	41.00	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
3.00	39.00	3/8" Coax	1	0.44	0.08	100.00	3	Individual NR		N	1.00	1.00	
3.00	25.00	1/4" Coax	2	0.65	0.16	100.00	1	Individual IR		N	0.25	1.00	
3.00	14.00	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	

Section Forces

Structure: CT20001-A-SBA
Site Name: STERLING CT TOWER
Height: 200.00 (ft)
Base Elev: 0.000 (ft)
Gh: 0.85 **Topography:** 1

Code: EIA_H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

4/2/2026



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Wind Loads

Wind Load Factor: 1.00	Wind Speed: 125.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	Ice Thickness: 0.00	
Ice Dead Load Factor: 0.00		Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	28.25	0.000	2.51	0.00	0.31	2.28	1.00	1.00	0.00	1.55	3.23	0.00	267.1	0.0	84.84	55.91	140.75
								0.85	1.00	0.00	1.55	3.23	0.00	267.1	0.0	84.84	55.91	140.75
								0.80	1.00	0.00	1.55	3.23	0.00	267.1	0.0	84.84	55.91	140.75
2	12.5	28.25	0.000	7.50	0.00	0.16	2.74	1.00	1.00	0.00	4.34	23.70	0.00	881.9	0.0	285.17	409.70	694.87
								0.85	1.00	0.00	4.34	23.70	0.00	881.9	0.0	285.17	409.70	694.87
								0.80	1.00	0.00	4.34	23.70	0.00	881.9	0.0	285.17	409.70	694.87
3	30.0	32.65	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	28.82	0.00	1,148.7	0.0	433.69	575.88	1,009.57
								0.85	1.00	0.00	5.69	28.82	0.00	1,148.7	0.0	433.69	575.88	1,009.57
								0.80	1.00	0.00	5.69	28.82	0.00	1,148.7	0.0	433.69	575.88	1,009.57
4	50.0	36.36	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	25.83	0.00	1,133.1	0.0	482.93	574.61	1,057.54
								0.85	1.00	0.00	5.69	25.83	0.00	1,133.1	0.0	482.93	574.61	1,057.54
								0.80	1.00	0.00	5.69	25.83	0.00	1,133.1	0.0	482.93	574.61	1,057.54
5	70.0	39.02	0.000	10.06	0.00	0.16	2.74	1.00	1.00	0.00	5.82	25.73	0.00	1,154.6	0.0	527.65	614.58	1,142.23
								0.85	1.00	0.00	5.82	25.73	0.00	1,154.6	0.0	527.65	614.58	1,142.23
								0.80	1.00	0.00	5.82	25.73	0.00	1,154.6	0.0	527.65	614.58	1,142.23
6	90.0	41.14	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	25.46	0.00	1,131.5	0.0	546.54	641.15	1,187.69
								0.85	1.00	0.00	5.69	25.46	0.00	1,131.5	0.0	546.54	641.15	1,187.69
								0.80	1.00	0.00	5.69	25.46	0.00	1,131.5	0.0	546.54	641.15	1,187.69
7	110.0	42.92	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	24.65	0.00	1,128.6	0.0	570.13	647.48	1,217.60
								0.85	1.00	0.00	5.69	24.65	0.00	1,128.6	0.0	570.13	647.48	1,217.60
								0.80	1.00	0.00	5.69	24.65	0.00	1,128.6	0.0	570.13	647.48	1,217.60
8	130.0	44.46	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	24.23	0.00	1,127.6	0.0	590.54	659.32	1,249.85
								0.85	1.00	0.00	5.69	24.23	0.00	1,127.6	0.0	590.54	659.32	1,249.85
								0.80	1.00	0.00	5.69	24.23	0.00	1,127.6	0.0	590.54	659.32	1,249.85
9	150.0	45.82	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	22.48	0.00	1,114.5	0.0	608.60	630.41	1,239.01
								0.85	1.00	0.00	5.69	22.48	0.00	1,114.5	0.0	608.60	630.41	1,239.01
								0.80	1.00	0.00	5.69	22.48	0.00	1,114.5	0.0	608.60	630.41	1,239.01
10	170.0	47.04	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	7.56	0.00	1,007.9	0.0	624.85	217.78	842.63
								0.85	1.00	0.00	5.69	7.56	0.00	1,007.9	0.0	624.85	217.78	842.63
								0.80	1.00	0.00	5.69	7.56	0.00	1,007.9	0.0	624.85	217.78	842.63
11	190.0	48.15	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	0.46	0.00	953.9	0.0	639.65	13.63	653.28
								0.85	1.00	0.00	5.69	0.46	0.00	953.9	0.0	639.65	13.63	653.28
								0.80	1.00	0.00	5.69	0.46	0.00	953.9	0.0	639.65	13.63	653.28

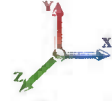
Section Forces

Structure: CT20001-A-SBA
Site Name: STERLING CT TOWER
Height: 200.00 (ft)
Base Elev: 0.000 (ft)
Gh: 0.85

Topography: 1

Code: EIA_H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

4/2/2026



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Wind Loads with Ice

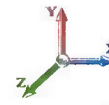
Wind Load Factor:	1.00	Wind Speed:	50.00	Wind Importance Factor:	1.00
Dead Load Factor:	1.20	Ice Thickness:	1.00		
Ice Dead Load Factor:	1.00			Ice Importance Factor:	1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	4.52	0.000	6.01	3.49	0.68	1.78	1.00	1.00	0.77	4.83	3.83	3.35	436.9	169.8	32.96	11.02	43.98
								0.85	1.00	0.77	4.83	3.83	3.35	436.9	169.8	32.96	11.02	43.98
								0.80	1.00	0.77	4.83	3.83	3.35	436.9	169.8	32.96	11.02	43.98
2	12.5	4.52	0.000	19.90	12.41	0.40	2.06	1.00	1.00	0.91	12.77	32.38	21.78	1,847.6	965.7	101.01	161.88	262.88
								0.85	1.00	0.91	12.77	32.38	21.78	1,847.6	965.7	101.01	161.88	262.88
								0.80	1.00	0.91	12.77	32.38	21.78	1,847.6	965.7	101.01	161.88	262.88
3	30.0	5.22	0.000	27.48	17.63	0.41	2.04	1.00	1.00	0.99	17.77	38.44	29.55	2,505.8	1357.1	160.57	228.26	388.83
								0.85	1.00	0.99	17.77	38.44	29.55	2,505.8	1357.1	160.57	228.26	388.83
								0.80	1.00	0.99	17.77	38.44	29.55	2,505.8	1357.1	160.57	228.26	388.83
4	50.0	5.82	0.000	28.40	18.56	0.43	2.01	1.00	1.00	1.04	18.53	34.86	24.50	2,486.2	1353.1	184.30	218.33	402.64
								0.85	1.00	1.04	18.53	34.86	24.50	2,486.2	1353.1	184.30	218.33	402.64
								0.80	1.00	1.04	18.53	34.86	24.50	2,486.2	1353.1	184.30	218.33	402.64
5	70.0	6.24	0.000	29.79	19.73	0.45	1.98	1.00	1.00	1.08	19.72	35.00	25.16	2,594.3	1439.7	206.91	229.13	436.04
								0.85	1.00	1.08	19.72	35.00	25.16	2,594.3	1439.7	206.91	229.13	436.04
								0.80	1.00	1.08	19.72	35.00	25.16	2,594.3	1439.7	206.91	229.13	436.04
6	90.0	6.58	0.000	29.52	19.68	0.44	1.98	1.00	1.00	1.11	19.48	34.92	24.87	2,588.1	1456.6	216.30	242.41	458.71
								0.85	1.00	1.11	19.48	34.92	24.87	2,588.1	1456.6	216.30	242.41	458.71
								0.80	1.00	1.11	19.48	34.92	24.87	2,588.1	1456.6	216.30	242.41	458.71
7	110.0	6.87	0.000	29.92	20.08	0.45	1.98	1.00	1.00	1.13	19.82	34.25	22.56	2,591.0	1462.4	228.53	239.02	467.55
								0.85	1.00	1.13	19.82	34.25	22.56	2,591.0	1462.4	228.53	239.02	467.55
								0.80	1.00	1.13	19.82	34.25	22.56	2,591.0	1462.4	228.53	239.02	467.55
8	130.0	7.11	0.000	30.26	20.42	0.45	1.97	1.00	1.00	1.15	20.11	31.84	22.94	2,595.7	1468.2	239.27	235.06	474.33
								0.85	1.00	1.15	20.11	31.84	22.94	2,595.7	1468.2	239.27	235.06	474.33
								0.80	1.00	1.15	20.11	31.84	22.94	2,595.7	1468.2	239.27	235.06	474.33
9	150.0	7.33	0.000	30.56	20.71	0.46	1.96	1.00	1.00	1.16	20.37	28.03	21.33	2,543.4	1428.9	248.91	215.94	464.85
								0.85	1.00	1.16	20.37	28.03	21.33	2,543.4	1428.9	248.91	215.94	464.85
								0.80	1.00	1.16	20.37	28.03	21.33	2,543.4	1428.9	248.91	215.94	464.85
10	170.0	7.53	0.000	30.82	20.97	0.46	1.96	1.00	1.00	1.18	20.59	10.36	5.50	2,030.6	1022.7	257.67	73.66	331.33
								0.85	1.00	1.18	20.59	10.36	5.50	2,030.6	1022.7	257.67	73.66	331.33
								0.80	1.00	1.18	20.59	10.36	5.50	2,030.6	1022.7	257.67	73.66	331.33
11	190.0	7.70	0.000	31.05	21.21	0.46	1.95	1.00	1.00	1.19	20.80	0.46	0.99	1,793.8	839.9	265.74	6.13	271.87
								0.85	1.00	1.19	20.80	0.46	0.99	1,793.8	839.9	265.74	6.13	271.87
								0.80	1.00	1.19	20.80	0.46	0.99	1,793.8	839.9	265.74	6.13	271.87

Section Forces

Structure: CT20001-A-SBA
Site Name: STERLING CT TOWER
Height: 200.00 (ft)
Base Elev: 0.000 (ft)
Gh: 0.85 **Topography:** 1
Code: EIA_H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

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Service Loads

Wind Load Factor:	1.00	Wind Speed:	60.00	Wind Importance Factor:	1.00
Dead Load Factor:	1.00	Ice Thickness:	0.00		
Ice Dead Load Factor:	0.00			Ice Importance Factor:	1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	6.51	0.000	2.51	0.00	0.31	2.28	1.00	1.00	0.00	1.55	3.23	0.00	222.6	0.0	19.55	12.88	32.43
								0.85	1.00	0.00	1.55	3.23	0.00	222.6	0.0	19.55	12.88	32.43
								0.80	1.00	0.00	1.55	3.23	0.00	222.6	0.0	19.55	12.88	32.43
2	12.5	6.51	0.000	7.50	0.00	0.16	2.74	1.00	1.00	0.00	4.34	23.70	0.00	734.9	0.0	65.70	94.39	160.10
								0.85	1.00	0.00	4.34	23.70	0.00	734.9	0.0	65.70	94.39	160.10
								0.80	1.00	0.00	4.34	23.70	0.00	734.9	0.0	65.70	94.39	160.10
3	30.0	7.52	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	28.82	0.00	957.3	0.0	99.92	132.68	232.60
								0.85	1.00	0.00	5.69	28.82	0.00	957.3	0.0	99.92	132.68	232.60
								0.80	1.00	0.00	5.69	28.82	0.00	957.3	0.0	99.92	132.68	232.60
4	50.0	8.38	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	25.83	0.00	944.3	0.0	111.27	132.39	243.66
								0.85	1.00	0.00	5.69	25.83	0.00	944.3	0.0	111.27	132.39	243.66
								0.80	1.00	0.00	5.69	25.83	0.00	944.3	0.0	111.27	132.39	243.66
5	70.0	8.99	0.000	10.06	0.00	0.16	2.74	1.00	1.00	0.00	5.82	25.73	0.00	962.2	0.0	121.57	141.60	263.17
								0.85	1.00	0.00	5.82	25.73	0.00	962.2	0.0	121.57	141.60	263.17
								0.80	1.00	0.00	5.82	25.73	0.00	962.2	0.0	121.57	141.60	263.17
6	90.0	9.48	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	25.46	0.00	942.9	0.0	125.92	147.72	273.64
								0.85	1.00	0.00	5.69	25.46	0.00	942.9	0.0	125.92	147.72	273.64
								0.80	1.00	0.00	5.69	25.46	0.00	942.9	0.0	125.92	147.72	273.64
7	110.0	9.89	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	24.65	0.00	940.5	0.0	131.36	149.18	280.54
								0.85	1.00	0.00	5.69	24.65	0.00	940.5	0.0	131.36	149.18	280.54
								0.80	1.00	0.00	5.69	24.65	0.00	940.5	0.0	131.36	149.18	280.54
8	130.0	10.24	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	24.23	0.00	939.6	0.0	136.06	151.91	287.97
								0.85	1.00	0.00	5.69	24.23	0.00	939.6	0.0	136.06	151.91	287.97
								0.80	1.00	0.00	5.69	24.23	0.00	939.6	0.0	136.06	151.91	287.97
9	150.0	10.56	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	22.48	0.00	928.7	0.0	140.22	145.25	285.47
								0.85	1.00	0.00	5.69	22.48	0.00	928.7	0.0	140.22	145.25	285.47
								0.80	1.00	0.00	5.69	22.48	0.00	928.7	0.0	140.22	145.25	285.47
10	170.0	10.84	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	7.56	0.00	839.9	0.0	143.96	50.18	194.14
								0.85	1.00	0.00	5.69	7.56	0.00	839.9	0.0	143.96	50.18	194.14
								0.80	1.00	0.00	5.69	7.56	0.00	839.9	0.0	143.96	50.18	194.14
11	190.0	11.09	0.000	9.84	0.00	0.16	2.75	1.00	1.00	0.00	5.69	0.46	0.00	794.9	0.0	147.38	3.14	150.52
								0.85	1.00	0.00	5.69	0.46	0.00	794.9	0.0	147.38	3.14	150.52
								0.80	1.00	0.00	5.69	0.46	0.00	794.9	0.0	147.38	3.14	150.52

Force/Stress Compression Summary

Structure: CT20001-A-SBA
Site Name: STERLING CT TOWER
Height: 200.00 (ft)
Base Elev: 0.000 (ft)
Gh: 0.85

Topography: 1

Code: EIA/TIA-222-H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

4/2/2026



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LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			KL/R	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
						X	Y	Z					
1	5	SOL - 1 3/4" SOLID	-29.96	1.2D + 1.0W Normal Wind	1.76	100	100	100	48.38	50.00	91.21	32.8	Member X
2	20	SOL - 1 3/4" SOLID	-31.23	1.2D + 1.0W 90° Wind	2.39	100	100	100	65.52	50.00	79.08	39.5	Member X
3	40	SOL - 1 3/4" SOLID	-31.54	1.2D + 1.0W 90° Wind	2.33	100	100	100	64.00	50.00	80.23	39.3	Member X
4	60	SOL - 1 3/4" SOLID	-39.98	1.2D + 1.0W Normal Wind	2.33	100	100	100	64.00	50.00	80.23	49.8	Member X
5	80	SOL - 1 3/4" SOLID	-46.53	1.2D + 1.0W Normal Wind	2.33	100	100	100	64.00	50.00	80.23	58.0	Member X
6	100	SOL - 1 3/4" SOLID	-31.09	1.2D + 1.0W Normal Wind	2.33	100	100	100	64.00	50.00	80.23	38.7	Member X
7	120	SOL - 1 3/4" SOLID	-25.16	1.2D + 1.0W Normal Wind	2.33	100	100	100	64.00	50.00	80.23	31.4	Member X
8	140	SOL - 1 3/4" SOLID	-26.34	1.2D + 1.0W Normal Wind	2.33	100	100	100	64.00	50.00	80.23	32.8	Member X
9	160	SOL - 1 3/4" SOLID	-54.86	1.2D + 1.0W 60° Wind	2.33	100	100	100	64.00	50.00	80.23	68.4	Member X
10	180	SOL - 1 3/4" SOLID	-58.10	1.2D + 1.0W 60° Wind	2.33	100	100	100	64.00	50.00	80.23	72.4	Member X
11	200	SOL - 1 3/4" SOLID	-34.85	1.2D + 1.0W 60° Wind	2.33	100	100	100	64.00	50.00	80.23	43.4	Member X

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
						X	Y	Z									
1	5										0.00	0	0				
2	20	SOL - 3/4" SOLID	-0.01	0.9D + 1.0W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			0.1	Member X
3	40	SOL - 3/4" SOLID	-0.24	0.9D + 1.0W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			4.3	Member X
4	60	SOL - 3/4" SOLID	-0.66	1.2D + 1.0W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			12.0	Member X
5	80	SOL - 3/4" SOLID	-0.55	1.2D + 1.0W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			10.0	Member X
6	100	SOL - 3/4" SOLID	-0.51	1.2D + 1.0W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			9.2	Member X
7	120	SOL - 3/4" SOLID	-0.06	0.9D + 1.0W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			1.2	Member X
8	140	SOL - 3/4" SOLID	-1.39	0.9D + 1.0W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			25.2	Member X
9	160	SOL - 3/4" SOLID	-2.23	1.2D + 1.0W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			40.3	Member X
10	180	SOL - 3/4" SOLID	-1.07	1.2D + 1.0W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			19.3	Member X
11	200	SOL - 3/4" SOLID	-1.53	1.2D + 1.0W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			27.6	Member X

DIAGONAL MEMBERS

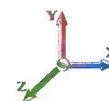
Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
						X	Y	Z									
1	5	SOL - 3/4" SOLID	-2.29	1.2D + 1.0W Normal Wind	2.26	50	50	50	65.11	50.00	14.58	0	0			15.7	Member X
2	20	SOL - 3/4" SOLID	-0.53	1.2D + 1.0W 60° Wind	3.83	50	50	50	110.45	50.00	8.15	0	0			6.5	Member X
3	40	SOL - 3/4" SOLID	-1.07	1.2D + 1.0W Normal Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			13.0	Member X
4	60	SOL - 3/4" SOLID	-1.65	1.2D + 1.0W Normal Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			19.9	Member X
5	80	SOL - 3/4" SOLID	-1.72	1.2D + 1.0W 90° Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			20.7	Member X
6	100	SOL - 3/4" SOLID	-1.39	1.2D + 1.0W Normal Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			16.7	Member X
7	120	SOL - 3/4" SOLID	-0.63	1.2D + 1.0W 90° Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			7.6	Member X
8	140	SOL - 3/4" SOLID	-5.76	1.2D + 1.0W 90° Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			69.6	Member X
9	160	SOL - 3/4" SOLID	-5.05	1.2D + 1.0W 90° Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			61.0	Member X
10	180	SOL - 3/4" SOLID	-3.00	1.2D + 1.0W 90° Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			36.2	Member X
11	200	SOL - 3/4" SOLID	-3.45	1.2D + 1.0W 90° Wind	3.80	50	50	50	109.46	50.00	8.28	0	0			41.7	Member X

Force/Stress Tension Summary

Structure: CT20001-A-SBA
Site Name: STERLING CT TOWER
Height: 200.00 (ft)
Base Elev: 0.000 (ft)
Gh: 0.85

Code: EIA/TIA-222-H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

4/2/2026



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LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	5				0	0.00		
2	20				0	0.00		
3	40				0	0.00		
4	60				0	0.00		
5	80	SOL - 1 3/4" SOLID	0.68	0.9D + 1.0W 60° Wind	50	108.24	0.6	Member
6	100				0	0.00		
7	120				0	0.00		
8	140	SOL - 1 3/4" SOLID	2.41	0.9D + 1.0W 60° Wind	50	108.24	2.2	Member
9	160	SOL - 1 3/4" SOLID	39.27	0.9D + 1.0W Normal Wind	50	108.24	36.3	Member
10	180	SOL - 1 3/4" SOLID	41.05	0.9D + 1.0W Normal Wind	50	108.24	37.9	Member
11	200	SOL - 1 3/4" SOLID	22.39	0.9D + 1.0W Normal Wind	50	108.24	20.7	Member

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	5	SOL - 3/4" SOLID	2.93	1.2D + 1.0W Normal Wi	50	19.88	0	0				14.7	Member
2	20	SOL - 3/4" SOLID	2.93	1.2D + 1.0W Normal Wi	50	19.88	0	0				14.7	Member
3	40	SOL - 3/4" SOLID	0.48	1.2D + 1.0W 60° Wind	50	19.88	0	0				2.4	Member
4	60	SOL - 3/4" SOLID	0.84	1.2D + 1.0W 60° Wind	50	19.88	0	0				4.2	Member
5	80	SOL - 3/4" SOLID	0.95	1.2D + 1.0W Normal Wi	50	19.88	0	0				4.8	Member
6	100	SOL - 3/4" SOLID	0.62	1.2D + 1.0W 60° Wind	50	19.88	0	0				3.1	Member
7	120	SOL - 3/4" SOLID	0.33	1.2D + 1.0W 60° Wind	50	19.88	0	0				1.6	Member
8	140	SOL - 3/4" SOLID	2.26	1.2D + 1.0W Normal Wi	50	19.88	0	0				11.4	Member
9	160	SOL - 3/4" SOLID	2.47	1.2D + 1.0W 60° Wind	50	19.88	0	0				12.4	Member
10	180	SOL - 3/4" SOLID	1.18	1.2D + 1.0W 60° Wind	50	19.88	0	0				5.9	Member
11	200	SOL - 3/4" SOLID	1.72	1.2D + 1.0W Normal Wi	50	19.88	0	0				8.6	Member

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	5	SOL - 3/4" SOLID	0.00		50	0.00	0	0					
2	20	SOL - 3/4" SOLID	0.51	1.2D + 1.0W 90° Wind	50	19.88	0	0				2.6	Member
3	40	SOL - 3/4" SOLID	0.60	0.9D + 1.0W Normal Wi	50	19.88	0	0				3.0	Member
4	60	SOL - 3/4" SOLID	1.22	1.2D + 1.0W 90° Wind	50	19.88	0	0				6.1	Member
5	80	SOL - 3/4" SOLID	1.30	1.2D + 1.0W Normal Wi	50	19.88	0	0				6.5	Member
6	100	SOL - 3/4" SOLID	1.03	1.2D + 1.0W 90° Wind	50	19.88	0	0				5.2	Member
7	120	SOL - 3/4" SOLID	0.38	0.9D + 1.0W 60° Wind	50	19.88	0	0				1.9	Member
8	140	SOL - 3/4" SOLID	4.85	0.9D + 1.0W 90° Wind	50	19.88	0	0				24.4	Member
9	160	SOL - 3/4" SOLID	4.93	1.2D + 1.0W 90° Wind	50	19.88	0	0				24.8	Member
10	180	SOL - 3/4" SOLID	2.78	1.2D + 1.0W 90° Wind	50	19.88	0	0				14.0	Member
11	200	SOL - 3/4" SOLID	2.89	1.2D + 1.0W 90° Wind	50	19.88	0	0				14.5	Member

Seismic Section Forces

Structure: CT20001-A-SBA

Code: TIA-222-H

4/2/2026

Site Name: STERLING CT TOWER

Exposure: C

Height: 200.00 (ft)

Crest Height: 0.00

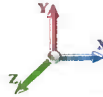
Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 0.85

Topography: 1

Struct Class: II



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IES

Tower Engineering Solutions

Dead Load Factor 1.20
 1.00



Guyed Tower Base Design

Customer Name:	SBA Communications Corp	TIA Standard:	TIA-222-H
Site Name:		Structure Height (Ft.):	200
Site Number:	CT20001-A-SBA	Engineer Name:	ali.saidi
Engr. Number:	169006	Date:	4/2/2026

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Guyed Tower

Analysis or Design?

Analysis

Base Reactions (Factored):

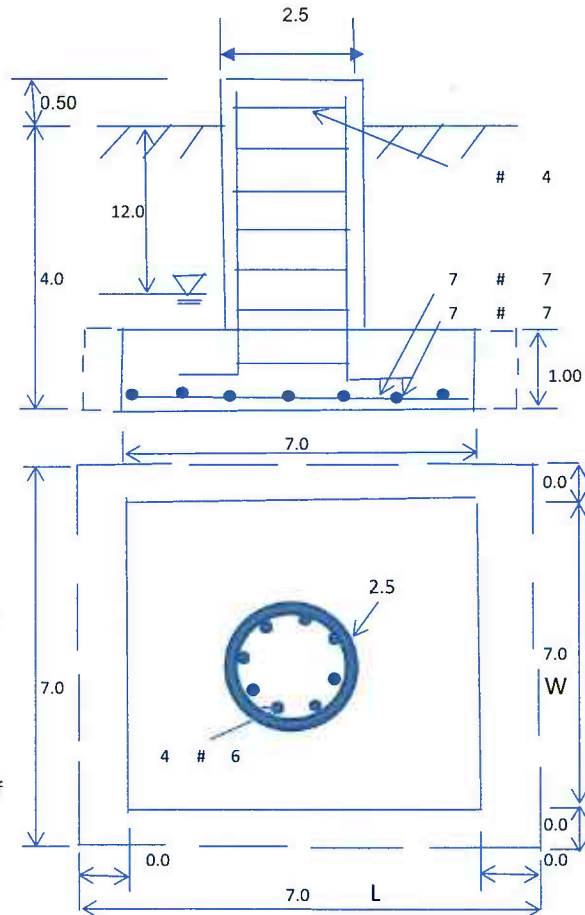
Axial Load (Kips):	81.5	Shear Force (Kips):	1.0
		Moment (Kips-ft):	

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	2.5	Depth of Base BG (ft.):	4.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	1.00
Length of Pad (ft.):	7	Width of Pad (ft.):	7
Final Length of pad (ft)	7.0	Final width of pad (ft):	7.0
Pier offset from center (W side, ft):	0.00	Pier offset (L side, ft):	0.00

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	6	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	4	Tie Spacing (in):	16.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	7	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	7	Qty. of Rebar in Pad (W):	7	



Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	62.6	Pcf	
Water Table B.G.S. (ft):	12.0	Unit Weight of Water:	62.4	pcf	
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Soil C against concrete pad (psf) 0
Consider Friction for OTM (Y/N):	No				Soil φ against concrete pad 20
Consider soil hor. resist. for OTM:	No				Use Rev I Exemption in Sec.15.7 #19 for bearing? No

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.60
Total Dry Soil Volume (cu. Ft.):	132	Total Dry Soil Weight (Kips):	16.5
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	16.5	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	66	Total Dry Concrete Weight (Kips):	9.9
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	9.9	Total Vertical Load on Base (Kips):	108

Check Soil Capacities:

Calculated Maximum Net Soil Pressure under the base (psf):	1742.4	<	Allowable Factored Soil Bearing (psf):	18000	0.10	OK!
Calculated Foundation Allowable Axial Capacity (Kips):	882.0	>	Design Factored Axial Load (Kips):	84	0.10	OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

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

Load/
Capacity
Ratio(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	0.44	Tie / Stirrup Area (sq. in./each):	0.20			
Calculated Moment Capacity (Mn,Kips-Ft):	92.1	>	Design Factored Moment (Mu, Kips-F	3.4	0.04	OK!
Calculated Shear Capacity (Kips):	103.1	>	Design Factored Shear (Kips):	1.0	0.01	OK!
Calculated Tension Capacity (Tn, Kips):	95.0	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	1246.6	>	Design Factored Axial Load (Pu Kips):	81.5	0.07	OK!
Moment & Axial Strength Combination(Pu/Pn+Mu/Mn):	0.10	OK!				
Pier Reinforcement Ratio:	0.002					

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Dir. Kips);	64.7	>	One-Way Factored Shear (L-Dir Kips):	18.9	0.29	OK!
One-Way Design Shear Capacity (W-Dir. Kips):	64.7	>	One-Way Factored Shear (W-Dir Kips):	18.9	0.29	OK!
One-Way Design Shear Capacity (Diagonal, Kips):	55.9	>	One-Way Factored Shear (Diagonal Kips):	15.6	0.28	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0042		Lower Steel Pad Reinf. Ratio (W-Direct.):	0.0042		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	145.2	>	Moment at Bottom (L-Direct. K-Ft):	30.3	0.21	OK!
Lower Steel Pad Moment Capacity (W-Dir. Kips-ft):	145.2	>	Moment at Bottom (W-Dir. Kips-Ft):	30.3	0.21	OK!
Max. factored shear stress (pier bending)	1.2	<	Max. factored shear (pier axial)	72.7		
Two-way (punching) shear Strength ϕv_n (psi):	189.7	>	Two-way (punching) shear (psi):	73.8	0.39	OK!

	Guy Anchor Analysis and Design			
	Customer Name:	SBA Communications Corp	TIA Standard:	TIA 222
	Site Name:		Structure Height (Ft.):	2
	Site Number:	CT21ASBA	Engineer Name:	ali.saidi
	Engineer Number:	113	Date:	4222

Foundation Info Obtained from:

Drainage Calculations

Number of Anchors: 1 Set

Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Unit Weight:	2. cf	Cohesion of Soils (psf):	0
Ultimate Lateral Bearing (psf):	0	Unit Weight of Water:	2.4 pcf	Internal Angle of Friction (°):	40
Conical Failure Angle from Top:	30	Ultimate Skin Friction:	0 sf	Coefficient of Shear Friction:	0.50
		Failure Angle from Bottom:	20	Lateral Pressure Design Method:	Classic

Material Properties:

Concrete Strength (psi):	3000	Unit Weight of Concrete:	150.0 psf	Horizontal Rebar Yield (psi):	0000
Shear Strength Reduction Factor:	0.75			Flexure Strength Reduction Factor:	0.9

A. Inner Anchors

Radius (ft.): 125

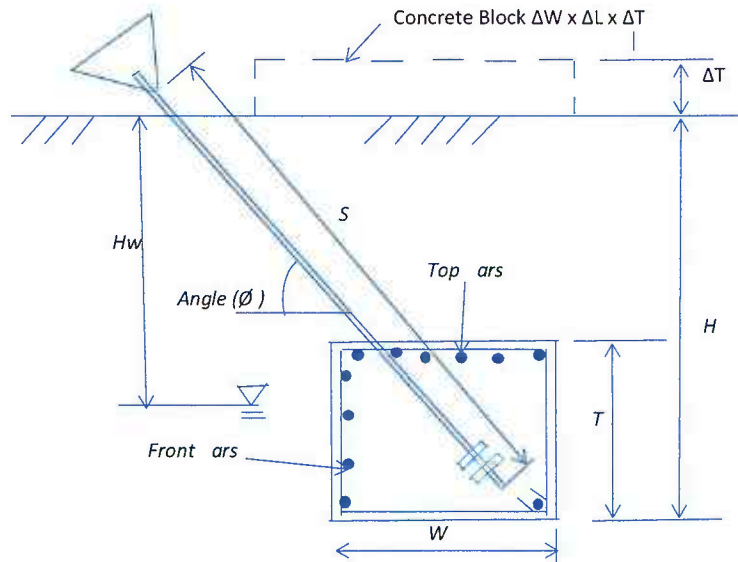
Design Actions (Factored):

Uplift (kips):	32.2	Shear (kips):	29.8	Angle of force resultant (°):	47.2
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Foundation Geometries:

Anchor Depth (ft.):	8.0	Anchor Width Toes:	0	Water Table below grade (ft.):	4.3
Length of Anchor Loc (ft.):	9.0	Width of Anchor Loc:	4.0 ft.	Thickness of Anchor Loc (ft.):	2.5
Concrete Loc top of Anchor:	0				

<u>(f) Inner Anchors:</u>		Radius (f.)	125
H (f.)	8	Hwf.(.)	4.3
Lf.)	9.0	W)	4.0
T f.)	2.5	Angle ()	47.2
S (f.):	11.59		
Top bars:	4	#	5
Front bars:	3	#	5
Concrete Volume	Cu. Yd./Ech		3.33



3. Foundation Analysis and Design:

Total Dry Soil Volume (cu. Ft.):	428.51	Total Dry Soil Weight (Kips):	57.11
Total Buoyant Soil Volume (cu. Ft.):	115.00	Total Buoyant Soil Weight (Kips):	7.20
Total Effective Soil Weight (Kips):	56.98	Weight of the Concrete Block at Top (Kips):	0.00
Total Dry Concrete Volume (cu. Ft.):	0.00	Total Dry Concrete Weight (Kip):	0.00
Total Buoyant Concrete Volume (cu. Ft.):	90.00	Total Buoyant Concrete Weight (Kips):	7.88
Total Effective Concrete Weight (Kips):	7.88	Weight Reduction Factor:	0.9
Soil Uplift Strength Reduction Factor A:	0.75	Shear Strength Reduction Factor:	0.75

4. Check Soil and Foundation Capacities:

Nominal Factored Uplift Resistance:	53.95	Kips > Design Uplift Force (Kips):	32.2	0.60	OK!
Ultimate Shear Friction Resistance at base:	5.05	Kips Ultimate Resistance Pressure:	3177.2		Psf
Factored Shear Resistance:	57.40	Kips > Design Shear Force (Kips):	29.8	0.52	OK!

5. Design Concrete Block:

Rebar Size (#):	5				
Qty. of the Rebar at top of the block:	4	Qty. of the Rebar in the front of the block:	3		
Area of Single Rebar (sq. in.):	0.31	Factor for concrete compression zone:	0.85		
One Way Shear due to Shear Force (Kips):	14.9	One Way Shear Capacity for shear (kips):	108.4		OK!
One Way Shear due to Uplift (Kips):	16.1	One Way Shear Capacity for uplift (kips):	102.5		OK!
Moment due to Shear Load (Kips-ft):	33.5	Flexural Capacity for Shear Load (Kips-ft):	182.6		OK!
Moment due to uplift Load (Kips-ft):	36.2	Flexural Capacity for uplift Load (Kips-ft):	143.4		OK!
Minimum reinforcement Ratio (top & front) :	0.0006	Ratio of Design Moment/Moment capacity:	0.25		OK!
		Max. Ratio of Shear Force/Shear capacity:	0.16		OK!

0.0

0.0



Engineering
& Design

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Architecture, Landscape Architecture,
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New Antenna Mount Analysis Report and PII Requirements

Mount ReAnalysis-VZW
SMART Tool Project #: 10343479
Colliers Engineering & Design Project #: 25777809 (Rev 1)

March 17, 2026

Site Information

Site ID: 5000992832-VZW / ONECO_CT
Site Name: ONECO_CT
Carrier Name: Verizon Wireless
Address: 421 Ekonk Hill Rd
Sterling, Connecticut 06377
Windham County
Latitude: 41.662302°
Longitude: -71.847095°

Structure Information

Tower Type: Guyed
Mount Type: 12.50-Ft Sector Frame

FUZE ID # 17602466

Analysis Results

Sector Frame: **52.4% Pass w/ New Mount Install***
((3) PerfectVision - PV-SFR-GS12-20-AP1)

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

***Contractor PII 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: Ana Mora

Kayla Wait
PROFESSIONAL ENGINEER
Date: 2026.03.17 16:15:17-04'00'

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: 617540222, dated March 3, 2026
Mount Specification	Perfect Vision, Part No. PV-SFR-GS12-20-AP1

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: 1.00 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.977
Seismic Parameters:	S_s : 0.187 g S_1 : 0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Load, L_v : 250 lbs. Maintenance Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V22)

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
160.00	160.00	6	Commscope	NHH-65C-HG-R3BD	Added
		3	Samsung	MT6433-77A	
		3	Samsung	RF4461d-13A	
		1	Raycap	12 OVP Box	
		3	Samsung	MF3208d	

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 mounts.

It is acceptable to install up to three (3) OVPs with dimensions not to exceed 30" x 17" x 13" and 40 lbs. 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 unless replacing an existing OVP.

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. 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. 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.
4. 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.
5. 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.
6. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
 - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - o HSS (Rectangular) ASTM 500 (Gr. B-46)
 - o Pipe ASTM A53 (Gr. B-35)
 - o Threaded Rod F1554 (Gr. 36)
 - o 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
Standoff Vertical Pipe	28.9 %	Pass
Standoff Horizontal	27.9 %	Pass
Standoff Diagonal	15.8 %	Pass
Face Horizontal	52.4 %	Pass
Tieback	8.3 %	Pass
Mount Pipe	30.5 %	Pass
Standoff Plate	42.1 %	Pass
Connection Check	17.5 %	Pass

Structure Rating – (Controlling Utilization of all Components)	52.4%
---	--------------

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 Top Standoff	161.6	A-T	1123	3735	0.000	0.000	1540	2925	0.000	0.000
Sector A Bottom Standoff	158.4	A-B	897	3562	0.000	0.000	1045	2893	0.000	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

BASELINE mount weight: 2408.73 lbs

Increase in mount weight due to modifications: 0.00 lbs

The weights listed above include 3 sectors.

Considered Equipment Dimensions, Weight, and EPA:

Manufacturer	Model	Height (In)	Width (In)	Depth (In)	Weight (Lbs)	(EPA)n (Sq. Ft.)	(EPA)t (Sq. Ft.)
Commscope	NHH-65C-HG-R3BD	96.0	13.8	8.2	93.1	12.86	8.51
Samsung	*MT6433-77A	36.2	15.8	5.9	63.5	4.23	1.48
Samsung	RF4461d-13A	15.0	15.0	10.2	79.1	1.88	1.28
Raycap	*12 OVP Box	29.5	16.5	12.6	32.0	3.17	2.41
Samsung	*MF3208d	39.0	25.5	8.5	127.2	6.89	2.29

*Appurtenance equivalent projected area has been established through data provided by the specific manufacturer, consistent with direction per ANSI/TIA-222 Section 2.6.11.2.

Requirements:

The proposed antenna mounts are **SUFFICIENT** for the final loading configuration (attachment 2) upon completion of the mount installation (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 (PII) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Manufacturer Drawings
4. Analysis Calculations

Mount Desktop – Post Modification Inspection (PII) 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 #: 5000992832

SMART Project #: 10343479

Fuze Project ID: 17602466

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 (highest and lowest measurement across all sectors):

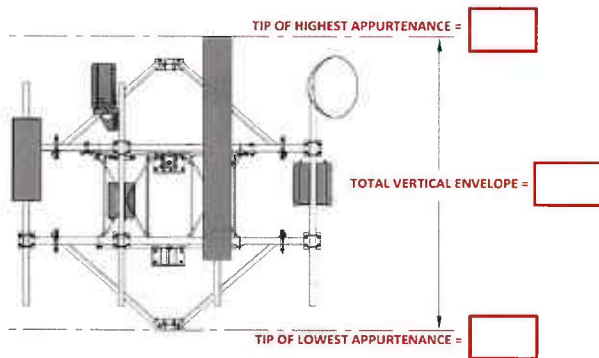


Illustration #1

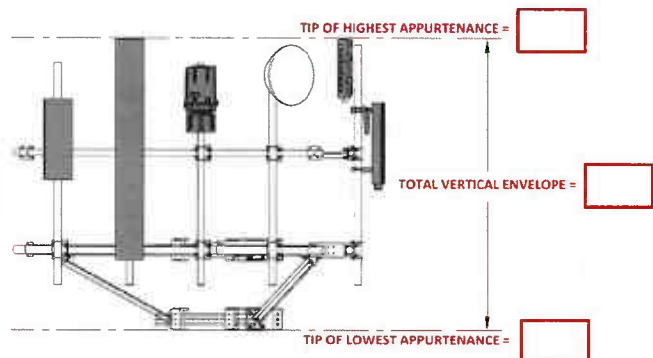


Illustration #2

Certifying Individual:

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

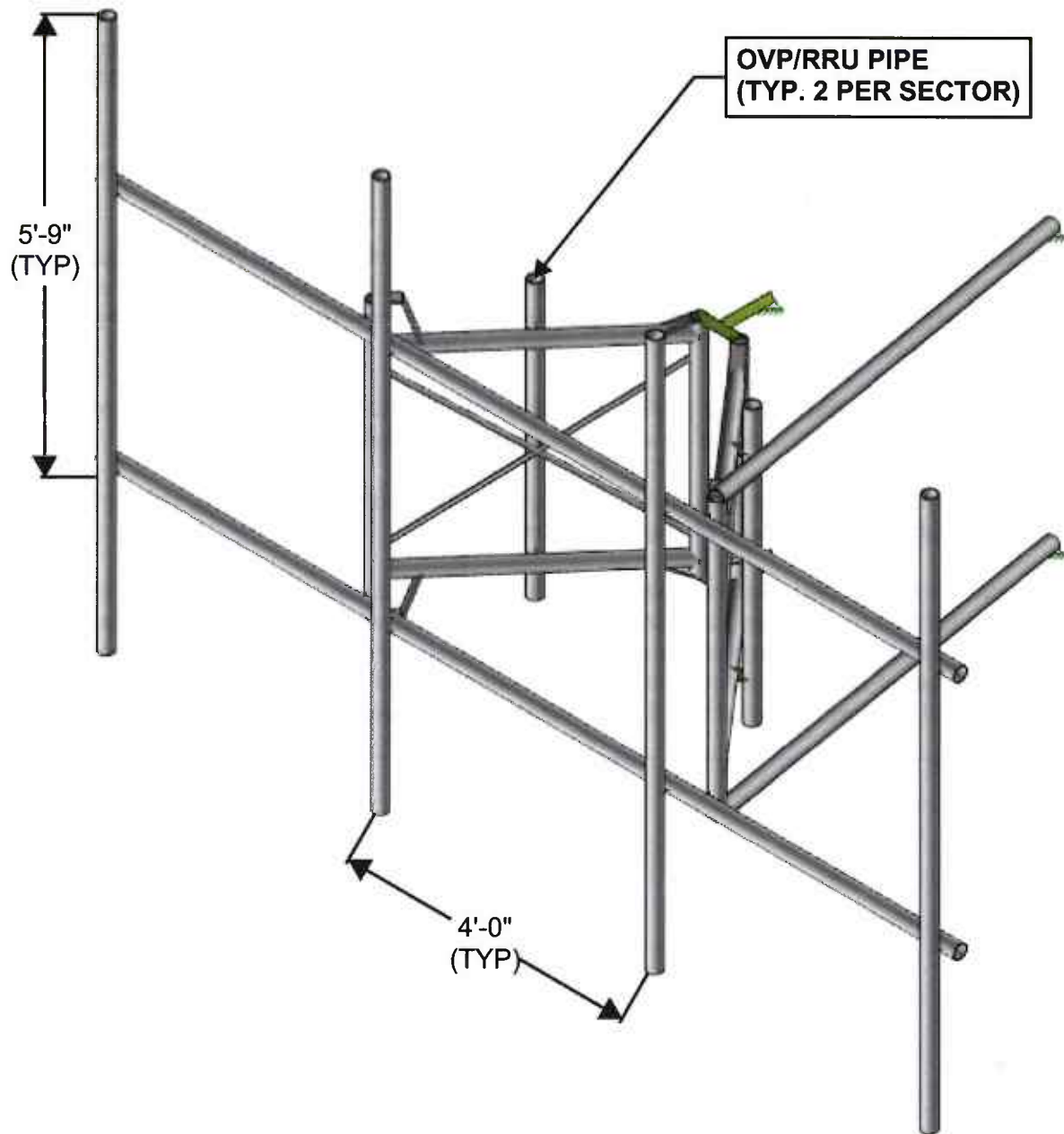


MDG #: 5000992832
Site Name: ONECO_CT
Fuze ID #: 17602466
Colliers Engineering & Design Project #: 25777809 (Rev 1)

PMI INSTRUCTIONS:

1. Contractor shall verify existing tower face width to be 36". **Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications.**
2. Contractor shall install the proposed sector frame (Perfect Vision, Part #: PV-SFR-GS12-20-AP1) mounts in accordance with manufacturer specifications and the New Mount Sketch. Contact EOR if these documents are not available.
3. Attach tiebacks to adjacent tower legs. Contractor shall ensure tiebacks do not exceed a rotation of $90^{\circ} \pm 25^{\circ}$ degrees from mount face. 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 Zinga or Zinc Kote. Refer to mount sketch.
4. Contractor shall install proposed OVPs and RRUs on standoff horizontals. Utilize galvanized SCH 40 equipment pipes and VZWSMART attachment hardware as needed.
5. Threaded rod from proposed kits shall be trimmed to extend no more than 3" beyond the lock nut. Treat all cut ends with (2) coats of Zinga or Zinc Kote.
6. 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 contacting the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of 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.

New Mount Sketch



MOUNT ISOMETRIC VIEW
N.T.S

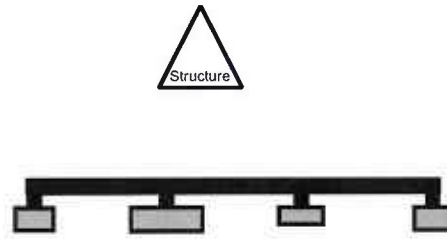
Sector: **A**
 Structure Type: Guyed
 Mount Elev: 160.00

Nominal Mount Azimuth: **0.00°**
 10343479

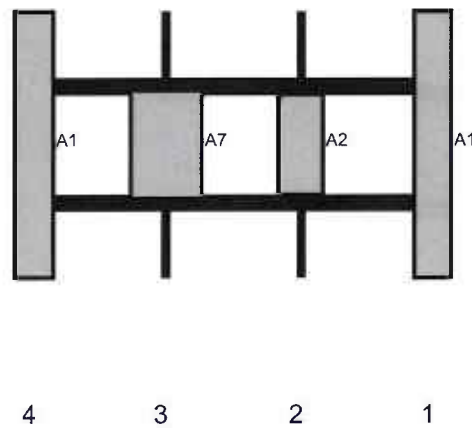
3/17/2026

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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
RRU1A	RF4461d-13A	15	15		Member					Added	
RRU2A	12 OVP Box	29.5	16.5		Member					Added	
A1	NHH-65C-HG-R3BD	96	13.8	147	1	a	Front	48	0	Added	
A2	MT6433-77A	36.2	15.8	99	2	a	Front	48	0	Added	
A7	MF3208d	39	25.5	51	3	a	Front	48	0	Added	
A1	NHH-65C-HG-R3BD	96	13.8	3	4	a	Front	48	0	Added	

*The Nominal Mount Azimuth provided on this document is intended for guidance and planning purposes only and may deviate from the Actual Mount Azimuth due to several real-world factors, including but not limited to Magnetic vs. True North.

Sector: B

Nominal Mount Azimuth: 120.00°

3/17/2026

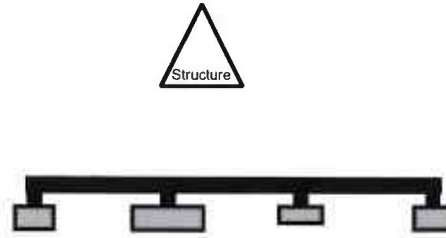
Structure Type: Guyed

10343479

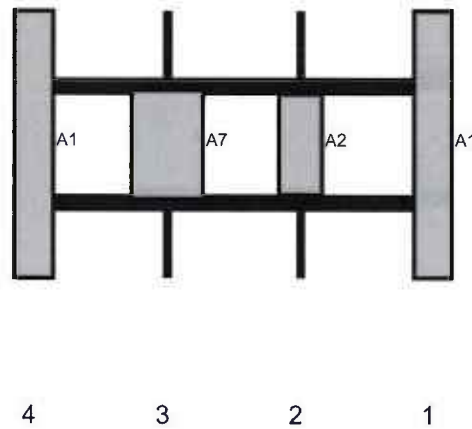
Mount Elev: 160.00

Page: 2

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
A1	NHH-65C-HG-R3BD	96	13.8	147	1	a	Front	48	0	Added	
A2	MT6433-77A	36.2	15.8	99	2	a	Front	48	0	Added	
A7	MF3208d	39	25.5	51	3	a	Front	48	0	Added	
A1	NHH-65C-HG-R3BD	96	13.8	3	4	a	Front	48	0	Added	

*The Nominal Mount Azimuth provided on this document is intended for guidance and planning purposes only and may deviate from the Actual Mount Azimuth due to several real-world factors, including but not limited to Magnetic vs. True North.

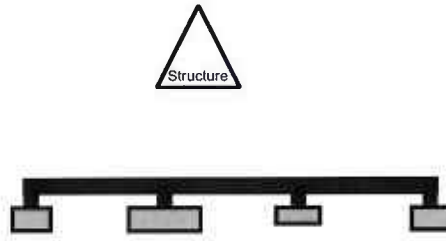
Sector: **C**
 Structure Type: Guyed
 Mount Elev: 160.00

Nominal Mount Azimuth: **240.00°**
 10343479

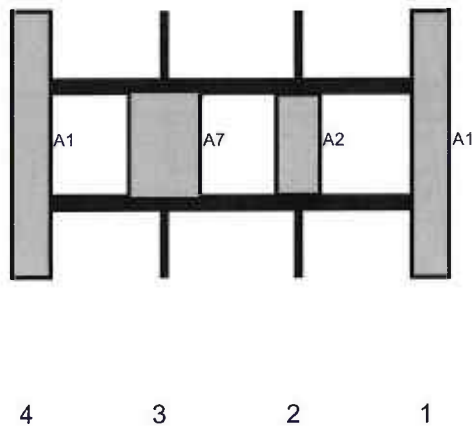
3/17/2026

Page: 3

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
A1	NHH-65C-HG-R3BD	96	13.8	147	1	a	Front	48	0	Added	
A2	MT6433-77A	36.2	15.8	99	2	a	Front	48	0	Added	
A7	MF3208d	39	25.5	51	3	a	Front	48	0	Added	
A1	NHH-65C-HG-R3BD	96	13.8	3	4	a	Front	48	0	Added	

*The Nominal Mount Azimuth provided on this document is intended for guidance and planning purposes only and may deviate from the Actual Mount Azimuth due to several real-world factors, including but not limited to Magnetic vs. True North.

GUARDIAN SECTOR FRAME

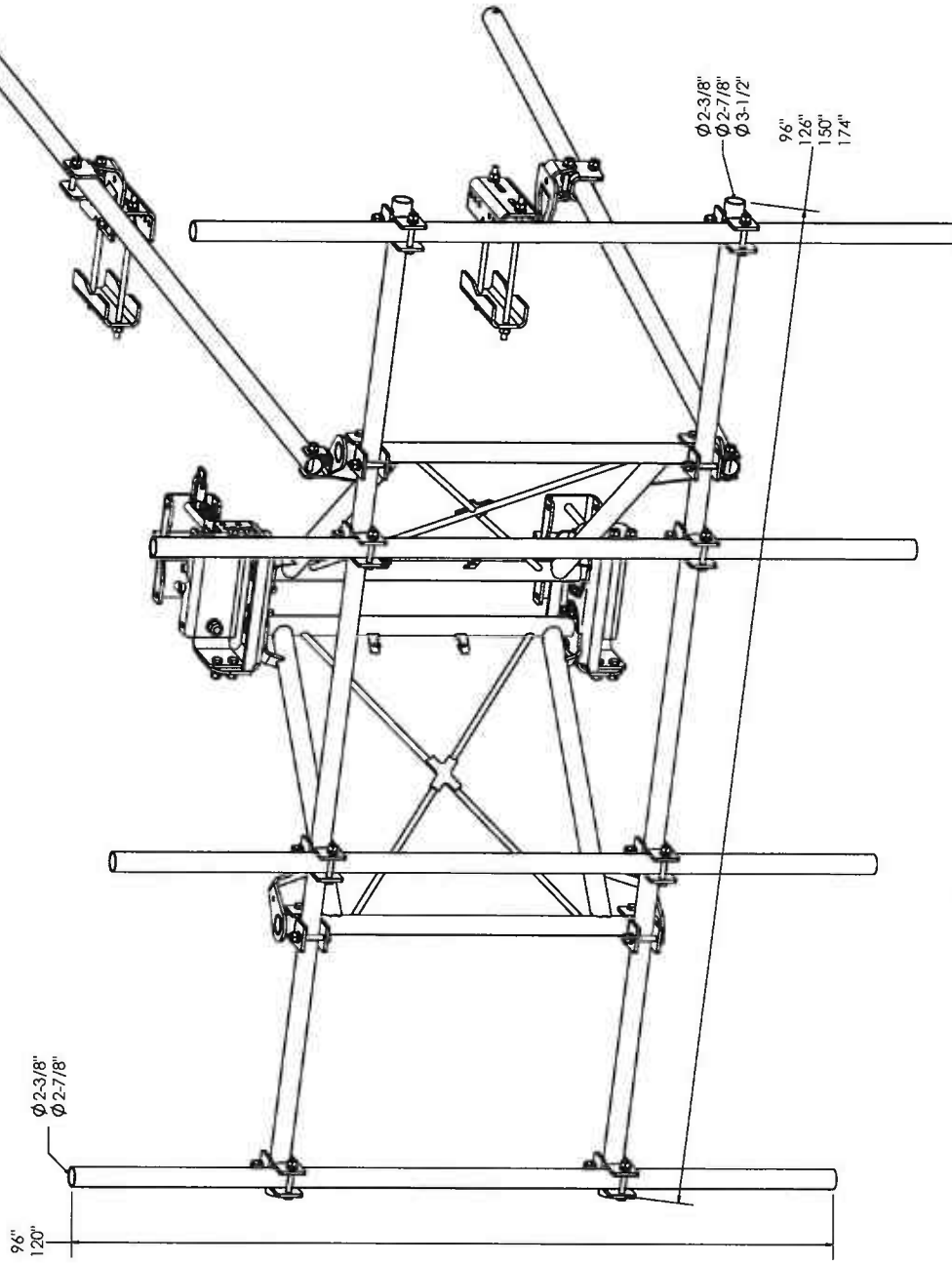


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SHEET	1 OF 29	THIRD ANGLE PROJECTION	SCALE	1:14	CATEGORY	01_Lattice Tower	4	PLATE 1 FOR 4 SECTOR MP	3/2024	PERFECT VISION®
DATE	8/16/2024	TOLERANCES ARE IN INCHES DIMENSIONS ARE IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS: ± 1/16" DECIMALS: ± 0.005" ALL OTHERS: ± 1/16"	BY	D.J.N.	CHECKED	S.J.S.	STATUS	APPROVED	REV	DESCRIPTION
DOCUMENT NUMBER	SFR-ENG-01-R4	GUARDIAN SECTOR FRAME	11/10/22	21/1/21	0	INITIAL RELEASE	1	GROUND BAR	9/2023	1/10/24
REV	4	SFR-ENG-01-R4	11/10/22	21/1/21	0	INITIAL RELEASE	1	GROUND BAR	9/2023	1/10/24

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PERFECTVISION. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PERFECTVISION IS PROHIBITED.

Part Number	Description	Weight [lbs]	Included Parts																				
			PV-SFR-GS-8	PV-SFR-HK-SS1B	PV-XP-DG-2020	PV-XP-DC-2025	PV-XP-DC-2030	PV-XP-DC-2525	PV-XP-DC-2530	PIPE-23BX96	PIPE-23BX120	PIPE-23BX126	PIPE-23BX150	PIPE-27BX96	PIPE-27BX120	PIPE-27BX126	PIPE-27BX174	PIPE-312X150	PIPE-312X174	PV-SA-PIPE-150	PV-SMU2090-01	PV-SCRB-SFA	PV-CMX-CG-BQ
PV-SFR-GS8-20-B	8' FW, 2-3/8" Face Pipe, No Antenna Pipe	560	1	1	4	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP19	8' FW, 2-3/8" Face Pipe, [2] 2-3/8" x 96" Antenna Pipe	650	1	1	8	-	-	-	4	-	-	-	-	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP20	8' FW, 2-3/8" Face Pipe, [2] 2-3/8" x 120" Antenna Pipe	660	1	1	8	-	-	-	2	2	-	-	-	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP21	8' FW, 2-3/8" Face Pipe, [2] 2-7/8" x 96" Antenna Pipe	680	1	1	4	4	-	-	2	-	-	-	2	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP22	8' FW, 2-3/8" Face Pipe, [2] 2-7/8" x 120" Antenna Pipe	710	1	1	4	4	-	-	2	-	-	-	2	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP7	8' FW, 2-3/8" Face Pipe, [3] 2-3/8" x 96" Antenna Pipe	690	1	1	10	-	-	-	5	-	-	-	-	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP8	8' FW, 2-3/8" Face Pipe, [3] 2-3/8" x 120" Antenna Pipe	710	1	1	10	-	-	-	2	3	-	-	-	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP9	8' FW, 2-3/8" Face Pipe, [3] 2-7/8" x 96" Antenna Pipe	750	1	1	4	6	-	-	2	-	-	-	3	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-20-AP10	8' FW, 2-3/8" Face Pipe, [3] 2-7/8" x 120" Antenna Pipe	780	1	1	4	6	-	-	2	-	-	-	3	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-B	8' FW, 2-7/8" Face Pipe, No Antenna Pipe	600	1	1	-	4	-	-	-	-	-	-	2	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP19	8' FW, 2-7/8" Face Pipe, [2] 2-3/8" x 96" Antenna Pipe	690	1	1	-	8	-	-	2	-	-	-	2	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP20	8' FW, 2-7/8" Face Pipe, [2] 2-3/8" x 120" Antenna Pipe	700	1	1	-	8	-	-	2	-	-	-	2	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP21	8' FW, 2-7/8" Face Pipe, [2] 2-7/8" x 96" Antenna Pipe	730	1	1	-	4	4	-	-	-	-	-	4	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP22	8' FW, 2-7/8" Face Pipe, [2] 2-7/8" x 120" Antenna Pipe	750	1	1	-	4	4	-	-	-	-	-	2	2	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP7	8' FW, 2-7/8" Face Pipe, [3] 2-3/8" x 96" Antenna Pipe	730	1	1	-	10	-	-	3	-	-	-	2	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP8	8' FW, 2-7/8" Face Pipe, [3] 2-3/8" x 120" Antenna Pipe	750	1	1	-	10	-	-	3	-	-	-	2	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP9	8' FW, 2-7/8" Face Pipe, [3] 2-7/8" x 96" Antenna Pipe	790	1	1	-	4	6	-	-	-	-	-	5	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS8-25-AP10	8' FW, 2-7/8" Face Pipe, [3] 2-7/8" x 120" Antenna Pipe	820	1	1	-	4	6	-	-	-	-	-	2	3	-	-	-	-	-	2	2	2	2
PV-SFR-GS10-20-B	10'6" FW, 2-3/8" Face Pipe, No Antenna Pipe	580	1	1	4	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS10-20-AP7	10'6" FW, 2-3/8" Face Pipe, [3] 2-3/8" x 96" Antenna Pipe	710	1	1	10	-	-	-	3	2	-	-	-	-	-	-	-	-	-	2	2	2	2
PV-SFR-GS10-20-AP8	10'6" FW, 2-3/8" Face Pipe, [3] 2-3/8" x 120" Antenna Pipe	730	1	1	10	-	-	-	-	3	2	-	-	-	-	-	-	-	-	2			

SHEET

8/16/2024

GUARDIAN SECTOR FRAME

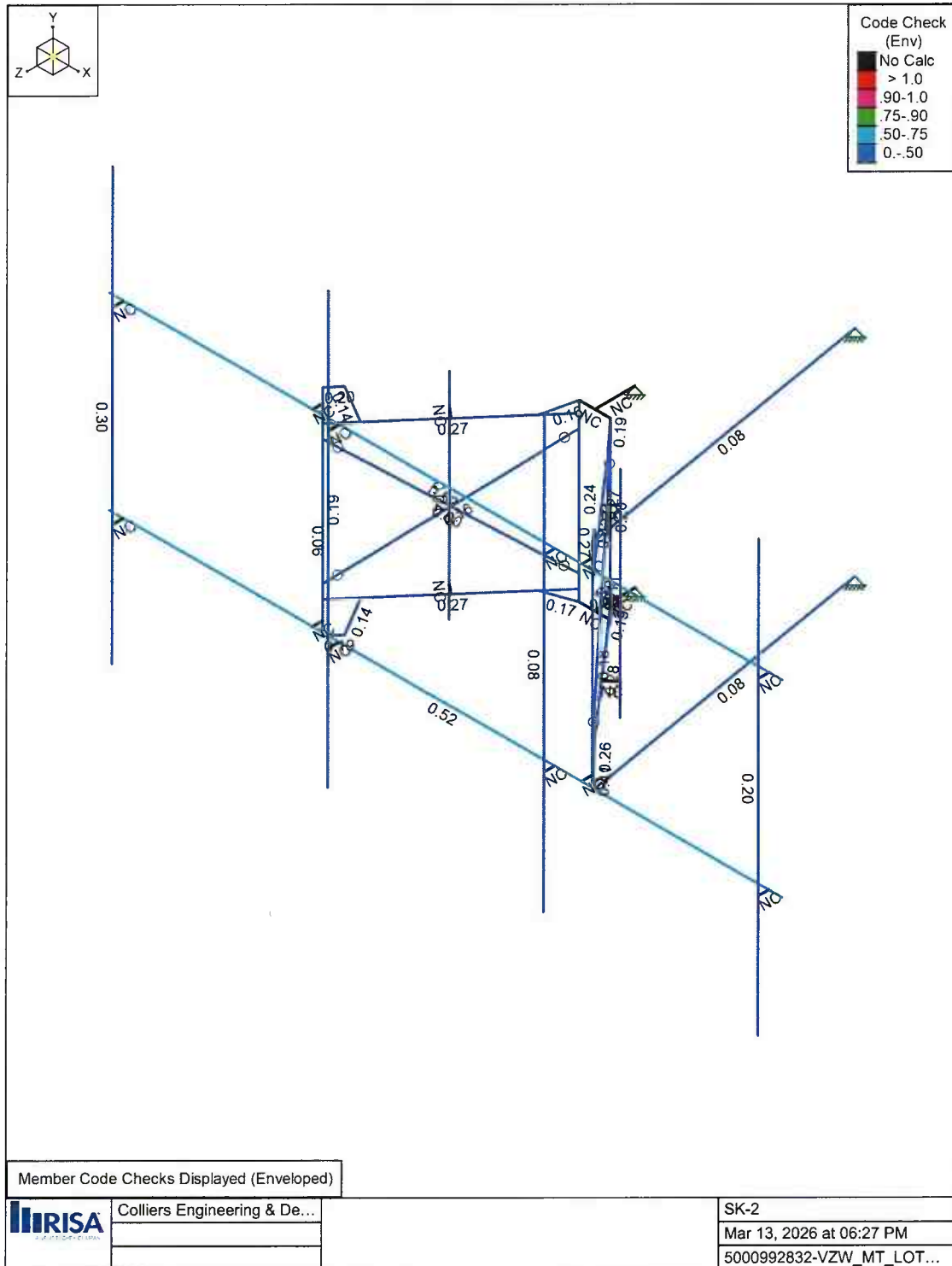
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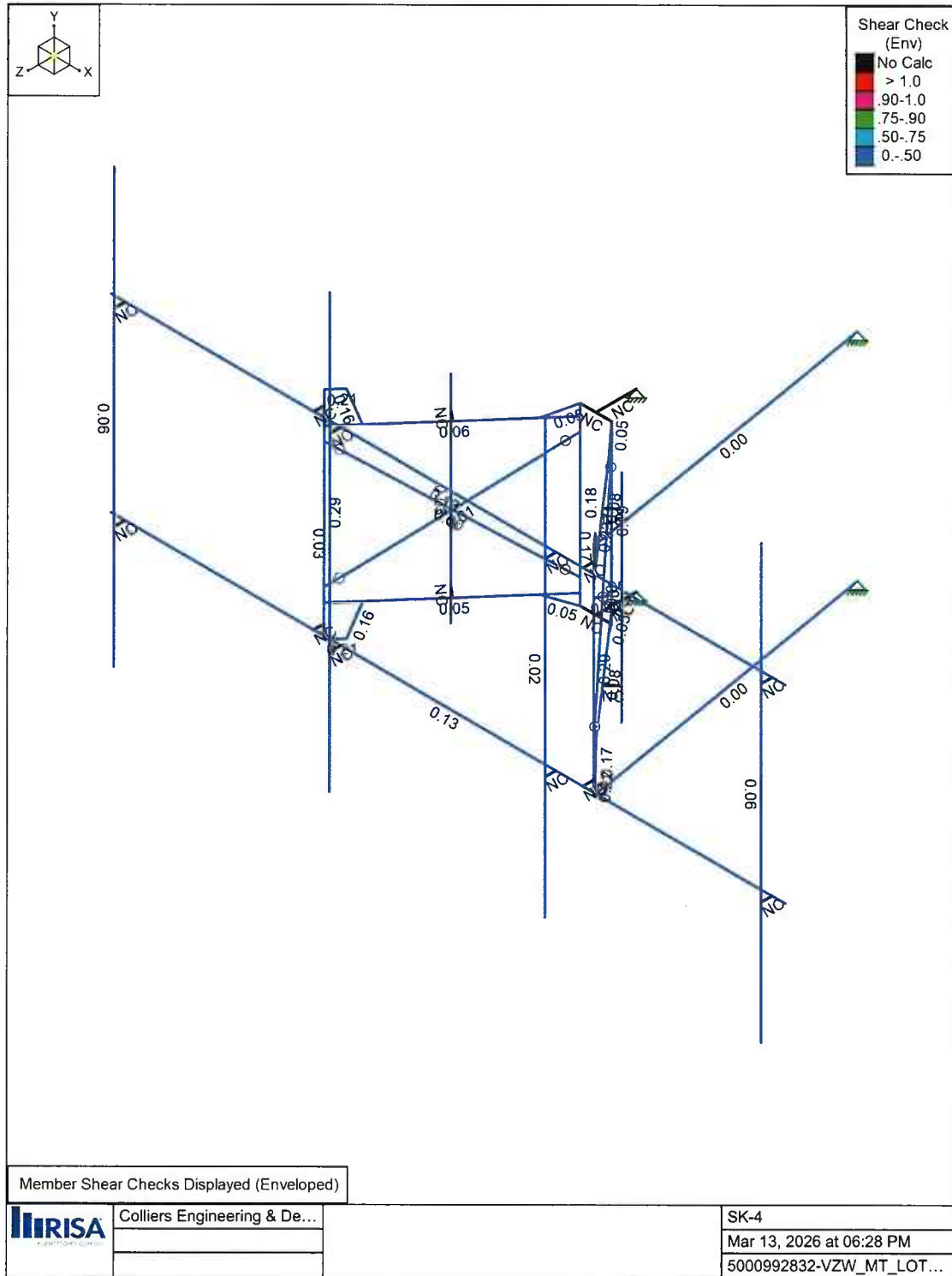
SFR-ENG-01-R4

KEY

4







Basic Load Cases

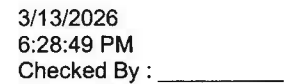
	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
1	Antenna D	None				30	
2	Antenna Di	None				30	
3	Antenna Wo (0 Deg)	None				30	
4	Antenna Wo (30 Deg)	None				30	
5	Antenna Wo (60 Deg)	None				30	
6	Antenna Wo (90 Deg)	None				30	
7	Antenna Wo (120 Deg)	None				30	
8	Antenna 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					34
41	Structure Wo (0 Deg)	None					68
42	Structure Wo (30 Deg)	None					68
43	Structure Wo (60 Deg)	None					68
44	Structure Wo (90 Deg)	None					68
45	Structure Wo (120 Deg)	None					68
46	Structure Wo (150 Deg)	None					68
47	Structure Wo (180 Deg)	None					68
48	Structure Wo (210 Deg)	None					68
49	Structure Wo (240 Deg)	None					68
50	Structure Wo (270 Deg)	None					68
51	Structure Wo (300 Deg)	None					68
52	Structure Wo (330 Deg)	None					68
53	Structure Wi (0 Deg)	None					68
54	Structure Wi (30 Deg)	None					68
55	Structure Wi (60 Deg)	None					68

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
56	Structure Wi (90 Deg)	None					68
57	Structure Wi (120 Deg)	None					68
58	Structure Wi (150 Deg)	None					68
59	Structure Wi (180 Deg)	None					68
60	Structure Wi (210 Deg)	None					68
61	Structure Wi (240 Deg)	None					68
62	Structure Wi (270 Deg)	None					68
63	Structure Wi (300 Deg)	None					68
64	Structure Wi (330 Deg)	None					68
65	Structure Wm (0 Deg)	None					68
66	Structure Wm (30 Deg)	None					68
67	Structure Wm (60 Deg)	None					68
68	Structure Wm (90 Deg)	None					68
69	Structure Wm (120 Deg)	None					68
70	Structure Wm (150 Deg)	None					68
71	Structure Wm (180 Deg)	None					68
72	Structure Wm (210 Deg)	None					68
73	Structure Wm (240 Deg)	None					68
74	Structure Wm (270 Deg)	None					68
75	Structure Wm (300 Deg)	None					68
76	Structure Wm (330 Deg)	None					68
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					
85	Structure Eh (0 Deg)	ELZ			-0.03		
86	Structure Eh (90 Deg)	ELX	0.03				

Load Combinations

	Description	Solve	P-Delta	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	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				

[illegible]

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	Standoff Vertical Pipe	PIPE 2.0X	Column	HSS Pipe	A500 Gr.C RND	Typical	1.4	0.827	0.827	1.65
2	Standoff Horizontal	PIPE 2.0	Beam	HSS Pipe	A500 Gr.C RND	Typical	1.02	0.627	0.627	1.25
3	Standoff Diagonal	SR 0.75	Column	BAR	A36 Gr.36	Typical	0.442	0.016	0.016	0.031
4	Face Horizontal	PIPE 2.0	Beam	HSS Pipe	A500 Gr.C RND	Typical	1.02	0.627	0.627	1.25
5	Mount Pipe	PIPE 2.0	Column	HSS Pipe	A500 Gr.C RND	Typical	1.02	0.627	0.627	1.25
6	Tieback	PIPE 2.0	Beam	HSS Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
7	Standoff Plate	PL3/8X2	HBrace	RECT	A36 Gr.36	Typical	0.75	0.009	0.25	0.031

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	-0.291667	1.625	0.75	
2	N2	-0.291667	-1.625	0.75	
3	N3	0.291667	1.625	0.75	
4	N4	0.291667	-1.625	0.75	
5	N5	-0.291667	1.416667	0.75	
6	N6	-0.291667	-1.416667	0.75	
7	N7	0.291667	1.416667	0.75	
8	N8	0.291667	-1.416667	0.75	
9	N9	-0.291667	1.166667	0.75	
10	N10	-0.291667	-1.166667	0.75	
11	N11	0.291667	1.166667	0.75	
12	N12	0.291667	-1.166667	0.75	
13	N13	-2.5	2	3.288333	
14	N14	-2.5	-2	3.288333	
15	N15	2.5	2	3.288333	
16	N16	2.5	-2	3.288333	
17	N17	-2.5	1.416667	3.288333	
18	N18	-2.5	-1.416667	3.288333	
19	N19	2.5	1.416667	3.288333	
20	N20	2.5	-1.416667	3.288333	
21	N21	-2.5	1.166667	3.288333	
22	N22	-2.5	-1.166667	3.288333	
23	N23	2.5	1.166667	3.288333	
24	N24	2.5	-1.166667	3.288333	
25	N25	-2.5	1.75	3.288333	
26	N26	-2.5	-1.75	3.288333	
27	N27	2.5	1.75	3.288333	
28	N28	2.5	-1.75	3.288333	
29	N29	-2.5	1.75	3.486667	
30	N30	-2.5	-1.75	3.486667	
31	N31	2.5	1.75	3.486667	
32	N32	2.5	-1.75	3.486667	
33	N33	-6.25	1.75	3.486667	
34	N34	-6.25	-1.75	3.486667	
35	N35	6.25	1.75	3.486667	
36	N36	6.25	-1.75	3.486667	
37	N38	-6	1.75	3.486667	
38	N39	-6	1.75	3.685	
39	N40	-6	-1.75	3.486667	
40	N41	-6	-1.75	3.685	
41	N42	-6	4	3.685	
42	N43	-6	-4	3.685	
43	N44	-2	1.75	3.685	
44	N45	-2	1.75	3.486667	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
45	N46	-2	-4	3.685	
46	N47	-2	4	3.685	
47	N48	-2	-1.75	3.685	
48	N49	-2	-1.75	3.486667	
49	N50	2	1.75	3.685	
50	N51	2	1.75	3.486667	
51	N52	2	-4	3.685	
52	N53	2	4	3.685	
53	N54	2	-1.75	3.685	
54	N55	2	-1.75	3.486667	
55	N56	6	1.75	3.685	
56	N57	6	1.75	3.486667	
57	N58	6	-4	3.685	
58	N59	6	4	3.685	
59	N60	6	-1.75	3.685	
60	N61	6	-1.75	3.486667	
61	N62	0	1.625	0.75	
62	N63	0	-1.625	0.75	
63	N65	-2.171819	1.416667	2.911111	
64	N66	-2.171819	-1.416667	2.911111	
65	N67	2.171819	1.416667	2.911111	
66	N68	2.171819	-1.416667	2.911111	
67	N69	-2.308561	2	3.068287	
68	N70	-2.308561	-2	3.068287	
69	N71	2.308561	2	3.068287	
70	N72	2.308561	-2	3.068287	
71	N73	-0.640306	1.416667	1.150738	
72	N74	-0.640306	-1.416667	1.150738	
73	N75	0.640306	1.416667	1.150738	
74	N76	0.640306	-1.416667	1.150738	
75	A-T	0	1.625	0	
76	A-B	0	-1.625	0	
77	N79	1.5	2	-2.598076	
78	N82	1.5	-2	-2.598076	
79	N80	0	0	0	
80	N81	-1.5	1.625	-2.598076	
81	N83	-1.5	-1.625	-2.598076	
82	N84	1.5	-1.625	-2.598076	
83	N85	1.5	1.625	-2.598076	
84	N89	0	0	-1.732051	
85	N88	-1.395833	1.416667	2.019167	
86	N90	-1.584445	1.416667	1.855076	
87	N87	-1.395833	-1.416667	2.019167	
88	N91	-1.584445	-1.416667	1.855076	
89	N92	-1.584445	2	1.855076	
90	N93	-1.584445	-2	1.855076	
91	N94	1.584445	2	1.855076	
92	N95	1.395833	1.416667	2.019167	
93	N96	1.584445	1.416667	1.855076	
94	N97	1.395833	-1.416667	2.019167	
95	N98	1.584445	-1.416667	1.855076	
96	N99	1.584445	-2	1.855076	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]
1	N63			
2	N62			
3	A-T	Reaction	Reaction	Reaction
4	A-B	Reaction	Reaction	Reaction
5	N79	Reaction	Reaction	Reaction
6	N82	Reaction	Reaction	Reaction

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	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.25	65	1.15
8	A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1
9	A500 Gr.C RND	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N2	N1		Standoff Vertical Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
2	M2	N4	N3		Standoff Vertical Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
3	M3	N14	N13		Standoff Vertical Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
4	M4	N16	N15		Standoff Vertical Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
5	OVP	N17	N5		Standoff Horizontal	Beam	HSS Pipe	A500 Gr.C RND	Typical
6	M6	N18	N6		Standoff Horizontal	Beam	HSS Pipe	A500 Gr.C RND	Typical
7	M7	N19	N7		Standoff Horizontal	Beam	HSS Pipe	A500 Gr.C RND	Typical
8	M8	N20	N8		Standoff Horizontal	Beam	HSS Pipe	A500 Gr.C RND	Typical
9	M9	N21	N10		Standoff Diagonal	Column	BAR	A36 Gr.36	Typical
10	M10	N22	N9		Standoff Diagonal	Column	BAR	A36 Gr.36	Typical
11	M11	N23	N12		Standoff Diagonal	Column	BAR	A36 Gr.36	Typical
12	M12	N24	N11		Standoff Diagonal	Column	BAR	A36 Gr.36	Typical
13	M13	N33	N35		Face Horizontal	Beam	HSS Pipe	A500 Gr.C RND	Typical
14	LV	N34	N36		Face Horizontal	Beam	HSS Pipe	A500 Gr.C RND	Typical
15	M15	N25	N29		RIGID	None	None	RIGID	Typical
16	M16	N26	N30		RIGID	None	None	RIGID	Typical
17	M17	N28	N32		RIGID	None	None	RIGID	Typical
18	M18	N27	N31		RIGID	None	None	RIGID	Typical
19	M19	N15	N79		Tieback	Beam	HSS Pipe	A53 Gr.B	Typical
20	MP4A	N42	N43		Mount Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
21	M21	N38	N39		RIGID	None	None	RIGID	Typical
22	LM2	N40	N41		RIGID	None	None	RIGID	Typical
23	M23	N45	N44		RIGID	None	None	RIGID	Typical
24	MP3A	N47	N46		Mount Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
25	M25	N49	N48		RIGID	None	None	RIGID	Typical
26	M26	N51	N50		RIGID	None	None	RIGID	Typical
27	MP2A	N53	N52		Mount Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
28	M28	N55	N54		RIGID	None	None	RIGID	Typical
29	M29	N57	N56		RIGID	None	None	RIGID	Typical
30	MP1A	N59	N58		Mount Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
31	LM1	N61	N60		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
32	M32	N1	N3		RIGID	None	None	RIGID	Typical
33	M33	N2	N4		RIGID	None	None	RIGID	Typical
34	M34	N16	N82		Tieback	Beam	HSS Pipe	A53 Gr.B	Typical
35	M35	N13	N69	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
36	M36	N69	N65	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
37	M37	N14	N70	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
38	M38	N70	N66	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
39	M39	N15	N71	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
40	M40	N71	N67	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
41	M41	N16	N72	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
42	M42	N72	N68	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
43	M43	N1	N73	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
44	M44	N2	N74	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
45	M45	N3	N75	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
46	M46	N4	N76	90	Standoff Plate	HBrace	RECT	A36 Gr.36	Typical
47	M47	N62	A-T		RIGID	None	None	RIGID	Typical
48	M48	N63	A-B		RIGID	None	None	RIGID	Typical
49	M49	N88	N90		RIGID	None	None	RIGID	Typical
50	M50	N87	N91		RIGID	None	None	RIGID	Typical
51	RRU2A	N92	N93		Mount Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical
52	M52	N95	N96		RIGID	None	None	RIGID	Typical
53	M53	N97	N98		RIGID	None	None	RIGID	Typical
54	RRU1A	N94	N99		Mount Pipe	Column	HSS Pipe	A500 Gr.C RND	Typical

Member Advanced Data

	Label	I Release	J Release	Col-Wall	Vert Release	Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio	Options	Seismic	DR
1	M1								Yes	** NA **		None	
2	M2								Yes	** NA **		None	
3	M3								Yes	** NA **		None	
4	M4								Yes	** NA **		None	
5	OVP					1.2	1.2		Yes	Default		None	
6	M6					1.2	1.2		Yes	Default		None	
7	M7					1.2	1.2		Yes	Default		None	
8	M8					1.2	1.2		Yes	Default		None	
9	M9	BenPIN	BenPIN			1.2	1.2	Tension Only	Yes	** NA **		None	
10	M10	BenPIN	BenPIN			1.2	1.2	Tension Only	Yes	** NA **		None	
11	M11	BenPIN	BenPIN			1.2	1.2	Tension Only	Yes	** NA **		None	
12	M12	BenPIN	BenPIN			1.2	1.2	Tension Only	Yes	** NA **		None	
13	M13								Yes	Default		None	
14	LV								Yes	Default		None	
15	M15								Yes	** NA **		None	
16	M16								Yes	** NA **		None	
17	M17								Yes	** NA **		None	
18	M18								Yes	** NA **		None	
19	M19	BenPIN							Yes	Default		None	
20	MP4A								Yes	** NA **		None	
21	M21								Yes	** NA **		None	
22	LM2								Yes	** NA **		None	
23	M23								Yes	** NA **		None	
24	MP3A								Yes	** NA **		None	
25	M25								Yes	** NA **		None	
26	M26								Yes	** NA **		None	
27	MP2A								Yes	** NA **		None	
28	M28								Yes	** NA **		None	
29	M29								Yes	** NA **		None	

Member Advanced Data (Continued)

	Label	Release	J Release	Col-Wall	Vert Release	Offset [in]	J Offset [in]	T/C Only	Physical	Deflection Ratio	Options	Seismic DR
30	MP1A								Yes	** NA **		None
31	LM1								Yes	** NA **		None
32	M32								Yes	** NA **		None
33	M33								Yes	** NA **		None
34	M34	BenPIN							Yes	Default		None
35	M35					1.2			Yes	** NA **		None
36	M36						1.2		Yes	** NA **		None
37	M37					1.2			Yes	** NA **		None
38	M38						1.2		Yes	** NA **		None
39	M39					1.2			Yes	** NA **		None
40	M40						1.2		Yes	** NA **		None
41	M41					1.2			Yes	** NA **		None
42	M42						1.2		Yes	** NA **		None
43	M43						1.2		Yes	** NA **		None
44	M44						1.2		Yes	** NA **		None
45	M45						1.2		Yes	** NA **		None
46	M46						1.2		Yes	** NA **		None
47	M47								Yes	** NA **		None
48	M48								Yes	** NA **		None
49	M49								Yes	** NA **		None
50	M50								Yes	** NA **		None
51	RRU2A								Yes	** NA **		None
52	M52								Yes	** NA **		None
53	M53								Yes	** NA **		None
54	RRU1A								Yes	** NA **		None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	Y	-46.55	1.5
2	MP1A	My	-0.023	1.5
3	MP1A	Mz	0	1.5
4	MP1A	Y	-46.55	6.5
5	MP1A	My	-0.023	6.5
6	MP1A	Mz	0	6.5
7	MP4A	Y	-46.55	1.5
8	MP4A	My	-0.023	1.5
9	MP4A	Mz	0	1.5
10	MP4A	Y	-46.55	6.5
11	MP4A	My	-0.023	6.5
12	MP4A	Mz	0	6.5
13	MP2A	Y	-31.75	3
14	MP2A	My	-0.016	3
15	MP2A	Mz	0	3
16	MP2A	Y	-31.75	5
17	MP2A	My	-0.016	5
18	MP2A	Mz	0	5
19	RRU1A	Y	-79.1	1
20	RRU1A	My	0	1
21	RRU1A	Mz	0	1
22	RRU2A	Y	-32	1
23	RRU2A	My	0.016	1
24	RRU2A	Mz	0	1
25	MP3A	Y	-63.6	3
26	MP3A	My	-0.032	3
27	MP3A	Mz	0	3

Member Point Loads (BLC 1 : Antenna D) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
28	MP3A	Y	-63.6	5
29	MP3A	My	-0.032	5
30	MP3A	Mz	0	5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	Y	-92.789	1.5
2	MP1A	My	-0.046	1.5
3	MP1A	Mz	0	1.5
4	MP1A	Y	-92.789	6.5
5	MP1A	My	-0.046	6.5
6	MP1A	Mz	0	6.5
7	MP4A	Y	-92.789	1.5
8	MP4A	My	-0.046	1.5
9	MP4A	Mz	0	1.5
10	MP4A	Y	-92.789	6.5
11	MP4A	My	-0.046	6.5
12	MP4A	Mz	0	6.5
13	MP2A	Y	-37.499	3
14	MP2A	My	-0.019	3
15	MP2A	Mz	0	3
16	MP2A	Y	-37.499	5
17	MP2A	My	-0.019	5
18	MP2A	Mz	0	5
19	RRU1A	Y	-46.133	1
20	RRU1A	My	0	1
21	RRU1A	Mz	0	1
22	RRU2A	Y	-89.334	1
23	RRU2A	My	0.045	1
24	RRU2A	Mz	0	1
25	MP3A	Y	-63.751	3
26	MP3A	My	-0.032	3
27	MP3A	Mz	0	3
28	MP3A	Y	-63.751	5
29	MP3A	My	-0.032	5
30	MP3A	Mz	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	0	1.5
2	MP1A	Z	-300.252	1.5
3	MP1A	Mx	0	1.5
4	MP1A	X	0	6.5
5	MP1A	Z	-300.252	6.5
6	MP1A	Mx	0	6.5
7	MP4A	X	0	1.5
8	MP4A	Z	-300.252	1.5
9	MP4A	Mx	0	1.5
10	MP4A	X	0	6.5
11	MP4A	Z	-300.252	6.5
12	MP4A	Mx	0	6.5
13	MP2A	X	0	3
14	MP2A	Z	-98.761	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2A	Mx	0	3
16	MP2A	X	0	5
17	MP2A	Z	-98.761	5
18	MP2A	Mx	0	5
19	RRU1A	X	0	1
20	RRU1A	Z	-87.321	1
21	RRU1A	Mx	0	1
22	RRU2A	X	0	1
23	RRU2A	Z	-148.025	1
24	RRU2A	Mx	0	1
25	MP3A	X	0	3
26	MP3A	Z	-160.866	3
27	MP3A	Mx	0	3
28	MP3A	X	0	5
29	MP3A	Z	-160.866	5
30	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	137.434	1.5
2	MP1A	Z	-238.042	1.5
3	MP1A	Mx	-0.069	1.5
4	MP1A	X	137.434	6.5
5	MP1A	Z	-238.042	6.5
6	MP1A	Mx	-0.069	6.5
7	MP4A	X	137.434	1.5
8	MP4A	Z	-238.042	1.5
9	MP4A	Mx	-0.069	1.5
10	MP4A	X	137.434	6.5
11	MP4A	Z	-238.042	6.5
12	MP4A	Mx	-0.069	6.5
13	MP2A	X	41.355	3
14	MP2A	Z	-71.628	3
15	MP2A	Mx	-0.021	3
16	MP2A	X	41.355	5
17	MP2A	Z	-71.628	5
18	MP2A	Mx	-0.021	5
19	RRU1A	X	40.187	1
20	RRU1A	Z	-69.606	1
21	RRU1A	Mx	0	1
22	RRU2A	X	69.576	1
23	RRU2A	Z	-120.51	1
24	RRU2A	Mx	0.035	1
25	MP3A	X	67.008	3
26	MP3A	Z	-116.061	3
27	MP3A	Mx	-0.034	3
28	MP3A	X	67.008	5
29	MP3A	Z	-116.061	5
30	MP3A	Mx	-0.034	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	194.076	1.5
2	MP1A	Z	-112.05	1.5
3	MP1A	Mx	-0.097	1.5
4	MP1A	X	194.076	6.5
5	MP1A	Z	-112.05	6.5
6	MP1A	Mx	-0.097	6.5
7	MP4A	X	194.076	1.5
8	MP4A	Z	-112.05	1.5
9	MP4A	Mx	-0.097	1.5
10	MP4A	X	194.076	6.5
11	MP4A	Z	-112.05	6.5
12	MP4A	Mx	-0.097	6.5
13	MP2A	X	43.826	3
14	MP2A	Z	-25.303	3
15	MP2A	Mx	-0.022	3
16	MP2A	X	43.826	5
17	MP2A	Z	-25.303	5
18	MP2A	Mx	-0.022	5
19	RRU1A	X	57.576	1
20	RRU1A	Z	-33.241	1
21	RRU1A	Mx	0	1
22	RRU2A	X	105.143	1
23	RRU2A	Z	-60.704	1
24	RRU2A	Mx	0.053	1
25	MP3A	X	69.556	3
26	MP3A	Z	-40.158	3
27	MP3A	Mx	-0.035	3
28	MP3A	X	69.556	5
29	MP3A	Z	-40.158	5
30	MP3A	Mx	-0.035	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	198.715	1.5
2	MP1A	Z	0	1.5
3	MP1A	Mx	-0.099	1.5
4	MP1A	X	198.715	6.5
5	MP1A	Z	0	6.5
6	MP1A	Mx	-0.099	6.5
7	MP4A	X	198.715	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	-0.099	1.5
10	MP4A	X	198.715	6.5
11	MP4A	Z	0	6.5
12	MP4A	Mx	-0.099	6.5
13	MP2A	X	34.555	3
14	MP2A	Z	0	3
15	MP2A	Mx	-0.017	3
16	MP2A	X	34.555	5
17	MP2A	Z	0	5
18	MP2A	Mx	-0.017	5
19	RRU1A	X	59.537	1
20	RRU1A	Z	0	1
21	RRU1A	Mx	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	RRU2A	X	112.536	1
23	RRU2A	Z	0	1
24	RRU2A	Mx	0.056	1
25	MP3A	X	53.466	3
26	MP3A	Z	0	3
27	MP3A	Mx	-0.027	3
28	MP3A	X	53.466	5
29	MP3A	Z	0	5
30	MP3A	Mx	-0.027	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	194.076	1.5
2	MP1A	Z	112.05	1.5
3	MP1A	Mx	-0.097	1.5
4	MP1A	X	194.076	6.5
5	MP1A	Z	112.05	6.5
6	MP1A	Mx	-0.097	6.5
7	MP4A	X	194.076	1.5
8	MP4A	Z	112.05	1.5
9	MP4A	Mx	-0.097	1.5
10	MP4A	X	194.076	6.5
11	MP4A	Z	112.05	6.5
12	MP4A	Mx	-0.097	6.5
13	MP2A	X	43.826	3
14	MP2A	Z	25.303	3
15	MP2A	Mx	-0.022	3
16	MP2A	X	43.826	5
17	MP2A	Z	25.303	5
18	MP2A	Mx	-0.022	5
19	RRU1A	X	57.576	1
20	RRU1A	Z	33.241	1
21	RRU1A	Mx	0	1
22	RRU2A	X	105.143	1
23	RRU2A	Z	60.704	1
24	RRU2A	Mx	0.053	1
25	MP3A	X	69.556	3
26	MP3A	Z	40.158	3
27	MP3A	Mx	-0.035	3
28	MP3A	X	69.556	5
29	MP3A	Z	40.158	5
30	MP3A	Mx	-0.035	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	137.434	1.5
2	MP1A	Z	238.042	1.5
3	MP1A	Mx	-0.069	1.5
4	MP1A	X	137.434	6.5
5	MP1A	Z	238.042	6.5
6	MP1A	Mx	-0.069	6.5
7	MP4A	X	137.434	1.5
8	MP4A	Z	238.042	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mx	-0.069	1.5
10	MP4A	X	137.434	6.5
11	MP4A	Z	238.042	6.5
12	MP4A	Mx	-0.069	6.5
13	MP2A	X	41.355	3
14	MP2A	Z	71.628	3
15	MP2A	Mx	-0.021	3
16	MP2A	X	41.355	5
17	MP2A	Z	71.628	5
18	MP2A	Mx	-0.021	5
19	RRU1A	X	40.187	1
20	RRU1A	Z	69.606	1
21	RRU1A	Mx	0	1
22	RRU2A	X	69.576	1
23	RRU2A	Z	120.51	1
24	RRU2A	Mx	0.035	1
25	MP3A	X	67.008	3
26	MP3A	Z	116.061	3
27	MP3A	Mx	-0.034	3
28	MP3A	X	67.008	5
29	MP3A	Z	116.061	5
30	MP3A	Mx	-0.034	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	0	1.5
2	MP1A	Z	300.252	1.5
3	MP1A	Mx	0	1.5
4	MP1A	X	0	6.5
5	MP1A	Z	300.252	6.5
6	MP1A	Mx	0	6.5
7	MP4A	X	0	1.5
8	MP4A	Z	300.252	1.5
9	MP4A	Mx	0	1.5
10	MP4A	X	0	6.5
11	MP4A	Z	300.252	6.5
12	MP4A	Mx	0	6.5
13	MP2A	X	0	3
14	MP2A	Z	98.761	3
15	MP2A	Mx	0	3
16	MP2A	X	0	5
17	MP2A	Z	98.761	5
18	MP2A	Mx	0	5
19	RRU1A	X	0	1
20	RRU1A	Z	87.321	1
21	RRU1A	Mx	0	1
22	RRU2A	X	0	1
23	RRU2A	Z	148.025	1
24	RRU2A	Mx	0	1
25	MP3A	X	0	3
26	MP3A	Z	160.866	3
27	MP3A	Mx	0	3
28	MP3A	X	0	5
29	MP3A	Z	160.866	5
30	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-137.434	1.5
2	MP1A	Z	238.042	1.5
3	MP1A	Mx	0.069	1.5
4	MP1A	X	-137.434	6.5
5	MP1A	Z	238.042	6.5
6	MP1A	Mx	0.069	6.5
7	MP4A	X	-137.434	1.5
8	MP4A	Z	238.042	1.5
9	MP4A	Mx	0.069	1.5
10	MP4A	X	-137.434	6.5
11	MP4A	Z	238.042	6.5
12	MP4A	Mx	0.069	6.5
13	MP2A	X	-41.355	3
14	MP2A	Z	71.628	3
15	MP2A	Mx	0.021	3
16	MP2A	X	-41.355	5
17	MP2A	Z	71.628	5
18	MP2A	Mx	0.021	5
19	RRU1A	X	-40.187	1
20	RRU1A	Z	69.606	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-69.576	1
23	RRU2A	Z	120.51	1
24	RRU2A	Mx	-0.035	1
25	MP3A	X	-67.008	3
26	MP3A	Z	116.061	3
27	MP3A	Mx	0.034	3
28	MP3A	X	-67.008	5
29	MP3A	Z	116.061	5
30	MP3A	Mx	0.034	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-194.076	1.5
2	MP1A	Z	112.05	1.5
3	MP1A	Mx	0.097	1.5
4	MP1A	X	-194.076	6.5
5	MP1A	Z	112.05	6.5
6	MP1A	Mx	0.097	6.5
7	MP4A	X	-194.076	1.5
8	MP4A	Z	112.05	1.5
9	MP4A	Mx	0.097	1.5
10	MP4A	X	-194.076	6.5
11	MP4A	Z	112.05	6.5
12	MP4A	Mx	0.097	6.5
13	MP2A	X	-43.826	3
14	MP2A	Z	25.303	3
15	MP2A	Mx	0.022	3
16	MP2A	X	-43.826	5
17	MP2A	Z	25.303	5
18	MP2A	Mx	0.022	5
19	RRU1A	X	-57.576	1
20	RRU1A	Z	33.241	1
21	RRU1A	Mx	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	RRU2A	X	-105.143	1
23	RRU2A	Z	60.704	1
24	RRU2A	Mx	-0.053	1
25	MP3A	X	-69.556	3
26	MP3A	Z	40.158	3
27	MP3A	Mx	0.035	3
28	MP3A	X	-69.556	5
29	MP3A	Z	40.158	5
30	MP3A	Mx	0.035	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-198.715	1.5
2	MP1A	Z	0	1.5
3	MP1A	Mx	0.099	1.5
4	MP1A	X	-198.715	6.5
5	MP1A	Z	0	6.5
6	MP1A	Mx	0.099	6.5
7	MP4A	X	-198.715	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	0.099	1.5
10	MP4A	X	-198.715	6.5
11	MP4A	Z	0	6.5
12	MP4A	Mx	0.099	6.5
13	MP2A	X	-34.555	3
14	MP2A	Z	0	3
15	MP2A	Mx	0.017	3
16	MP2A	X	-34.555	5
17	MP2A	Z	0	5
18	MP2A	Mx	0.017	5
19	RRU1A	X	-59.537	1
20	RRU1A	Z	0	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-112.536	1
23	RRU2A	Z	0	1
24	RRU2A	Mx	-0.056	1
25	MP3A	X	-53.466	3
26	MP3A	Z	0	3
27	MP3A	Mx	0.027	3
28	MP3A	X	-53.466	5
29	MP3A	Z	0	5
30	MP3A	Mx	0.027	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-194.076	1.5
2	MP1A	Z	-112.05	1.5
3	MP1A	Mx	0.097	1.5
4	MP1A	X	-194.076	6.5
5	MP1A	Z	-112.05	6.5
6	MP1A	Mx	0.097	6.5
7	MP4A	X	-194.076	1.5
8	MP4A	Z	-112.05	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mx	0.097	1.5
10	MP4A	X	-194.076	6.5
11	MP4A	Z	-112.05	6.5
12	MP4A	Mx	0.097	6.5
13	MP2A	X	-43.826	3
14	MP2A	Z	-25.303	3
15	MP2A	Mx	0.022	3
16	MP2A	X	-43.826	5
17	MP2A	Z	-25.303	5
18	MP2A	Mx	0.022	5
19	RRU1A	X	-57.576	1
20	RRU1A	Z	-33.241	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-105.143	1
23	RRU2A	Z	-60.704	1
24	RRU2A	Mx	-0.053	1
25	MP3A	X	-69.556	3
26	MP3A	Z	-40.158	3
27	MP3A	Mx	0.035	3
28	MP3A	X	-69.556	5
29	MP3A	Z	-40.158	5
30	MP3A	Mx	0.035	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-137.434	1.5
2	MP1A	Z	-238.042	1.5
3	MP1A	Mx	0.069	1.5
4	MP1A	X	-137.434	6.5
5	MP1A	Z	-238.042	6.5
6	MP1A	Mx	0.069	6.5
7	MP4A	X	-137.434	1.5
8	MP4A	Z	-238.042	1.5
9	MP4A	Mx	0.069	1.5
10	MP4A	X	-137.434	6.5
11	MP4A	Z	-238.042	6.5
12	MP4A	Mx	0.069	6.5
13	MP2A	X	-41.355	3
14	MP2A	Z	-71.628	3
15	MP2A	Mx	0.021	3
16	MP2A	X	-41.355	5
17	MP2A	Z	-71.628	5
18	MP2A	Mx	0.021	5
19	RRU1A	X	-40.187	1
20	RRU1A	Z	-69.606	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-69.576	1
23	RRU2A	Z	-120.51	1
24	RRU2A	Mx	-0.035	1
25	MP3A	X	-67.008	3
26	MP3A	Z	-116.061	3
27	MP3A	Mx	0.034	3
28	MP3A	X	-67.008	5
29	MP3A	Z	-116.061	5
30	MP3A	Mx	0.034	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	0	1.5
2	MP1A	Z	-52.042	1.5
3	MP1A	Mx	0	1.5
4	MP1A	X	0	6.5
5	MP1A	Z	-52.042	6.5
6	MP1A	Mx	0	6.5
7	MP4A	X	0	1.5
8	MP4A	Z	-52.042	1.5
9	MP4A	Mx	0	1.5
10	MP4A	X	0	6.5
11	MP4A	Z	-52.042	6.5
12	MP4A	Mx	0	6.5
13	MP2A	X	0	3
14	MP2A	Z	-20.116	3
15	MP2A	Mx	0	3
16	MP2A	X	0	5
17	MP2A	Z	-20.116	5
18	MP2A	Mx	0	5
19	RRU1A	X	0	1
20	RRU1A	Z	-16.76	1
21	RRU1A	Mx	0	1
22	RRU2A	X	0	1
23	RRU2A	Z	-34.417	1
24	RRU2A	Mx	0	1
25	MP3A	X	0	3
26	MP3A	Z	-33.802	3
27	MP3A	Mx	0	3
28	MP3A	X	0	5
29	MP3A	Z	-33.802	5
30	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	23.977	1.5
2	MP1A	Z	-41.529	1.5
3	MP1A	Mx	-0.012	1.5
4	MP1A	X	23.977	6.5
5	MP1A	Z	-41.529	6.5
6	MP1A	Mx	-0.012	6.5
7	MP4A	X	23.977	1.5
8	MP4A	Z	-41.529	1.5
9	MP4A	Mx	-0.012	1.5
10	MP4A	X	23.977	6.5
11	MP4A	Z	-41.529	6.5
12	MP4A	Mx	-0.012	6.5
13	MP2A	X	8.694	3
14	MP2A	Z	-15.059	3
15	MP2A	Mx	-0.004	3
16	MP2A	X	8.694	5
17	MP2A	Z	-15.059	5
18	MP2A	Mx	-0.004	5
19	RRU1A	X	7.768	1
20	RRU1A	Z	-13.455	1
21	RRU1A	Mx	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	RRU2A	X	16.272	1
23	RRU2A	Z	-28.184	1
24	RRU2A	Mx	0.008	1
25	MP3A	X	14.304	3
26	MP3A	Z	-24.776	3
27	MP3A	Mx	-0.007	3
28	MP3A	X	14.304	5
29	MP3A	Z	-24.776	5
30	MP3A	Mx	-0.007	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	34.448	1.5
2	MP1A	Z	-19.888	1.5
3	MP1A	Mx	-0.017	1.5
4	MP1A	X	34.448	6.5
5	MP1A	Z	-19.888	6.5
6	MP1A	Mx	-0.017	6.5
7	MP4A	X	34.448	1.5
8	MP4A	Z	-19.888	1.5
9	MP4A	Mx	-0.017	1.5
10	MP4A	X	34.448	6.5
11	MP4A	Z	-19.888	6.5
12	MP4A	Mx	-0.017	6.5
13	MP2A	X	10.334	3
14	MP2A	Z	-5.967	3
15	MP2A	Mx	-0.005	3
16	MP2A	X	10.334	5
17	MP2A	Z	-5.967	5
18	MP2A	Mx	-0.005	5
19	RRU1A	X	11.337	1
20	RRU1A	Z	-6.546	1
21	RRU1A	Mx	0	1
22	RRU2A	X	24.938	1
23	RRU2A	Z	-14.398	1
24	RRU2A	Mx	0.012	1
25	MP3A	X	15.781	3
26	MP3A	Z	-9.111	3
27	MP3A	Mx	-0.008	3
28	MP3A	X	15.781	5
29	MP3A	Z	-9.111	5
30	MP3A	Mx	-0.008	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	35.689	1.5
2	MP1A	Z	0	1.5
3	MP1A	Mx	-0.018	1.5
4	MP1A	X	35.689	6.5
5	MP1A	Z	0	6.5
6	MP1A	Mx	-0.018	6.5
7	MP4A	X	35.689	1.5
8	MP4A	Z	0	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mx	-0.018	1.5
10	MP4A	X	35.689	6.5
11	MP4A	Z	0	6.5
12	MP4A	Mx	-0.018	6.5
13	MP2A	X	9.205	3
14	MP2A	Z	0	3
15	MP2A	Mx	-0.005	3
16	MP2A	X	9.205	5
17	MP2A	Z	0	5
18	MP2A	Mx	-0.005	5
19	RRU1A	X	11.869	1
20	RRU1A	Z	0	1
21	RRU1A	Mx	0	1
22	RRU2A	X	26.922	1
23	RRU2A	Z	0	1
24	RRU2A	Mx	0.013	1
25	MP3A	X	13.03	3
26	MP3A	Z	0	3
27	MP3A	Mx	-0.007	3
28	MP3A	X	13.03	5
29	MP3A	Z	0	5
30	MP3A	Mx	-0.007	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	34.448	1.5
2	MP1A	Z	19.888	1.5
3	MP1A	Mx	-0.017	1.5
4	MP1A	X	34.448	6.5
5	MP1A	Z	19.888	6.5
6	MP1A	Mx	-0.017	6.5
7	MP4A	X	34.448	1.5
8	MP4A	Z	19.888	1.5
9	MP4A	Mx	-0.017	1.5
10	MP4A	X	34.448	6.5
11	MP4A	Z	19.888	6.5
12	MP4A	Mx	-0.017	6.5
13	MP2A	X	10.334	3
14	MP2A	Z	5.967	3
15	MP2A	Mx	-0.005	3
16	MP2A	X	10.334	5
17	MP2A	Z	5.967	5
18	MP2A	Mx	-0.005	5
19	RRU1A	X	11.337	1
20	RRU1A	Z	6.546	1
21	RRU1A	Mx	0	1
22	RRU2A	X	24.938	1
23	RRU2A	Z	14.398	1
24	RRU2A	Mx	0.012	1
25	MP3A	X	15.781	3
26	MP3A	Z	9.111	3
27	MP3A	Mx	-0.008	3
28	MP3A	X	15.781	5
29	MP3A	Z	9.111	5
30	MP3A	Mx	-0.008	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	23.977	1.5
2	MP1A	Z	41.529	1.5
3	MP1A	Mx	-0.012	1.5
4	MP1A	X	23.977	6.5
5	MP1A	Z	41.529	6.5
6	MP1A	Mx	-0.012	6.5
7	MP4A	X	23.977	1.5
8	MP4A	Z	41.529	1.5
9	MP4A	Mx	-0.012	1.5
10	MP4A	X	23.977	6.5
11	MP4A	Z	41.529	6.5
12	MP4A	Mx	-0.012	6.5
13	MP2A	X	8.694	3
14	MP2A	Z	15.059	3
15	MP2A	Mx	-0.004	3
16	MP2A	X	8.694	5
17	MP2A	Z	15.059	5
18	MP2A	Mx	-0.004	5
19	RRU1A	X	7.768	1
20	RRU1A	Z	13.455	1
21	RRU1A	Mx	0	1
22	RRU2A	X	16.272	1
23	RRU2A	Z	28.184	1
24	RRU2A	Mx	0.008	1
25	MP3A	X	14.304	3
26	MP3A	Z	24.776	3
27	MP3A	Mx	-0.007	3
28	MP3A	X	14.304	5
29	MP3A	Z	24.776	5
30	MP3A	Mx	-0.007	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	0	1.5
2	MP1A	Z	52.042	1.5
3	MP1A	Mx	0	1.5
4	MP1A	X	0	6.5
5	MP1A	Z	52.042	6.5
6	MP1A	Mx	0	6.5
7	MP4A	X	0	1.5
8	MP4A	Z	52.042	1.5
9	MP4A	Mx	0	1.5
10	MP4A	X	0	6.5
11	MP4A	Z	52.042	6.5
12	MP4A	Mx	0	6.5
13	MP2A	X	0	3
14	MP2A	Z	20.116	3
15	MP2A	Mx	0	3
16	MP2A	X	0	5
17	MP2A	Z	20.116	5
18	MP2A	Mx	0	5
19	RRU1A	X	0	1
20	RRU1A	Z	16.76	1
21	RRU1A	Mx	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	RRU2A	X	0	1
23	RRU2A	Z	34.417	1
24	RRU2A	Mx	0	1
25	MP3A	X	0	3
26	MP3A	Z	33.802	3
27	MP3A	Mx	0	3
28	MP3A	X	0	5
29	MP3A	Z	33.802	5
30	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-23.977	1.5
2	MP1A	Z	41.529	1.5
3	MP1A	Mx	0.012	1.5
4	MP1A	X	-23.977	6.5
5	MP1A	Z	41.529	6.5
6	MP1A	Mx	0.012	6.5
7	MP4A	X	-23.977	1.5
8	MP4A	Z	41.529	1.5
9	MP4A	Mx	0.012	1.5
10	MP4A	X	-23.977	6.5
11	MP4A	Z	41.529	6.5
12	MP4A	Mx	0.012	6.5
13	MP2A	X	-8.694	3
14	MP2A	Z	15.059	3
15	MP2A	Mx	0.004	3
16	MP2A	X	-8.694	5
17	MP2A	Z	15.059	5
18	MP2A	Mx	0.004	5
19	RRU1A	X	-7.768	1
20	RRU1A	Z	13.455	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-16.272	1
23	RRU2A	Z	28.184	1
24	RRU2A	Mx	-0.008	1
25	MP3A	X	-14.304	3
26	MP3A	Z	24.776	3
27	MP3A	Mx	0.007	3
28	MP3A	X	-14.304	5
29	MP3A	Z	24.776	5
30	MP3A	Mx	0.007	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-34.448	1.5
2	MP1A	Z	19.888	1.5
3	MP1A	Mx	0.017	1.5
4	MP1A	X	-34.448	6.5
5	MP1A	Z	19.888	6.5
6	MP1A	Mx	0.017	6.5
7	MP4A	X	-34.448	1.5
8	MP4A	Z	19.888	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mx	0.017	1.5
10	MP4A	X	-34.448	6.5
11	MP4A	Z	19.888	6.5
12	MP4A	Mx	0.017	6.5
13	MP2A	X	-10.334	3
14	MP2A	Z	5.967	3
15	MP2A	Mx	0.005	3
16	MP2A	X	-10.334	5
17	MP2A	Z	5.967	5
18	MP2A	Mx	0.005	5
19	RRU1A	X	-11.337	1
20	RRU1A	Z	6.546	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-24.938	1
23	RRU2A	Z	14.398	1
24	RRU2A	Mx	-0.012	1
25	MP3A	X	-15.781	3
26	MP3A	Z	9.111	3
27	MP3A	Mx	0.008	3
28	MP3A	X	-15.781	5
29	MP3A	Z	9.111	5
30	MP3A	Mx	0.008	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-35.689	1.5
2	MP1A	Z	0	1.5
3	MP1A	Mx	0.018	1.5
4	MP1A	X	-35.689	6.5
5	MP1A	Z	0	6.5
6	MP1A	Mx	0.018	6.5
7	MP4A	X	-35.689	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	0.018	1.5
10	MP4A	X	-35.689	6.5
11	MP4A	Z	0	6.5
12	MP4A	Mx	0.018	6.5
13	MP2A	X	-9.205	3
14	MP2A	Z	0	3
15	MP2A	Mx	0.005	3
16	MP2A	X	-9.205	5
17	MP2A	Z	0	5
18	MP2A	Mx	0.005	5
19	RRU1A	X	-11.869	1
20	RRU1A	Z	0	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-26.922	1
23	RRU2A	Z	0	1
24	RRU2A	Mx	-0.013	1
25	MP3A	X	-13.03	3
26	MP3A	Z	0	3
27	MP3A	Mx	0.007	3
28	MP3A	X	-13.03	5
29	MP3A	Z	0	5
30	MP3A	Mx	0.007	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-34.448	1.5
2	MP1A	Z	-19.888	1.5
3	MP1A	Mx	0.017	1.5
4	MP1A	X	-34.448	6.5
5	MP1A	Z	-19.888	6.5
6	MP1A	Mx	0.017	6.5
7	MP4A	X	-34.448	1.5
8	MP4A	Z	-19.888	1.5
9	MP4A	Mx	0.017	1.5
10	MP4A	X	-34.448	6.5
11	MP4A	Z	-19.888	6.5
12	MP4A	Mx	0.017	6.5
13	MP2A	X	-10.334	3
14	MP2A	Z	-5.967	3
15	MP2A	Mx	0.005	3
16	MP2A	X	-10.334	5
17	MP2A	Z	-5.967	5
18	MP2A	Mx	0.005	5
19	RRU1A	X	-11.337	1
20	RRU1A	Z	-6.546	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-24.938	1
23	RRU2A	Z	-14.398	1
24	RRU2A	Mx	-0.012	1
25	MP3A	X	-15.781	3
26	MP3A	Z	-9.111	3
27	MP3A	Mx	0.008	3
28	MP3A	X	-15.781	5
29	MP3A	Z	-9.111	5
30	MP3A	Mx	0.008	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-23.977	1.5
2	MP1A	Z	-41.529	1.5
3	MP1A	Mx	0.012	1.5
4	MP1A	X	-23.977	6.5
5	MP1A	Z	-41.529	6.5
6	MP1A	Mx	0.012	6.5
7	MP4A	X	-23.977	1.5
8	MP4A	Z	-41.529	1.5
9	MP4A	Mx	0.012	1.5
10	MP4A	X	-23.977	6.5
11	MP4A	Z	-41.529	6.5
12	MP4A	Mx	0.012	6.5
13	MP2A	X	-8.694	3
14	MP2A	Z	-15.059	3
15	MP2A	Mx	0.004	3
16	MP2A	X	-8.694	5
17	MP2A	Z	-15.059	5
18	MP2A	Mx	0.004	5
19	RRU1A	X	-7.768	1
20	RRU1A	Z	-13.455	1
21	RRU1A	Mx	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	RRU2A	X	-16.272	1
23	RRU2A	Z	-28.184	1
24	RRU2A	Mx	-0.008	1
25	MP3A	X	-14.304	3
26	MP3A	Z	-24.776	3
27	MP3A	Mx	0.007	3
28	MP3A	X	-14.304	5
29	MP3A	Z	-24.776	5
30	MP3A	Mx	0.007	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	0	1.5
2	MP1A	Z	-17.295	1.5
3	MP1A	Mx	0	1.5
4	MP1A	X	0	6.5
5	MP1A	Z	-17.295	6.5
6	MP1A	Mx	0	6.5
7	MP4A	X	0	1.5
8	MP4A	Z	-17.295	1.5
9	MP4A	Mx	0	1.5
10	MP4A	X	0	6.5
11	MP4A	Z	-17.295	6.5
12	MP4A	Mx	0	6.5
13	MP2A	X	0	3
14	MP2A	Z	-5.689	3
15	MP2A	Mx	0	3
16	MP2A	X	0	5
17	MP2A	Z	-5.689	5
18	MP2A	Mx	0	5
19	RRU1A	X	0	1
20	RRU1A	Z	-5.03	1
21	RRU1A	Mx	0	1
22	RRU2A	X	0	1
23	RRU2A	Z	-8.526	1
24	RRU2A	Mx	0	1
25	MP3A	X	0	3
26	MP3A	Z	-9.266	3
27	MP3A	Mx	0	3
28	MP3A	X	0	5
29	MP3A	Z	-9.266	5
30	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	7.916	1.5
2	MP1A	Z	-13.711	1.5
3	MP1A	Mx	-0.004	1.5
4	MP1A	X	7.916	6.5
5	MP1A	Z	-13.711	6.5
6	MP1A	Mx	-0.004	6.5
7	MP4A	X	7.916	1.5
8	MP4A	Z	-13.711	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mx	-0.004	1.5
10	MP4A	X	7.916	6.5
11	MP4A	Z	-13.711	6.5
12	MP4A	Mx	-0.004	6.5
13	MP2A	X	2.382	3
14	MP2A	Z	-4.126	3
15	MP2A	Mx	-0.001	3
16	MP2A	X	2.382	5
17	MP2A	Z	-4.126	5
18	MP2A	Mx	-0.001	5
19	RRU1A	X	2.315	1
20	RRU1A	Z	-4.009	1
21	RRU1A	Mx	0	1
22	RRU2A	X	4.008	1
23	RRU2A	Z	-6.941	1
24	RRU2A	Mx	0.002	1
25	MP3A	X	3.86	3
26	MP3A	Z	-6.685	3
27	MP3A	Mx	-0.002	3
28	MP3A	X	3.86	5
29	MP3A	Z	-6.685	5
30	MP3A	Mx	-0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	11.179	1.5
2	MP1A	Z	-6.454	1.5
3	MP1A	Mx	-0.006	1.5
4	MP1A	X	11.179	6.5
5	MP1A	Z	-6.454	6.5
6	MP1A	Mx	-0.006	6.5
7	MP4A	X	11.179	1.5
8	MP4A	Z	-6.454	1.5
9	MP4A	Mx	-0.006	1.5
10	MP4A	X	11.179	6.5
11	MP4A	Z	-6.454	6.5
12	MP4A	Mx	-0.006	6.5
13	MP2A	X	2.524	3
14	MP2A	Z	-1.457	3
15	MP2A	Mx	-0.001	3
16	MP2A	X	2.524	5
17	MP2A	Z	-1.457	5
18	MP2A	Mx	-0.001	5
19	RRU1A	X	3.316	1
20	RRU1A	Z	-1.915	1
21	RRU1A	Mx	0	1
22	RRU2A	X	6.056	1
23	RRU2A	Z	-3.497	1
24	RRU2A	Mx	0.003	1
25	MP3A	X	4.006	3
26	MP3A	Z	-2.313	3
27	MP3A	Mx	-0.002	3
28	MP3A	X	4.006	5
29	MP3A	Z	-2.313	5
30	MP3A	Mx	-0.002	5



Company : Colliers Engineering & Design
 Designer :
 Job Number :
 Model Name :

3/13/2026
 6:28:49 PM
 Checked By : _____

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	11.446	1.5
2	MP1A	Z	0	1.5
3	MP1A	Mx	-0.006	1.5
4	MP1A	X	11.446	6.5
5	MP1A	Z	0	6.5
6	MP1A	Mx	-0.006	6.5
7	MP4A	X	11.446	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	-0.006	1.5
10	MP4A	X	11.446	6.5
11	MP4A	Z	0	6.5
12	MP4A	Mx	-0.006	6.5
13	MP2A	X	1.99	3
14	MP2A	Z	0	3
15	MP2A	Mx	-0.000995	3
16	MP2A	X	1.99	5
17	MP2A	Z	0	5
18	MP2A	Mx	-0.000995	5
19	RRU1A	X	3.429	1
20	RRU1A	Z	0	1
21	RRU1A	Mx	0	1
22	RRU2A	X	6.482	1
23	RRU2A	Z	0	1
24	RRU2A	Mx	0.003	1
25	MP3A	X	3.08	3
26	MP3A	Z	0	3
27	MP3A	Mx	-0.002	3
28	MP3A	X	3.08	5
29	MP3A	Z	0	5
30	MP3A	Mx	-0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	11.179	1.5
2	MP1A	Z	6.454	1.5
3	MP1A	Mx	-0.006	1.5
4	MP1A	X	11.179	6.5
5	MP1A	Z	6.454	6.5
6	MP1A	Mx	-0.006	6.5
7	MP4A	X	11.179	1.5
8	MP4A	Z	6.454	1.5
9	MP4A	Mx	-0.006	1.5
10	MP4A	X	11.179	6.5
11	MP4A	Z	6.454	6.5
12	MP4A	Mx	-0.006	6.5
13	MP2A	X	2.524	3
14	MP2A	Z	1.457	3
15	MP2A	Mx	-0.001	3
16	MP2A	X	2.524	5
17	MP2A	Z	1.457	5
18	MP2A	Mx	-0.001	5
19	RRU1A	X	3.316	1
20	RRU1A	Z	1.915	1
21	RRU1A	Mx	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	RRU2A	X	6.056	1
23	RRU2A	Z	3.497	1
24	RRU2A	Mx	0.003	1
25	MP3A	X	4.006	3
26	MP3A	Z	2.313	3
27	MP3A	Mx	-0.002	3
28	MP3A	X	4.006	5
29	MP3A	Z	2.313	5
30	MP3A	Mx	-0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	7.916	1.5
2	MP1A	Z	13.711	1.5
3	MP1A	Mx	-0.004	1.5
4	MP1A	X	7.916	6.5
5	MP1A	Z	13.711	6.5
6	MP1A	Mx	-0.004	6.5
7	MP4A	X	7.916	1.5
8	MP4A	Z	13.711	1.5
9	MP4A	Mx	-0.004	1.5
10	MP4A	X	7.916	6.5
11	MP4A	Z	13.711	6.5
12	MP4A	Mx	-0.004	6.5
13	MP2A	X	2.382	3
14	MP2A	Z	4.126	3
15	MP2A	Mx	-0.001	3
16	MP2A	X	2.382	5
17	MP2A	Z	4.126	5
18	MP2A	Mx	-0.001	5
19	RRU1A	X	2.315	1
20	RRU1A	Z	4.009	1
21	RRU1A	Mx	0	1
22	RRU2A	X	4.008	1
23	RRU2A	Z	6.941	1
24	RRU2A	Mx	0.002	1
25	MP3A	X	3.86	3
26	MP3A	Z	6.685	3
27	MP3A	Mx	-0.002	3
28	MP3A	X	3.86	5
29	MP3A	Z	6.685	5
30	MP3A	Mx	-0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	0	1.5
2	MP1A	Z	17.295	1.5
3	MP1A	Mx	0	1.5
4	MP1A	X	0	6.5
5	MP1A	Z	17.295	6.5
6	MP1A	Mx	0	6.5
7	MP4A	X	0	1.5
8	MP4A	Z	17.295	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mx	0	1.5
10	MP4A	X	0	6.5
11	MP4A	Z	17.295	6.5
12	MP4A	Mx	0	6.5
13	MP2A	X	0	3
14	MP2A	Z	5.689	3
15	MP2A	Mx	0	3
16	MP2A	X	0	5
17	MP2A	Z	5.689	5
18	MP2A	Mx	0	5
19	RRU1A	X	0	1
20	RRU1A	Z	5.03	1
21	RRU1A	Mx	0	1
22	RRU2A	X	0	1
23	RRU2A	Z	8.526	1
24	RRU2A	Mx	0	1
25	MP3A	X	0	3
26	MP3A	Z	9.266	3
27	MP3A	Mx	0	3
28	MP3A	X	0	5
29	MP3A	Z	9.266	5
30	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-7.916	1.5
2	MP1A	Z	13.711	1.5
3	MP1A	Mx	0.004	1.5
4	MP1A	X	-7.916	6.5
5	MP1A	Z	13.711	6.5
6	MP1A	Mx	0.004	6.5
7	MP4A	X	-7.916	1.5
8	MP4A	Z	13.711	1.5
9	MP4A	Mx	0.004	1.5
10	MP4A	X	-7.916	6.5
11	MP4A	Z	13.711	6.5
12	MP4A	Mx	0.004	6.5
13	MP2A	X	-2.382	3
14	MP2A	Z	4.126	3
15	MP2A	Mx	0.001	3
16	MP2A	X	-2.382	5
17	MP2A	Z	4.126	5
18	MP2A	Mx	0.001	5
19	RRU1A	X	-2.315	1
20	RRU1A	Z	4.009	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-4.008	1
23	RRU2A	Z	6.941	1
24	RRU2A	Mx	-0.002	1
25	MP3A	X	-3.86	3
26	MP3A	Z	6.685	3
27	MP3A	Mx	0.002	3
28	MP3A	X	-3.86	5
29	MP3A	Z	6.685	5
30	MP3A	Mx	0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-11.179	1.5
2	MP1A	Z	6.454	1.5
3	MP1A	Mx	0.006	1.5
4	MP1A	X	-11.179	6.5
5	MP1A	Z	6.454	6.5
6	MP1A	Mx	0.006	6.5
7	MP4A	X	-11.179	1.5
8	MP4A	Z	6.454	1.5
9	MP4A	Mx	0.006	1.5
10	MP4A	X	-11.179	6.5
11	MP4A	Z	6.454	6.5
12	MP4A	Mx	0.006	6.5
13	MP2A	X	-2.524	3
14	MP2A	Z	1.457	3
15	MP2A	Mx	0.001	3
16	MP2A	X	-2.524	5
17	MP2A	Z	1.457	5
18	MP2A	Mx	0.001	5
19	RRU1A	X	-3.316	1
20	RRU1A	Z	1.915	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-6.056	1
23	RRU2A	Z	3.497	1
24	RRU2A	Mx	-0.003	1
25	MP3A	X	-4.006	3
26	MP3A	Z	2.313	3
27	MP3A	Mx	0.002	3
28	MP3A	X	-4.006	5
29	MP3A	Z	2.313	5
30	MP3A	Mx	0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-11.446	1.5
2	MP1A	Z	0	1.5
3	MP1A	Mx	0.006	1.5
4	MP1A	X	-11.446	6.5
5	MP1A	Z	0	6.5
6	MP1A	Mx	0.006	6.5
7	MP4A	X	-11.446	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	0.006	1.5
10	MP4A	X	-11.446	6.5
11	MP4A	Z	0	6.5
12	MP4A	Mx	0.006	6.5
13	MP2A	X	-1.99	3
14	MP2A	Z	0	3
15	MP2A	Mx	0.000995	3
16	MP2A	X	-1.99	5
17	MP2A	Z	0	5
18	MP2A	Mx	0.000995	5
19	RRU1A	X	-3.429	1
20	RRU1A	Z	0	1
21	RRU1A	Mx	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
22	RRU2A	X	-6.482	1
23	RRU2A	Z	0	1
24	RRU2A	Mx	-0.003	1
25	MP3A	X	-3.08	3
26	MP3A	Z	0	3
27	MP3A	Mx	0.002	3
28	MP3A	X	-3.08	5
29	MP3A	Z	0	5
30	MP3A	Mx	0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-11.179	1.5
2	MP1A	Z	-6.454	1.5
3	MP1A	Mx	0.006	1.5
4	MP1A	X	-11.179	6.5
5	MP1A	Z	-6.454	6.5
6	MP1A	Mx	0.006	6.5
7	MP4A	X	-11.179	1.5
8	MP4A	Z	-6.454	1.5
9	MP4A	Mx	0.006	1.5
10	MP4A	X	-11.179	6.5
11	MP4A	Z	-6.454	6.5
12	MP4A	Mx	0.006	6.5
13	MP2A	X	-2.524	3
14	MP2A	Z	-1.457	3
15	MP2A	Mx	0.001	3
16	MP2A	X	-2.524	5
17	MP2A	Z	-1.457	5
18	MP2A	Mx	0.001	5
19	RRU1A	X	-3.316	1
20	RRU1A	Z	-1.915	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-6.056	1
23	RRU2A	Z	-3.497	1
24	RRU2A	Mx	-0.003	1
25	MP3A	X	-4.006	3
26	MP3A	Z	-2.313	3
27	MP3A	Mx	0.002	3
28	MP3A	X	-4.006	5
29	MP3A	Z	-2.313	5
30	MP3A	Mx	0.002	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	-7.916	1.5
2	MP1A	Z	-13.711	1.5
3	MP1A	Mx	0.004	1.5
4	MP1A	X	-7.916	6.5
5	MP1A	Z	-13.711	6.5
6	MP1A	Mx	0.004	6.5
7	MP4A	X	-7.916	1.5
8	MP4A	Z	-13.711	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mx	0.004	1.5
10	MP4A	X	-7.916	6.5
11	MP4A	Z	-13.711	6.5
12	MP4A	Mx	0.004	6.5
13	MP2A	X	-2.382	3
14	MP2A	Z	-4.126	3
15	MP2A	Mx	0.001	3
16	MP2A	X	-2.382	5
17	MP2A	Z	-4.126	5
18	MP2A	Mx	0.001	5
19	RRU1A	X	-2.315	1
20	RRU1A	Z	-4.009	1
21	RRU1A	Mx	0	1
22	RRU2A	X	-4.008	1
23	RRU2A	Z	-6.941	1
24	RRU2A	Mx	-0.002	1
25	MP3A	X	-3.86	3
26	MP3A	Z	-6.685	3
27	MP3A	Mx	0.002	3
28	MP3A	X	-3.86	5
29	MP3A	Z	-6.685	5
30	MP3A	Mx	0.002	5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M25	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	LM2	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	LV	Y	-250	%100

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	Y	0	1.5
2	MP1A	My	0	1.5
3	MP1A	Mz	0	1.5
4	MP1A	Y	0	6.5
5	MP1A	My	0	6.5
6	MP1A	Mz	0	6.5
7	MP4A	Y	0	1.5
8	MP4A	My	0	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP4A	Mz	0	1.5
10	MP4A	Y	0	6.5
11	MP4A	My	0	6.5
12	MP4A	Mz	0	6.5
13	MP2A	Y	0	3
14	MP2A	My	0	3
15	MP2A	Mz	0	3
16	MP2A	Y	0	5
17	MP2A	My	0	5
18	MP2A	Mz	0	5
19	RRU1A	Y	0	1
20	RRU1A	My	0	1
21	RRU1A	Mz	0	1
22	RRU2A	Y	0	1
23	RRU2A	My	0	1
24	RRU2A	Mz	0	1
25	MP3A	Y	0	3
26	MP3A	My	0	3
27	MP3A	Mz	0	3
28	MP3A	Y	0	5
29	MP3A	My	0	5
30	MP3A	Mz	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	Z	-1.397	1.5
2	MP1A	Mx	0	1.5
3	MP1A	Z	-1.397	6.5
4	MP1A	Mx	0	6.5
5	MP4A	Z	-1.397	1.5
6	MP4A	Mx	0	1.5
7	MP4A	Z	-1.397	6.5
8	MP4A	Mx	0	6.5
9	MP2A	Z	-0.953	3
10	MP2A	Mx	0	3
11	MP2A	Z	-0.953	5
12	MP2A	Mx	0	5
13	RRU1A	Z	-2.373	1
14	RRU1A	Mx	0	1
15	RRU2A	Z	-0.96	1
16	RRU2A	Mx	0	1
17	MP3A	Z	-1.908	3
18	MP3A	Mx	0	3
19	MP3A	Z	-1.908	5
20	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP1A	X	1.397	1.5
2	MP1A	Mx	-0.000698	1.5
3	MP1A	X	1.397	6.5
4	MP1A	Mx	-0.000698	6.5
5	MP4A	X	1.397	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
6	MP4A	Mx	-0.000698	1.5
7	MP4A	X	1.397	6.5
8	MP4A	Mx	-0.000698	6.5
9	MP2A	X	0.953	3
10	MP2A	Mx	-0.000476	3
11	MP2A	X	0.953	5
12	MP2A	Mx	-0.000476	5
13	RRU1A	X	2.373	1
14	RRU1A	Mx	0	1
15	RRU2A	X	0.96	1
16	RRU2A	Mx	0.00048	1
17	MP3A	X	1.908	3
18	MP3A	Mx	-0.000954	3
19	MP3A	X	1.908	5
20	MP3A	Mx	-0.000954	5

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
1	A-T	max	1590.904	46	1539.883	18	1433.83	12	0	75	0	75	0	75
2		min	-1296.436	4	192.527	12	-3619.243	6	0	1	0	1	0	1
3	A-B	max	1181.646	10	1044.533	24	3460.849	12	0	75	0	75	0	75
4		min	-1585.958	40	-32.469	6	-1297.67	6	0	1	0	1	0	1
5	N79	max	275.543	5	27.748	22	1706.034	3	0	75	0	75	0	75
6		min	-275.092	11	9.324	67	-1743.612	9	0	1	0	1	0	1
7	N82	max	273.312	5	27.699	22	1698.776	3	0	75	0	75	0	75
8		min	-264.92	11	9.321	67	-1688.212	9	0	1	0	1	0	1
9	Totals:	max	1973.323	10	2416.653	23	2919.509	1						
10		min	-1973.322	4	836.198	65	-2919.507	7						

Node Reactions

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	A-T	18.164	354.62	532.9	0	0	0
2	1	A-B	11.639	735.416	2560.445	0	0	0
3	1	N79	-17.228	12.45	-100.621	0	0	0
4	1	N82	-12.573	12.445	-73.215	0	0	0
5	1	Totals:	0.002	1114.931	2919.509			
6	1	COG (ft):	X: 0.032	Y: 0.119	Z: 2.97			
7	2	A-T	-903.972	644.422	-1072.683	0	0	0
8	2	A-B	-838.713	446.109	1010.618	0	0	0
9	2	N79	195.564	12.201	1198.757	0	0	0
10	2	N82	196.181	12.199	1203.225	0	0	0
11	2	Totals:	-1350.94	1114.931	2339.918			
12	2	COG (ft):	X: 0.032	Y: 0.119	Z: 2.97			
13	3	A-T	-1278.112	855.51	-2223.23	0	0	0
14	3	A-B	-1178.033	235.296	-67.165	0	0	0
15	3	N79	263.717	12.06	1706.034	0	0	0
16	3	N82	262.229	12.064	1698.776	0	0	0
17	3	Totals:	-1930.199	1114.931	1114.416			
18	3	COG (ft):	X: 0.032	Y: 0.119	Z: 2.97			
19	4	A-T	-1296.436	966.71	-2798.629	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
20	4	A-B	-1189.826	124.124	-580.672	0	0	0
21	4	N79	257.557	12.045	1695.235	0	0	0
22	4	N82	255.382	12.052	1684.072	0	0	0
23	4	Totals:	-1973.322	1114.931	0.007			
24	4	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
25	5	A-T	-1273.631	1078.113	-3380.573	0	0	0
26	5	A-B	-1172.623	12.75	-1105.283	0	0	0
27	5	N79	275.543	12.03	1700.898	0	0	0
28	5	N82	273.312	12.038	1689.493	0	0	0
29	5	Totals:	-1897.399	1114.931	-1095.465			
30	5	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
31	6	A-T	-920.823	1123.126	-3619.243	0	0	0
32	6	A-B	-854.108	-32.469	-1297.67	0	0	0
33	6	N79	221.695	12.134	1305.667	0	0	0
34	6	N82	221.231	12.14	1304.14	0	0	0
35	6	Totals:	-1332.005	1114.931	-2307.107			
36	6	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
37	7	A-T	-12.341	958.464	-2706.9	0	0	0
38	7	A-B	-17.309	131.632	-384.97	0	0	0
39	7	N79	13.051	12.419	75.734	0	0	0
40	7	N82	16.597	12.416	96.628	0	0	0
41	7	Totals:	-0.002	1114.931	-2919.507			
42	7	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
43	8	A-T	911.347	666.05	-1086.385	0	0	0
44	8	A-B	834.603	423.658	1180.597	0	0	0
45	8	N79	-201.243	12.618	-1238.854	0	0	0
46	8	N82	-193.766	12.605	-1195.275	0	0	0
47	8	Totals:	1350.94	1114.931	-2339.917			
48	8	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
49	9	A-T	1283.287	455.723	61.729	0	0	0
50	9	A-B	1171.773	633.921	2255.68	0	0	0
51	9	N79	-267.157	12.651	-1743.612	0	0	0
52	9	N82	-257.704	12.637	-1688.212	0	0	0
53	9	Totals:	1930.199	1114.931	-1114.415			
54	9	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
55	10	A-T	1299.668	346.284	627.955	0	0	0
56	10	A-B	1181.646	743.388	2759.511	0	0	0
57	10	N79	-259.054	12.636	-1723.48	0	0	0
58	10	N82	-248.936	12.623	-1663.992	0	0	0
59	10	Totals:	1973.323	1114.931	-0.006			
60	10	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
61	11	A-T	1274.904	236.687	1200.704	0	0	0
62	11	A-B	1162.507	853.005	3274.326	0	0	0
63	11	N79	-275.092	12.625	-1719.736	0	0	0
64	11	N82	-264.92	12.614	-1659.828	0	0	0
65	11	Totals:	1897.4	1114.931	1095.466			
66	11	COG (ft):	X: 0.032	Y: 0.119	Z: 2.97			
67	12	A-T	922.297	192.527	1433.83	0	0	0
68	12	A-B	844.166	897.233	3460.849	0	0	0
69	12	N79	-221.49	12.589	-1318.836	0	0	0
70	12	N82	-212.968	12.582	-1268.734	0	0	0
71	12	Totals:	1332.006	1114.931	2307.108			
72	12	COG (ft):	X: 0.032	Y: 0.119	Z: 2.97			
73	13	A-T	47.329	1354.584	-1951.774	0	0	0
74	13	A-B	-40.129	1006.895	2677.544	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
75	13	N79	-14.419	27.61	-84.539	0	0	0
76	13	N82	7.22	27.564	42.829	0	0	0
77	13	Totals:	0.001	2416.653	684.06			
78	13	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
79	14	A-T	-170.036	1421.928	-2321.13	0	0	0
80	14	A-B	-242.058	939.772	2319.246	0	0	0
81	14	N79	34.432	27.499	218.657	0	0	0
82	14	N82	55.275	27.454	341.624	0	0	0
83	14	Totals:	-322.386	2416.653	558.397			
84	14	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
85	15	A-T	-268.301	1473.524	-2596.026	0	0	0
86	15	A-B	-332.321	888.275	2060.195	0	0	0
87	15	N79	50.174	27.449	346.386	0	0	0
88	15	N82	70.518	27.406	466.537	0	0	0
89	15	Totals:	-479.93	2416.653	277.091			
90	15	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
91	16	A-T	-279.284	1503.242	-2741.898	0	0	0
92	16	A-B	-341.49	858.561	1928.629	0	0	0
93	16	N79	48.902	27.446	347.253	0	0	0
94	16	N82	69.011	27.403	466.019	0	0	0
95	16	Totals:	-502.861	2416.653	0.003			
96	16	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
97	17	A-T	-265.715	1530.365	-2874.919	0	0	0
98	17	A-B	-329.323	831.435	1808.81	0	0	0
99	17	N79	52.751	27.448	338.38	0	0	0
100	17	N82	72.78	27.405	456.661	0	0	0
101	17	Totals:	-469.506	2416.653	-271.068			
102	17	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
103	18	A-T	-172.98	1539.883	-2920.204	0	0	0
104	18	A-B	-244.221	821.839	1774.189	0	0	0
105	18	N79	40.268	27.487	239.16	0	0	0
106	18	N82	60.564	27.444	358.887	0	0	0
107	18	Totals:	-316.369	2416.653	-547.969			
108	18	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
109	19	A-T	39.762	1501.955	-2710.061	0	0	0
110	19	A-B	-46.758	859.554	1985.351	0	0	0
111	19	N79	-7.006	27.595	-41.482	0	0	0
112	19	N82	14.002	27.549	82.134	0	0	0
113	19	Totals:	0	2416.653	-684.058			
114	19	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
115	20	A-T	257.161	1434.527	-2340.178	0	0	0
116	20	A-B	155.203	926.766	2344.216	0	0	0
117	20	N79	-55.888	27.704	-345.217	0	0	0
118	20	N82	-34.09	27.656	-217.215	0	0	0
119	20	Totals:	322.386	2416.653	-558.394			
120	20	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
121	21	A-T	355.315	1382.962	-2065.316	0	0	0
122	21	A-B	245.358	978.246	2603.221	0	0	0
123	21	N79	-71.517	27.748	-472.908	0	0	0
124	21	N82	-49.226	27.698	-342.087	0	0	0
125	21	Totals:	479.93	2416.653	-277.089			
126	21	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
127	22	A-T	366.219	1353.306	-1919.753	0	0	0
128	22	A-B	254.45	1007.9	2734.452	0	0	0
129	22	N79	-70.166	27.748	-473.457	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
130	22	N82	-47.641	27.699	-341.242	0	0	0
131	22	Totals:	502.862	2416.653	0			
132	22	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
133	23	A-T	352.581	1326.244	-1787.055	0	0	0
134	23	A-B	242.216	1034.967	2853.916	0	0	0
135	23	N79	-73.947	27.746	-464.251	0	0	0
136	23	N82	-51.343	27.696	-331.541	0	0	0
137	23	Totals:	469.507	2416.653	271.07			
138	23	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
139	24	A-T	259.883	1316.748	-1741.979	0	0	0
140	24	A-B	157.15	1044.533	2888.314	0	0	0
141	24	N79	-61.503	27.71	-364.816	0	0	0
142	24	N82	-39.16	27.662	-233.548	0	0	0
143	24	Totals:	316.369	2416.653	547.971			
144	24	COG (ft):	X: -0.007	Y: 0.111	Z: 2.994			
145	25	A-T	461.655	1097.867	-1819.717	0	0	0
146	25	A-B	-459.944	742.196	1997.847	0	0	0
147	25	N79	-0.041	12.434	-0.187	0	0	0
148	25	N82	-1.67	12.436	-9.776	0	0	0
149	25	Totals:	0	1864.933	168.167			
150	25	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
151	26	A-T	408.483	1114.635	-1912.598	0	0	0
152	26	A-B	-508.954	725.454	1908.139	0	0	0
153	26	N79	12.253	12.421	75.061	0	0	0
154	26	N82	10.403	12.423	64.177	0	0	0
155	26	Totals:	-77.814	1864.933	134.779			
156	26	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
157	27	A-T	386.994	1126.772	-1978.781	0	0	0
158	27	A-B	-528.44	713.328	1846.121	0	0	0
159	27	N79	16.117	12.416	104.206	0	0	0
160	27	N82	14.151	12.418	92.645	0	0	0
161	27	Totals:	-111.178	1864.933	64.19			
162	27	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
163	28	A-T	385.999	1133.127	-2011.66	0	0	0
164	28	A-B	-529.075	706.972	1816.792	0	0	0
165	28	N79	15.71	12.416	103.333	0	0	0
166	28	N82	13.703	12.418	91.535	0	0	0
167	28	Totals:	-113.663	1864.933	0.001			
168	28	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
169	29	A-T	387.374	1139.492	-2044.917	0	0	0
170	29	A-B	-528.039	700.607	1786.827	0	0	0
171	29	N79	16.694	12.416	103.409	0	0	0
172	29	N82	14.682	12.418	91.583	0	0	0
173	29	Totals:	-109.289	1864.933	-63.097			
174	29	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
175	30	A-T	407.703	1142.058	-2058.501	0	0	0
176	30	A-B	-509.711	698.034	1775.888	0	0	0
177	30	N79	13.601	12.42	80.503	0	0	0
178	30	N82	11.683	12.422	69.223	0	0	0
179	30	Totals:	-76.724	1864.933	-132.887			
180	30	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
181	31	A-T	459.935	1132.636	-2006.253	0	0	0
182	31	A-B	-461.647	707.431	1828.116	0	0	0
183	31	N79	1.707	12.432	9.99	0	0	0
184	31	N82	0.006	12.434	-0.019	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
185	31	Totals:	0	1864.933	-168.166			
186	31	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
187	32	A-T	513.112	1115.86	-1913.322	0	0	0
188	32	A-B	-412.632	724.182	1917.876	0	0	0
189	32	N79	-10.593	12.445	-65.308	0	0	0
190	32	N82	-12.072	12.446	-74.022	0	0	0
191	32	Totals:	77.815	1864.933	-134.777			
192	32	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
193	33	A-T	534.593	1103.726	-1847.148	0	0	0
194	33	A-B	-393.153	736.307	1979.885	0	0	0
195	33	N79	-14.449	12.45	-94.445	0	0	0
196	33	N82	-15.813	12.451	-102.481	0	0	0
197	33	Totals:	111.178	1864.933	-64.189			
198	33	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
199	34	A-T	535.582	1097.376	-1814.299	0	0	0
200	34	A-B	-392.525	742.656	2009.182	0	0	0
201	34	N79	-14.035	12.45	-93.542	0	0	0
202	34	N82	-15.359	12.451	-101.34	0	0	0
203	34	Totals:	113.663	1864.933	0			
204	34	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
205	35	A-T	534.2	1091.017	-1781.072	0	0	0
206	35	A-B	-393.567	749.016	2039.114	0	0	0
207	35	N79	-15.013	12.45	-93.586	0	0	0
208	35	N82	-16.331	12.451	-101.357	0	0	0
209	35	Totals:	109.289	1864.933	63.099			
210	35	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
211	36	A-T	513.872	1088.454	-1767.507	0	0	0
212	36	A-B	-411.894	751.586	2050.035	0	0	0
213	36	N79	-11.921	12.446	-70.661	0	0	0
214	36	N82	-13.333	12.447	-78.978	0	0	0
215	36	Totals:	76.724	1864.933	132.889			
216	36	COG (ft):	X: -0.785	Y: -0.632	Z: 3.178			
217	37	A-T	1517.271	1103.335	-1033.464	0	0	0
218	37	A-B	-1516.378	736.733	1210.453	0	0	0
219	37	N79	-108.286	12.398	-639.22	0	0	0
220	37	N82	107.391	12.471	630.394	0	0	0
221	37	Totals:	-0.002	1864.937	168.164			
222	37	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178			
223	38	A-T	1464.378	1120.093	-1126.126	0	0	0
224	38	A-B	-1565.666	719.967	1120.518	0	0	0
225	38	N79	-96.092	12.404	-564.176	0	0	0
226	38	N82	119.563	12.473	704.56	0	0	0
227	38	Totals:	-77.817	1864.937	134.776			
228	38	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178			
229	39	A-T	1443.026	1132.225	-1192.181	0	0	0
230	39	A-B	-1585.289	707.832	1058.359	0	0	0
231	39	N79	-92.278	12.406	-535.15	0	0	0
232	39	N82	123.36	12.474	733.159	0	0	0
233	39	Totals:	-111.18	1864.937	64.187			
234	39	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178			
235	40	A-T	1442.064	1138.58	-1225.01	0	0	0
236	40	A-B	-1585.958	701.477	1028.971	0	0	0
237	40	N79	-92.697	12.406	-536.068	0	0	0
238	40	N82	122.925	12.473	732.105	0	0	0
239	40	Totals:	-113.665	1864.937	-0.002			

Node Reactions (Continued)

LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
240	40	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
241	41	A-T	1443.463	1144.945	-1258.226	0	0
242	41	A-B	-1584.947	695.112	998.954	0	0
243	41	N79	-91.723	12.407	-536.032	0	0
244	41	N82	123.916	12.473	732.202	0	0
245	41	Totals:	-109.291	1864.937	-63.1		
246	41	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
247	42	A-T	1463.721	1147.513	-1271.834	0	0
248	42	A-B	-1566.551	692.546	988.03	0	0
249	42	N79	-94.795	12.405	-558.916	0	0
250	42	N82	120.899	12.472	709.83	0	0
251	42	Totals:	-76.726	1864.937	-132.89		
252	42	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
253	43	A-T	1515.705	1138.101	-1219.755	0	0
254	43	A-B	-1518.243	701.966	1040.426	0	0
255	43	N79	-106.604	12.4	-629.273	0	0
256	43	N82	109.14	12.47	640.433	0	0
257	43	Totals:	-0.002	1864.937	-168.169		
258	43	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
259	44	A-T	1568.603	1121.334	-1127.043	0	0
260	44	A-B	-1468.951	718.741	1130.414	0	0
261	44	N79	-118.803	12.394	-704.367	0	0
262	44	N82	96.963	12.467	566.216	0	0
263	44	Totals:	77.812	1864.937	-134.78		
264	44	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
265	45	A-T	1589.948	1109.205	-1060.996	0	0
266	45	A-B	-1449.335	730.874	1192.563	0	0
267	45	N79	-122.61	12.392	-733.385	0	0
268	45	N82	93.173	12.466	537.626	0	0
269	45	Totals:	111.176	1864.937	-64.192		
270	45	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
271	46	A-T	1590.904	1102.855	-1028.197	0	0
272	46	A-B	-1448.672	737.224	1221.919	0	0
273	46	N79	-122.185	12.391	-732.436	0	0
274	46	N82	93.614	12.466	538.711	0	0
275	46	Totals:	113.661	1864.937	-0.003		
276	46	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
277	47	A-T	1589.499	1096.496	-995.012	0	0
278	47	A-B	-1449.69	743.583	1251.903	0	0
279	47	N79	-123.152	12.391	-732.442	0	0
280	47	N82	92.63	12.467	538.646	0	0
281	47	Totals:	109.287	1864.937	63.096		
282	47	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
283	48	A-T	1569.241	1093.931	-981.422	0	0
284	48	A-B	-1468.085	746.145	1262.808	0	0
285	48	N79	-120.081	12.393	-709.538	0	0
286	48	N82	95.646	12.468	561.037	0	0
287	48	Totals:	76.722	1864.937	132.886		
288	48	COG (ft):	X: -2.394	Y: -0.632	Z: 3.178		
289	49	A-T	3.035	882.591	-1488.716	0	0
290	49	A-B	-3.017	582.472	1488.815	0	0
291	49	N79	-2.204	12.437	-12.969	0	0
292	49	N82	2.187	12.431	12.871	0	0
293	49	Totals:	0	1489.932	0.001		
294	49	COG (ft):	X: 0.024	Y: -0.351	Z: 3.1		

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
295	50	A-T	-775.479	896.827	-1827.448	0	0	0
296	50	A-B	775.467	568.226	1828.71	0	0	0
297	50	N79	44.656	12.32	262.128	0	0	0
298	50	N82	-44.642	12.547	-263.386	0	0	0
299	50	Totals:	0.001	1489.92	0.003			
300	50	COG (ft):	X: 1.597	Y: -0.351	Z: 3.1			
301	51	A-T	3.367	765.967	-1268.642	0	0	0
302	51	A-B	-3.341	505.773	1268.78	0	0	0
303	51	N79	-2.407	14.509	-14.163	0	0	0
304	51	N82	2.382	14.504	14.026	0	0	0
305	51	Totals:	0	1300.753	0.001			
306	51	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
307	52	A-T	2.829	653.56	-1073.108	0	0	0
308	52	A-B	-2.809	436.502	1100.475	0	0	0
309	52	N79	-2.015	12.436	-11.547	0	0	0
310	52	N82	1.994	12.432	12.054	0	0	0
311	52	Totals:	0	1114.931	27.874			
312	52	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
313	53	A-T	-6.491	655.949	-1086.809	0	0	0
314	53	A-B	-11.033	434.118	1087.458	0	0	0
315	53	N79	-0.182	12.434	0.113	0	0	0
316	53	N82	3.77	12.43	23.378	0	0	0
317	53	Totals:	-13.937	1114.931	24.139			
318	53	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
319	54	A-T	-13.298	658.473	-1100.67	0	0	0
320	54	A-B	-17.07	431.597	1074.455	0	0	0
321	54	N79	1.147	12.433	8.489	0	0	0
322	54	N82	5.083	12.429	31.663	0	0	0
323	54	Totals:	-24.138	1114.931	13.937			
324	54	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
325	55	A-T	-15.769	660.456	-1110.978	0	0	0
326	55	A-B	-19.302	429.615	1064.948	0	0	0
327	55	N79	1.617	12.432	11.34	0	0	0
328	55	N82	5.582	12.428	34.69	0	0	0
329	55	Totals:	-27.873	1114.931	0.001			
330	55	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
331	56	A-T	-13.24	661.366	-1114.969	0	0	0
332	56	A-B	-17.131	428.703	1061.488	0	0	0
333	56	N79	1.1	12.433	7.899	0	0	0
334	56	N82	5.133	12.429	31.646	0	0	0
335	56	Totals:	-24.138	1114.931	-13.936			
336	56	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
337	57	A-T	-6.391	660.961	-1111.576	0	0	0
338	57	A-B	-11.138	429.106	1064.999	0	0	0
339	57	N79	-0.264	12.434	-0.909	0	0	0
340	57	N82	3.856	12.43	23.348	0	0	0
341	57	Totals:	-13.937	1114.931	-24.138			
342	57	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
343	58	A-T	2.945	659.347	-1101.706	0	0	0
344	58	A-B	-2.929	430.715	1074.542	0	0	0
345	58	N79	-2.11	12.436	-12.727	0	0	0
346	58	N82	2.094	12.432	12.019	0	0	0
347	58	Totals:	0	1114.931	-27.873			
348	58	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
349	59	A-T	12.266	656.958	-1088.005	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
350	59	A-B	5.296	433.1	1087.561	0	0	0
351	59	N79	-3.943	12.438	-24.387	0	0	0
352	59	N82	0.319	12.434	0.694	0	0	0
353	59	Totals:	13.937	1114.931	-24.138			
354	59	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
355	60	A-T	19.072	654.435	-1074.144	0	0	0
356	60	A-B	11.332	435.621	1100.564	0	0	0
357	60	N79	-5.272	12.44	-32.764	0	0	0
358	60	N82	-0.994	12.435	-7.591	0	0	0
359	60	Totals:	24.138	1114.931	-13.936			
360	60	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
361	61	A-T	21.543	652.452	-1063.836	0	0	0
362	61	A-B	13.564	437.603	1110.07	0	0	0
363	61	N79	-5.741	12.44	-35.615	0	0	0
364	61	N82	-1.493	12.436	-10.618	0	0	0
365	61	Totals:	27.873	1114.931	0			
366	61	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
367	62	A-T	19.014	651.541	-1059.845	0	0	0
368	62	A-B	11.392	438.515	1113.53	0	0	0
369	62	N79	-5.225	12.44	-32.174	0	0	0
370	62	N82	-1.044	12.435	-7.574	0	0	0
371	62	Totals:	24.138	1114.931	13.937			
372	62	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
373	63	A-T	12.165	651.947	-1063.239	0	0	0
374	63	A-B	5.4	438.112	1110.018	0	0	0
375	63	N79	-3.861	12.438	-23.365	0	0	0
376	63	N82	0.233	12.434	0.724	0	0	0
377	63	Totals:	13.937	1114.931	24.139			
378	63	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
379	64	A-T	2.109	489.346	-801.254	0	0	0
380	64	A-B	-2.096	328.201	828.577	0	0	0
381	64	N79	-1.499	9.327	-8.51	0	0	0
382	64	N82	1.486	9.324	9.06	0	0	0
383	64	Totals:	0	836.198	27.874			
384	64	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
385	65	A-T	-7.212	491.735	-814.959	0	0	0
386	65	A-B	-10.321	325.816	815.563	0	0	0
387	65	N79	0.335	9.325	3.153	0	0	0
388	65	N82	3.261	9.323	20.382	0	0	0
389	65	Totals:	-13.937	836.198	24.139			
390	65	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
391	66	A-T	-14.019	494.258	-828.822	0	0	0
392	66	A-B	-16.357	323.294	802.563	0	0	0
393	66	N79	1.664	9.324	11.532	0	0	0
394	66	N82	4.574	9.322	28.665	0	0	0
395	66	Totals:	-24.138	836.198	13.937			
396	66	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
397	67	A-T	-16.49	496.241	-839.133	0	0	0
398	67	A-B	-18.589	321.312	793.059	0	0	0
399	67	N79	2.134	9.324	14.383	0	0	0
400	67	N82	5.073	9.321	31.691	0	0	0
401	67	Totals:	-27.873	836.198	0			
402	67	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
403	68	A-T	-13.961	497.152	-843.124	0	0	0
404	68	A-B	-16.418	320.4	789.598	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
405	68	N79	1.617	9.324	10.942	0	0	0
406	68	N82	4.624	9.322	28.647	0	0	0
407	68	Totals:	-24.138	836.198	-13.936			
408	68	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
409	69	A-T	-7.111	496.747	-839.729	0	0	0
410	69	A-B	-10.425	320.803	793.108	0	0	0
411	69	N79	0.253	9.325	2.131	0	0	0
412	69	N82	3.347	9.323	20.352	0	0	0
413	69	Totals:	-13.937	836.198	-24.138			
414	69	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
415	70	A-T	2.225	495.134	-829.856	0	0	0
416	70	A-B	-2.217	322.413	802.648	0	0	0
417	70	N79	-1.594	9.327	-9.689	0	0	0
418	70	N82	1.586	9.324	9.025	0	0	0
419	70	Totals:	0	836.198	-27.873			
420	70	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
421	71	A-T	11.546	492.745	-816.151	0	0	0
422	71	A-B	6.007	324.799	815.662	0	0	0
423	71	N79	-3.427	9.328	-21.352	0	0	0
424	71	N82	-0.189	9.326	-2.298	0	0	0
425	71	Totals:	13.937	836.198	-24.138			
426	71	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
427	72	A-T	18.353	490.222	-802.287	0	0	0
428	72	A-B	12.043	327.32	828.662	0	0	0
429	72	N79	-4.756	9.329	-29.731	0	0	0
430	72	N82	-1.502	9.327	-10.581	0	0	0
431	72	Totals:	24.138	836.198	-13.936			
432	72	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
433	73	A-T	20.824	488.239	-791.977	0	0	0
434	73	A-B	14.275	329.302	838.167	0	0	0
435	73	N79	-5.226	9.33	-32.583	0	0	0
436	73	N82	-2	9.327	-13.607	0	0	0
437	73	Totals:	27.873	836.198	0			
438	73	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
439	74	A-T	18.295	487.328	-787.986	0	0	0
440	74	A-B	12.103	330.214	841.627	0	0	0
441	74	N79	-4.709	9.329	-29.141	0	0	0
442	74	N82	-1.551	9.327	-10.563	0	0	0
443	74	Totals:	24.138	836.198	13.937			
444	74	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			
445	75	A-T	11.446	487.733	-791.381	0	0	0
446	75	A-B	6.111	329.811	838.117	0	0	0
447	75	N79	-3.345	9.328	-20.33	0	0	0
448	75	N82	-0.275	9.326	-2.267	0	0	0
449	75	Totals:	13.937	836.198	24.139			
450	75	COG (ft):	X: 0.032	Y: 0.12	Z: 2.97			

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
1	M1	PIPE 2.0X	0.243	3.25	43	0.176	3.047	48	48742.36	57960		3.326		3.326		1	H1-1b
2	M2	PIPE 2.0X	0.196	3.25	17	0.187	3.25	3	48742.36	57960		3.326		3.326		1	H1-1b
3	M3	PIPE 2.0X	0.19	0.583	37	0.287	3.417	7	44584.397	57960		3.326		3.326		1	H1-1b
4	M4	PIPE 2.0X	0.177	0.583	11	0.289	3.75	8	44584.397	57960		3.326		3.326		1	H1-1b
5	OVP	PIPE 2.0	0.275	0	1	0.058	0	7	36063.494	42228		2.46		2.46		1	H1-1b
6	M6	PIPE 2.0	0.274	0	1	0.052	0	7	36063.494	42228		2.46		2.46		1	H1-1b

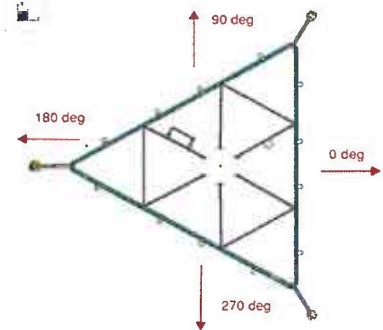
Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

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
7	M7	PIPE 2.0	0.275	0	7	0.077	0.429	3	36063.494	42228		2.46		2.46	1	H1-1b				
8	M8	PIPE 2.0	0.279	0	1	0.082	1.582	5	36063.494	42228		2.46		2.46	1	H1-1b				
9	M9	SR 0.75	0	3.894	75	0	3.894	75	1606.592	14313.882		0.179		0.179	1	H1-1a				
10	M10	SR 0.75	0.158	3.894	37	0.015	3.894	1	1606.592	14313.882		0.179		0.179	1	H1-1b*				
11	M11	SR 0.75	0	3.894	75	0	3.894	75	1606.592	14313.882		0.179		0.179	1	H1-1a				
12	M12	SR 0.75	0.113	3.894	23	0.016	3.894	1	1606.592	14313.882		0.179		0.179	1	H1-1b*				
13	M13	PIPE 2.0	0.518	8.854	7	0.132	8.724	11	6295.422	42228		2.46		2.46	1	H1-1b				
14	LV	PIPE 2.0	0.524	8.854	1	0.133	8.724	5	6295.422	42228		2.46		2.46	1	H1-1b				
15	M19	PIPE 2.0	0.083	0	5	0.004	5.971	4	20954.529	32130		1.872		1.872	1	H1-1b*				
16	MP4A	PIPE 2.0	0.305	5.75	41	0.064	2.25	9	15369.683	42228		2.46		2.46	1	H1-1b				
17	MP3A	PIPE 2.0	0.064	5.75	1	0.032	5.75	2	15369.683	42228		2.46		2.46	1	H1-1b				
18	MP2A	PIPE 2.0	0.08	2.25	5	0.02	5.75	12	15369.683	42228		2.46		2.46	1	H1-1b				
19	MP1A	PIPE 2.0	0.202	5.75	50	0.064	2.25	5	15369.683	42228		2.46		2.46	1	H1-1b				
20	M34	PIPE 2.0	0.083	0	5	0.004	5.971	4	20954.529	32130		1.872		1.872	1	H1-1b*				
21	M35	PL3/8X2	0.2	0	42	0.215	0	y	1	23742.553	24300	0.207		1.08	1.657	H1-1b				
22	M36	PL3/8X2	0.142	0.519	7	0.156	0	y	7	20492.047	24300	0.207		1.08	2.171	H1-1b				
23	M37	PL3/8X2	0.189	0	12	0.213	0	y	1	23742.553	24300	0.207		1.08	1.298	H1-1b				
24	M38	PL3/8X2	0.137	0.519	1	0.155	0	y	1	20492.047	24300	0.207		1.08	2.168	H1-1b				
25	M39	PL3/8X2	0.421	0	5	0.226	0	y	8	23742.553	24300	0.207		1.08	1.889	H1-1b				
26	M40	PL3/8X2	0.269	0.519	5	0.171	0	y	8	20492.047	24300	0.207		1.08	1.583	H1-1b				
27	M41	PL3/8X2	0.414	0	11	0.221	0	y	2	23742.553	24300	0.207		1.08	2.025	H1-1b				
28	M42	PL3/8X2	0.259	0.519	11	0.167	0	y	2	20492.047	24300	0.207		1.08	1.559	H1-1b				
29	M43	PL3/8X2	0.164	0	6	0.051	0.471	y	6	21127.841	24300	0.207		1.08	1.278	H1-1b				
30	M44	PL3/8X2	0.171	0	12	0.053	0.471	y	12	21127.841	24300	0.207		1.08	1.271	H1-1b				
31	M45	PL3/8X2	0.19	0	3	0.054	0.471	y	8	21127.841	24300	0.207		1.08	1.123	H1-1b				
32	M46	PL3/8X2	0.19	0	8	0.054	0.471	y	2	21127.841	24300	0.207		1.08	1.198	H1-1b				
33	RRU2A	PIPE 2.0	0.043	3.417	30	0.031	0.583	5	32817.255	42228		2.46		2.46	1	H1-1b				
34	RRU1A	PIPE 2.0	0.046	3.417	5	0.01	0.583	6	32817.255	42228		2.46		2.46	1	H1-1b				

I. Mount-to-Tower Connection Check

Custom Orientation Required

Yes

[illegible]

Tower Connection Bolt Checks

Yes

Bolt Orientation

Parallel

Bolt Quantity per Reaction:

 d_x (in) (Delta X of typ. bolt config. sketch): d_y (in) (Delta Y of typ. bolt config. sketch) :

Bolt Type:

Bolt Diameter (in):

Required Tensile Strength / bolt (kips):

Required Shear Strength / bolt (kips):

Tensile Capacity / bolt (kips):

Shear Capacity / bolt (kips):

Bolt Overall Utilization:

2 (Horizontal)

10

3

A307

0.625

1.7

0.8

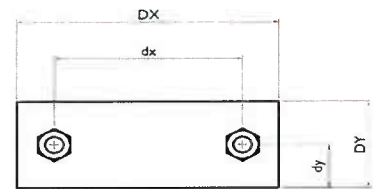
10.4

6.2

17.5%

Tower Connection Baseplate Checks

No



ATTACHMENT 5



C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
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Calculated Radio Frequency Emissions Report



Oneco CT
419 Ekonk Hill Road
Sterling, CT 06377

May 13, 2026

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the installation of Verizon's antenna arrays to be mounted at 160' above ground level (AGL) on the existing guyed tower located at 419 Ekonk Hill Road, Sterling, CT. The coordinates of the facility are 41° 39' 44.23" N, 71° 50' 49.54" W.

Verizon is proposing to install twelve (12) directional antennas (three sectors, four antennas per sector) to support its 4G LTE and 5G NR networks.

This report considers the proposed antenna configuration for Verizon, in addition to equipment configuration from operators that are currently located on the existing guyed tower, to calculate the resulting percentage of Maximum Permissible Exposure (% MPE) at ground level around the existing facility. The other operators on site include American Messaging, Arch Wireless, Dish Wireless, Marc Dodge, Plainfield Municipal, and T-Mobile. The technical operating information for the existing operators are based on prior Connecticut Siting Council (CSC) application on record^{1,2} and the structural³ analysis listing an inventory of existing equipment.

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/cm²). 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 in Dish Network's Connecticut Siting Council Tower Share Application – 419 Ekonk Hill Road, Sterling, CT, dated 01/19/2023.

² As referenced T-Mobile's Connecticut Siting Council Notice of Exempt Modification, – 419 Ekonk Hill Road, Sterling, CT, dated 01/10/2022.

³ As referenced to the Structural Analysis Report prepared by Tower Engineering Solutions, LLC, dated 04/02/2026

RF Exposure Calculation Methods

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

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

Where:

EIRP = Effective Isotropic Radiated Power

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

H = Horizontal Distance from antenna

V = Vertical Distance from center of antenna

Off Beam Loss is determined by the selected antenna patterns

GRF = Ground reflection factor 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. As a result, the calculated power density and corresponding % MPE levels reported below are more conservative (higher) than the actual signal levels will be from the final installation.

The percentage 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 and/or electrical down-tilt was used in the calculations. This results in a conservative or "worst case" assumption for percent of MPE calculations.

3. Antenna Inventory

Table 1 below outlines the proposed antenna configurations for Verizon. The associated data model and antenna patterns for these specific antenna models are included in Attachment C.

Operator	Sector / Azimuth	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. / Elec. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha / 0°	750	160	16.7	7484	NHH-65C-HG-R3BD	62	0/2	8	160
		850	160	16.3	6825		60	0/3		
		1900	160	22.6	29115	MF3208d-25A	-	0/1	3.3	
		2100	160	23.3	34207		-	0/1		
		3700	480	26.6	219402	MF6433-77A	-	0/1	3	
	Beta / 120°	750	160	16.7	7484	NHH-65C-HG-R3BD	62	0/3	8	160
		850	160	16.3	6825		60	0/6		
		1900	160	22.6	29115	MF3208d-25A	-	0/1	3.3	
		2100	160	23.3	34207		-	0/1		
		3700	480	26.6	219402	MF6433-77A	-	0/1	3	
	Gamma / 240°	750	160	16.7	7484	NHH-65C-HG-R3BD	62	0/2	8	160
		850	160	16.3	6825		60	0/2		
		1900	160	22.6	29115	MF3208d-25A	-	0/1	3.3	
		2100	160	23.3	34207		-	0/1		
		3700	480	26.6	219402	MF6433-77A	-	0/1	3	

Table 1: Proposed Antenna Inventory^{4,5}

⁴ Antenna configuration is in reference to Verizon's Radio Frequency Design Sheet dated 03/03/2026.

⁵ Transmit power assumes 0 dB of cable loss.

5. Calculated % MPE Results

The calculated % MPE results for the proposed and existing antenna configurations 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.

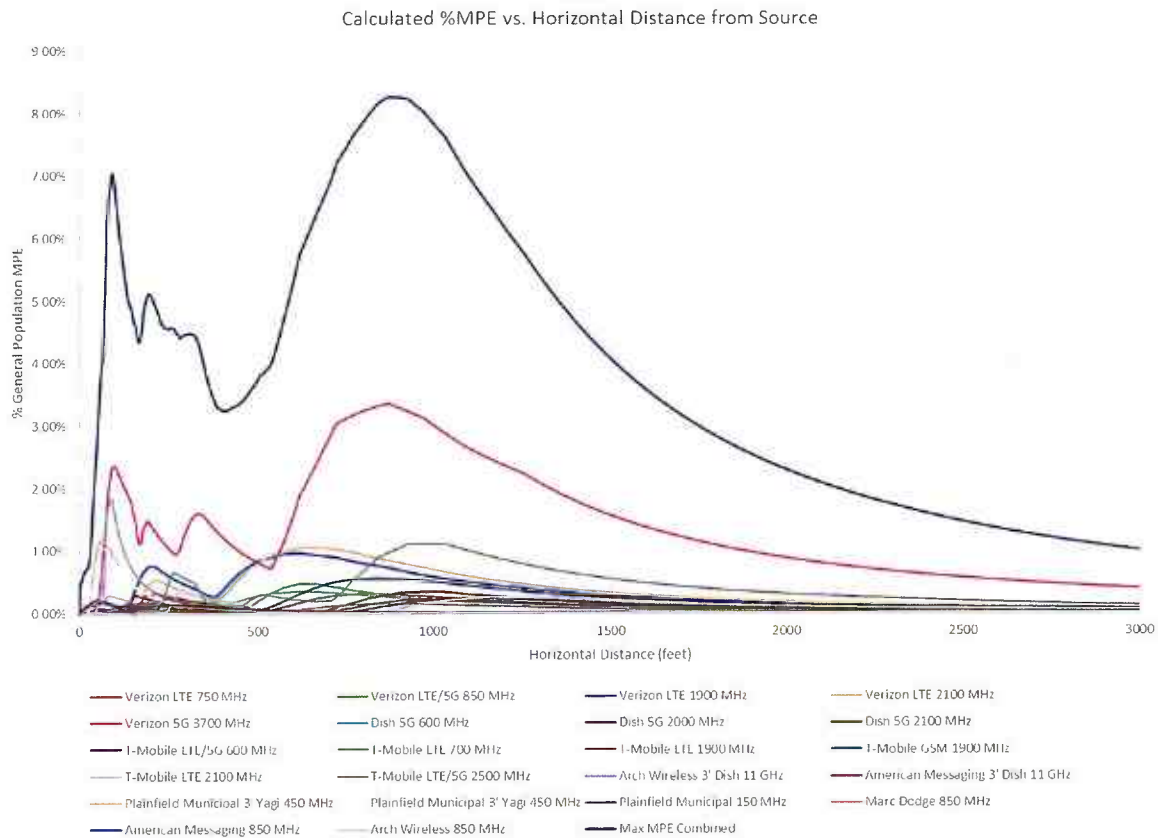


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (8.27% of the General Population limit) is calculated to occur at a horizontal distance of 874 feet away from the site. Please note that the percent of MPE calculations close to the site consider 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 1000 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, power density levels vary based 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 transmitters are operating at full power and 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 more conservative (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
American Messaging 3' Dish 11 GHz	1	0.1	25.0	874	0.000203	1.000	0.02%
American Messaging 850 MHz	1	12.7	178.0	874	0.000007	0.567	0.00%
Arch Wireless 3' Dish 11 GHz	1	0.1	14.0	874	0.000203	1.000	0.02%
Arch Wireless 850 MHz	1	12.7	140.0	874	0.000028	0.567	0.00%
Dish 5G 2000 MHz	1	160.0	150.0	874	0.001693	0.567	0.30%
Dish 5G 2100 MHz	1	160.0	150.0	874	0.001811	1.000	0.18%
Dish 5G 600 MHz	1	246.0	150.0	874	0.001319	0.500	0.26%
Marc Dodge 850 MHz	1	12.7	195.0	874	0.000003	0.567	0.00%
Plainfield Municipal 150 MHz	2	25.4	99.0	874	0.000042	0.200	0.02%
Plainfield Municipal 3' Yagi 450 MHz	1	6.2	39.0	874	0.000047	0.300	0.02%
Plainfield Municipal 3' Yagi 450 MHz	1	6.2	41.0	874	0.000047	0.300	0.02%
T-Mobile GSM 1900 MHz	1	15.0	170.0	874	0.000065	1.000	0.01%
T-Mobile LTE 1900 MHz	1	280.0	170.0	874	0.001218	1.000	0.12%
T-Mobile LTE 2100 MHz	1	280.0	170.0	874	0.000455	1.000	0.05%
T-Mobile LTE 700 MHz	1	80.0	170.0	874	0.000711	0.467	0.15%
T-Mobile LTE/5G 2500 MHz	1	240.0	170.0	874	0.009774	1.000	0.98%
T-Mobile LTE/5G 600 MHz	1	320.0	170.0	874	0.002261	0.400	0.57%
Verizon 5G 3700 MHz	1	480.0	160.0	874	0.033602	1.000	3.36%
Verizon LTE 1900 MHz	1	160.0	160.0	874	0.007394	1.000	0.74%
Verizon LTE 2100 MHz	1	160.0	160.0	874	0.008492	1.000	0.85%
Verizon LTE 750 MHz	1	160.0	160.0	874	0.001549	0.500	0.31%
Verizon LTE/5G 850 MHz	1	160.0	160.0	874	0.001670	0.567	0.29%
Total							8.27%

Table 2: Maximum Percent of General Population Exposure Values ^{6, 7, 8}

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 For the purpose of this analysis, a maximum ERP of 100 Watts is used for antennas operating in the VHF/UHF and cellular frequency range.

6. Conclusion

The above analysis concludes that RF exposure levels from Verizon's proposed equipment 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 at ground level in consideration of all transmitters is calculated to be **8.27% of the FCC limit (General Population/Uncontrolled)**. This maximum cumulative percent of MPE value is calculated to occur 874 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. C95.1, ANSI/IEEE Std. C95.3, and FCC OET Bulletin 65 Edition 97-01.



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C Squared Systems, LLC

May 12, 2026

Date



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

May 13, 2026

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 to 300 GHz IEEE-SA Standards Board

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

(A) Limits for Occupational/Controlled Exposure ⁹

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 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)
0.3-1.34	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

⁹ 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.

¹⁰ 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.

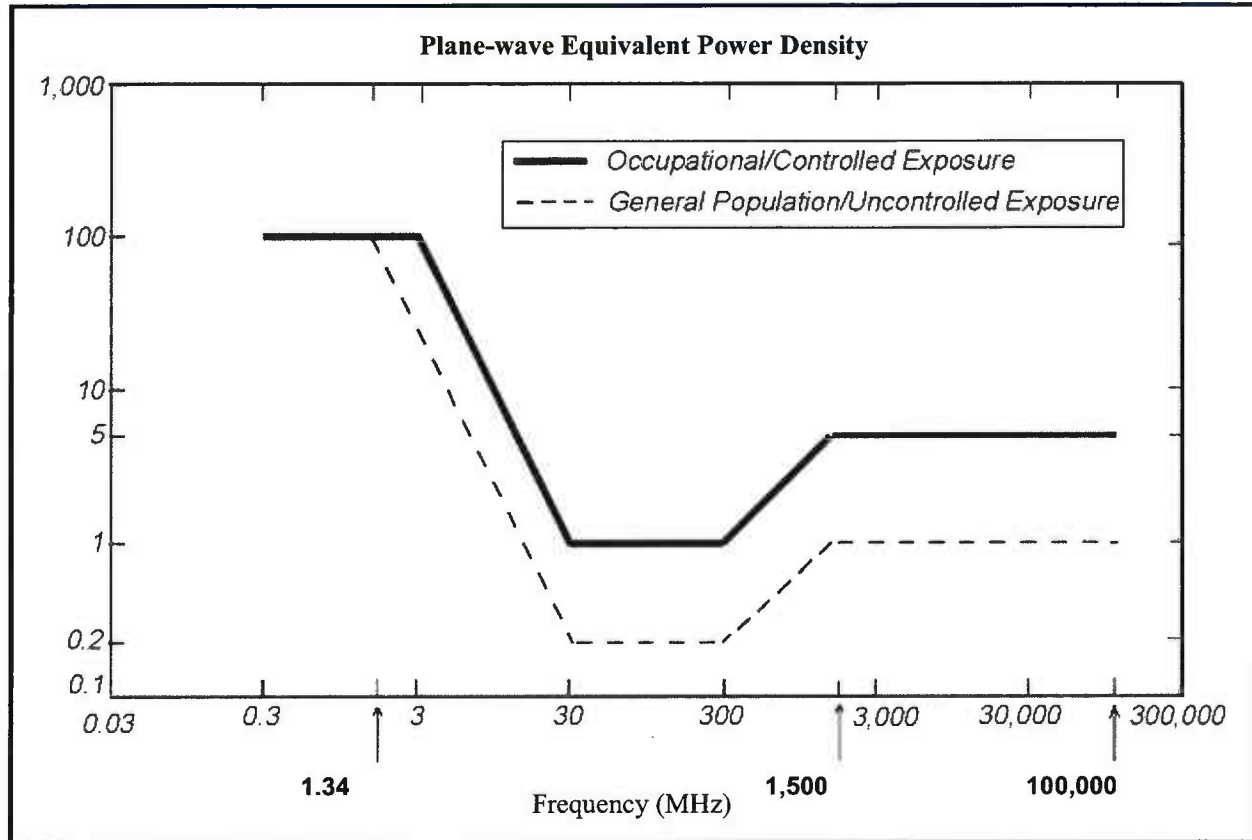
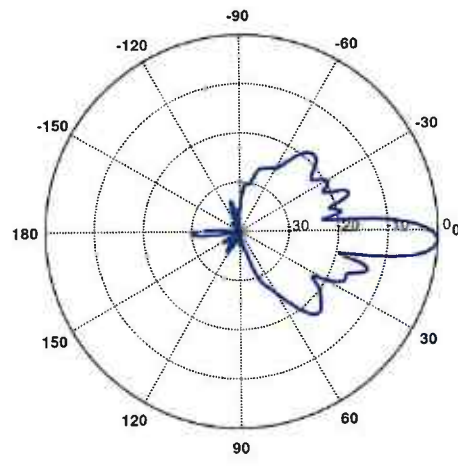
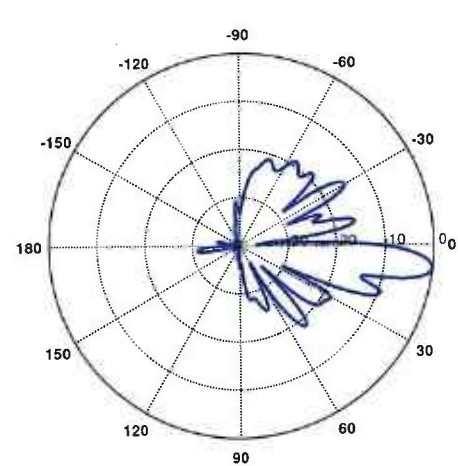
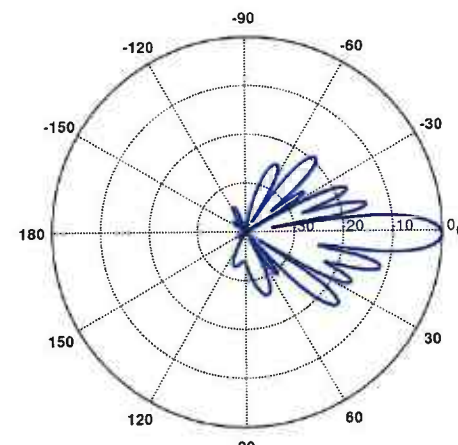


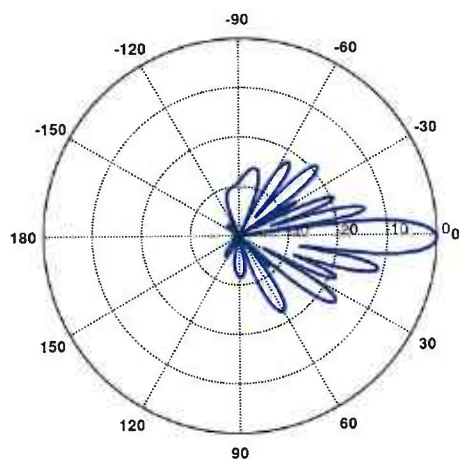
Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns

750 MHz Manufacturer: Andrew Model #: NHH-65C-HG-R3BD Frequency Band: 698-806 MHz Gain: 16.7 dBi Electrical Down-Tilt: 3° Vertical Beamwidth: 9.7° Horizontal Beamwidth: 62° Polarization: ±45° Dimensions (L x W x D): 96.0" x 13.9" x 8.2"	 A polar plot showing the radiation pattern for the 750 MHz antenna. The plot is circular with concentric dashed lines representing signal strength in dB, labeled 0, 10, 20, and 30. Radial lines indicate angles from 0 to 180 degrees in 30-degree increments. The main beam is centered at 0 degrees, reaching a peak of approximately 25 dB. There are side lobes extending to about 150 and 30 degrees, and a small back lobe around 180 degrees.
850 MHz Manufacturer: Andrew Model #: NHH-65C-HG-R3BD Frequency Band: 824 - 894 MHz Gain: 16.3 dBi Electrical Down-Tilt: 6° Vertical Beamwidth: 7.6° Horizontal Beamwidth: 60° Polarization: ±45° Dimensions (L x W x D): 96.0" x 13.9" x 8.2"	 A polar plot showing the radiation pattern for the 850 MHz antenna. The plot is circular with concentric dashed lines representing signal strength in dB, labeled 0, 10, 20, and 30. Radial lines indicate angles from 0 to 180 degrees in 30-degree increments. The main beam is centered at 0 degrees, reaching a peak of approximately 25 dB. Side lobes are visible at approximately 150 and 30 degrees, and a small back lobe is present at 180 degrees.
1900 MHz Manufacturer: Samsung Model #: MF3208d-25A Frequency Band: 1850-1990 MHz Gain: 22.6 dBi Electrical Down-Tilt: 1° Vertical Beamwidth: 15° Horizontal Beamwidth: 109° Polarization: ±45° Dimensions (L x W x D): 25.5" x 39" x 8.5"	 A polar plot showing the radiation pattern for the 1900 MHz antenna. The plot is circular with concentric dashed lines representing signal strength in dB, labeled 0, 10, 20, and 30. Radial lines indicate angles from 0 to 180 degrees in 30-degree increments. The main beam is centered at 0 degrees, reaching a peak of approximately 25 dB. The pattern shows a wider horizontal spread compared to the lower frequency antennas, with significant side lobes extending to about 150 and 30 degrees, and a small back lobe at 180 degrees.

2100 MHz

Manufacturer: Samsung
 Model #: MF3208d-25A
 Frequency Band: 1920-2200 MHz
 Gain: 23.3 dBi
 Electrical Down-Tilt: 1°
 Vertical Beamwidth: 15°
 Horizontal Beamwidth: 96°
 Polarization: $\pm 45^\circ$
 Dimensions (L x W x D): 25.5" x 39" x 8.5"



3700 MHz

Manufacturer: SAMSUNG
 Model #: MT6433-77A
 Frequency Band: 3700-3980 MHz
 Gain: 25.5 dBi
 Electrical Down-Tilt: 3°
 Vertical Beamwidth: N/A°
 Horizontal Beamwidth: N/A°
 Polarization: N/A°
 Dimensions (L x W x D): 36" x 15.8" x 6"

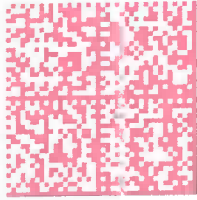
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ATTACHMENT 6



Verizon/Oneco CT (6009)

Certificate of Mailing — Firm

Name and Address of Sender Jonathan H. Schaefer, Esq. Robinson & Cole LLP One State Street Hartford, CT 06103		TOTAL NO. of Pieces Listed by Sender 3	TOTAL NO. of Pieces Received at Post Office™ 3	Affix Stamp Here Postmark with Date of Receipt.	
Postmaster, per (name of receiving employee) J.L.D.		 quadrant CORRECTION IMI \$003.74 ⁰ 05/29/2016 ZIP 06103 043M132206619 US POSTAGE			
USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Myron "Jack" Joslyn, First Selectman Town of Sterling 1183 Plainfield Pike Oneco, CT 06373	MAY 29 2016			
2.	John Guskowski, Zoning Enforcement Official Town of Sterling 1183 Plainfield Pike Oneco, CT 06373				
3.	SBA Towers VIII, LLC ATTN: Tax Dept – CT20001-A 8051 Congress Avenue Boca Raton, FL 33487				
4.					
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