PYRAMID
Network Services, LLC

May 22, 2024

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Tower Share Application // Site: Washington 2 (ATC: 209259)
10 Blackville Road, Washington, CT 06794
41.6466° N, 73.3161° W

Dear Ms. Bachman:

This letter and attachments are re-submitted on behalf of Cellco Partnership d/b/a Verizon Wireless. Verizon Wireless plans to install antennas and related equipment to the tower site located at 10 Blackville Road, Washington, Connecticut. The project was deemed incomplete due to a deficiency on the construction drawings citing the 2018 Connecticut State Building Code (CSBC). The Constructiondrawings have been revised accordingly. Since Verizon was unable to revise construction drawings untilMay, the project was denied. Please refer to attached letters from Melanie Bachman, Executive Director,CT Siting Council.

Verizon Wireless proposes to install nine (9) 700/850/1900 5G MHz antenna and six (6) RRUs at the 100-foot level of the existing 134-foot monopine tower, two (2) hybrid cable will also be installed. Verizon Wireless equipment cabinets will be placed within 12'x30' lease area. Included are plans by Dewberry Engineers, dated January 23, 2024. Also included is a structural analysis prepared by American Tower Engineering Professionals, dated December 18, 2023 confirming that the existing tower is structurally capable of supporting the proposed equipment. This facility was approved by the Connecticut Siting Council, Docket No. 441 on March 6, 2014.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Verizon Wireless intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Jim L. Brinton, First Selectman, MaryAnn Nusom Haverstock, Enforcement Officer, as well as the property owner and tower owner.

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89

1. The proposed modifications will not result in an increase in the height of the existing structure. The top of the tower is 134-feet; Verizon Wireless proposed antennas will be located at a center line height of 100-feet.

2. The proposed modification will not result in the increase of the site boundary as depicted on the attached site plan.

3. The proposed modification will not increase the noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. The incremental effect of the proposed changes will be negligent.

4.The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

Connecticut General Statutes 16-50-aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, Verizon Wireless respectfully indicates that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing monopine has been deemed structurally capable of supporting Verizon Wireless proposed loading.

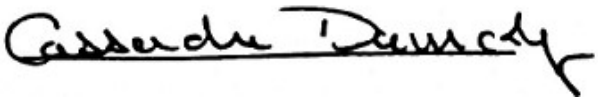
B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this monopine in Washington. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit Verizon Wireless to obtain a building permit for the proposed installation. Further, a letter of Authorization is included authorizing Pyramid Network Services to file this application for shared use.

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Verizon Wireless equipment at the 100-foot level of the existing 134-foot tower would have an insignificant visual impact on the area around the monopine. Verizon Wireless ground equipment would be installed within the existing facility compound. Verizon Wireless shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. Verizon Wireless will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist Pyramid with this tower share application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Verizon Wireless proposed loading. Verizon Wireless is not aware of any public safety concerns relative to the proposed sharing of the existing tower. Verizon Wireless intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Washington.

Sincerely,



Cassandra Darmody
Agent for American Tower
c/o Pyramid Network Services, LLC
6615 Towpath Road
East Syracuse, NY 13057
Cell (315) 569-9241
Fax (315) 445-0653

Attachments Cc:
James L. Brinton, First Selectman – as the property owner
Town of Washington
P.O. Box 383
Washington Depot, CT 06794

MaryAnn Nusom Haverstock, Enforcement Officer
Town of Washington
P.O. Box 383
Washington Depot, CT 06794

American Tower – as the tower owner
10 Presidential Way
Woburn, MA 01801

DOCKET NO. 441 – Homeland Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at 10 Blackville Road, Washington, Connecticut.	}	Connecticut
	}	Siting
	}	Council

March 6, 2014

Decision and Order

Pursuant to Connecticut General Statutes §16-50p and the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and operation of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes **§** 16-50k, be issued to Homeland Towers, LLC, hereinafter referred to as the Certificate Holder, for a telecommunications facility at 10 Blackville Road, in Washington, Connecticut.

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

1. The tower shall be constructed as a monopine, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of New Cingular Wireless PCS, LLC, Litchfield County Dispatch and other entities, both public and private, but such tower shall not exceed a height of 135 feet above ground level (140 feet with camouflage branches in place).

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

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

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

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

6. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

7. Any request for extension of the time period referred to in Condition 6 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Washington. Any proposed modifications to this Decision and Order shall likewise be so served.

8. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Certificate Holder may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period.

9. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

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

11. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

12. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

13. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

14. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.

15. This Certificate may be surrendered by the Certificate Holder upon written notification and approval by the Council.

We hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed in the Service List, dated November 22, 2013, and notice of issuance published in The Voices.

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

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2023.

Information on the Property Records for the Municipality of Washington was last updated on 1/23/2024.

Parcel Information

Location:	10 BLACKVILLE RD	Property Use:	Automotive	Primary Use:	Commercial Garage
Unique ID:	3008	Map Block Lot:	08-07-23	Acres:	15.3400
490 Acres:	0.00	Zone:	B-2	Volume / Page:	130/ 425
Developers Map / Lot:	1962 1643 /1287 985	Census:	2671		

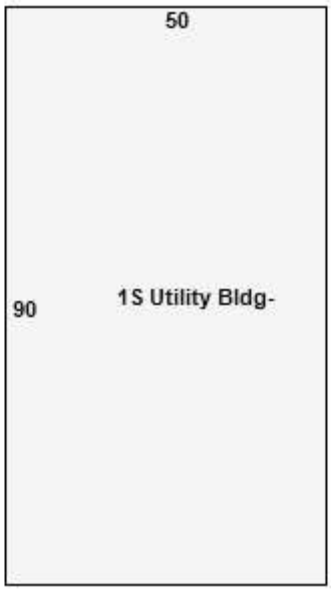
Value Information

	Appraised Value	Assessed Value
Land	280,400	196,280
Buildings	1,973,000	1,381,100
Detached Outbuildings	149,200	104,440
Total	2,402,600	1,681,820

Owner's Information

Owner's Data
WASHINGTON TOWN OF PO BOX 383 WASHINGTON DEPOT, CT 06794

Building 1



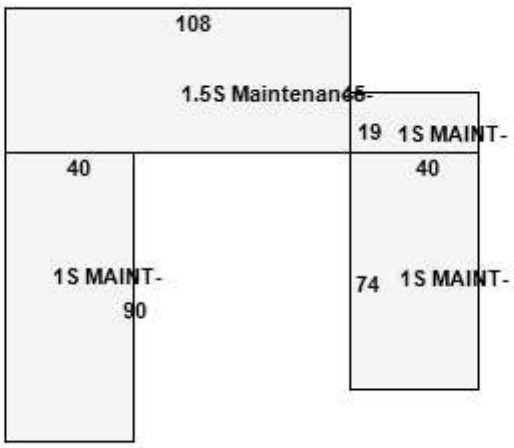
Category:	Automotive	Use:	Commercial Garage	GLA:	4,500
Stories:	1.00	Construction:	Very Good	Year Built:	1996

Heating:		Fuel:		Cooling Percent:	0%
Siding:	Vertical Wood	Roof Material:	Asphalt	Beds/Units:	0

Special Features

Attached Components

Building 2



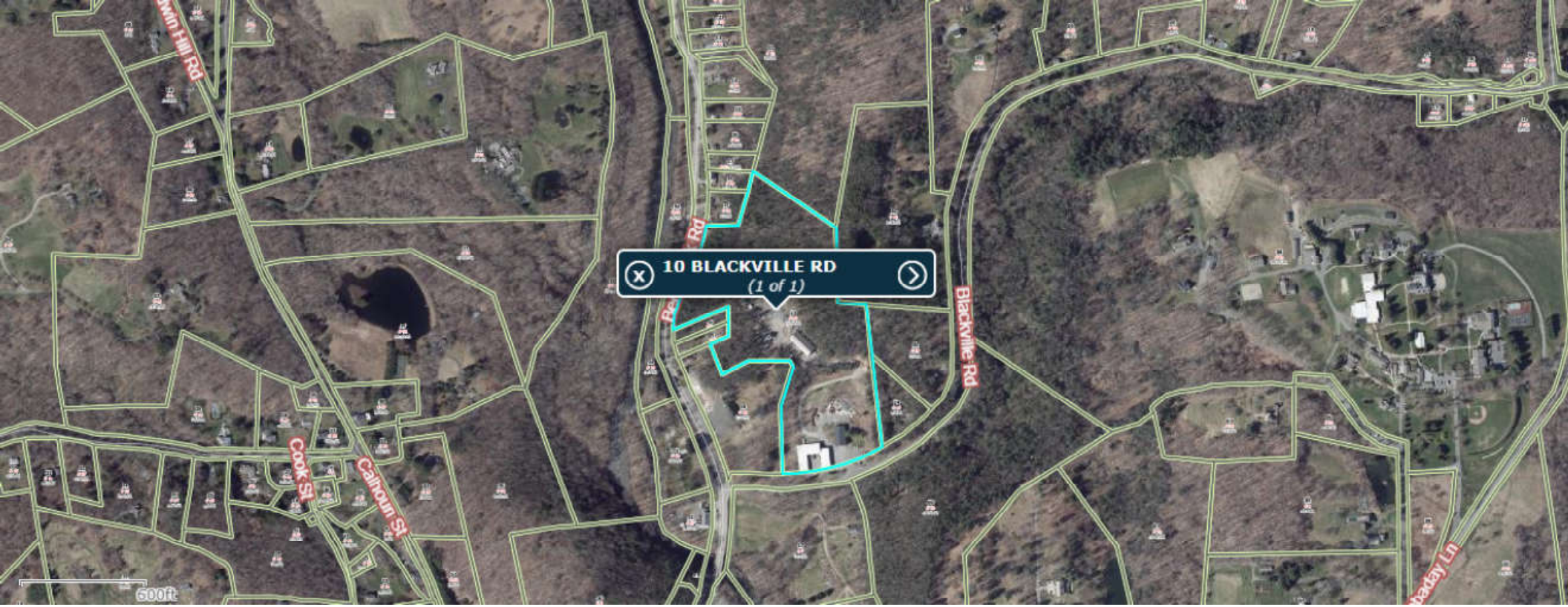
Category:	Automotive	Use:	Commercial Garage	GLA:	14,622
Stories:	1.00	Construction:	Very Good	Year Built:	1996
Heating:	FHA	Fuel:	Gas	Cooling Percent:	0%
Siding:	Metal	Roof Material:	Metal	Beds/Units:	0

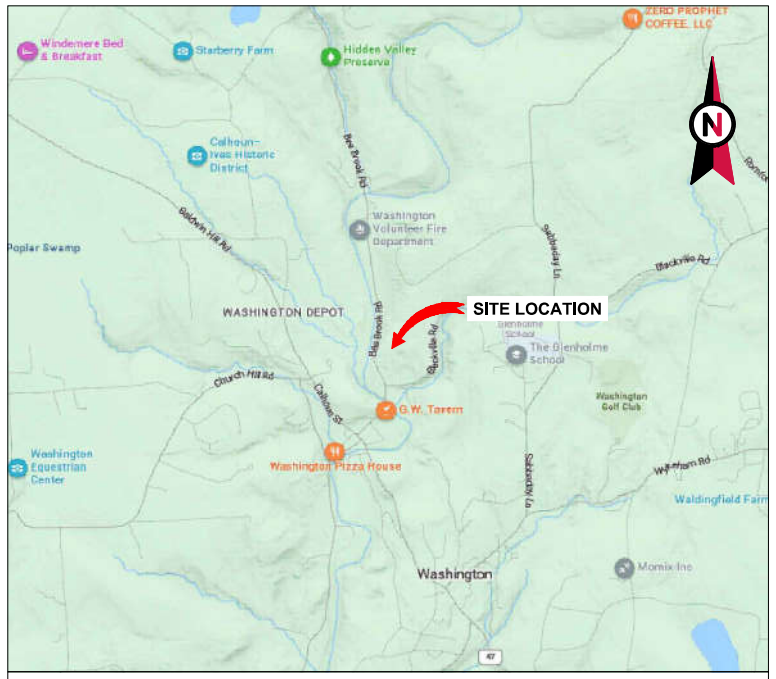
Special Features

Attached Components

Detached Outbuildings

Type:	Year Built:	Area:
Generator	2014	1
Paving	1996	12,000
Paving	2014	2,000
Paving	2014	4,875
Metal Shed	2007	6,000

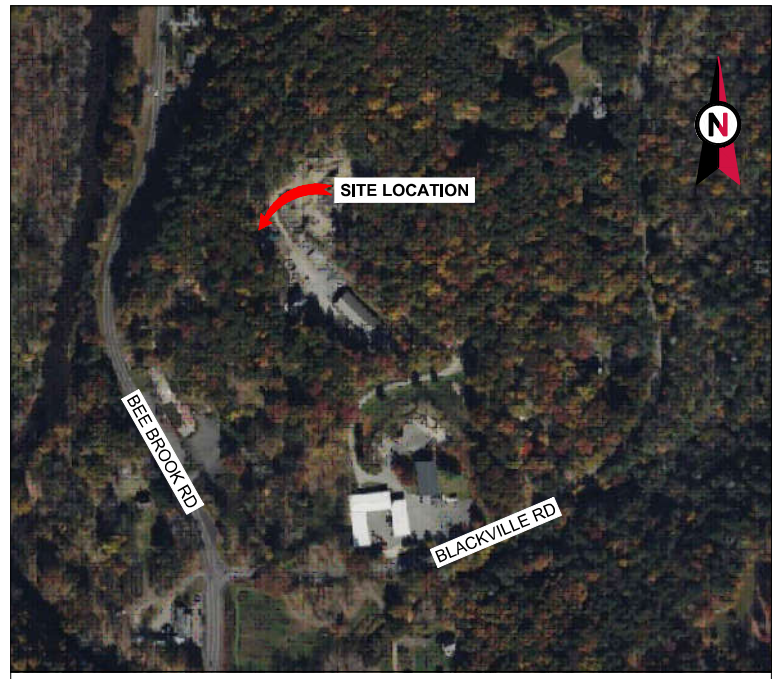

10 BLACKVILLE RD
(1 of 1)
Blackville Rd
Cook St
Calhoun St
600ft



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: WASHINGTON 2
ATC SITE NUMBER: 209259
VERIZON SITE NAME: WASHINGTON DEPOT CT
VERIZON SITE NUMBER: 5000927259
VERIZON FUZE PID: 16737957
SITE ADDRESS: 10 BLACKVILLE ROAD
WASHINGTON, CT 06794



LOCATION MAP

VERIZON COLLOCATION PLAN

COMPLIANCE CODE

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

1. 2022 CONNECTICUT STATE BUILDING CODE-AMENDMENTS TO IBC 2021
2. INTERNATIONAL BUILDING CODE 2015, INTERNATIONAL CODE COUNCIL
3. TIA-222-G-4, STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS
4. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, AMERICAN SOCIETY OF CIVIL ENGINEERS
5. STEEL CONSTRUCTION MANUAL 14TH EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION
6. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: UNKNOWN
PHONE: N/A

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

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

PROJECT SUMMARY

SITE ADDRESS:

10 BLACKVILLE ROAD
WASHINGTON, CT 06794
COUNTY: LITCHFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.646533
LONGITUDE: -73.316053
GROUND ELEVATION: 596' AMSL
STRUCTURE HEIGHT: 731' AMSL (135' AGL)

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

ENGINEER:

DEWBERRY ENGINEERS INC.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

PROPERTY OWNER:

TOWN OF WASHINGTON
P.O. BOX 383
WASHINGTON DEPOT, CT 06794

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES PLACING EQUIPMENT CABINETS ON A PROPOSED CONCRETE PAD INSIDE A 12'X30' (360 SQ FT) GROUND SPACE WITHIN THE EXISTING COMPOUND, AND PLACING NEW ANTENNAS ON PROPOSED SECTOR FRAMES MOUNTED TO THE EXISTING TOWER.

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

PER GPS

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	2	01/23/24	VL
G-002	GENERAL NOTES	2	01/23/24	VL
C-001	OVERALL SITE PLAN	2	01/23/24	VL
C-101	DETAILED SITE PLAN	2	01/23/24	VL
C-102	DETAILED EQUIPMENT PLAN	2	01/23/24	VL
C-201	TOWER ELEVATION	2	01/23/24	VL
C-401	ANTENNA INFORMATION & SCHEDULE	2	01/23/24	VL
C-501	MOUNT DETAILS	2	01/23/24	VL
C-502	CONSTRUCTION DETAILS	2	01/23/24	VL
C-503	CONSTRUCTION DETAILS	2	01/23/24	VL
E-101	GROUNDING PLAN & NOTES	2	01/23/24	VL
E-102	GROUNDING DETAILS	2	01/23/24	VL
E-501	ONE-LINE & PANEL SCHEDULE	2	01/23/24	VL
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			

AMERICAN TOWER®

Dewberry®
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

REV.	DESCRIPTION	BY	DATE
A	PRELIM	VL	08/29/23
0	FINAL	VL	12/21/23
1	FINAL	VL	01/22/24
2	FINAL	VL	01/23/24

ATC SITE NUMBER:
209259
ATC SITE NAME:
WASHINGTON 2
VERIZON SITE NAME:
WASHINGTON DEPOT CT
SITE ADDRESS:
10 BLACKVILLE ROAD
WASHINGTON, CT 06794

SEAL:

verizon

ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	2

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
   - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
   - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
   - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
   - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
   - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
   - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
   - B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
   - C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
   - D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
   - E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
   - F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
   - G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
   - H. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
   - I. ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND VERIZON PROJECT MANAGER IN WRITING

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. MIX DESIGN SHALL BE APPROVED BY VERIZON REP PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C150, TYPE 2
REINFORCEMENT:	ASTM A185, PLAIN STEEL WELDED WIRE FABRIC
REINFORCEMENT BARS:	ASTM A615, GRADE 60, DEFORMED
NORMAL WEIGHT AGGREGATE:	ASTM C33
WATER:	ASTM C 94/C 94M
WELDED WIRE FABRIC:	ASTM A185
ADMIXTURES:	
-WATER-REDUCING AGENT:	ASTM C 494/C 494M, TYPE A
-AIR-ENTERING AGENT:	ASTM C 260/C 260M
-SUPERPLASTICIZER:	ASTM C494, TYPE F OR TYPE G
-RETARDING:	ASTM C 494/C 494M, TYPE B

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
14. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
15. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
16. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
17. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
18. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
19. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
20. BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
21. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
22. SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

1. ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2. ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES) ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF ATC. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUNDING CABLES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUNDING LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

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

AMERICAN TOWER®

Dewberry®
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

REV.	DESCRIPTION	BY	DATE
A	PRELIM	VL	08/29/23
0	FINAL	VL	12/21/23
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ATC SITE NUMBER:
209259
ATC SITE NAME:
WASHINGTON 2
VERIZON SITE NAME:
WASHINGTON DEPOT CT
SITE ADDRESS:
10 BLACKVILLE ROAD
WASHINGTON, CT 06794

SEAL:

verizon

ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	2

NOTES:

1. BOUNDARY LINES BASED ON "CONNECTICUT PARCELS" DATA OBTAINED FROM WASHINGTON CITY, CONNECTICUT ONLINE GIS.
2. DEWBERRY ENGINEERS INC. HAS NOT BEEN PROVIDED WITH OR CONTRACTED TO PERFORM A PROPERTY SURVEY OR ANY FIELD SURVEY AT THIS SITE.

VALERIE LAPLANTE
PARCEL #: 08-09-26

HUNT JACOB C & FOSTER LAUREN M
PARCEL #: 08-09-27

STEEP ROCK ASSOCIATION INC.
PARCEL #: 04-08-02

RAYMOND RANIERI
PARCEL #: 08-07-16

BLACKVILLE RD

BARRY J & GEMMA OBRIEN
PARCEL #: 09-08-16

STATE OF CONNECTICUT
PARCEL #: 08-07-15A

DAWN M BELANGER & VINCENT M ET AL
PARCEL #: 08-07-17

SPEICHER JUDY A TRUSTEE
JUDY A SPEICHER
REVOCABLE TRUST
PARCEL #: 08-07-26

BEE BROOK RD

313'-1"±

PROPOSED VERIZON EQUIPMENT AND LEASE AREA

1
C-101

57'-8"±

374'-1"±

STEEP ROCK ASSOCIATION INC.
PARCEL #: 09-08-21

STEEP ROCK ASSOCIATION INC.
PARCEL #: 08-07-15

MICHAEL J ROSENERG & KOWALSKI LEONARD J
PARCEL #: 08-07-18

SITE

247'-7"±

DEVEREUX FOUNDATION INC.
PARCEL #: 03-08-08

JON LYNCH
PARCEL #: 08-07-25

TOWN OF WASHINGTON
PARCEL #: 08-07-23

JEFFREY E MCSHERRY
PARCEL #: 08-07-19

CONNECTICUT LIGHT & POWER CO
PARCEL #: 08-07-14

38 BEE BROOK ROAD LLC
PARCEL #: 08-07-20

WALTER G & PATRICIA ANDERSON
PARCEL #: 08-07-24

MARY A RIMBOCCHI
PARCEL #: 08-07-13

BEE BROOK RD

BLACKVILLE RD

KENNETH & PATRICIA LOBIANCO
PARCEL #: 04-08-06

LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING LEASE AREA
- EXISTING EASEMENT
- EXISTING WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING METAL FENCE
- EXISTING GUARD RAIL
- EXISTING CHAINLINK FENCE
- EXISTING ROAD (DIRT)
- EXISTING ROAD (STONE)
- EXISTING ROAD (PAVED)

1 OVERALL SITE PLAN

GRAPHIC SCALE

200 0 100 200

(IN FEET)
1 UNIT = 200 FEET

N

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99 SUMMER STREET
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SEAL:

verizon

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CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

OVERALL SITE PLAN

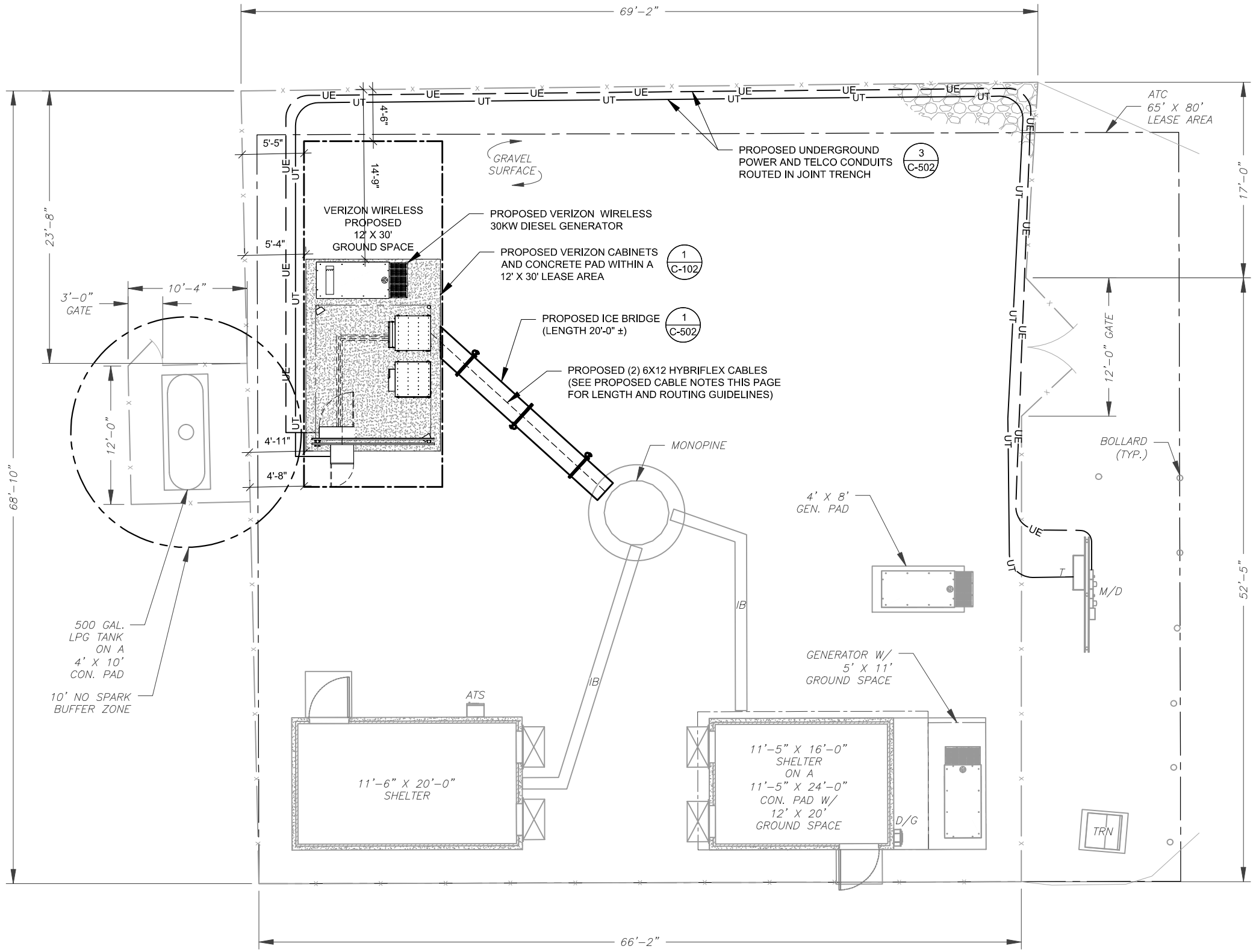
SHEET NUMBER:	REVISION:
C-001	2

SITE PLAN NOTES:

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

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

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE VERIZON REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.



LEGEND

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

PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **135'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

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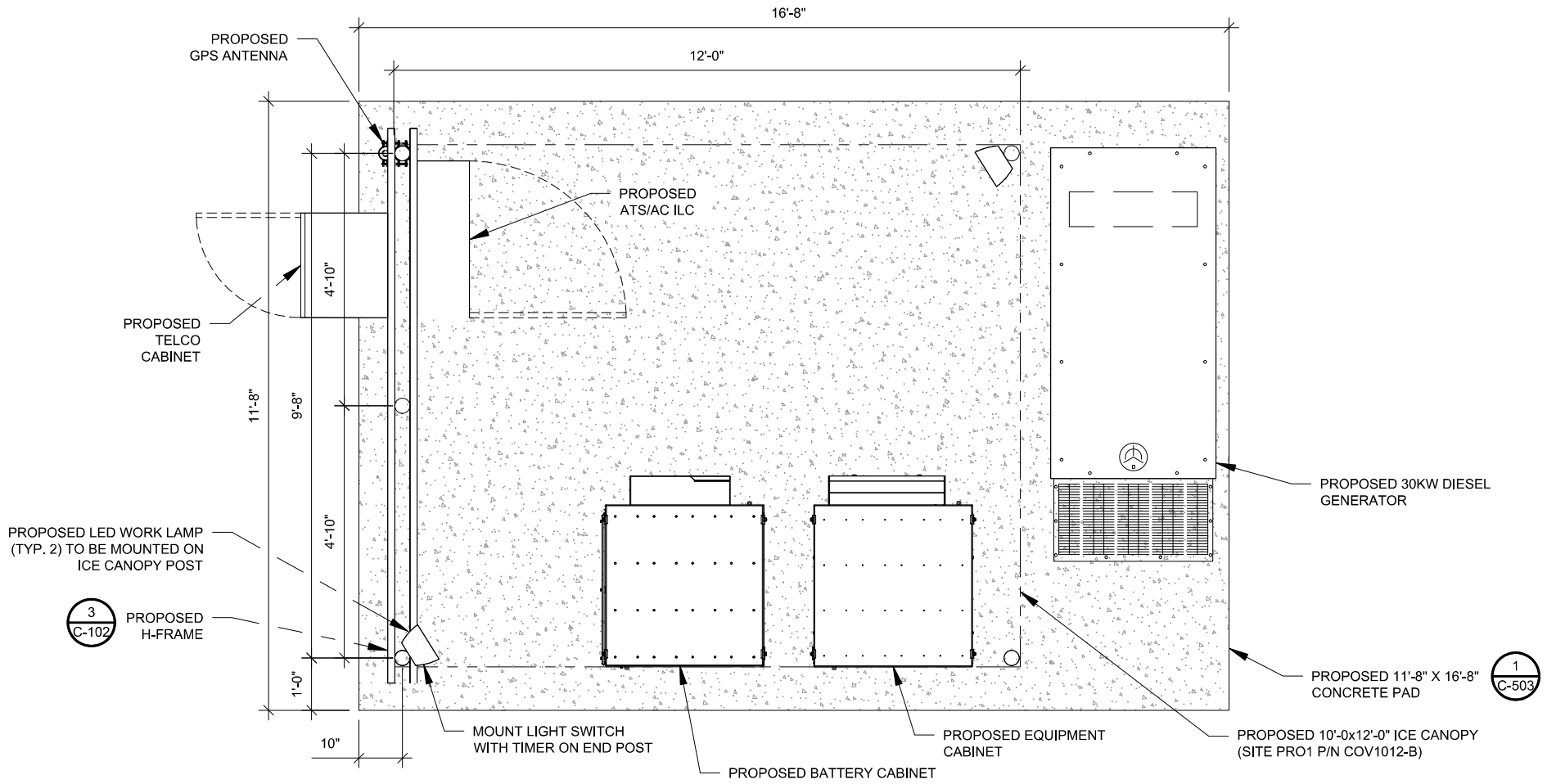
DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	2



1 PROPOSED GROUND EQUIPMENT LAYOUT

GRAPHIC SCALE

3 0 1.5' 3

(IN FEET)
1 UNIT = 3 FEET

VERIZON WIRELESS PROVIDED EQUIPMENT

- CHARLES INDUSTRIES CUBE-SS4B231PX2 EQUIPMENT WITH BATTERY CHARGER
- RAYCAP OVP-12 (RCMDC-3315-PF-48)

CONTRACTOR PROVIDED EQUIPMENT

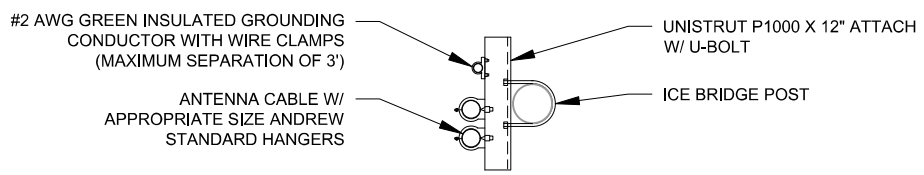
* THIS IS NOT A COMPREHENSIVE LIST. IT SHOULD BE ASSUMED BY THE CONTRACTOR THAT ALL OTHER ITEMS DETAILED IN THIS SET OF DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.

- 18"X18" FIBER JUNCTION BOX, NEMA 3R CABINET ENCLOSURE WITH WOODEN BACKBOARD, PADLOCK LATCH, AND COMBINATION LOCK (USE FOR DARK FIBER)

- 26.2" WIDE X 78" TALL X 12.3" DEEP ASCO D300L SERIES POWER TRANSFER LOAD CENTER MODEL AA300G-1PH-N-3R INTEGRATED LOAD CENTER "ILC" WITH COMBINATION PAD LOCK.

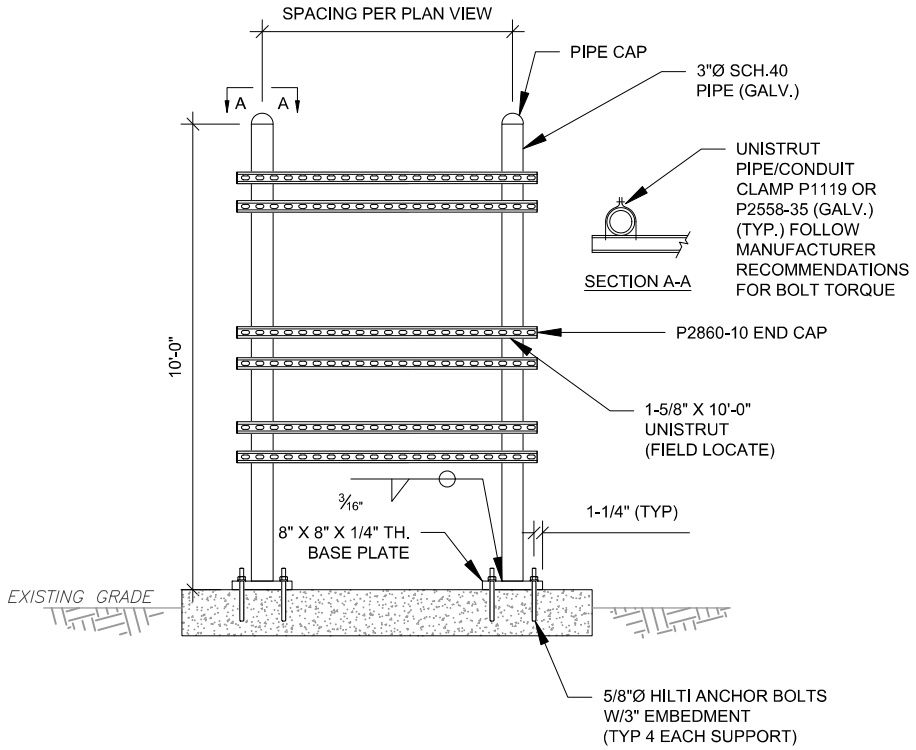
- 22" WIDE X 26" TALL X 20" DEEP CHARLES INDUSTRIES CUBE-RL1003C-1 WITH HEAT EXCHANGER (120V) WITH TRIPP-LITE UPS PART #SM1200RMXL2UTAA INSIDE (ONLY REQUIRED WHEN VZT PROVIDES LIT FIBER. UTILITY COORDINATOR MUST VERIFY IF NEEDED)

- COORDINATE ADDITIONAL ENTRY GATE LOCK(S) WITH CONSTRUCTION MANAGER



2 WAVEGUIDE UNISTRUT

SCALE: N.T.S.



3 TYPICAL H-FRAME AND ICE BRIDGE POST DETAIL

SCALE: N.T.S.

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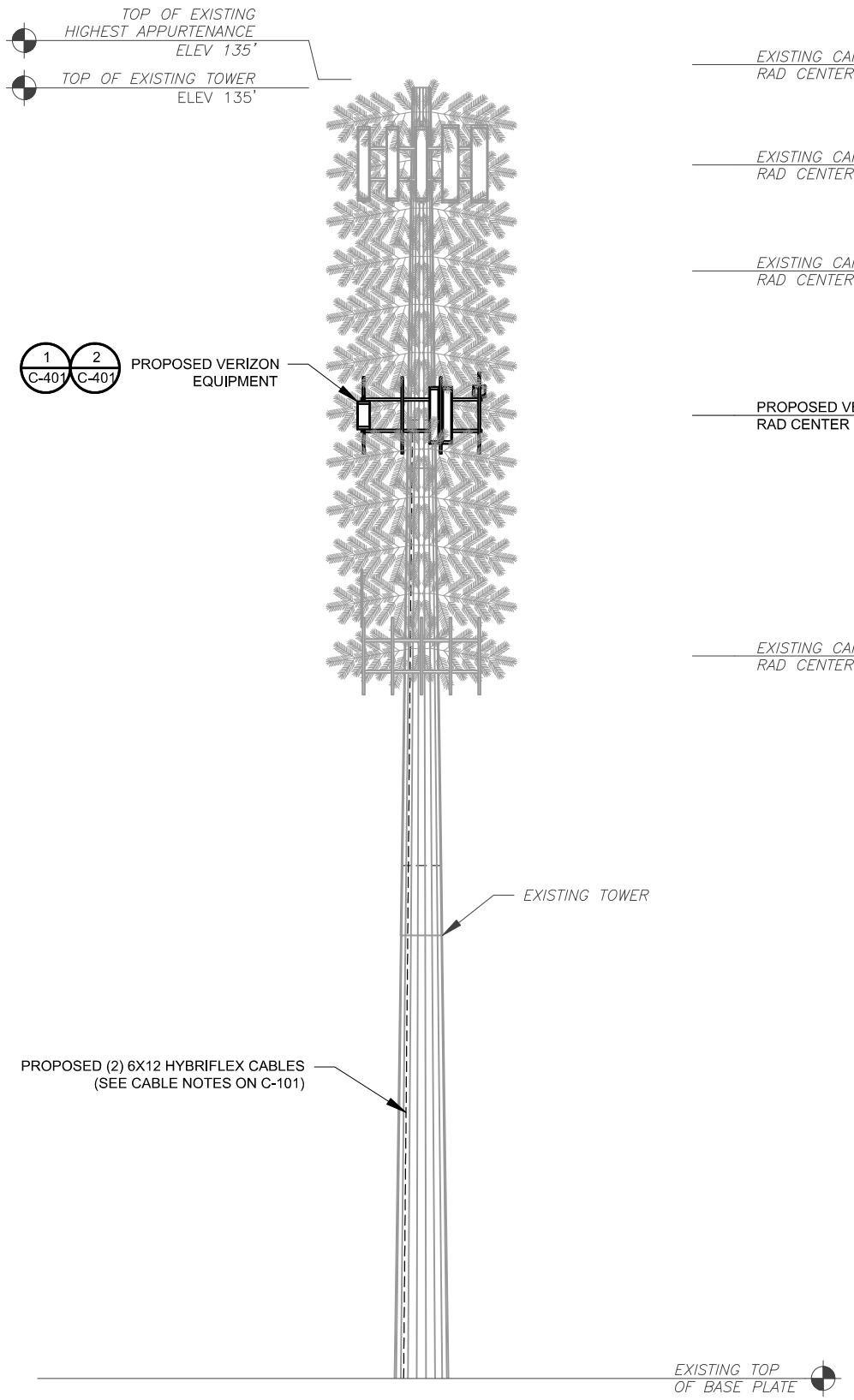
DETAILED EQUIPMENT PLAN

SHEET NUMBER:	REVISION:
C-102	2

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 10/16/23, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
5. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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Dewberry®
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
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FAX: 617.695.3310

REV.	DESCRIPTION	BY	DATE
A	PRELIM	VL	08/29/23
0	FINAL	VL	12/21/23
1	FINAL	VL	01/22/24
2	FINAL	VL	01/23/24

ATC SITE NUMBER:
209259
ATC SITE NAME:
WASHINGTON 2
VERIZON SITE NAME:
WASHINGTON DEPOT CT
SITE ADDRESS:
10 BLACKVILLE ROAD
WASHINGTON, CT 06794

SEAL:

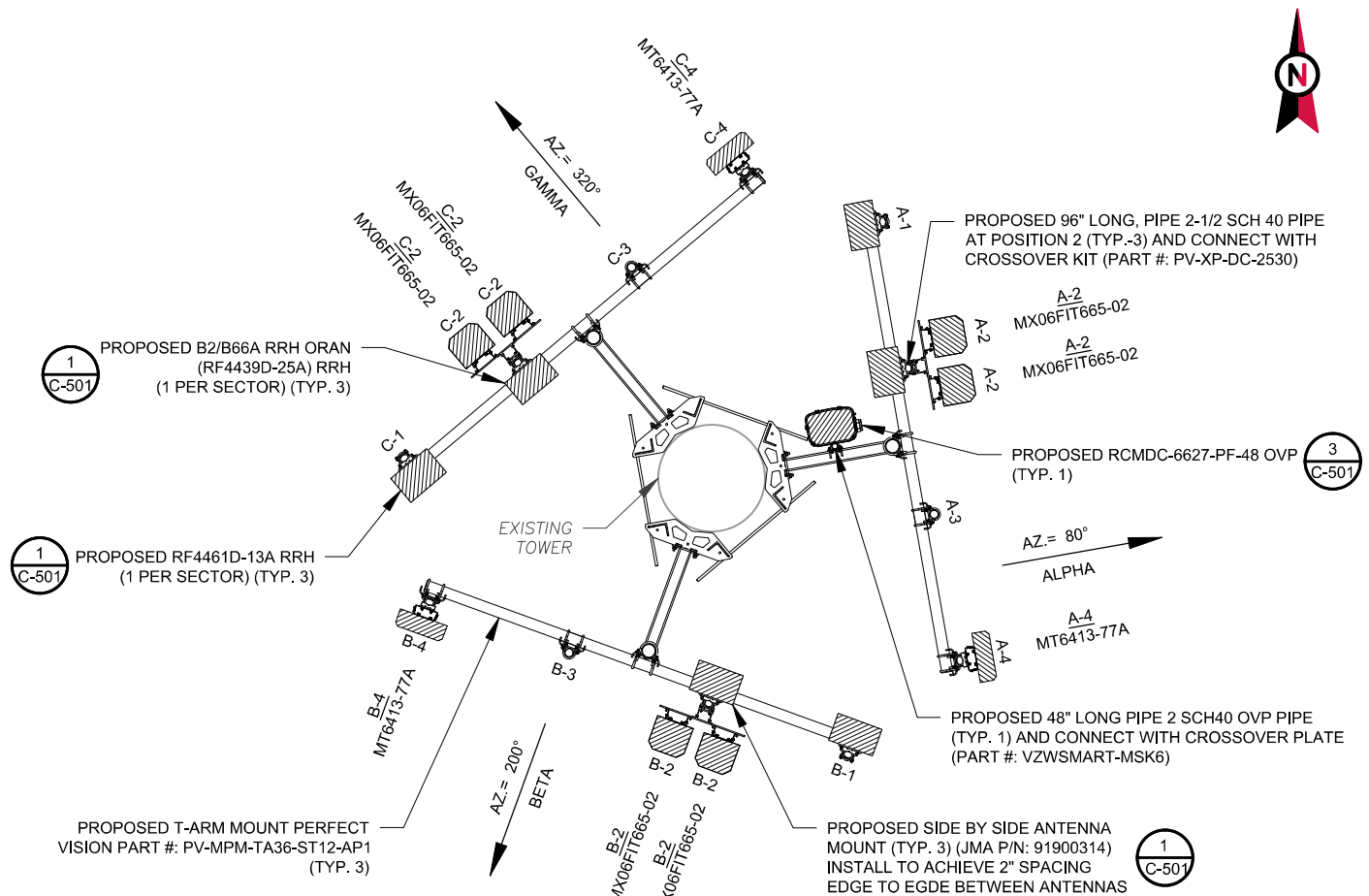
verizon

ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	2

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 10/16/23, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 FINAL ANTENNA PLAN

SCALE: N.T.S.

FINAL EQUIPMENT SCHEDULE							
LOCATION			ANTENNA SUMMARY			NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	ADDITIONAL TOWER MOUNTED EQUIPMENT	CABLE DESCRIPTION
ALPHA	100'	80°	A1	-	-	RF4461D-13A	(2) 6X12 HYBRIFLEX
			A2	MX06FIT665-02	LTE 700, LTE 850, 5G 850, LTE 1900, LTE AWS	B2/B66A RRH ORAN (RF4439D-25A)	
				MX06FIT665-02	LTE 700, LTE 850, 5G 850, LTE 1900, LTE AWS		
			A3	-	-	-	
			A4	MT6413-77A	5G L-SUB6	-	
BETA	100'	200°	B1	-	-	RF4461D-13A	
			B2	MX06FIT665-02	LTE 700, LTE 850, 5G 850, LTE 1900, LTE AWS	B2/B66A RRH ORAN (RF4439D-25A)	
				MX06FIT665-02	LTE 700, LTE 850, 5G 850, LTE 1900, LTE AWS		
			B3	-	-	-	
			B4	MT6413-77A	5G L-SUB6	-	
GAMMA	100'	320°	C1	-	-	RF4461D-13A	
			C2	MX06FIT665-02	LTE 700, LTE 850, 5G 850, LTE 1900, LTE AWS	B2/B66A RRH ORAN (RF4439D-25A)	
				MX06FIT665-02	LTE 700, LTE 850, 5G 850, LTE 1900, LTE AWS		
			C3	-	-	-	
			C4	MT6413-77A	5G L-SUB6	-	

1. CONFIRM WITH CARRIER REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS.
2. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH THE ATC CM.
3. SPACING OF PROPOSED EQUIPMENT SHALL BE CONFIRMED FOR TOWER CONFLICTS AND PROPOSED MOUNTS SHALL NOT IMPEDE TOWER CLIMBING PEGS.
4. INSTALL (1) RCMDC-6627-PF-48 OVP.

2 ANTENNA SCHEDULE

RF JUMPER LENGTH
MONOPOLE = 15'± GUYED / SELF SUPPORT = FACE WIDTH + 15'
REFER TO FINAL RFDS FOR TYPE AND QUANTITY

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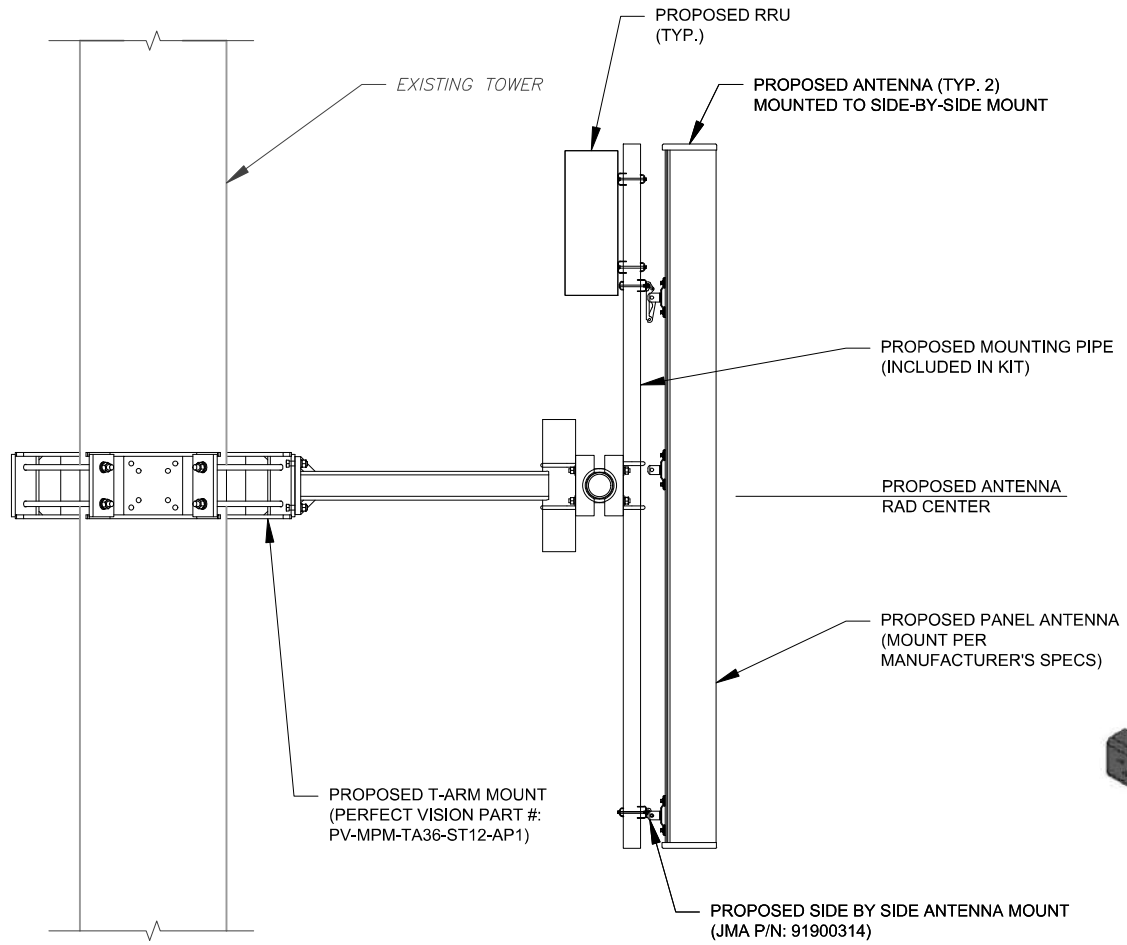
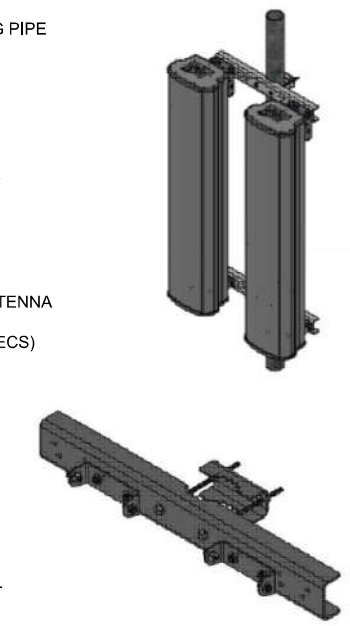
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	2



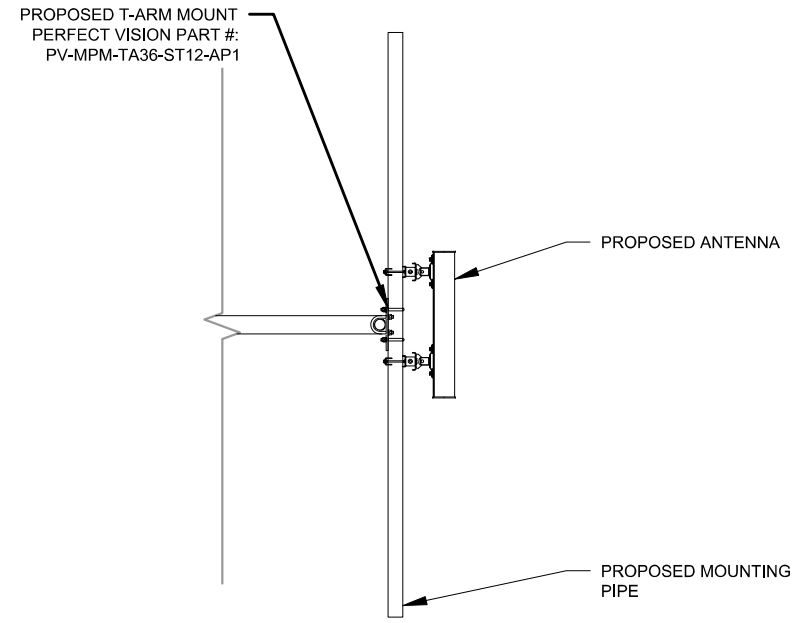
PROFILE VIEW



ISOMETRIC VIEW (BY MANUFACTURER)

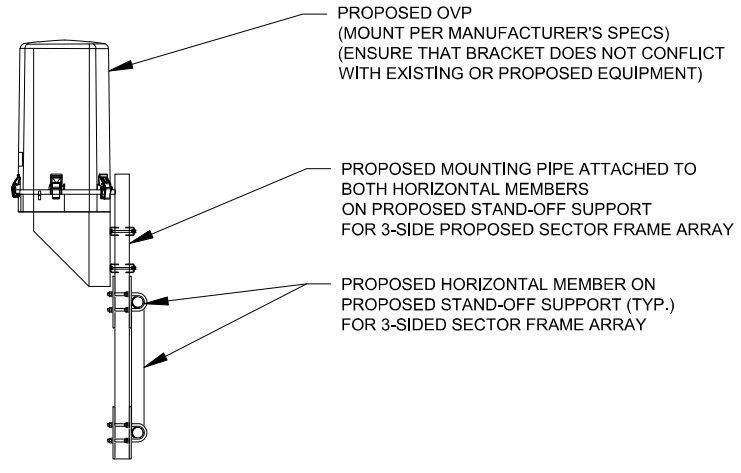
1 PROPOSED ANTENNA MOUNTING DETAIL (ELEVATION)

SCALE: N.T.S.



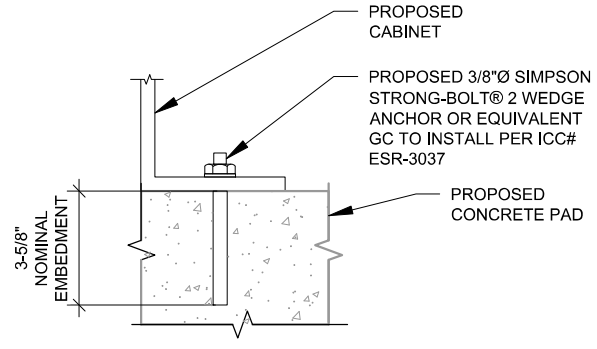
2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED OVP MOUNTING

SCALE: N.T.S.



NOTE:

INSTALL SIMPSON STRONG-TIE® STRONG-BOLT® 2 WEDGE ANCHOR(S) STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.STRONGTIE.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

4 CABINET ATTACHMENT DETAIL

SCALE: N.T.S.

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verizon

ATC JOB NO:	14482869_D2
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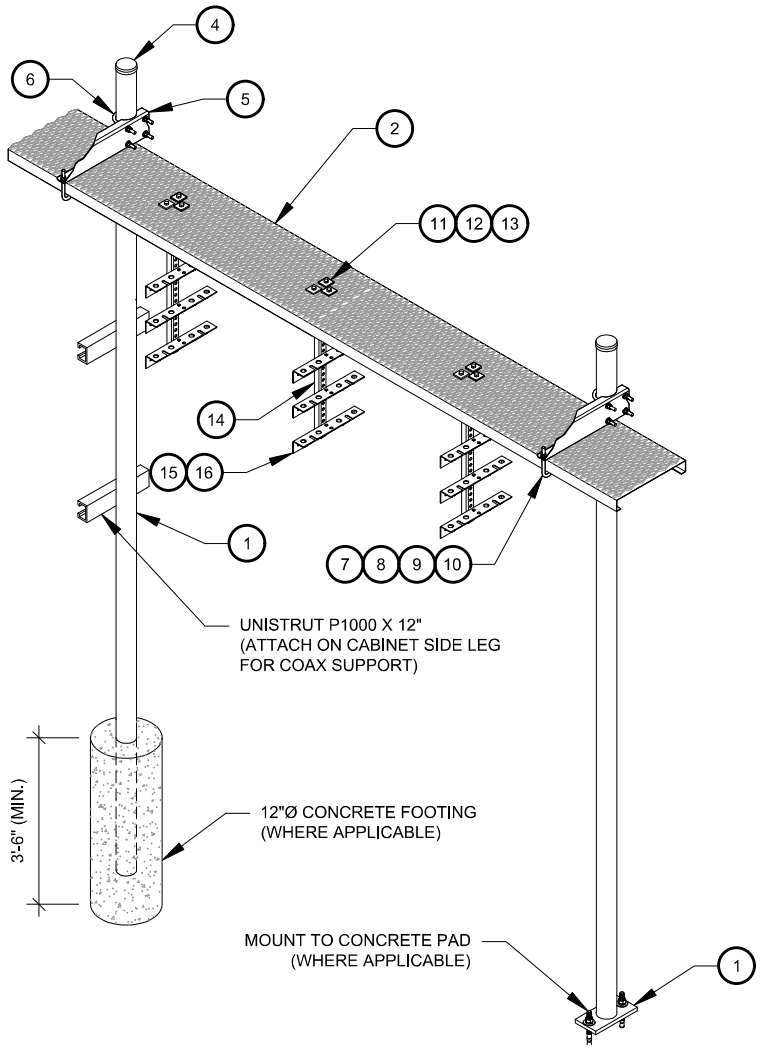
MOUNT DETAILS

SHEET NUMBER:	REVISION:
C-501	2

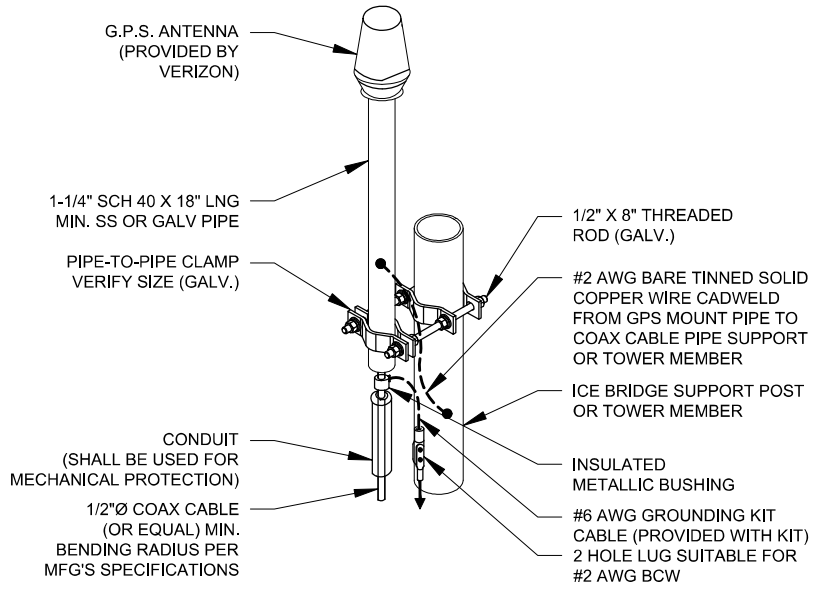
CONSTRUCTION NOTE:

1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.



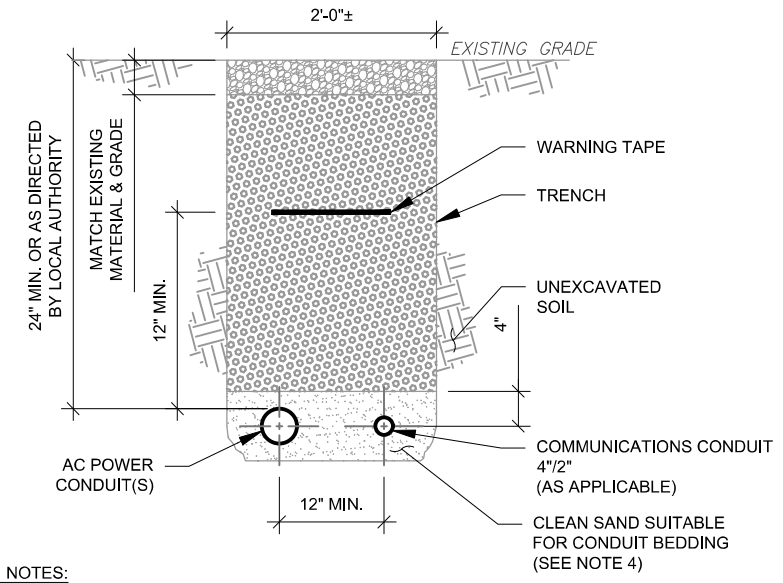
WB-K210-B WAVEGUIDE BRIDGE KIT - BILL OF MATERIALS (INCLUDED WITH KIT UNLESS NOTED OTHERWISE)					
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	MF126.01 MF-130	10'-4" COLUMN & BASE SHOE* 13'-4" PIPE COLUMN	9	GWL-04	1/2" GALV LOCK WASHER
2	WB-CY210	SAFETY GRATING 24" X 10'	10	GN-04	1/2" GALV HEX NUT
3	WBK110BHK	HARDWARE KIT (ITEMS 4-16)	11	GB-03205	3/8" X 2" GALV BOLT KIT
4	PC-034	PIPE CAP 3-1/2"	12	MT-387	SQUARE WASHER, 1-1/2" X 1-1/2" W/ 7/16" HOLE
5	WBLB243.08	24" WAVEGUIDE BRIDGE SUPPORT BRACKET	13	GWF-03	3/8" GALV FLAT WASHER
6	GUB-4356	1/2" X 3-5/8" X 6" GALV U-BOLT	14	WBT243.01	VERTICAL TRAPEZE SECTION
7	WB-JB-6	1/2" J-BOLT	15	GB-03105	3/8" X 1" GALV BOLT KIT
8	GWF-04	1/2" GALV FLAT WASHER	16	WBT243.02	HORIZONTAL TRAPEZE SECTION
CONTRACTOR SHALL USE PARTS MANUFACTURED BY COMMSCOPE OR APPROVED EQUIVALENT. *BASE SHOE NOT INCLUDED IN WB-K210-B KIT, ORDER COLUMN SEPARATELY OR KIT WB-K210-S.					

1 WAVEGUIDE BRIDGE KIT
SCALE: N.T.S.



NOTE:
1. GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
2. CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

2 GPS ANTENNA ATTACHMENT DETAIL
SCALE: N.T.S.



TRENCH NOTES:

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL.
2. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
4. USE COMMUNICATIONS ONLY TRENCH FOR COMMUNICATIONS CONDUIT UNLESS TRAVELING UNDER PATH OF VEHICLE TRAVEL, THEN CONDUIT MUST BE 24" MIN. BELOW GRADE.
5. CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS

3 POWER/TELCO CONDUIT TRENCH DETAILS
SCALE: N.T.S.

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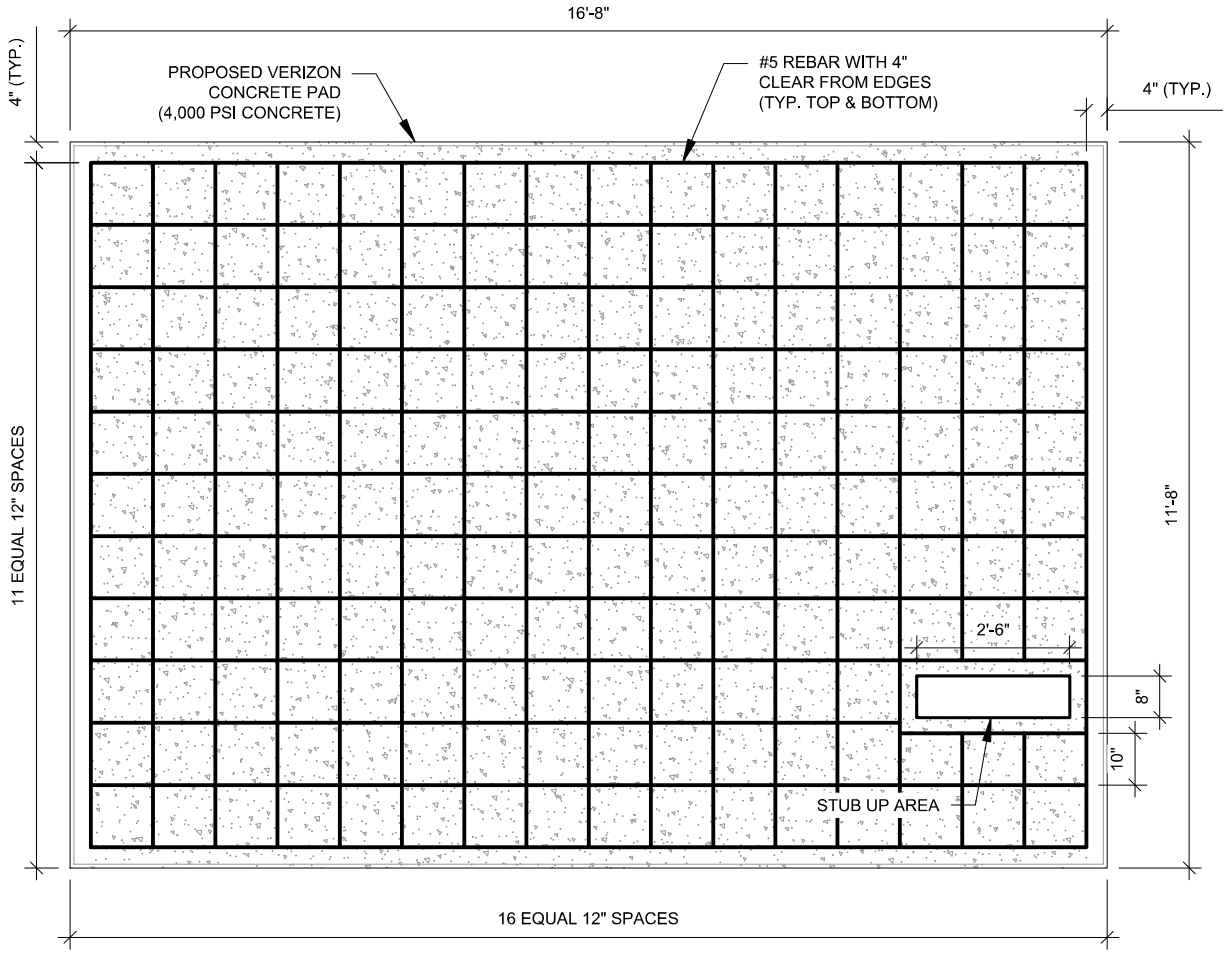
ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	2

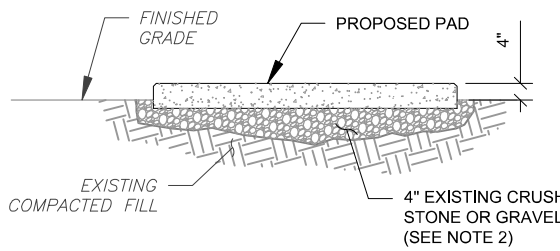


PAD NOTES:

1. PADS SHALL BE PRE-CAST MATCHING THIS DESIGN WHERE ALLOWED BY LOCAL JURISDICTION.
2. REFER TO CONCRETE & REINFORCED STEEL NOTES ON SHEET G-002 & ATC SPEC 033000 FOR CAST-IN-PLACE PADS.

1 CONCRETE EQUIPMENT PAD DESIGN

SCALE: N.T.S.

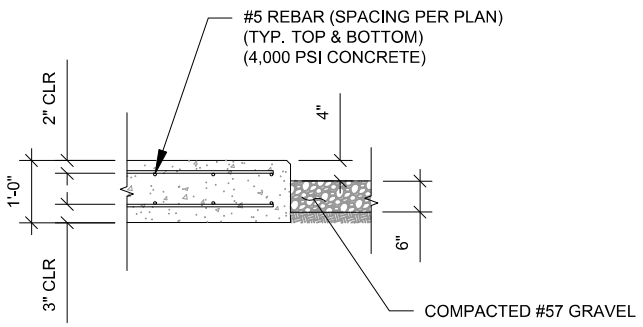


PAD NOTES:

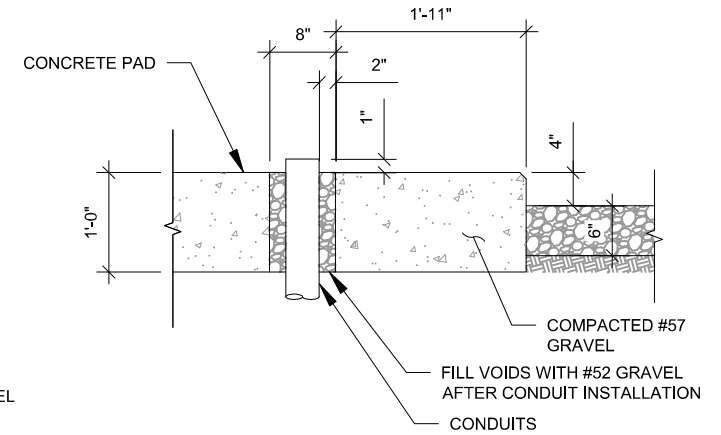
1. SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. DELETRIOUS MATERIAL AND ORGANICS SHALL BE REMOVED.
2. MECHANICALLY COMPACT FOOTPRINT OF PAD PLUS 2' PERIMETER.
3. USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
4. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.

3 GRAVEL PREPARATION

SCALE: NOT TO SCALE

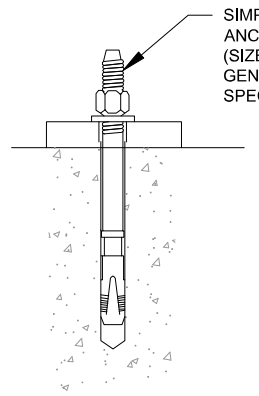


NOTE:
THIS DESIGN ASSUMES A 1500 PSF SOIL BEARING PRESSURE



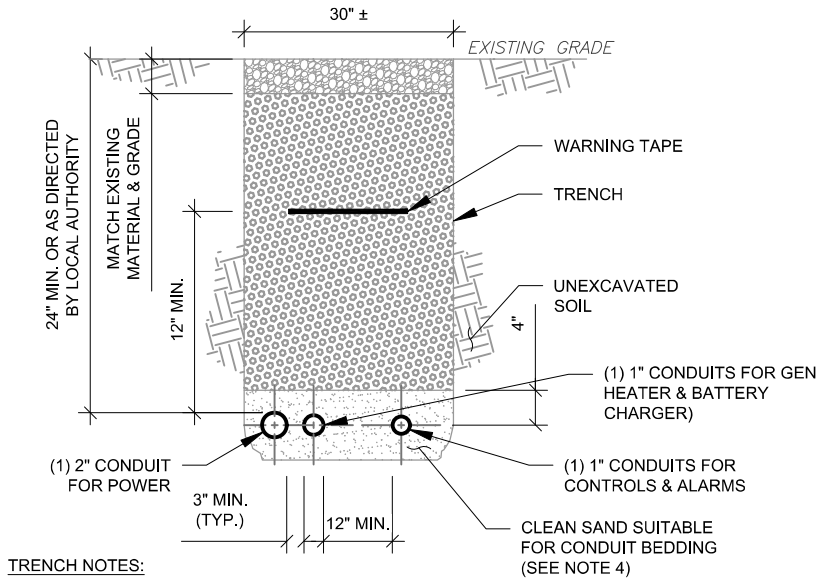
2 GENERATOR CONDUIT STUB UP DETAIL

SCALE: N.T.S.



4 EXPANSION ANCHOR DETAIL

SCALE: N.T.S.



TRENCH NOTES:

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL.
2. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
4. USE COMMUNICATIONS ONLY TRENCH FOR COMMUNICATIONS CONDUIT UNLESS TRAVELING UNDER PATH OF VEHICLE TRAVEL, THEN CONDUIT MUST BE 24" MIN. BELOW GRADE.
5. CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS

5 GENERATOR CONDUIT TRENCH DETAILS

SCALE: N.T.S.

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CUSTOMER #:	5000927259

CONSTRUCTION DETAILS

SHEET NUMBER: C-503
REVISION: 2

CONDUIT KEYED NOTES:

FIBER CONDUITS

1. (1) 2" SCH. 40 PVC CONDUIT WITH MULE TAPE FROM TELCO BOX TO THE EQUIPMENT CABINET.
2. 3" CONDUIT FROM TELCO CABINET TO TELCO GROUND VAULT

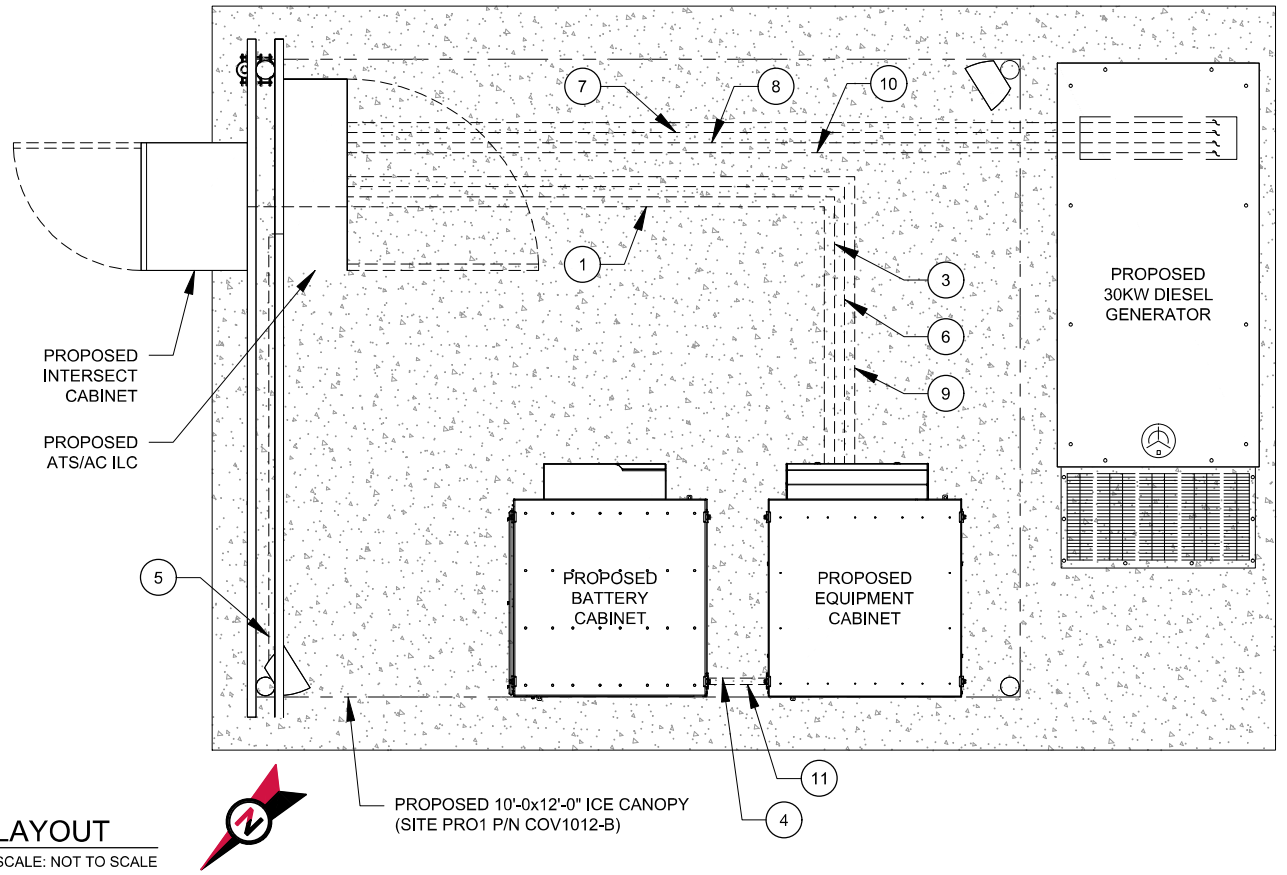
AC POWER CONDUITS

3. (1) 2-1/2" CONDUIT WITH (12) #10 & (1) #10 G FROM THE ILC TO THE EQUIPMENT CABINET FOR (4) 30 AMP 2-POLE CIRCUITS.
4. (2) 3" CONDUIT WITH (2) 4/0 AWG CABLES FROM 5-STRING BATTERY CABINET TO EQUIPMENT CABINET.
5. (1) 1" CONDUIT WITH (2) #12 & (1) #12 G FROM ILC TO GFI RECEPTACLE/LIGHT. LIGHT SWITCH. CONTINUE 1" TO 2ND LIGHT.
6. (1) 2" CONDUIT WITH PULLSTRING FOR FUTURE RECTIFIER CIRCUITS FROM EQUIPMENT CABINET TO ILC.
7. (1) 2" CONDUIT WITH (3) #1/0 & (1) #6 G FROM THE ILC TO THE GENERATOR.
8. (1) 1" CONDUIT WITH (4) #12 & (1) #12 G FROM ILC TO GENERATOR. (GEN HEATER & BATTERY CHARGER)

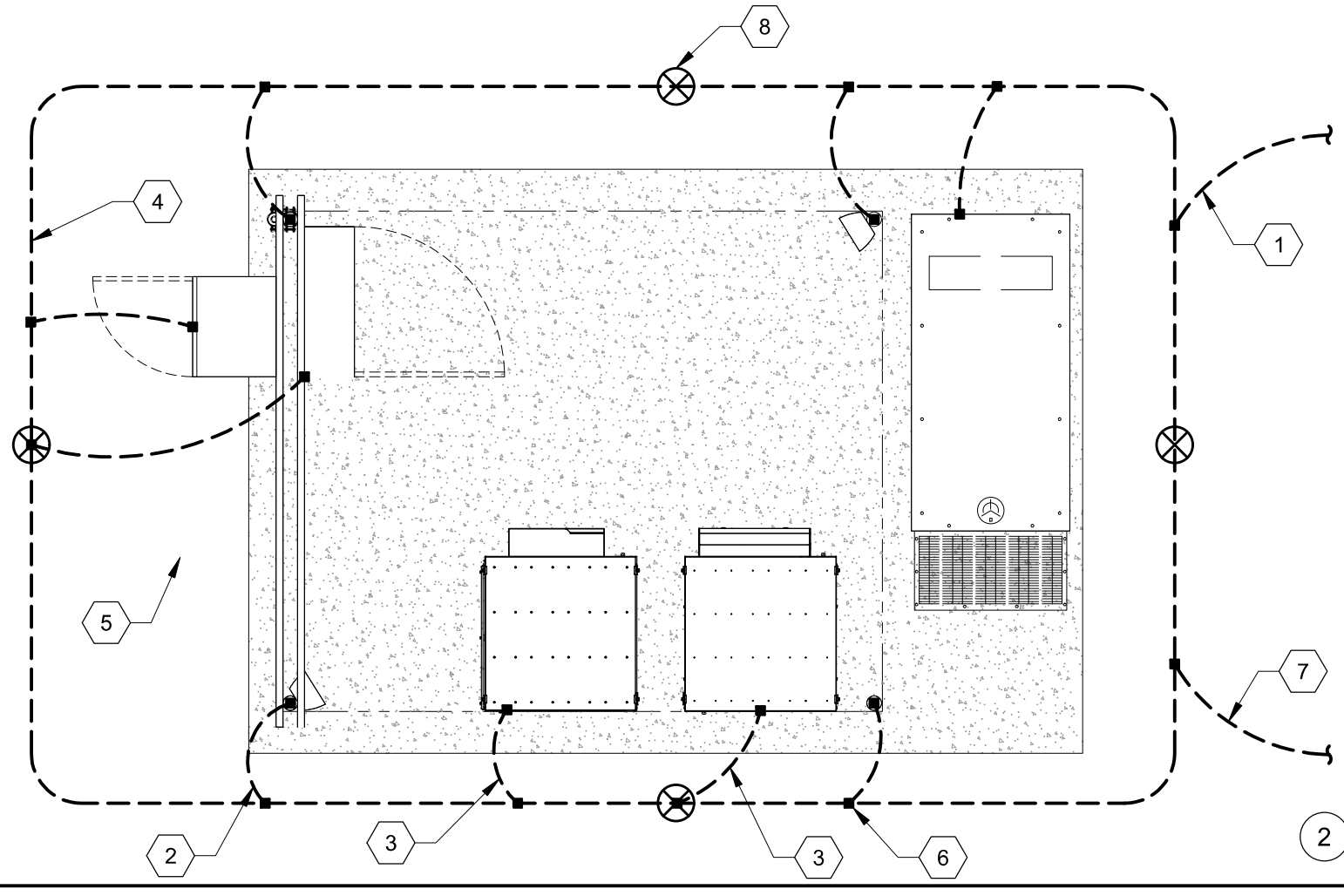
ALARM/MISCELLANEOUS CONDUITS

9. (1) 1" CONDUIT FROM ILC TO EQUIPMENT CABINET FOR ILC ALARMS.
10. (2) 1" CONDUIT FROM ILC TO GENERATOR [(1) FOR GEN CONTROLS, (1) FOR ALARMS].
11. (1) 1" CONDUIT FROM BATTERY CABINET TO EQUIPMENT CABINET FOR ALARMS.

NOTE:
BELOW GRADE CONDUIT SHALL BE SCHEDULE 80 PVC. ABOVE GRADE CONDUIT SHALL BE GALVANIZED RIGID CONDUIT. BELOW GRADE PVC CONDUIT SHALL TRANSITION TO GRC PRIOR TO RISING ABOVE GRADE. ALL BENDS SHALL HAVE MINIMUM 24" RADIUS. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. VERIFY CONDUIT TYPE WITH LOCAL CONSTRUCTION MANAGER AND ADJUST AS NECESSARY. ALL CONDUIT SHALL MEET NEC, STATE, AND LOCAL CODE REQUIREMENTS AS REQUIRED.



1 DETAILED CONDUIT LAYOUT
SCALE: NOT TO SCALE



GROUNDING KEYED NOTES:

1. BOND TO TOWER GROUND RING
2. #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
3. EQUIPMENT BOND TO GROUND RING (TYP.).
4. #2 GROUND RING
5. GROUNDING ELECTRODE CONDUCTOR PER NEC
6. GROUNDING ELECTRODE (TYP.)
7. BOND TO COMPOUND GROUND RING
8. GROUNDING ELECTRODE WITH TEST WELL

2 DETAILED GROUNDING LAYOUT
SCALE: NOT TO SCALE

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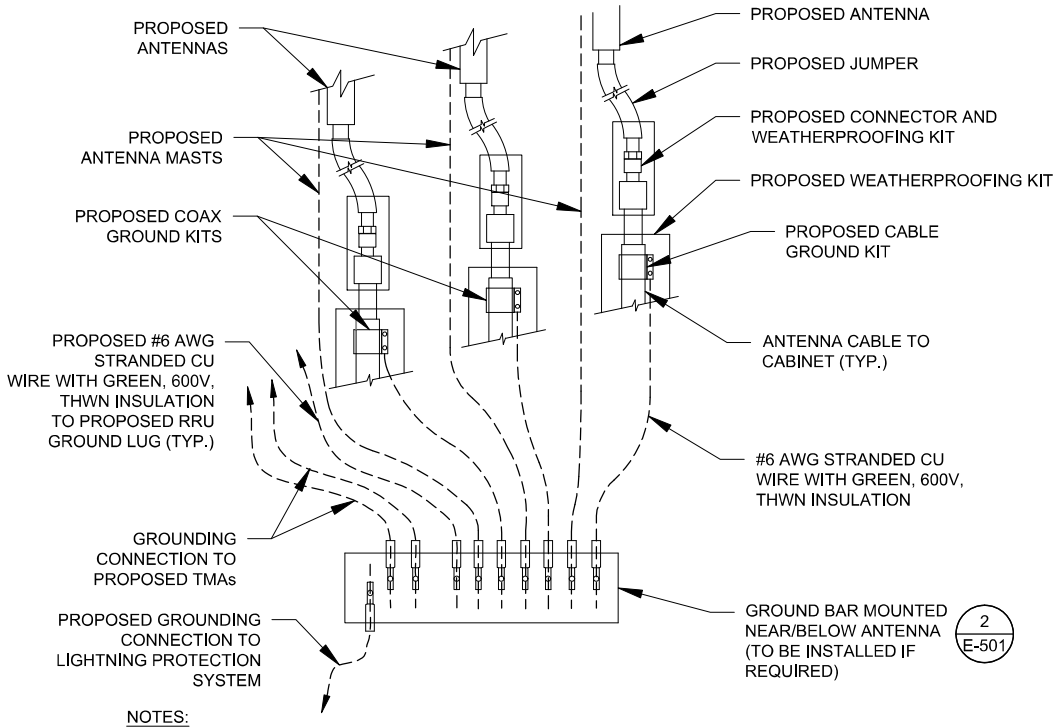
GROUNDING PLAN & NOTES

SHEET NUMBER:	REVISION:
E-101	2

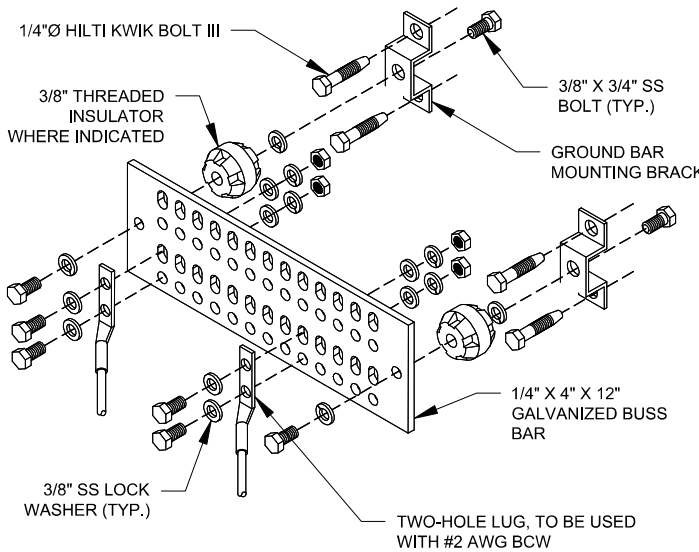


NOTES:

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

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

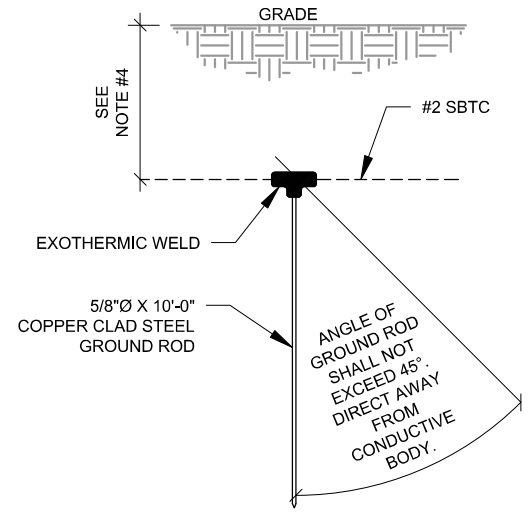


GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

3 MAIN GROUND BAR DETAIL

SCALE: N.T.S.

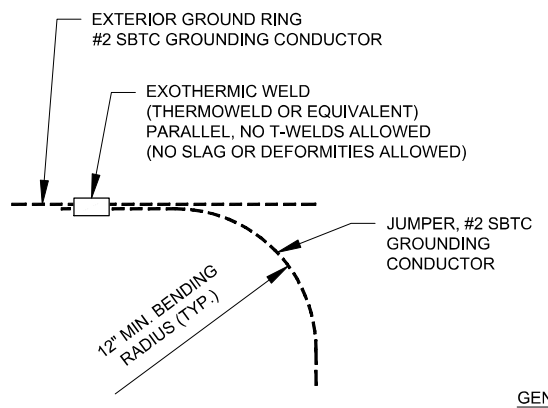


NOTES:

1. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.
2. COORDINATE UTILITY, LOCATE BEFORE DIGGING.
3. CONDUIT TRENCHING DEPTHS AT 36" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
4. ALL RING AND RADIAL DEPTHS AT 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.

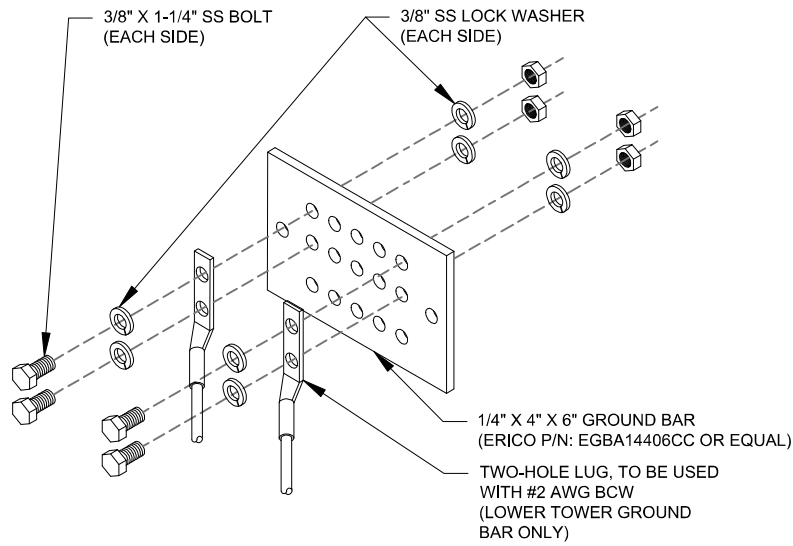
4 GROUND ROD DETAIL

SCALE: N.T.S.



5 TIE CONNECTION DETAIL

SCALE: N.T.S.

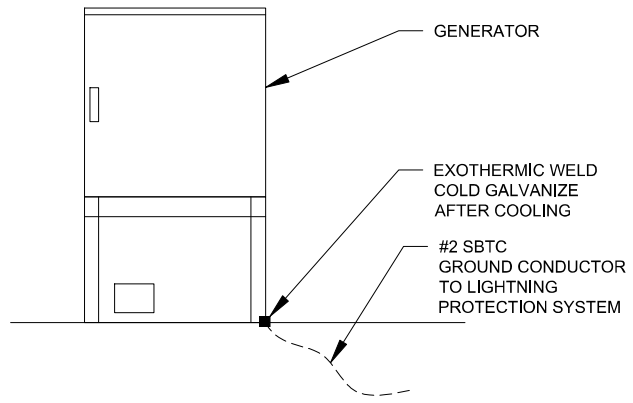


GROUND BAR NOTES:

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

2 TOWER GROUND BAR DETAIL

SCALE: N.T.S.



GENERATOR INSTALLATION NOTE:

INSTALL GENERATOR AND TRANSFER SWITCH WITH ALL SUPPLIED ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, ACCESSORIES FOR THE EXHAUST SYSTEM, FUEL SYSTEM, ENCLOSURE INTEGRITY (CAPS, PLUGS, COVERS, ETC.), ELECTRICAL CONNECTIONS, AND GROUNDING CONNECTIONS.

6 GENERATOR GROUNDING

SCALE: N.T.S.

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Dewberry®
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

REV.	DESCRIPTION	BY	DATE
A	PRELIM	VL	08/29/23
0	FINAL	VL	12/21/23
1	FINAL	VL	01/22/24
2	FINAL	VL	01/23/24

ATC SITE NUMBER:
209259
ATC SITE NAME:
WASHINGTON 2
VERIZON SITE NAME:
WASHINGTON DEPOT CT
SITE ADDRESS:
10 BLACKVILLE ROAD
WASHINGTON, CT 06794

SEAL:

verizon

ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	2

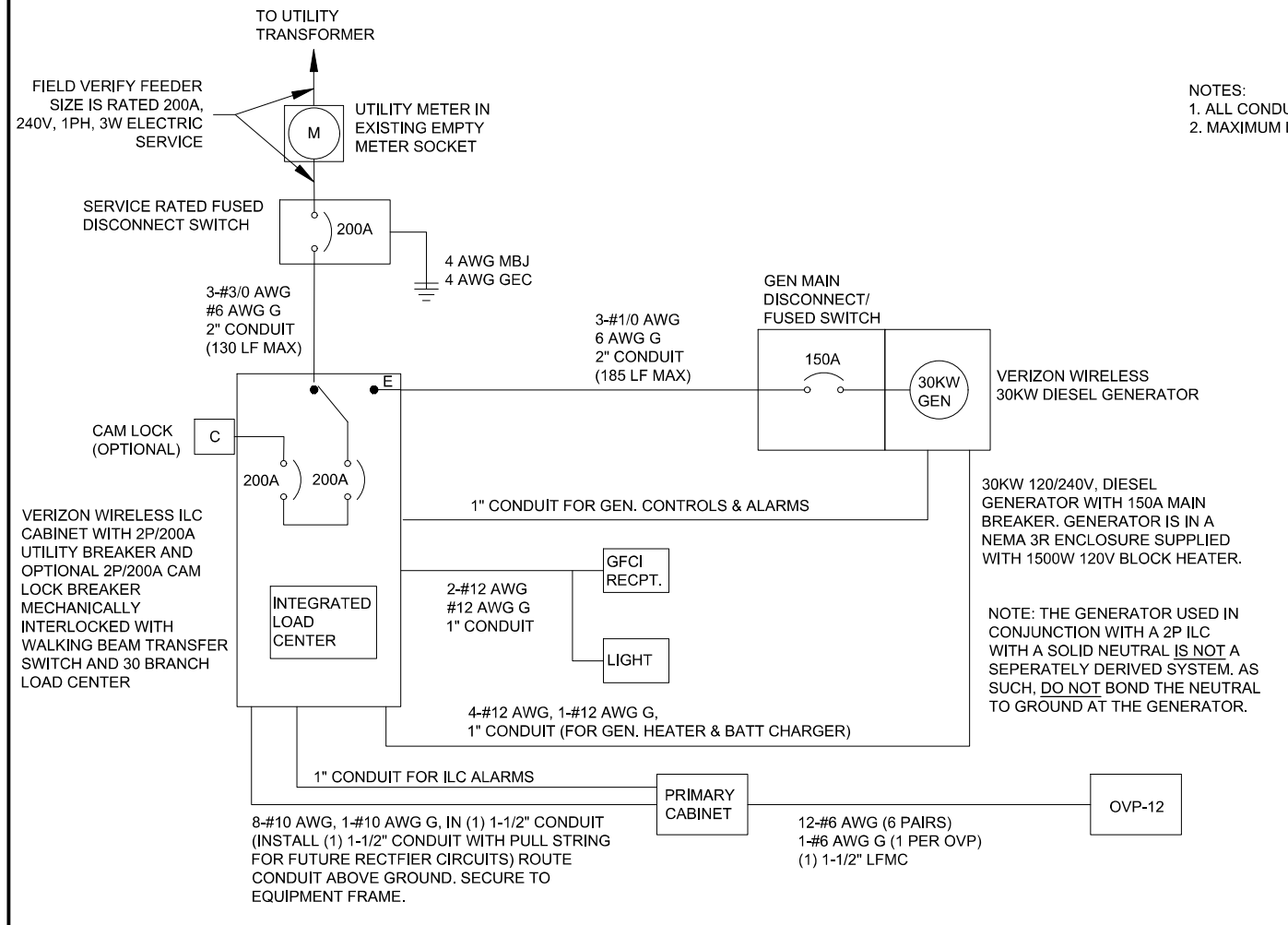
PANEL DESIGNATION:	VZW	TYPE:	LIGHTING & APPLIANCE	SYSTEM:	120/240V, 3W, 30 CKT	LOCATION:	VZW LEASE AREA
		MOUNTING:	SURFACE	MAIN BREAKER (MB):	MLO		
		ENCLOSURE	NEMA 3R	MAIN BUS RATING:	200A	PANEL NOTES:	ASCO D300L SERIES
				MIN. A.I.C. RATING:	65K		

CONNECTED LOAD (kVA)		BRIEF DESCRIPTION	FEEDER OR BRANCH CIRCUIT BREAKER		POLE NO.	CIRC NOTES		CIRC NOTES	POLE NO.	FEEDER OR BRANCH CIRCUIT BREAKER		BRIEF DESCRIPTION	CONNECTED LOAD (kVA)	
A	B		AMPS	POLES						POLES	AMPS		A	B
2.88		RECTIFIER	30	2	1				2			SPACE	0.00	
	2.88				3				4			SPACE		0.00
2.88		RECTIFIER	30	2	5				6			SPACE	0.00	
	2.88				7				8			SPACE		0.00
2.88		RECTIFIER	30	2	9				10			SPACE	0.00	
	2.88				11				12			SPACE		0.00
2.88		RECTIFIER	30	2	13				14			SPACE	0.00	
	2.88				15				16			SPACE		0.00
0.68		GFI RECEPT / LIGHT	20	1	17				18			SPACE	0.00	
	1.92	GEN BLOCK HEATER	20	1	19				20			SPACE		0.00
1.92		BATTERY CHARGER	20	1	21				22			SPACE	0.00	
	0.00	SPACE			23				24			SPACE		0.00
0.00		SPACE			25				26			SPACE	0.00	
	0.00	SPACE			27				28			SPACE		0.00
0.00		SPACE			29				30			SPACE	0.00	
14.1	13.4					A	B	TOTAL					0.0	0.0
						14.1	13.4	27.6	CONNECTED LOAD (kVA)					
						14.1	13.4	27.6	DEMAND LOAD (kVA)					

DERATING FACTOR (80%)
DEMANDLOAD SIZING: 147 AMPS

PANEL SCHEDULE

NOTES:
1. ALL CONDUCTORS ARE TYPE THWN (75°C) COPPER.
2. MAXIMUM LENGTH OF RUN FOR RECTIFIER CIRCUITS IS 50 FT.



ELECTRICAL SINGLE LINE DIAGRAM

NOTES:
1. ALL EQUIPMENT SHALL BE NEMA 3R RATED.
2. ALL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH TIA-222-G AND VERIZON WIRELESS STANDARDS.
3. CONDUCTOR SIZES AND DISTANCES HAVE BEEN SIZED FOR 3% MAX VOLTAGE DROP. (TOTAL SYSTEM VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST DEMAND SHALL NOT EXCEED 5%)
4. WIRE SIZING AND MAXIMUM DISTANCE FROM GENERATOR TO ILC ASSUMES POWER FACTOR OF 0.9.
5. BELOW GRADE PVC CONDUIT SHALL TRANSITION TO RMC PRIOR TO RISING ABOVE GRADE, ALL BENDS SHALL HAVE A MINIMUM 24" RADIUS. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. VERIFY CONDUIT TYPE WITH LOCAL CONSTRUCTION MANAGER AND ADJUST IF NECESSARY. ALL CONDUIT SHALL MEET NEC, STATE, AND LOCAL CODE REQUIREMENTS AS REQUIRED.

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	VL	08/29/23
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SEAL:

verizon

ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

ONE-LINE & PANEL SCHEDULE

SHEET NUMBER:	REVISION:
E-601	2

Antenna Summary

Added Antenna

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
				5G	Samsung	MT6413-77A	100	101.2	80(A),200(B),320(C)	PHYSICAL	3
LTE	5G,LTE	LTE	LTE		JMA	MX06FIT665-02	100	103	80(A),200(B),320(C)	PHYSICAL	6

Removed Antenna

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity

Retained Antenna

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity

Added: 9	Removed: 0	Retained: 0

Non Antenna Summary

Added Non Antenna

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity
OVP	Tower	LTE	LTE,5G	LTE	LTE	5G		12 OVP	PHYSICAL	1
Hybrid Cable	Tower	LTE	LTE,5G	LTE	LTE	5G	N/A	6x12 Hybriflex	PHYSICAL	2
RRU	Tower			LTE	LTE		Samsung	B2/B66A RRH ORAN (RF4439d-25A)	PHYSICAL	3
Mount	Tower	LTE	LTE,5G	LTE	LTE		JMA	JMA Mount	PHYSICAL	3
RRU	Tower					5G	Samsung	MT6413-77A	PHYSICAL	3
RRU	Tower	LTE	5G,LTE				Samsung	RF4461d-13A	PHYSICAL	3

Removed Non Antenna

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity

Retained Non Antenna

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity

Added: 15	Removed: 0	Retained: 0

1 EQUIPMENT SUMMARY

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

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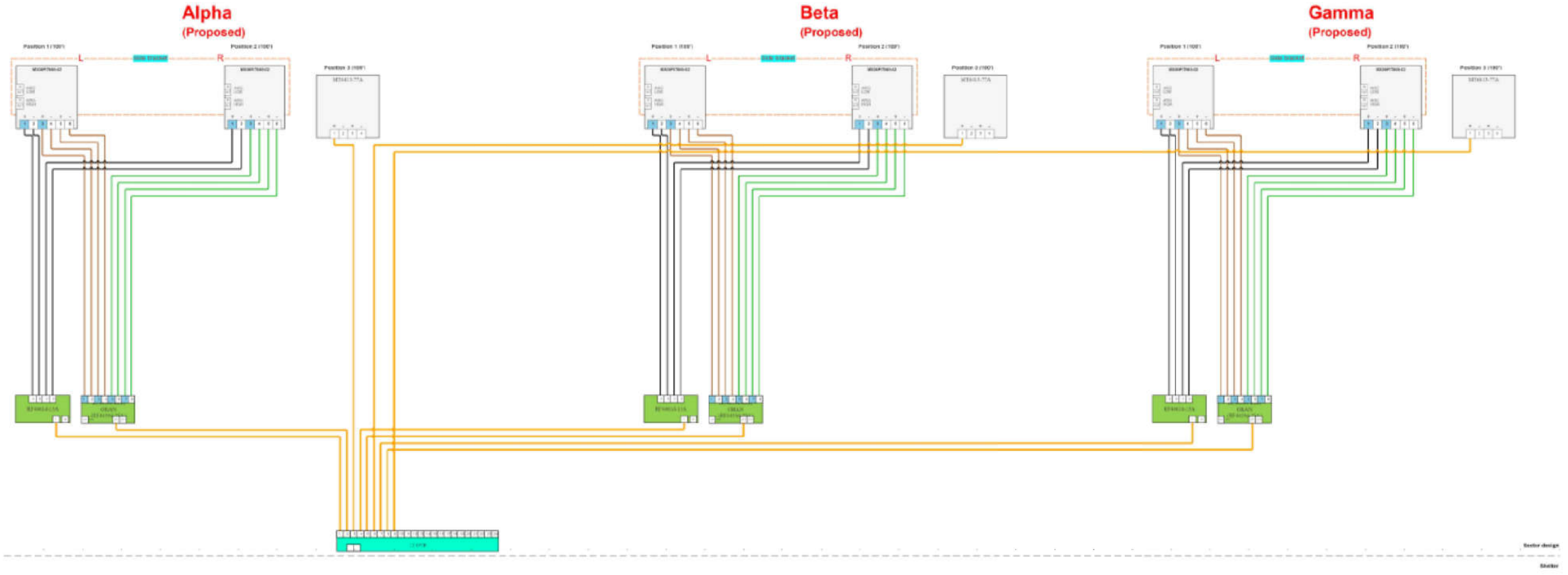
ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

SUPPLEMENTAL

SHEET NUMBER:
R-601



1 PLUMBING DIAGRAM

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

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ATC JOB NO:	14482869_D2
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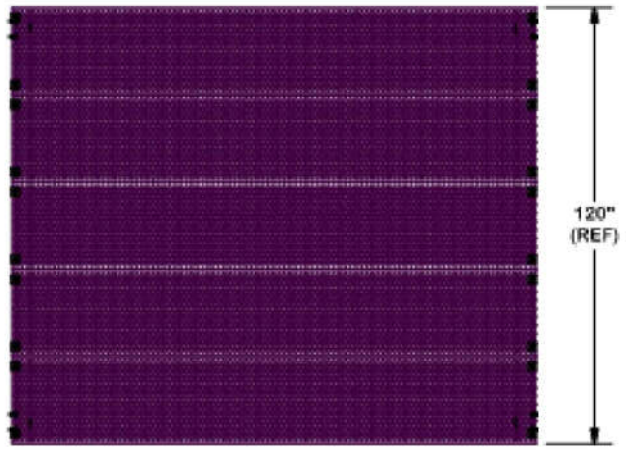
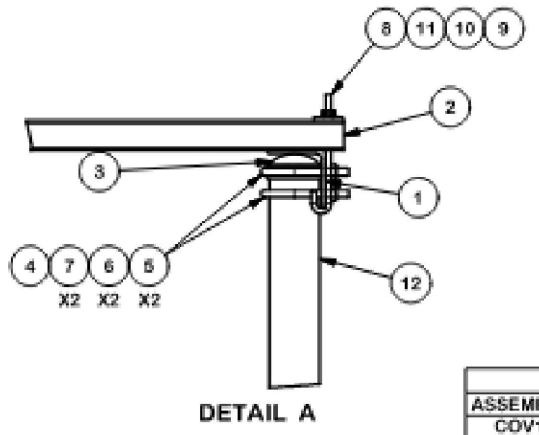
CUSTOMER #:	5000927259

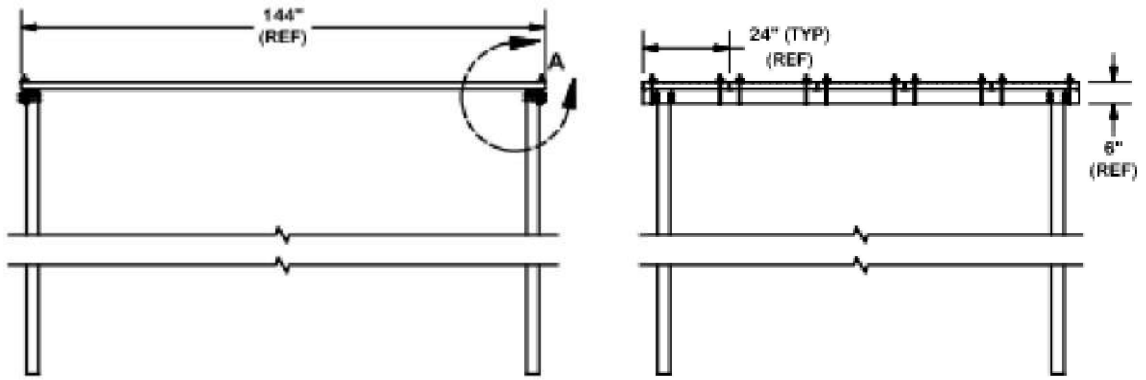
SUPPLEMENTAL

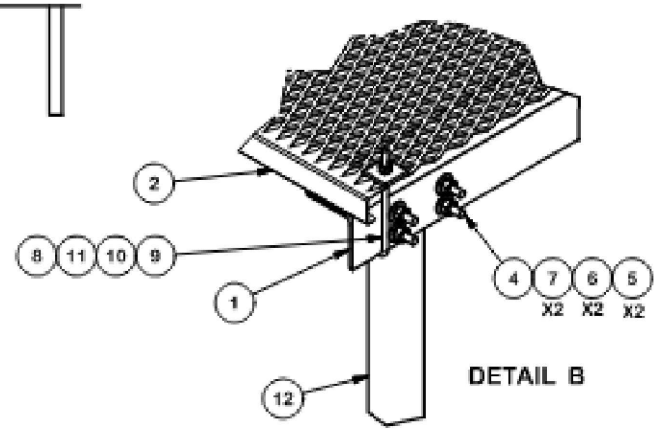
SHEET NUMBER:
R-602



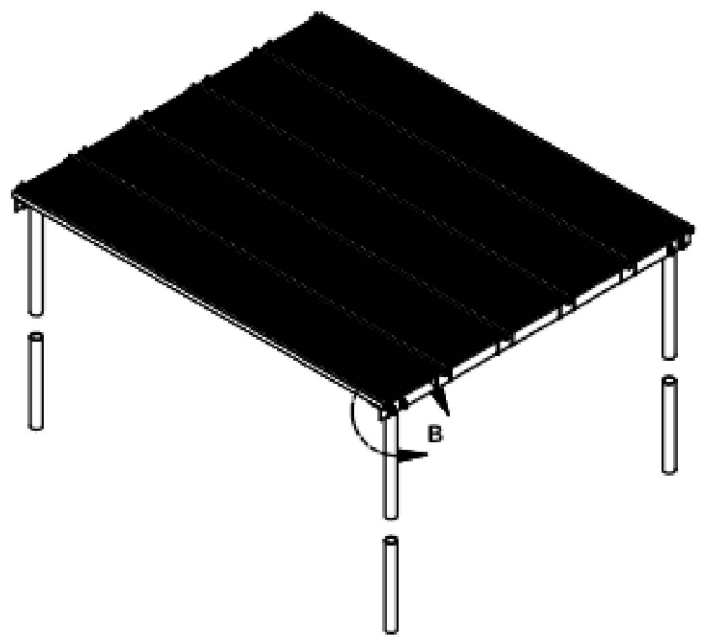


DETAIL A





DETAIL B



COMMON PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-COV10	4" X 4" x 1/4" ANGLE (A36)	120 in	66.32	132.64
2	5	GRS24-12	24" X 12' GRIP SPAN BRIDGE CHANNEL		81.68	408.41
3	4	PC312	3-1/2" FENCE POST CAP		0.59	2.34
4	8	X-UB1358	1/2" X 3-5/8" X 5-1/2" X 3" U-BOLT (HDG.)		0.81	6.49
5	16	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.14
6	16	G12LW	1/2" HDG LOCKWASHER		0.01	0.22
7	16	G12FW	1/2" HDG USS FLATWASHER		0.03	0.54
8	20	X-JB8	X-JB8		0.33	6.55
9	20	G38NUT	3/8" HDG HEAVY 2H HEX NUT		0.03	0.68
10	20	G38LW	3/8" HDG LOCKWASHER		0.01	0.13
11	20	SQW38	3/8" SQUARE WASHER (GALV.)	2 in	0.27	5.46

VARIABLE PARTS LIST

ASSEMBLY "A"	ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
COV1012 (BURIAL)	12	4	P3160	3" SCH 40 PIPE (3.5 O.D. x .216" WALL) A500	160 in	101.25	404.99

TOTAL WEIGHT: 969.64

VARIABLE PARTS LIST

ASSEMBLY "A"	ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	TOTAL WEIGHT
COV1012-B (BASE SHOE)	12	4	X-SP126	BASE SHOE PLATE PIPE COLUMN	126 in	92.98	371.93
		16	SWA585	5/8" X 5" STAINLESS WEDGE ANCHOR		.61	9.70

TOTAL WEIGHT: 946.28

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	X-COV10 TO QTY 2, ITEM 2 "-12", UPDATED LENGTH & WTS		KC8	7/1/13

REVISION HISTORY

TOLERANCE NOTES

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

DESCRIPTION
PLATFORM CANOPY
12' X 10' BURIAL OR BASE SHOE

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	KC8 8/24/2012		SEE ASSEMBLY "A"	1 OF 1

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 7/2/2013	COV1012

SITE PRO 1 — A valmont | comer
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

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ATC JOB NO:	14482869_D2
CUSTOMER ID:	WASHINGTON DEPOT CT
CUSTOMER #:	5000927259

SUPPLEMENTAL

SHEET NUMBER:
R-603

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	134 ft Monopine
ATC Asset Name	:	Washington 2
ATC Asset Number	:	209259
Engineering Number	:	14482869_C3_07
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	Washington Depot CT
Carrier Site Number	:	5000927259
Site Location	:	10 Blackville Road Washington, CT 06794 41.6466° N, 73.3161° W
County	:	Litchfield
Date	:	December 18, 2023
Max Usage	:	62%
Analysis Result	:	Pass

Created By:

Thomas Ambrosio
Structural Engineer I

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 134 ft Monopine tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	Structural Analysis By Sabre Order #116883, dated January 20, 2015
Foundation:	Mapping By Delta Oaks Group Project #BG121-08947-01, dated May 18, 2021
Geotechnical:	Terracon Project #J2145120, dated March 20, 2014

Analysis

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

Basic Wind Speed:	115 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.19, S_1 = 0.05
Site Class:	D - Stiff Soil - Default

Conclusion

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

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	56.9%	1.2D + 1.0W	Pass
Serviceability Usage	29.3%	1.0D + 1.0W	Pass
Base Plate @ 0.0 ft	50.1%	Rods	Pass
Mat & Pier	62.0%	Moment [Soil]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	5,414.8	60.9	53.4

Reactions shown reflect the results from the Load Case with maximum Moment

Structure base reactions were analyzed using available geotechnical and foundation information.

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
100.0	1	Triangular Low Profile Platform	(2) 1 5/8" Hybriflex
	1	Raycap RCMDC-6627-PF-48	
	2	JMA Wireless MX06FHG665-HG	
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	4	JMA Wireless MX06FHG865-HG	

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
136.4	2	5' Omni	-	LITCHFIELD COUNTY DISPATCH INC
133.5	2	Stand-Off	-	
126.0	3	Ericsson RRUS-32 (77 lbs)	(3) 0.51" (13mm) Hybrid (10) 0.76" (19.2mm) 8 AWG 6 (3) 2" Carflex Non-Metallic Conduit	AT&T MOBILITY
	3	T-Arm		
	3	Raycap DC6-48-60-18-8F		
	6	CCI DMP65R-BU8D		
	6	CCI HPA-65R-BUU-H8		
122.0	3	Ericsson RRUS 4449 B5, B12	(3) 0.51" (13mm) Cable	
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS A2 Module		
	3	Ericsson RRUS E2		
	3	Ericsson RRUS-12 800 MHz		
	9	Ericsson RRUS-11		
115.0	3	Commscope VV-65A-R1B	(3) 1.99" (50.7mm) Hybrid	T-MOBILE
	3	Ericsson 4460 BAND 2/25		
	3	Ericsson 4480 BAND 71		
	3	Ericsson AIR 6419 B41		
	3	RFS APXVAALL24 43-U-NA20		
	3	Site Pro 1 VFA10-HD		
75.0	1	5' Omni	(1) 7/8" Coax	LITCHFIELD COUNTY DISPATCH INC
	1	Stand-Off		

(If table breaks across pages, please see previous page for data in merged cells)

Standard Conditions

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

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

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

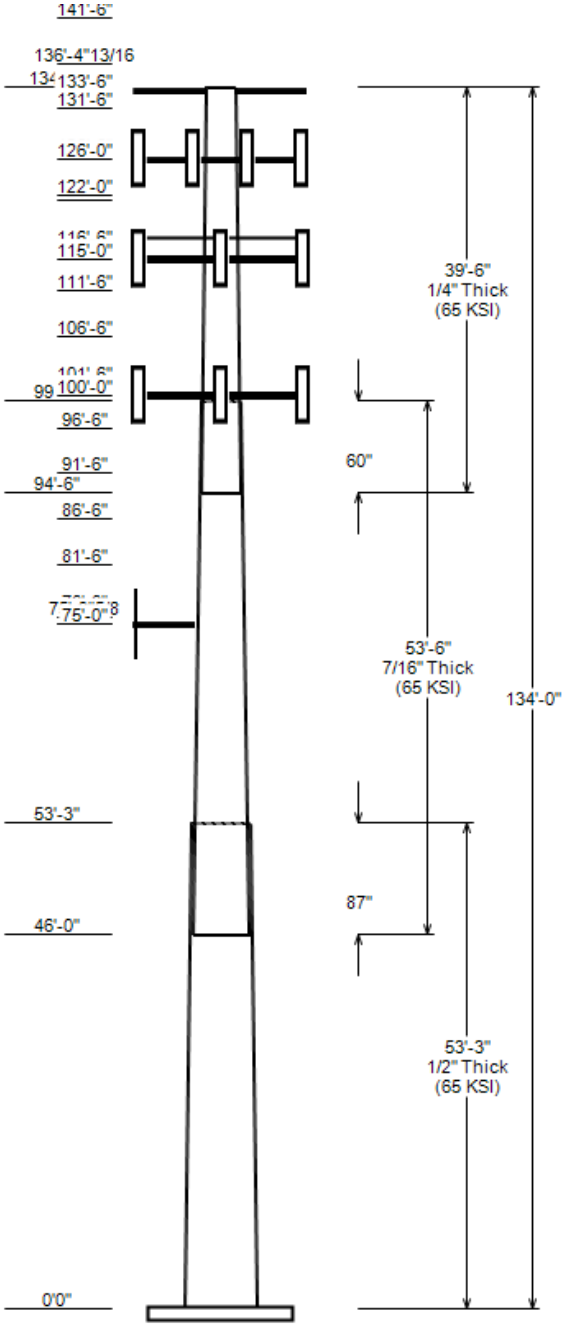
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

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

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

ANALYSIS PARAMETERS

Nominal Wind:	115 mph	**Ice Wind:**	50 mph w/ 1" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	B	**S_s:** 0.187	**S_1:** 0.054
Topo Category:	1	**Topo Factor:**	Method 1	**Topo Feature:**	
Structure Height:	134 ft	**Base Elevation:**	0.00 ft	**Structure Type:**	Taper
Base Diameter:	66.31 in	**Base Rotation:**	0°	**Taper:**	0.3380 (in/ft)



POLE SECTION PROPERTIES

Section	Length (ft)	Flat Diameter (in) Top	Flat Diameter (in) Bottom	Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
1	53.250	48.31	66.31	0.500		0.000	18 Sides	65
2	53.500	33.55	51.64	0.438	Slip Joint	87.000	18 Sides	65
3	39.500	22.39	35.74	0.250	Slip Joint	60.000	18 Sides	65

DISCRETE APPURTENANCE

Elev (ft)	Description
146.5	(1) Top Branches
141.5	(1) Top Branches
136.5	(1) Branches (9' Max)
136.4	(2) Generic 5' Omni
133.5	(2) Generic Flat Stand-Off
131.5	(1) Branches (9' Max)
126.5	(1) Branches (9' Max)
126.0	(3) Raycap DC6-48-60-18-8F
126.0	(3) Ericsson RRUS-32 (77 lbs)
126.0	(3) Generic Round T-Arm
126.0	(6) CCI HPA-65R-BUU-H8
126.0	(6) CCI DMP65R-BU8D
122.0	(3) Ericsson RRUS A2 Module
122.0	(3) Ericsson RRUS 4478 B14
122.0	(3) Ericsson RRUS 4449 B5, B12
122.0	(3) Ericsson RRUS E2
122.0	(3) Ericsson RRUS-12 800 MHz
122.0	(9) Ericsson RRUS-11
121.5	(1) Branches (10' Max)
116.5	(1) Branches (10' Max)
115.0	(3) Ericsson 4460 BAND 2/25
115.0	(3) Ericsson 4480 BAND 71
115.0	(3) Ericsson AIR 6419 B41
115.0	(3) Commscope VV-65A-R1B
115.0	(3) Site Pro 1 VFA10-HD
115.0	(3) RFS APXVAALL24 43-U-NA20
111.5	(1) Branches (10' Max)
106.5	(1) Branches (11' Max)
101.5	(1) Branches (11' Max)
100.0	(3) Samsung B2/B66A RRH ORAN (RF 4
100.0	(3) Samsung RF4461d-13A
100.0	(3) Samsung MT6413-77A
100.0	(1) Raycap RCMDC-6627-PF-48
100.0	(2) JMA Wireless MX06FHG665-HG
100.0	(4) JMA Wireless MX06FHG865-HG
100.0	(1) Generic Flat Low Profile Platf
96.5	(1) Branches (12' Max)
91.5	(1) Branches (12' Max)
86.5	(1) Branches (12' Max)
81.5	(1) Branches (13' Max)
76.5	(1) Branches (13' Max)
75.8	(1) Branches (13' Max)
75.0	(1) Generic 5' Omni
75.0	(1) Generic Flat Stand-Off

LINEAR APPURTENANCE

Elev To (ft)	Description
136.0	(2) 7/8" Coax
126.0	(3) 2" Carflex Non-Metallic Conduit
126.0	(10) 0.76" (19.2mm) 8 AWG 6
126.0	(3) 0.51" (13mm) Hybrid
122.0	(3) 0.51" (13mm) Cable
115.0	(3) 1.99" (50.7mm) Hybrid
100.0	(2) 1 5/8" Hybriflex
75.0	(1) 7/8" Coax

GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	5414.82	60.91	53.44
0.9D + 1.0W	5386.01	45.67	53.42
1.2D + 1.0Di + 1.0Wi	1487.65	79.42	14.79
1.2D + 1.0Ev + 1.0Eh	198.59	60.72	1.95
0.9D - 1.0Ev + 1.0Eh	197.31	42.12	1.95
1.0D + 1.0W	1314.82	50.81	13.01

ANALYSIS PARAMETERS

Location:	Litchfield County,CT	**Height:**	134 ft
Type and Shape:	Taper, 18 Sides	**Base Diameter:**	66.31 in
Manufacturer:	Sabre	**Top Diameter:**	22.39 in
K_d (non-service):	0.95	**Taper:**	0.3380 in/ft
K_e:	0.98	**Rotation:**	0.000º

ICE & WIND PARAMETERS

Risk Category:	II	**Design Wind Speed:**	115 mph
Exposure Category:	B	**Design Wind Speed w/ Ice:**	50 mph
Topo Factor Procedure:	Method 1	**Design Ice Thickness:**	1.00 in
Topographic Category:	1	**Service Wind Speed:**	60 mph
Crest Height:	0 ft	**HMSL:**	596.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil		**Period Based on Rayleigh Method (sec):**		1.50
T_L (sec):	6	**P:**	1	**C_s:**	0.038
S_s:	0.187	**S_1:**	0.054	**C_s Max:**	0.038
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.199	**S_{d1}:**	0.086		

LOAD CASES

1.2D + 1.0W	115 mph Wind with No Ice
0.9D + 1.0W	115 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph Wind with 1" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

							Bottom						Top						
Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	53.25	0.5000	65		0.00	16,336	66.31	0.000	104.44	57,146.6	21.62	132.62	48.31	53.25	75.87	21,912.	15.27	96.62	0.3380
2-18	53.50	0.4375	65	Slip	87.00	10,657	51.64	46.000	71.09	23,544.9	19.05	118.03	33.55	99.50	45.98	6,370.6	11.76	76.69	0.3380
3-18	39.50	0.2500	65	Slip	60.00	3,073	35.74	94.500	28.16	4,482.1	23.45	142.97	22.39	134.00	17.57	1,088.0	14.03	89.56	0.3380
			Total Shaft Weight			**30,066**													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
146.50	Top Branches	1	1.00	0.000	250.00	25.000	1.00	365.02	36.502	1.00
141.50	Top Branches	1	1.00	0.000	250.00	25.000	1.00	365.02	36.502	1.00
136.50	Branches (9' Max)	1	1.00	0.000	500.00	50.000	1.00	730.04	73.004	1.00
136.40	Generic 5' Omni	2	1.00	0.000	10.00	1.000	1.00	28.09	1.905	1.00
133.50	Generic Flat Stand-Off	2	1.00	0.000	187.50	6.300	0.90	275.41	8.356	0.90
131.50	Branches (9' Max)	1	1.00	0.000	500.00	50.000	1.00	729.52	72.952	1.00
126.50	Branches (9' Max)	1	1.00	0.000	500.00	50.000	1.00	728.72	72.872	1.00
126.00	CCI HPA-65R-BUU-H8	6	0.80	0.000	68.00	12.976	0.67	236.62	15.325	0.67
126.00	CCI DMP65R-BU8D	6	0.80	0.000	95.70	17.871	0.63	318.74	20.289	0.63
126.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	483.94	15.110	0.67
126.00	Ericsson RRUS-32 (77 lbs)	3	0.80	0.000	77.00	3.314	0.71	140.82	4.156	0.71
126.00	Raycap DC6-48-60-18-8F	3	0.80	0.000	20.00	1.260	0.67	54.55	1.692	0.67
122.00	Ericsson RRUS-12 800 MHz	3	0.80	0.000	60.00	2.700	0.67	108.51	3.403	0.67
122.00	Ericsson RRUS E2	3	0.80	0.000	52.90	2.475	0.67	93.84	3.150	0.67
122.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	113.17	2.579	0.50
122.00	Ericsson RRUS-11	9	0.80	0.000	55.00	3.792	0.61	113.73	4.632	0.61
122.00	Ericsson RRUS A2 Module	3	0.80	0.000	21.20	1.600	0.50	44.78	2.147	0.50
122.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.90	1.842	0.50	96.07	2.429	0.50
121.50	Branches (10' Max)	1	1.00	0.000	500.00	55.600	1.00	727.70	80.920	1.00
116.50	Branches (10' Max)	1	1.00	0.000	500.00	55.600	1.00	726.74	80.814	1.00
115.00	RFS APXVAALL24 43-U-NA20	3	0.80	0.000	122.80	20.243	0.63	375.79	22.652	0.63
115.00	Site Pro 1 VFA10-HD	3	0.75	0.000	718.00	13.650	0.75	1411.97	22.631	0.75
115.00	Ericsson AIR 6419 B41	3	0.80	0.000	68.50	5.600	0.63	146.98	6.629	0.63
115.00	Commscope VV-65A-R1B	3	0.80	0.000	24.70	5.887	0.63	100.62	7.262	0.63
115.00	Ericsson 4460 BAND 2/25	3	0.80	0.000	109.00	2.564	0.67	166.41	3.249	0.67
115.00	Ericsson 4480 BAND 71	3	0.80	0.000	81.00	2.878	0.67	130.44	3.607	0.67
111.50	Branches (10' Max)	1	1.00	0.000	500.00	55.600	1.00	725.74	80.703	1.00
106.50	Branches (11' Max)	1	1.00	0.000	550.00	61.100	1.00	797.17	88.559	1.00
101.50	Branches (11' Max)	1	1.00	0.000	550.00	61.100	1.00	795.98	88.426	1.00
100.00	Generic Flat Low Profile Platf	1	1.00	0.000	1875.00	26.100	1.00	2394.39	38.344	1.00
100.00	JMA Wireless MX06FHG865-HG	4	0.80	0.000	51.00	11.608	0.70	202.85	13.683	0.70
100.00	JMA Wireless MX06FHG665-HG	2	0.80	0.000	41.00	8.242	0.77	157.03	10.028	0.77
100.00	Raycap RCMDC-6627-PF-48	1	0.80	0.000	32.00	4.056	1.00	113.51	4.931	1.00
100.00	Samsung MT6413-77A	3	0.80	0.000	57.30	3.805	0.61	111.75	4.657	0.61
100.00	Samsung B2/B66A RRH ORAN (RF 4	3	0.80	0.000	74.70	1.875	0.50	115.68	2.452	0.50
100.00	Samsung RF4461d-13A	3	0.80	0.000	79.10	1.875	0.50	120.45	2.454	0.50
96.50	Branches (12' Max)	1	1.00	0.000	600.00	66.700	1.00	866.98	96.379	1.00
91.50	Branches (12' Max)	1	1.00	0.000	600.00	66.700	1.00	865.55	96.220	1.00
86.50	Branches (12' Max)	1	1.00	0.000	600.00	66.700	1.00	864.05	96.053	1.00
81.50	Branches (13' Max)	1	1.00	0.000	650.00	72.200	1.00	934.34	103.783	1.00
76.50	Branches (13' Max)	1	1.00	0.000	650.00	72.200	1.00	932.68	103.599	1.00
75.80	Branches (13' Max)	1	1.00	0.000	700.00	77.800	1.00	1004.12	111.601	1.00
75.00	Generic 5' Omni	1	1.00	0.000	10.00	1.000	1.00	27.02	1.851	1.00
75.00	Generic Flat Stand-Off	1	1.00	0.000	187.50	6.300	1.00	270.26	8.236	1.00
Totals	**Row Count: 44**	**102**			**18,691.50**			**32,500.05**		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	136.00	2	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	LITCHFIELD COUNTY DIS
0.00	126.00	10	0.76" (19.2mm) 8 AWG	0.76	0.53	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	126.00	3	2" Carflex Non-Metall	2.36	0.68	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	126.00	3	0.51" (13mm) Hybrid	0.51	0.14	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	122.00	3	0.51" (13mm) Cable	0.51	0.14	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	115.00	3	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	T-MOBILE
0.00	100.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	75.00	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	LITCHFIELD COUNTY DIS

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description *(Max Length: 5 ft)*	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.5000	66.310	104.437	57,146.60	21.62	132.62	76	1697.4	0.0	0.0
5.00		0.5000	64.620	101.755	52,855.80	21.03	129.24	76.7	1611.0	0.0	1,754.1
10.00		0.5000	62.930	99.073	48,785.40	20.43	125.86	77.4	1526.9	0.0	1,708.4
15.00		0.5000	61.240	96.390	44,929.60	19.83	122.48	78.1	1445.0	0.0	1,662.8
20.00		0.5000	59.550	93.708	41,282.40	19.24	119.10	78.8	1365.4	0.0	1,617.2
25.00		0.5000	57.860	91.026	37,838.20	18.64	115.72	79.5	1288.1	0.0	1,571.5
30.00		0.5000	56.169	88.344	34,591.10	18.05	112.34	80.2	1213.0	0.0	1,525.9
35.00		0.5000	54.479	85.662	31,535.20	17.45	108.96	80.9	1140.1	0.0	1,480.3
40.00		0.5000	52.789	82.980	28,664.90	16.85	105.58	81.6	1069.5	0.0	1,434.6
45.00		0.5000	51.099	80.298	25,974.20	16.26	102.20	82.3	1001.2	0.0	1,389.0
46.00	Bot - Section 2	0.5000	50.761	79.761	25,457.20	16.14	101.52	82.4	987.8	0.0	272.3
50.00		0.5000	49.409	77.616	23,457.40	15.66	98.82	82.6	935.1	0.0	2,025.9
53.25	Top - Section 1	0.4375	49.185	67.690	20,323.20	18.06	112.42	80.2	813.8	0.0	1,605.7
55.00		0.4375	48.594	66.869	19,592.30	17.82	111.07	80.4	794.1	0.0	400.6
60.00		0.4375	46.904	64.522	17,601.00	17.14	107.21	81.2	739.1	0.0	1,117.7
65.00		0.4375	45.214	62.175	15,749.40	16.46	103.35	82	686.1	0.0	1,077.8
70.00		0.4375	43.524	59.828	14,032.50	15.78	99.48	82.6	635.0	0.0	1,037.9
75.00		0.4375	41.834	57.481	12,445.10	15.10	95.62	82.6	585.9	0.0	997.9
75.80		0.4375	41.563	57.106	12,202.80	14.99	95.00	82.6	578.3	0.0	156.0
76.50		0.4375	41.326	56.777	11,993.40	14.89	94.46	82.6	571.6	0.0	135.6
80.00		0.4375	40.143	55.135	10,982.20	14.42	91.76	82.6	538.8	0.0	666.4
81.50		0.4375	39.636	54.431	10,566.80	14.21	90.60	82.6	525.1	0.0	279.6
85.00		0.4375	38.453	52.788	9,638.60	13.73	87.89	82.6	493.7	0.0	638.5
86.50		0.4375	37.946	52.084	9,258.10	13.53	86.73	82.6	480.5	0.0	267.6
90.00		0.4375	36.763	50.441	8,409.40	13.05	84.03	82.6	450.5	0.0	610.5
91.50		0.4375	36.256	49.737	8,062.10	12.85	82.87	82.6	438.0	0.0	255.7
94.50	Bot - Section 3	0.4375	35.242	48.329	7,396.60	12.44	80.55	82.6	413.4	0.0	500.5
95.00		0.4375	35.073	48.094	7,289.40	12.37	80.17	82.6	409.4	0.0	129.8
96.50		0.4375	34.566	47.390	6,973.90	12.17	79.01	82.6	397.4	0.0	385.7
99.50	Top - Section 2	0.2500	34.052	26.821	3,871.80	22.25	136.21	75.2	223.9	0.0	754.5
100.00		0.2500	33.883	26.687	3,814.00	22.13	135.53	75.4	221.7	0.0	45.5
101.50		0.2500	33.376	26.285	3,644.10	21.78	133.50	75.8	215.0	0.0	135.2
105.00		0.2500	32.193	25.346	3,267.40	20.94	128.77	76.8	199.9	0.0	307.5
106.50		0.2500	31.686	24.943	3,114.30	20.59	126.74	77.2	193.6	0.0	128.3
110.00		0.2500	30.503	24.005	2,775.80	19.75	122.01	78.2	179.2	0.0	291.5
111.50		0.2500	29.996	23.602	2,638.50	19.39	119.98	78.6	173.3	0.0	121.5
115.00		0.2500	28.813	22.664	2,336.10	18.56	115.25	79.6	159.7	0.0	275.5
116.50		0.2500	28.306	22.261	2,213.80	18.20	113.22	80	154.0	0.0	114.7
120.00		0.2500	27.123	21.323	1,945.40	17.37	108.49	81	141.3	0.0	259.5
121.50		0.2500	26.616	20.920	1,837.40	17.01	106.46	81.4	136.0	0.0	107.8
122.00		0.2500	26.447	20.786	1,802.30	16.89	105.79	81.5	134.2	0.0	35.5
125.00		0.2500	25.433	19.982	1,601.00	16.17	101.73	82.4	124.0	0.0	208.1
126.00		0.2500	25.094	19.713	1,537.40	15.94	100.38	82.6	120.7	0.0	67.5
126.50		0.2500	24.925	19.579	1,506.20	15.82	99.70	82.6	119.0	0.0	33.4
130.00		0.2500	23.742	18.641	1,299.80	14.98	94.97	82.6	107.8	0.0	227.6
131.50		0.2500	23.235	18.238	1,217.40	14.62	92.94	82.6	103.2	0.0	94.1

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	*(Max Length: 5 ft)*	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
133.50			0.2500	22.559	17.702	1,113.10	14.15	90.24	82.6	97.2	0.0	122.3
134.00			0.2500	22.390	17.568	1,088.00	14.03	89.56	82.6	95.7	0.0	30.0
											Total:	**30,065.5**

CALCULATED FORCES

Load Case: 1.2D + 1.0W — 115 mph Wind with No Ice — 21 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-60.91	-53.44	0.00	-5,414.8	0.00	5,414.82	7,140.68	1,832.86	10,894.70	9,671.58	0	0	0.569
5.00	-58.58	-53.09	0.00	-5,147.6	0.00	5,147.64	7,021.49	1,785.79	10,342.36	9,264.07	0.07	-0.13	0.565
10.00	-56.30	-52.74	0.00	-4,882.2	0.00	4,882.22	6,898.92	1,738.72	9,804.39	8,860.58	0.28	-0.27	0.560
15.00	-54.08	-52.40	0.00	-4,618.5	0.00	4,618.52	6,772.97	1,691.65	9,280.79	8,461.44	0.64	-0.4	0.555
20.00	-51.90	-52.07	0.00	-4,356.5	0.00	4,356.50	6,643.63	1,644.58	8,771.56	8,067.03	1.14	-0.55	0.549
25.00	-49.79	-51.75	0.00	-4,096.2	0.00	4,096.15	6,510.90	1,597.51	8,276.69	7,677.69	1.79	-0.69	0.542
30.00	-47.72	-51.42	0.00	-3,837.4	0.00	3,837.43	6,374.80	1,550.44	7,796.20	7,293.79	2.6	-0.84	0.535
35.00	-45.71	-51.09	0.00	-3,580.3	0.00	3,580.34	6,235.31	1,503.37	7,330.07	6,915.67	3.56	-0.99	0.526
40.00	-43.75	-50.74	0.00	-3,324.9	0.00	3,324.91	6,092.43	1,456.30	6,878.30	6,543.69	4.69	-1.15	0.517
45.00	-41.90	-50.52	0.00	-3,071.2	0.00	3,071.20	5,946.17	1,409.23	6,440.91	6,178.21	5.98	-1.31	0.505
46.00	-41.49	-50.35	0.00	-3,020.7	0.00	3,020.68	5,916.51	1,399.81	6,355.15	6,105.93	6.26	-1.34	0.503
50.00	-38.88	-50.05	0.00	-2,819.3	0.00	2,819.28	5,766.46	1,362.16	6,017.88	5,789.41	7.44	-1.47	0.495
53.25	-36.82	-49.84	0.00	-2,656.6	0.00	2,656.61	4,883.36	1,187.96	5,230.82	4,892.69	8.48	-1.58	0.552
55.00	-36.20	-49.61	0.00	-2,569.4	0.00	2,569.39	4,840.98	1,173.55	5,104.66	4,790.85	9.07	-1.64	0.546
60.00	-34.62	-49.24	0.00	-2,321.4	0.00	2,321.36	4,717.60	1,132.36	4,752.69	4,503.42	10.89	-1.82	0.525
65.00	-33.08	-48.88	0.00	-2,075.1	0.00	2,075.14	4,590.84	1,091.17	4,413.29	4,221.53	12.89	-2	0.501
70.00	-31.60	-48.51	0.00	-1,830.8	0.00	1,830.76	4,444.94	1,049.99	4,086.46	3,931.60	15.07	-2.17	0.475
75.00	-30.00	-48.03	0.00	-1,588.2	0.00	1,588.21	4,270.58	1,008.80	3,772.21	3,627.71	17.44	-2.34	0.447
75.80	-29.04	-45.49	0.00	-1,549.8	0.00	1,549.79	4,242.69	1,002.21	3,723.09	3,580.23	17.84	-2.37	0.442
76.50	-28.13	-43.03	0.00	-1,518.0	0.00	1,517.95	4,218.28	996.44	3,680.38	3,538.93	18.19	-2.4	0.437
80.00	-27.20	-42.83	0.00	-1,367.4	0.00	1,367.36	4,096.23	967.61	3,470.52	3,336.06	19.99	-2.52	0.418
81.50	-26.11	-40.29	0.00	-1,303.1	0.00	1,303.11	4,043.92	955.26	3,382.47	3,250.94	20.79	-2.57	0.409
85.00	-25.23	-40.10	0.00	-1,162.1	0.00	1,162.09	3,921.87	926.43	3,181.41	3,056.62	22.72	-2.69	0.388
86.50	-24.21	-37.70	0.00	-1,101.9	0.00	1,101.94	3,869.56	914.07	3,097.13	2,975.17	23.57	-2.74	0.378
90.00	-23.37	-37.51	0.00	-970.0	0.00	969.99	3,747.51	885.24	2,904.87	2,789.40	25.62	-2.85	0.356
91.50	-22.39	-35.09	0.00	-913.7	0.00	913.73	3,695.20	872.88	2,824.35	2,711.62	26.53	-2.9	0.345
94.50	-21.70	-34.95	0.00	-808.5	0.00	808.46	3,590.59	848.17	2,666.73	2,559.36	28.38	-2.99	0.324
95.00	-21.52	-34.88	0.00	-791.0	0.00	790.99	3,573.15	844.05	2,640.90	2,534.41	28.69	-3	0.320
96.50	-20.40	-32.42	0.00	-738.7	0.00	738.68	3,520.85	831.70	2,564.16	2,460.29	29.64	-3.05	0.308
99.50	-19.41	-32.25	0.00	-641.4	0.00	641.43	1,815.87	470.71	1,437.09	1,263.52	31.58	-3.13	0.523
100.00	-16.09	-29.42	0.00	-625.3	0.00	625.31	1,810.16	468.35	1,422.76	1,253.20	31.91	-3.15	0.512
101.50	-15.31	-27.13	0.00	-581.2	0.00	581.17	1,792.82	461.29	1,380.19	1,222.34	32.91	-3.21	0.487
105.00	-14.85	-26.96	0.00	-486.2	0.00	486.21	1,751.18	444.82	1,283.37	1,150.99	35.32	-3.36	0.435
106.50	-14.10	-24.64	0.00	-445.8	0.00	445.77	1,732.82	437.76	1,242.96	1,120.71	36.39	-3.42	0.409
110.00	-13.67	-24.47	0.00	-359.5	0.00	359.53	1,688.81	421.28	1,151.17	1,050.82	38.95	-3.55	0.354
111.50	-13.00	-22.32	0.00	-322.8	0.00	322.83	1,669.44	414.22	1,112.92	1,021.21	40.07	-3.6	0.327
115.00	-8.73	-19.05	0.00	-244.7	0.00	244.71	1,623.06	397.75	1,026.16	953.02	42.75	-3.71	0.264
116.50	-8.10	-16.88	0.00	-216.1	0.00	216.13	1,602.68	390.69	990.06	924.20	43.92	-3.75	0.241
120.00	-7.75	-16.71	0.00	-157.1	0.00	157.07	1,553.93	374.21	908.33	857.97	46.7	-3.83	0.190
121.50	-7.14	-14.59	0.00	-132.0	0.00	132.00	1,532.53	367.15	874.38	830.04	47.91	-3.87	0.165
122.00	-5.62	-13.25	0.00	-124.7	0.00	124.71	1,525.33	364.80	863.21	820.80	48.32	-3.88	0.157
125.00	-5.35	-13.12	0.00	-85.0	0.00	84.95	1,481.41	350.68	797.68	766.02	50.77	-3.93	0.116
126.00	-2.91	-8.58	0.00	-71.8	0.00	71.84	1,464.61	345.97	776.41	747.06	51.59	-3.94	0.099
126.50	-2.40	-6.60	0.00	-67.5	0.00	67.54	1,454.64	343.62	765.89	736.88	52.01	-3.95	0.094
130.00	-2.13	-6.45	0.00	-44.4	0.00	44.43	1,384.90	327.14	694.22	667.58	54.91	-3.98	0.068
131.50	-1.55	-4.46	0.00	-34.8	0.00	34.76	1,355.01	320.08	664.58	638.92	56.17	-4	0.056
133.50	-0.99	-3.93	0.00	-25.8	0.00	25.83	1,315.16	310.67	626.07	601.70	57.84	-4.01	0.044
134.00	0.00	-3.86	0.00	-23.9	0.00	23.86	1,305.19	308.31	616.62	592.56	58.26	-4.01	0.040

CALCULATED FORCES

Load Case: 0.9D + 1.0W — 115 mph Wind with No Ice (Reduced DL) — 21 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-45.67	-53.42	0.00	-5,386.0	0.00	5,386.01	7,140.68	1,832.86	10,894.70	9,671.58	0	0	0.564
5.00	-43.89	-53.03	0.00	-5,118.9	0.00	5,118.93	7,021.49	1,785.79	10,342.36	9,264.07	0.07	-0.13	0.560
10.00	-42.15	-52.66	0.00	-4,853.8	0.00	4,853.77	6,898.92	1,738.72	9,804.39	8,860.58	0.28	-0.26	0.555
15.00	-40.45	-52.29	0.00	-4,590.5	0.00	4,590.49	6,772.97	1,691.65	9,280.79	8,461.44	0.63	-0.4	0.549
20.00	-38.79	-51.93	0.00	-4,329.0	0.00	4,329.05	6,643.63	1,644.58	8,771.56	8,067.03	1.13	-0.54	0.543
25.00	-37.17	-51.57	0.00	-4,069.4	0.00	4,069.42	6,510.90	1,597.51	8,276.69	7,677.69	1.78	-0.69	0.537
30.00	-35.59	-51.22	0.00	-3,811.6	0.00	3,811.57	6,374.80	1,550.44	7,796.20	7,293.79	2.58	-0.84	0.529
35.00	-34.05	-50.86	0.00	-3,555.5	0.00	3,555.46	6,235.31	1,503.37	7,330.07	6,915.67	3.54	-0.99	0.521
40.00	-32.55	-50.50	0.00	-3,301.2	0.00	3,301.15	6,092.43	1,456.30	6,878.30	6,543.69	4.66	-1.14	0.511
45.00	-31.15	-50.26	0.00	-3,048.7	0.00	3,048.66	5,946.17	1,409.23	6,440.91	6,178.21	5.94	-1.3	0.500
46.00	-30.82	-50.08	0.00	-2,998.4	0.00	2,998.40	5,916.51	1,399.81	6,355.15	6,105.93	6.22	-1.33	0.498
50.00	-28.84	-49.78	0.00	-2,798.1	0.00	2,798.07	5,766.46	1,362.16	6,017.88	5,789.41	7.39	-1.46	0.490
53.25	-27.28	-49.56	0.00	-2,636.3	0.00	2,636.28	4,883.36	1,187.96	5,230.82	4,892.69	8.43	-1.57	0.546
55.00	-26.80	-49.32	0.00	-2,549.6	0.00	2,549.55	4,840.98	1,173.55	5,104.66	4,790.85	9.01	-1.63	0.539
60.00	-25.57	-48.94	0.00	-2,303.0	0.00	2,302.97	4,717.60	1,132.36	4,752.69	4,503.42	10.82	-1.81	0.519
65.00	-24.39	-48.55	0.00	-2,058.3	0.00	2,058.29	4,590.84	1,091.17	4,413.29	4,221.53	12.8	-1.98	0.495
70.00	-23.25	-48.17	0.00	-1,815.5	0.00	1,815.52	4,444.94	1,049.99	4,086.46	3,931.60	14.98	-2.16	0.469
75.00	-22.03	-47.70	0.00	-1,574.7	0.00	1,574.66	4,270.58	1,008.80	3,772.21	3,627.71	17.33	-2.33	0.441
75.80	-21.33	-45.16	0.00	-1,536.5	0.00	1,536.50	4,242.69	1,002.21	3,723.09	3,580.23	17.72	-2.36	0.436
76.50	-20.66	-42.70	0.00	-1,504.9	0.00	1,504.89	4,218.28	996.44	3,680.38	3,538.93	18.07	-2.38	0.432
80.00	-19.95	-42.50	0.00	-1,355.4	0.00	1,355.45	4,096.23	967.61	3,470.52	3,336.06	19.86	-2.5	0.413
81.50	-19.15	-39.97	0.00	-1,291.7	0.00	1,291.70	4,043.92	955.26	3,382.47	3,250.94	20.65	-2.55	0.404
85.00	-18.47	-39.77	0.00	-1,151.8	0.00	1,151.82	3,921.87	926.43	3,181.41	3,056.62	22.57	-2.67	0.383
86.50	-17.73	-37.38	0.00	-1,092.2	0.00	1,092.17	3,869.56	914.07	3,097.13	2,975.17	23.42	-2.72	0.373
90.00	-17.08	-37.18	0.00	-961.3	0.00	961.34	3,747.51	885.24	2,904.87	2,789.40	25.45	-2.83	0.351
91.50	-16.37	-34.77	0.00	-905.6	0.00	905.57	3,695.20	872.88	2,824.35	2,711.62	26.35	-2.87	0.340
94.50	-15.85	-34.63	0.00	-801.2	0.00	801.25	3,590.59	848.17	2,666.73	2,559.36	28.18	-2.96	0.319
95.00	-15.71	-34.56	0.00	-783.9	0.00	783.93	3,573.15	844.05	2,640.90	2,534.41	28.49	-2.98	0.315
96.50	-14.89	-32.11	0.00	-732.1	0.00	732.09	3,520.85	831.70	2,564.16	2,460.29	29.44	-3.02	0.303
99.50	-14.15	-31.96	0.00	-635.8	0.00	635.76	1,815.87	470.71	1,437.09	1,263.52	31.36	-3.11	0.516
100.00	-11.68	-29.17	0.00	-619.8	0.00	619.78	1,810.16	468.35	1,422.76	1,253.20	31.69	-3.12	0.505
101.50	-11.12	-26.89	0.00	-576.0	0.00	576.02	1,792.82	461.29	1,380.19	1,222.34	32.68	-3.19	0.481
105.00	-10.76	-26.71	0.00	-481.9	0.00	481.93	1,751.18	444.82	1,283.37	1,150.99	35.08	-3.33	0.428
106.50	-10.23	-24.40	0.00	-441.9	0.00	441.86	1,732.82	437.76	1,242.96	1,120.71	36.13	-3.39	0.403
110.00	-9.89	-24.23	0.00	-356.5	0.00	356.47	1,688.81	421.28	1,151.17	1,050.82	38.67	-3.52	0.348
111.50	-9.42	-22.09	0.00	-320.1	0.00	320.12	1,669.44	414.22	1,112.92	1,021.21	39.79	-3.57	0.322
115.00	-6.26	-18.89	0.00	-242.8	0.00	242.82	1,623.06	397.75	1,026.16	953.02	42.45	-3.68	0.261
116.50	-5.82	-16.72	0.00	-214.5	0.00	214.49	1,602.68	390.69	990.06	924.20	43.61	-3.72	0.238
120.00	-5.55	-16.56	0.00	-156.0	0.00	155.97	1,553.93	374.21	908.33	857.97	46.37	-3.8	0.187
121.50	-5.12	-14.45	0.00	-131.1	0.00	131.13	1,532.53	367.15	874.38	830.04	47.57	-3.84	0.163
122.00	-4.01	-13.14	0.00	-123.9	0.00	123.91	1,525.33	364.80	863.21	820.80	47.97	-3.85	0.155
125.00	-3.80	-13.01	0.00	-84.5	0.00	84.49	1,481.41	350.68	797.68	766.02	50.41	-3.9	0.114
126.00	-2.04	-8.52	0.00	-71.5	0.00	71.48	1,464.61	345.97	776.41	747.06	51.22	-3.91	0.098
126.50	-1.69	-6.55	0.00	-67.2	0.00	67.22	1,454.64	343.62	765.89	736.88	51.63	-3.92	0.093
130.00	-1.49	-6.40	0.00	-44.3	0.00	44.28	1,384.90	327.14	694.22	667.58	54.52	-3.95	0.068
131.50	-1.09	-4.43	0.00	-34.7	0.00	34.68	1,355.01	320.08	664.58	638.92	55.76	-3.97	0.055
133.50	-0.68	-3.91	0.00	-25.8	0.00	25.82	1,315.16	310.67	626.07	601.70	57.42	-3.98	0.044
134.00	0.00	-3.86	0.00	-23.9	0.00	23.86	1,305.19	308.31	616.62	592.56	57.84	-3.98	0.040

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph Wind with 1" Radial Ice — 20 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-79.42	-14.79	0.00	-1,487.6	0.00	1,487.65	7,140.68	1,832.86	10,894.70	9,671.58	0	0	0.165
5.00	-76.88	-14.68	0.00	-1,413.7	0.00	1,413.72	7,021.49	1,785.79	10,342.36	9,264.07	0.02	-0.04	0.164
10.00	-74.38	-14.58	0.00	-1,340.3	0.00	1,340.31	6,898.92	1,738.72	9,804.39	8,860.58	0.08	-0.07	0.162
15.00	-71.91	-14.47	0.00	-1,267.4	0.00	1,267.43	6,772.97	1,691.65	9,280.79	8,461.44	0.17	-0.11	0.160
20.00	-69.50	-14.37	0.00	-1,195.1	0.00	1,195.06	6,643.63	1,644.58	8,771.56	8,067.03	0.31	-0.15	0.159
25.00	-67.15	-14.28	0.00	-1,123.2	0.00	1,123.19	6,510.90	1,597.51	8,276.69	7,677.69	0.49	-0.19	0.157
30.00	-64.85	-14.18	0.00	-1,051.8	0.00	1,051.82	6,374.80	1,550.44	7,796.20	7,293.79	0.71	-0.23	0.154
35.00	-62.61	-14.08	0.00	-980.9	0.00	980.93	6,235.31	1,503.37	7,330.07	6,915.67	0.98	-0.27	0.152
40.00	-60.43	-13.97	0.00	-910.6	0.00	910.55	6,092.43	1,456.30	6,878.30	6,543.69	1.29	-0.32	0.149
45.00	-58.32	-13.90	0.00	-840.7	0.00	840.70	5,946.17	1,409.23	6,440.91	6,178.21	1.64	-0.36	0.146
46.00	-57.90	-13.85	0.00	-826.8	0.00	826.79	5,916.51	1,399.81	6,355.15	6,105.93	1.72	-0.37	0.145
50.00	-55.11	-13.76	0.00	-771.4	0.00	771.38	5,766.46	1,362.16	6,017.88	5,789.41	2.04	-0.4	0.143
53.25	-52.90	-13.70	0.00	-726.6	0.00	726.65	4,883.36	1,187.96	5,230.82	4,892.69	2.33	-0.43	0.159
55.00	-52.26	-13.63	0.00	-702.7	0.00	702.68	4,840.98	1,173.55	5,104.66	4,790.85	2.49	-0.45	0.158
60.00	-50.49	-13.52	0.00	-634.5	0.00	634.54	4,717.60	1,132.36	4,752.69	4,503.42	2.99	-0.5	0.152
65.00	-48.77	-13.41	0.00	-567.0	0.00	566.96	4,590.84	1,091.17	4,413.29	4,221.53	3.53	-0.55	0.145
70.00	-47.11	-13.29	0.00	-499.9	0.00	499.93	4,444.94	1,049.99	4,086.46	3,931.60	4.13	-0.59	0.138
75.00	-45.20	-13.16	0.00	-433.5	0.00	433.47	4,270.58	1,008.80	3,772.21	3,627.71	4.78	-0.64	0.130
75.80	-43.88	-12.46	0.00	-422.9	0.00	422.94	4,242.69	1,002.21	3,723.09	3,580.23	4.89	-0.65	0.129
76.50	-42.67	-11.79	0.00	-414.2	0.00	414.22	4,218.28	996.44	3,680.38	3,538.93	4.99	-0.66	0.127
80.00	-41.60	-11.72	0.00	-373.0	0.00	372.97	4,096.23	967.61	3,470.52	3,336.06	5.48	-0.69	0.122
81.50	-40.15	-11.03	0.00	-355.4	0.00	355.39	4,043.92	955.26	3,382.47	3,250.94	5.7	-0.7	0.119
85.00	-39.12	-10.96	0.00	-316.8	0.00	316.80	3,921.87	926.43	3,181.41	3,056.62	6.23	-0.74	0.114
86.50	-37.77	-10.30	0.00	-300.4	0.00	300.35	3,869.56	914.07	3,097.13	2,975.17	6.46	-0.75	0.111
90.00	-36.78	-10.24	0.00	-264.3	0.00	264.30	3,747.51	885.24	2,904.87	2,789.40	7.02	-0.78	0.105
91.50	-35.44	-9.57	0.00	-248.9	0.00	248.94	3,695.20	872.88	2,824.35	2,711.62	7.27	-0.79	0.102
94.50	-34.62	-9.53	0.00	-220.2	0.00	220.23	3,590.59	848.17	2,666.73	2,559.36	7.78	-0.82	0.096
95.00	-34.43	-9.50	0.00	-215.5	0.00	215.46	3,573.15	844.05	2,640.90	2,534.41	7.86	-0.82	0.095
96.50	-32.94	-8.82	0.00	-201.2	0.00	201.21	3,520.85	831.70	2,564.16	2,460.29	8.12	-0.83	0.091
99.50	-31.83	-8.77	0.00	-174.7	0.00	174.74	1,815.87	470.71	1,437.09	1,263.52	8.65	-0.86	0.156
100.00	-26.92	-8.04	0.00	-170.4	0.00	170.36	1,810.16	468.35	1,422.76	1,253.20	8.74	-0.86	0.151
101.50	-25.81	-7.41	0.00	-158.3	0.00	158.29	1,792.82	461.29	1,380.19	1,222.34	9.02	-0.88	0.144
105.00	-25.22	-7.35	0.00	-132.4	0.00	132.37	1,751.18	444.82	1,283.37	1,150.99	9.68	-0.92	0.130
106.50	-24.12	-6.71	0.00	-121.3	0.00	121.34	1,732.82	437.76	1,242.96	1,120.71	9.97	-0.94	0.122
110.00	-23.55	-6.65	0.00	-97.9	0.00	97.86	1,688.81	421.28	1,151.17	1,050.82	10.67	-0.97	0.107
111.50	-22.55	-6.05	0.00	-87.9	0.00	87.88	1,669.44	414.22	1,112.92	1,021.21	10.98	-0.98	0.100
115.00	-15.15	-5.17	0.00	-66.7	0.00	66.70	1,623.06	397.75	1,026.16	953.02	11.71	-1.01	0.079
116.50	-14.17	-4.56	0.00	-59.0	0.00	58.95	1,602.68	390.69	990.06	924.20	12.03	-1.03	0.073
120.00	-13.68	-4.50	0.00	-43.0	0.00	42.99	1,553.93	374.21	908.33	857.97	12.79	-1.05	0.059
121.50	-12.70	-3.91	0.00	-36.2	0.00	36.24	1,532.53	367.15	874.38	830.04	13.12	-1.06	0.052
122.00	-10.23	-3.56	0.00	-34.3	0.00	34.28	1,525.33	364.80	863.21	820.80	13.23	-1.06	0.049
125.00	-9.84	-3.52	0.00	-23.6	0.00	23.59	1,481.41	350.68	797.68	766.02	13.9	-1.07	0.038
126.00	-4.61	-2.42	0.00	-20.1	0.00	20.07	1,464.61	345.97	776.41	747.06	14.13	-1.08	0.030
126.50	-3.78	-1.86	0.00	-18.9	0.00	18.86	1,454.64	343.62	765.89	736.88	14.24	-1.08	0.028
130.00	-3.38	-1.81	0.00	-12.4	0.00	12.36	1,384.90	327.14	694.22	667.58	15.04	-1.09	0.021
131.50	-2.45	-1.25	0.00	-9.6	0.00	9.65	1,355.01	320.08	664.58	638.92	15.38	-1.09	0.017
133.50	-1.64	-1.10	0.00	-7.2	0.00	7.15	1,315.16	310.67	626.07	601.70	15.84	-1.1	0.013
134.00	0.00	-1.07	0.00	-6.6	0.00	6.60	1,305.19	308.31	616.62	592.56	15.95	-1.1	0.011

CALCULATED FORCES

Load Case: 1.0D + 1.0W — 60 mph Wind with No Ice — 20 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-50.81	-13.01	0.00	-1,314.8	0.00	1,314.82	7,140.68	1,832.86	10,894.70	9,671.58	0	0	0.143
5.00	-48.96	-12.92	0.00	-1,249.8	0.00	1,249.76	7,021.49	1,785.79	10,342.36	9,264.07	0.02	-0.03	0.142
10.00	-47.16	-12.83	0.00	-1,185.2	0.00	1,185.16	6,898.92	1,738.72	9,804.39	8,860.58	0.07	-0.06	0.141
15.00	-45.40	-12.74	0.00	-1,121.0	0.00	1,121.01	6,772.97	1,691.65	9,280.79	8,461.44	0.15	-0.1	0.139
20.00	-43.69	-12.66	0.00	-1,057.3	0.00	1,057.29	6,643.63	1,644.58	8,771.56	8,067.03	0.28	-0.13	0.138
25.00	-42.02	-12.58	0.00	-994.0	0.00	993.99	6,510.90	1,597.51	8,276.69	7,677.69	0.43	-0.17	0.136
30.00	-40.40	-12.49	0.00	-931.1	0.00	931.11	6,374.80	1,550.44	7,796.20	7,293.79	0.63	-0.2	0.134
35.00	-38.83	-12.41	0.00	-868.6	0.00	868.65	6,235.31	1,503.37	7,330.07	6,915.67	0.86	-0.24	0.132
40.00	-37.30	-12.32	0.00	-806.6	0.00	806.62	6,092.43	1,456.30	6,878.30	6,543.69	1.14	-0.28	0.129
45.00	-35.82	-12.27	0.00	-745.0	0.00	745.01	5,946.17	1,409.23	6,440.91	6,178.21	1.45	-0.32	0.127
46.00	-35.52	-12.22	0.00	-732.8	0.00	732.75	5,916.51	1,399.81	6,355.15	6,105.93	1.52	-0.33	0.126
50.00	-33.42	-12.15	0.00	-683.8	0.00	683.85	5,766.46	1,362.16	6,017.88	5,789.41	1.81	-0.36	0.124
53.25	-31.76	-12.10	0.00	-644.4	0.00	644.37	4,883.36	1,187.96	5,230.82	4,892.69	2.06	-0.38	0.138
55.00	-31.32	-12.04	0.00	-623.2	0.00	623.20	4,840.98	1,173.55	5,104.66	4,790.85	2.2	-0.4	0.137
60.00	-30.10	-11.95	0.00	-563.0	0.00	563.00	4,717.60	1,132.36	4,752.69	4,503.42	2.64	-0.44	0.132
65.00	-28.93	-11.86	0.00	-503.2	0.00	503.25	4,590.84	1,091.17	4,413.29	4,221.53	3.13	-0.48	0.126
70.00	-27.80	-11.77	0.00	-444.0	0.00	443.96	4,444.94	1,049.99	4,086.46	3,931.60	3.66	-0.53	0.119
75.00	-26.51	-11.65	0.00	-385.1	0.00	385.12	4,270.58	1,008.80	3,772.21	3,627.71	4.23	-0.57	0.113
75.80	-25.65	-11.03	0.00	-375.8	0.00	375.80	4,242.69	1,002.21	3,723.09	3,580.23	4.33	-0.58	0.111
76.50	-24.85	-10.43	0.00	-368.1	0.00	368.07	4,218.28	996.44	3,680.38	3,538.93	4.41	-0.58	0.110
80.00	-24.12	-10.39	0.00	-331.6	0.00	331.55	4,096.23	967.61	3,470.52	3,336.06	4.85	-0.61	0.105
81.50	-23.17	-9.77	0.00	-316.0	0.00	315.97	4,043.92	955.26	3,382.47	3,250.94	5.05	-0.62	0.103
85.00	-22.47	-9.72	0.00	-281.8	0.00	281.78	3,921.87	926.43	3,181.41	3,056.62	5.51	-0.65	0.098
86.50	-21.58	-9.14	0.00	-267.2	0.00	267.19	3,869.56	914.07	3,097.13	2,975.17	5.72	-0.66	0.095
90.00	-20.91	-9.09	0.00	-235.2	0.00	235.20	3,747.51	885.24	2,904.87	2,789.40	6.22	-0.69	0.090
91.50	-20.03	-8.51	0.00	-221.6	0.00	221.57	3,695.20	872.88	2,824.35	2,711.62	6.44	-0.7	0.087
94.50	-19.48	-8.47	0.00	-196.0	0.00	196.05	3,590.59	848.17	2,666.73	2,559.36	6.89	-0.72	0.082
95.00	-19.34	-8.45	0.00	-191.8	0.00	191.82	3,573.15	844.05	2,640.90	2,534.41	6.96	-0.73	0.081
96.50	-18.33	-7.86	0.00	-179.1	0.00	179.14	3,520.85	831.70	2,564.16	2,460.29	7.19	-0.74	0.078
99.50	-17.52	-7.82	0.00	-155.6	0.00	155.57	1,815.87	470.71	1,437.09	1,263.52	7.66	-0.76	0.133
100.00	-14.65	-7.14	0.00	-151.7	0.00	151.66	1,810.16	468.35	1,422.76	1,253.20	7.74	-0.76	0.129
101.50	-13.95	-6.58	0.00	-141.0	0.00	140.96	1,792.82	461.29	1,380.19	1,222.34	7.99	-0.78	0.123
105.00	-13.59	-6.54	0.00	-117.9	0.00	117.94	1,751.18	444.82	1,283.37	1,150.99	8.57	-0.81	0.110
106.50	-12.89	-5.97	0.00	-108.1	0.00	108.13	1,732.82	437.76	1,242.96	1,120.71	8.83	-0.83	0.104
110.00	-12.55	-5.93	0.00	-87.2	0.00	87.23	1,688.81	421.28	1,151.17	1,050.82	9.45	-0.86	0.091
111.50	-11.91	-5.41	0.00	-78.3	0.00	78.33	1,669.44	414.22	1,112.92	1,021.21	9.72	-0.87	0.084
115.00	-8.23	-4.62	0.00	-59.4	0.00	59.40	1,623.06	397.75	1,026.16	953.02	10.38	-0.9	0.068
116.50	-7.60	-4.09	0.00	-52.5	0.00	52.47	1,602.68	390.69	990.06	924.20	10.66	-0.91	0.062
120.00	-7.31	-4.05	0.00	-38.1	0.00	38.14	1,553.93	374.21	908.33	857.97	11.34	-0.93	0.049
121.50	-6.70	-3.54	0.00	-32.1	0.00	32.07	1,532.53	367.15	874.38	830.04	11.63	-0.94	0.043
122.00	-5.38	-3.22	0.00	-30.3	0.00	30.30	1,525.33	364.80	863.21	820.80	11.73	-0.94	0.041
125.00	-5.14	-3.18	0.00	-20.6	0.00	20.65	1,481.41	350.68	797.68	766.02	12.32	-0.95	0.031
126.00	-2.87	-2.09	0.00	-17.5	0.00	17.46	1,464.61	345.97	776.41	747.06	12.52	-0.96	0.025
126.50	-2.35	-1.60	0.00	-16.4	0.00	16.42	1,454.64	343.62	765.89	736.88	12.62	-0.96	0.024
130.00	-2.12	-1.57	0.00	-10.8	0.00	10.81	1,384.90	327.14	694.22	667.58	13.33	-0.97	0.018
131.50	-1.53	-1.08	0.00	-8.5	0.00	8.46	1,355.01	320.08	664.58	638.92	13.63	-0.97	0.014
133.50	-1.03	-0.96	0.00	-6.3	0.00	6.29	1,315.16	310.67	626.07	601.70	14.04	-0.97	0.011
134.00	0.00	-0.94	0.00	-5.8	0.00	5.81	1,305.19	308.31	616.62	592.56	14.14	-0.97	0.010

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period (S_S):	0.187
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.054
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a:	1.600
Site Coefficient F_v:	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.199
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.086
Seismic Response Coefficient (C_s):	0.038
Upper Limit C_S:	0.038
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	1.500
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.500
Total Unfactored Dead Load:	50.810 k
Seismic Base Shear (E):	1.950 k

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
47	133.75	30	47	0.001	3	38
46	132.5	124	190	0.005	10	153
45	130.75	95	143	0.004	8	118
44	128.25	230	336	0.010	18	285
43	126.25	34	48	0.001	3	42
42	125.5	76	107	0.003	6	94
41	123.5	233	322	0.009	18	289
40	121.75	40	54	0.002	3	49
39	120.75	121	162	0.005	9	150
38	118.25	290	376	0.011	21	360
37	115.75	128	160	0.004	9	159
36	113.25	326	396	0.011	22	405
35	110.75	143	168	0.005	9	178
34	108.25	342	388	0.011	21	425
33	105.75	150	164	0.005	9	186
32	103.25	358	378	0.011	21	444
31	100.75	157	160	0.004	9	195
30	99.75	54	54	0.002	3	67
29	98	806	787	0.022	43	999
28	95.75	411	388	0.011	21	510
27	94.75	138	128	0.004	7	172
26	93	552	498	0.014	27	684
25	90.75	281	245	0.007	13	349
24	88.25	671	559	0.016	31	831
23	85.75	293	234	0.007	13	364
22	83.25	698	534	0.015	29	866
21	80.75	305	223	0.006	12	379
20	78.25	726	506	0.014	28	901
19	76.15	148	99	0.003	5	183
18	75.4	170	112	0.003	6	210
17	72.5	1,085	674	0.019	37	1,346
16	67.5	1,125	628	0.018	35	1,395
15	62.5	1,165	579	0.016	32	1,445
14	57.5	1,205	528	0.015	29	1,494
13	54.125	431	173	0.005	9	535
12	51.625	1,663	620	0.018	34	2,061
11	48	2,096	701	0.020	39	2,599
10	45.5	290	89	0.002	5	359

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
9	42.5	1,476	411	0.012	23	1,831
8	37.5	1,522	351	0.010	19	1,887
7	32.5	1,568	292	0.008	16	1,944
6	27.5	1,613	234	0.007	13	2,000
5	22.5	1,659	178	0.005	10	2,057
4	17.5	1,705	125	0.004	7	2,113
3	12.5	1,750	78	0.002	4	2,170
2	7.5	1,796	37	0.001	2	2,227
1	2.5	1,841	7	0.000	0	2,283
Top Branches	134	250	390	0.011	21	310
Top Branches	134	250	390	0.011	21	310
Branches (9' Max)	134	500	781	0.022	43	620
Branches (9' Max)	131.5	500	759	0.021	42	620
Branches (9' Max)	126.5	500	716	0.020	39	620
Generic 5' Omni	134	20	31	0.001	2	25
Generic 5' Omni	75	10	7	0.000	0	12
Generic Flat Stand-Off	133.5	375	582	0.016	32	465
Generic Flat Stand-Off	75	188	122	0.004	7	232
Raycap DC6-48-60-18-8F	126	60	85	0.002	5	74
Ericsson RRUS-32 (77 lbs)	126	231	329	0.009	18	286
Generic Round T-Arm	126	938	1,334	0.038	73	1,162
CCI HPA-65R-BUU-H8	126	408	581	0.016	32	506
CCI DMP65R-BU8D	126	574	817	0.023	45	712
Ericsson RRUS A2 Module	122	64	86	0.002	5	79
Ericsson RRUS 4478 B14	122	180	244	0.007	13	223
Ericsson RRUS 4449 B5, B12	122	213	289	0.008	16	264
Ericsson RRUS E2	122	159	215	0.006	12	197
Ericsson RRUS-12 800 MHz	122	180	244	0.007	13	223
Ericsson RRUS-11	122	495	671	0.019	37	614
Branches (10' Max)	121.5	500	674	0.019	37	620
Branches (10' Max)	116.5	500	633	0.018	35	620
Branches (10' Max)	111.5	500	592	0.017	33	620
Ericsson 4460 BAND 2/25	115	327	406	0.012	22	405
Ericsson 4480 BAND 71	115	243	302	0.008	17	301
Ericsson AIR 6419 B41	115	206	255	0.007	14	255
Commscope VV-65A-R1B	115	74	92	0.003	5	92
Site Pro 1 VFA10-HD	115	2,154	2,673	0.076	147	2,671
RFS APXVAALL24 43-U-NA20	115	368	457	0.013	25	457
Branches (11' Max)	106.5	550	608	0.017	33	682
Branches (11' Max)	101.5	550	566	0.016	31	682
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	100	224	225	0.006	12	278
Samsung RF4461d-13A	100	237	239	0.007	13	294
Samsung MT6413-77A	100	172	173	0.005	10	213
Raycap RCMDC-6627-PF-48	100	32	32	0.001	2	40
JMA Wireless MX06FHG665-HG	100	82	83	0.002	5	102
JMA Wireless MX06FHG865-HG	100	204	205	0.006	11	253
Generic Flat Low Profile Platform	100	1,875	1,886	0.053	104	2,325
Branches (12' Max)	96.5	600	572	0.016	31	744
Branches (12' Max)	91.5	600	528	0.015	29	744
Branches (12' Max)	86.5	600	486	0.014	27	744
Branches (13' Max)	81.5	650	481	0.014	26	806
Branches (13' Max)	76.5	650	437	0.012	24	806
Branches (13' Max)	75.8	700	465	0.013	26	868
	Totals:	**50,815**	**35,415**	**1.000**	**1,948**	**63,005**

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
47	133.75	30	47	0.001	3	26
46	132.5	124	190	0.005	10	106

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
45	130.75	95	143	0.004	8	82
44	128.25	230	336	0.010	18	198
43	126.25	34	48	0.001	3	29
42	125.5	76	107	0.003	6	65
41	123.5	233	322	0.009	18	201
40	121.75	40	54	0.002	3	34
39	120.75	121	162	0.005	9	104
38	118.25	290	376	0.011	21	250
37	115.75	128	160	0.004	9	110
36	113.25	326	396	0.011	22	281
35	110.75	143	168	0.005	9	123
34	108.25	342	388	0.011	21	294
33	105.75	150	164	0.005	9	129
32	103.25	358	378	0.011	21	308
31	100.75	157	160	0.004	9	135
30	99.75	54	54	0.002	3	47
29	98	806	787	0.022	43	693
28	95.75	411	388	0.011	21	354
27	94.75	138	128	0.004	7	119
26	93	552	498	0.014	27	475
25	90.75	281	245	0.007	13	242
24	88.25	671	559	0.016	31	577
23	85.75	293	234	0.007	13	252
22	83.25	698	534	0.015	29	601
21	80.75	305	223	0.006	12	263
20	78.25	726	506	0.014	28	625
19	76.15	148	99	0.003	5	127
18	75.4	170	112	0.003	6	146
17	72.5	1,085	674	0.019	37	933
16	67.5	1,125	628	0.018	35	968
15	62.5	1,165	579	0.016	32	1,002
14	57.5	1,205	528	0.015	29	1,037
13	54.125	431	173	0.005	9	371
12	51.625	1,663	620	0.018	34	1,430
11	48	2,096	701	0.020	39	1,803
10	45.5	290	89	0.002	5	249
9	42.5	1,476	411	0.012	23	1,270
8	37.5	1,522	351	0.010	19	1,309
7	32.5	1,568	292	0.008	16	1,348
6	27.5	1,613	234	0.007	13	1,388
5	22.5	1,659	178	0.005	10	1,427
4	17.5	1,705	125	0.004	7	1,466
3	12.5	1,750	78	0.002	4	1,505
2	7.5	1,796	37	0.001	2	1,545
1	2.5	1,841	7	0.000	0	1,584
Top Branches	134	250	390	0.011	21	215
Top Branches	134	250	390	0.011	21	215
Branches (9' Max)	134	500	781	0.022	43	430
Branches (9' Max)	131.5	500	759	0.021	42	430
Branches (9' Max)	126.5	500	716	0.020	39	430
Generic 5' Omni	134	20	31	0.001	2	17
Generic 5' Omni	75	10	7	0.000	0	9
Generic Flat Stand-Off	133.5	375	582	0.016	32	323
Generic Flat Stand-Off	75	188	122	0.004	7	161
Raycap DC6-48-60-18-8F	126	60	85	0.002	5	52
Ericsson RRUS-32 (77 lbs)	126	231	329	0.009	18	199
Generic Round T-Arm	126	938	1,334	0.038	73	806
CCI HPA-65R-BUU-H8	126	408	581	0.016	32	351
CCI DMP65R-BU8D	126	574	817	0.023	45	494
Ericsson RRUS A2 Module	122	64	86	0.002	5	55
Ericsson RRUS 4478 B14	122	180	244	0.007	13	155

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
Ericsson RRUS 4449 B5, B12	122	213	289	0.008	16	183
Ericsson RRUS E2	122	159	215	0.006	12	136
Ericsson RRUS-12 800 MHz	122	180	244	0.007	13	155
Ericsson RRUS-11	122	495	671	0.019	37	426
Branches (10' Max)	121.5	500	674	0.019	37	430
Branches (10' Max)	116.5	500	633	0.018	35	430
Branches (10' Max)	111.5	500	592	0.017	33	430
Ericsson 4460 BAND 2/25	115	327	406	0.012	22	281
Ericsson 4480 BAND 71	115	243	302	0.008	17	209
Ericsson AIR 6419 B41	115	206	255	0.007	14	177
Commscope VV-65A-R1B	115	74	92	0.003	5	64
Site Pro 1 VFA10-HD	115	2,154	2,673	0.076	147	1,853
RFS APXVAALL24 43-U-NA20	115	368	457	0.013	25	317
Branches (11' Max)	106.5	550	608	0.017	33	473
Branches (11' Max)	101.5	550	566	0.016	31	473
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	100	224	225	0.006	12	193
Samsung RF4461d-13A	100	237	239	0.007	13	204
Samsung MT6413-77A	100	172	173	0.005	10	148
Raycap RCMDC-6627-PF-48	100	32	32	0.001	2	28
JMA Wireless MX06FHG665-HG	100	82	83	0.002	5	71
JMA Wireless MX06FHG865-HG	100	204	205	0.006	11	175
Generic Flat Low Profile Platform	100	1,875	1,886	0.053	104	1,613
Branches (12' Max)	96.5	600	572	0.016	31	516
Branches (12' Max)	91.5	600	528	0.015	29	516
Branches (12' Max)	86.5	600	486	0.014	27	516
Branches (13' Max)	81.5	650	481	0.014	26	559
Branches (13' Max)	76.5	650	437	0.012	24	559
Branches (13' Max)	75.8	700	465	0.013	26	602
	Totals:	**50,815**	**35,415**	**1.000**	**1,948**	**43,706**

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

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-60.72	-1.95	0.00	-198.59	0.00	198.59	7,140.68	1,832.86	10,895	9,671.58	0.00	0.00	0.03
5.00	-58.50	-1.95	0.00	-188.85	0.00	188.85	7,021.49	1,785.79	10,342	9,264.07	0.00	0.00	0.03
10.00	-56.32	-1.95	0.00	-179.09	0.00	179.09	6,898.92	1,738.72	9,804	8,860.58	0.01	-0.01	0.03
15.00	-54.21	-1.95	0.00	-169.33	0.00	169.33	6,772.97	1,691.65	9,281	8,461.44	0.02	-0.01	0.03
20.00	-52.15	-1.94	0.00	-159.59	0.00	159.59	6,643.63	1,644.58	8,772	8,067.03	0.04	-0.02	0.03
25.00	-50.15	-1.93	0.00	-149.87	0.00	149.87	6,510.90	1,597.51	8,277	7,677.69	0.07	-0.03	0.03
30.00	-48.21	-1.92	0.00	-140.20	0.00	140.20	6,374.80	1,550.44	7,796	7,293.79	0.10	-0.03	0.03
35.00	-46.32	-1.91	0.00	-130.58	0.00	130.58	6,235.31	1,503.37	7,330	6,915.67	0.13	-0.04	0.03
40.00	-44.49	-1.89	0.00	-121.05	0.00	121.05	6,092.43	1,456.30	6,878	6,543.69	0.17	-0.04	0.03
45.00	-44.13	-1.88	0.00	-111.62	0.00	111.62	5,946.17	1,409.23	6,441	6,178.21	0.22	-0.05	0.03
46.00	-41.53	-1.85	0.00	-109.73	0.00	109.73	5,916.51	1,399.81	6,355	6,105.93	0.23	-0.05	0.03
50.00	-39.47	-1.81	0.00	-102.35	0.00	102.35	5,766.46	1,362.16	6,018	5,789.41	0.27	-0.05	0.03
53.25	-38.94	-1.81	0.00	-96.46	0.00	96.46	4,883.36	1,187.96	5,231	4,892.69	0.31	-0.06	0.03
55.00	-37.44	-1.78	0.00	-93.30	0.00	93.30	4,840.98	1,173.55	5,105	4,790.85	0.33	-0.06	0.03
60.00	-36.00	-1.75	0.00	-84.41	0.00	84.41	4,717.60	1,132.36	4,753	4,503.42	0.40	-0.07	0.03
65.00	-34.60	-1.72	0.00	-75.67	0.00	75.67	4,590.84	1,091.17	4,413	4,221.53	0.47	-0.07	0.03
70.00	-33.26	-1.68	0.00	-67.09	0.00	67.09	4,444.94	1,049.99	4,086	3,931.60	0.55	-0.08	0.03
75.00	-32.80	-1.67	0.00	-58.69	0.00	58.69	4,270.58	1,008.80	3,772	3,627.71	0.64	-0.09	0.02
75.80	-31.75	-1.64	0.00	-57.35	0.00	57.35	4,242.69	1,002.21	3,723	3,580.23	0.65	-0.09	0.02
76.50	-30.04	-1.58	0.00	-56.21	0.00	56.21	4,218.28	996.44	3,680	3,538.93	0.66	-0.09	0.02
80.00	-29.67	-1.57	0.00	-50.67	0.00	50.67	4,096.23	967.61	3,471	3,336.06	0.73	-0.09	0.02
81.50	-27.99	-1.52	0.00	-48.31	0.00	48.31	4,043.92	955.26	3,382	3,250.94	0.76	-0.09	0.02
85.00	-27.63	-1.50	0.00	-43.00	0.00	43.00	3,921.87	926.43	3,181	3,056.62	0.83	-0.10	0.02
86.50	-26.06	-1.44	0.00	-40.75	0.00	40.75	3,869.56	914.07	3,097	2,975.17	0.86	-0.10	0.02
90.00	-25.71	-1.43	0.00	-35.69	0.00	35.69	3,747.51	885.24	2,905	2,789.40	0.94	-0.10	0.02

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
91.50	-24.28	-1.37	0.00	-33.54	0.00	33.54	3,695.20	872.88	2,824	2,711.62	0.97	-0.11	0.02
94.50	-24.11	-1.37	0.00	-29.42	0.00	29.42	3,590.59	848.17	2,667	2,559.36	1.04	-0.11	0.02
95.00	-23.60	-1.35	0.00	-28.73	0.00	28.73	3,573.15	844.05	2,641	2,534.41	1.05	-0.11	0.02
96.50	-21.85	-1.27	0.00	-26.72	0.00	26.72	3,520.85	831.70	2,564	2,460.29	1.08	-0.11	0.02
99.50	-21.79	-1.27	0.00	-22.91	0.00	22.91	1,815.87	470.71	1,437	1,263.52	1.16	-0.11	0.03
100.00	-18.09	-1.09	0.00	-22.28	0.00	22.28	1,810.16	468.35	1,423	1,253.20	1.17	-0.12	0.03
101.50	-16.96	-1.04	0.00	-20.64	0.00	20.64	1,792.82	461.29	1,380	1,222.34	1.20	-0.12	0.03
105.00	-16.77	-1.03	0.00	-16.99	0.00	16.99	1,751.18	444.82	1,283	1,150.99	1.29	-0.12	0.02
106.50	-15.67	-0.98	0.00	-15.44	0.00	15.44	1,732.82	437.76	1,243	1,120.71	1.33	-0.12	0.02
110.00	-15.49	-0.97	0.00	-12.03	0.00	12.03	1,688.81	421.28	1,151	1,050.82	1.42	-0.13	0.02
111.50	-14.47	-0.91	0.00	-10.57	0.00	10.57	1,669.44	414.22	1,113	1,021.21	1.46	-0.13	0.02
115.00	-10.13	-0.66	0.00	-7.38	0.00	7.38	1,623.06	397.75	1,026	953.02	1.56	-0.13	0.01
116.50	-9.15	-0.61	0.00	-6.39	0.00	6.39	1,602.68	390.69	990	924.20	1.60	-0.14	0.01
120.00	-9.00	-0.60	0.00	-4.27	0.00	4.27	1,553.93	374.21	908	857.97	1.70	-0.14	0.01
121.50	-8.33	-0.56	0.00	-3.37	0.00	3.37	1,532.53	367.15	874	830.04	1.75	-0.14	0.01
122.00	-6.44	-0.44	0.00	-3.09	0.00	3.09	1,525.33	364.80	863	820.80	1.76	-0.14	0.01
125.00	-6.35	-0.43	0.00	-1.78	0.00	1.78	1,481.41	350.68	798	766.02	1.85	-0.14	0.01
126.00	-3.56	-0.25	0.00	-1.35	0.00	1.35	1,464.61	345.97	776	747.06	1.88	-0.14	0.00
126.50	-2.66	-0.19	0.00	-1.23	0.00	1.23	1,454.64	343.62	766	736.88	1.89	-0.14	0.00
130.00	-2.54	-0.18	0.00	-0.57	0.00	0.57	1,384.90	327.14	694	667.58	2.00	-0.14	0.00
131.50	-1.77	-0.13	0.00	-0.30	0.00	0.30	1,355.01	320.08	665	638.92	2.04	-0.14	0.00
133.50	-1.26	-0.09	0.00	-0.05	0.00	0.05	1,315.16	310.67	626	601.70	2.10	-0.14	0.00
134.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,305.19	308.31	617	592.56	2.12	-0.14	0.00

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

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-42.12	-1.95	0.00	-197.31	0.00	197.31	7,140.68	1,832.86	10,895	9,671.58	0.00	0.00	0.03
5.00	-40.58	-1.95	0.00	-187.57	0.00	187.57	7,021.49	1,785.79	10,342	9,264.07	0.00	0.00	0.03
10.00	-39.07	-1.95	0.00	-177.83	0.00	177.83	6,898.92	1,738.72	9,804	8,860.58	0.01	-0.01	0.03
15.00	-37.61	-1.94	0.00	-168.09	0.00	168.09	6,772.97	1,691.65	9,281	8,461.44	0.02	-0.01	0.03
20.00	-36.18	-1.94	0.00	-158.37	0.00	158.37	6,643.63	1,644.58	8,772	8,067.03	0.04	-0.02	0.03
25.00	-34.79	-1.93	0.00	-148.68	0.00	148.68	6,510.90	1,597.51	8,277	7,677.69	0.07	-0.03	0.03
30.00	-33.44	-1.91	0.00	-139.05	0.00	139.05	6,374.80	1,550.44	7,796	7,293.79	0.09	-0.03	0.02
35.00	-32.13	-1.90	0.00	-129.48	0.00	129.48	6,235.31	1,503.37	7,330	6,915.67	0.13	-0.04	0.02
40.00	-30.86	-1.88	0.00	-119.99	0.00	119.99	6,092.43	1,456.30	6,878	6,543.69	0.17	-0.04	0.02
45.00	-30.61	-1.87	0.00	-110.61	0.00	110.61	5,946.17	1,409.23	6,441	6,178.21	0.22	-0.05	0.02
46.00	-28.81	-1.83	0.00	-108.74	0.00	108.74	5,916.51	1,399.81	6,355	6,105.93	0.23	-0.05	0.02
50.00	-27.38	-1.80	0.00	-101.40	0.00	101.40	5,766.46	1,362.16	6,018	5,789.41	0.27	-0.05	0.02
53.25	-27.01	-1.79	0.00	-95.55	0.00	95.55	4,883.36	1,187.96	5,231	4,892.69	0.31	-0.06	0.03
55.00	-25.97	-1.76	0.00	-92.41	0.00	92.41	4,840.98	1,173.55	5,105	4,790.85	0.33	-0.06	0.03
60.00	-24.97	-1.73	0.00	-83.59	0.00	83.59	4,717.60	1,132.36	4,753	4,503.42	0.40	-0.07	0.02
65.00	-24.00	-1.70	0.00	-74.92	0.00	74.92	4,590.84	1,091.17	4,413	4,221.53	0.47	-0.07	0.02
70.00	-23.07	-1.67	0.00	-66.41	0.00	66.41	4,444.94	1,049.99	4,086	3,931.60	0.55	-0.08	0.02
75.00	-22.75	-1.65	0.00	-58.08	0.00	58.08	4,270.58	1,008.80	3,772	3,627.71	0.63	-0.08	0.02
75.80	-22.03	-1.62	0.00	-56.76	0.00	56.76	4,242.69	1,002.21	3,723	3,580.23	0.65	-0.09	0.02
76.50	-20.84	-1.57	0.00	-55.62	0.00	55.62	4,218.28	996.44	3,680	3,538.93	0.66	-0.09	0.02
80.00	-20.58	-1.56	0.00	-50.13	0.00	50.13	4,096.23	967.61	3,471	3,336.06	0.72	-0.09	0.02
81.50	-19.42	-1.50	0.00	-47.80	0.00	47.80	4,043.92	955.26	3,382	3,250.94	0.75	-0.09	0.02
85.00	-19.17	-1.49	0.00	-42.54	0.00	42.54	3,921.87	926.43	3,181	3,056.62	0.82	-0.10	0.02
86.50	-18.07	-1.43	0.00	-40.31	0.00	40.31	3,869.56	914.07	3,097	2,975.17	0.85	-0.10	0.02
90.00	-17.83	-1.42	0.00	-35.30	0.00	35.30	3,747.51	885.24	2,905	2,789.40	0.93	-0.10	0.02
91.50	-16.84	-1.36	0.00	-33.18	0.00	33.18	3,695.20	872.88	2,824	2,711.62	0.96	-0.11	0.02
94.50	-16.72	-1.35	0.00	-29.10	0.00	29.10	3,590.59	848.17	2,667	2,559.36	1.03	-0.11	0.02
95.00	-16.37	-1.33	0.00	-28.42	0.00	28.42	3,573.15	844.05	2,641	2,534.41	1.04	-0.11	0.02
96.50	-15.16	-1.26	0.00	-26.42	0.00	26.42	3,520.85	831.70	2,564	2,460.29	1.07	-0.11	0.02
99.50	-15.11	-1.25	0.00	-22.66	0.00	22.66	1,815.87	470.71	1,437	1,263.52	1.15	-0.11	0.03
100.00	-12.55	-1.08	0.00	-22.03	0.00	22.03	1,810.16	468.35	1,423	1,253.20	1.16	-0.11	0.03

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
101.50	-11.77	-1.03	0.00	-20.41	0.00	20.41	1,792.82	461.29	1,380	1,222.34	1.19	-0.12	0.02
105.00	-11.64	-1.02	0.00	-16.80	0.00	16.80	1,751.18	444.82	1,283	1,150.99	1.28	-0.12	0.02
106.50	-10.87	-0.97	0.00	-15.27	0.00	15.27	1,732.82	437.76	1,243	1,120.71	1.32	-0.12	0.02
110.00	-10.75	-0.96	0.00	-11.89	0.00	11.89	1,688.81	421.28	1,151	1,050.82	1.41	-0.13	0.02
111.50	-10.03	-0.90	0.00	-10.45	0.00	10.45	1,669.44	414.22	1,113	1,021.21	1.45	-0.13	0.02
115.00	-7.02	-0.66	0.00	-7.30	0.00	7.30	1,623.06	397.75	1,026	953.02	1.55	-0.13	0.01
116.50	-6.35	-0.60	0.00	-6.32	0.00	6.32	1,602.68	390.69	990	924.20	1.59	-0.13	0.01
120.00	-6.24	-0.59	0.00	-4.22	0.00	4.22	1,553.93	374.21	908	857.97	1.69	-0.14	0.01
121.50	-5.78	-0.55	0.00	-3.33	0.00	3.33	1,532.53	367.15	874	830.04	1.73	-0.14	0.01
122.00	-4.47	-0.43	0.00	-3.06	0.00	3.06	1,525.33	364.80	863	820.80	1.75	-0.14	0.01
125.00	-4.40	-0.43	0.00	-1.76	0.00	1.76	1,481.41	350.68	798	766.02	1.83	-0.14	0.01
126.00	-2.47	-0.25	0.00	-1.34	0.00	1.34	1,464.61	345.97	776	747.06	1.86	-0.14	0.00
126.50	-1.84	-0.19	0.00	-1.22	0.00	1.22	1,454.64	343.62	766	736.88	1.88	-0.14	0.00
130.00	-1.76	-0.18	0.00	-0.56	0.00	0.56	1,384.90	327.14	694	667.58	1.98	-0.14	0.00
131.50	-1.23	-0.13	0.00	-0.29	0.00	0.29	1,355.01	320.08	665	638.92	2.02	-0.14	0.00
133.50	-0.88	-0.09	0.00	-0.04	0.00	0.04	1,315.16	310.67	626	601.70	2.08	-0.14	0.00
134.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,305.19	308.31	617	592.56	2.10	-0.14	0.00

ANALYSIS SUMMARY

Load Case	Base Reactions Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Max Usage Elev (ft)	Interaction Ratio
1.2D + 1.0W	53.44	0.00	60.91	0.00	0.00	5414.82	0.00	0.57
0.9D + 1.0W	53.42	0.00	45.67	0.00	0.00	5386.01	0.00	0.56
1.2D + 1.0Di + 1.0Wi	14.79	0.00	79.42	0.00	0.00	1487.65	0.00	0.17
1.2D + 1.0Ev + 1.0Eh	1.95	0.00	60.72	0.00	0.00	198.59	99.50	0.03
0.9D - 1.0Ev + 1.0Eh	1.95	0.00	42.12	0.00	0.00	197.31	0.00	0.03
1.0D + 1.0W	13.01	0.00	50.81	0.00	0.00	1314.82	0.00	0.14

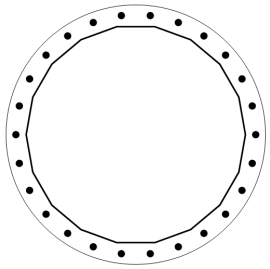
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
5414.82	60.91	53.44

PLATE PARAMETERS (ID# 18601)

Width:	79.25	in
Shape:	Round	
Thickness:	3	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	3.5	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	90	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#19071]	Radial	26	2.25	73.25	A615-75	75	100	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	66.31"ø x 0.5" (18 Sides)	102.8501	-	-	55688.50	-
Bolt Group	Original (26) 2.25"ø	3.9761	3.2477	0.8393	52668.96	4.5

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	66.31"ø x 0.5" (18 Sides)	5414.8	60.91	53.44	1.000
Bolt Group	Original (26) 2.25"ø	5414.8	-	53.44	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	66.44	in	Flat Width:	11.714	in	Neutral Axis:	90	°
Point-to-Point Diameter:	67.46	in	Flat Radians:	0.349	rad	Bend Line Limits:	2.763 to 3.520	rad
Orientation Offset:	-	°						

PLATE PROPERTIES

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$
Flats	38.211	0.00	85.975	600.0	3868.9	15.5%
Corners	36.371	0.00	81.835	383.1	3682.6	10.4%
Circumferential	39.998	0.00	89.996	669.8	4049.8	16.5%

PLASTIC ANCHOR ROD ANALYSIS

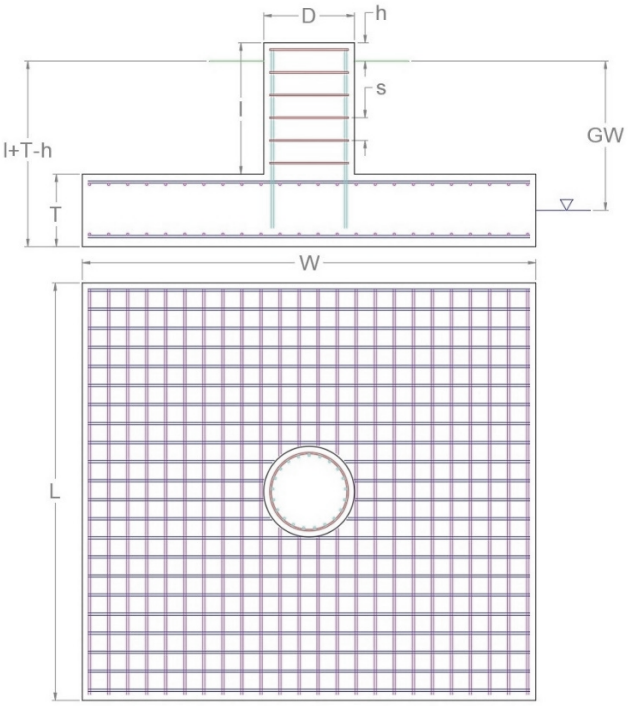
Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result
Original	26	2.25	115.7	3.2	243.6	50.1%

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
5,414.82	60.91	53.44

FOUNDATION PARAMETERS

Mat Length:	L	28	ft
Mat Width:	W	28	ft
Mat Thickness:	T	2.5	ft
Base Depth:	L+T-h	6.1	ft
Pier Shape:		Round	
Pier Diameter:	D	8	ft
Pier Height above Grade:	h	0.7	ft
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW		ft
Soil Unit Weight:		125	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		16,000	psf
Bearing Pressure Type:		Net	
Coefficient of Shear Friction:		0.5	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
5,778.21	9,326.06	**62.0%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
2,278.00	12,572.00	Diagonal to Pad Edge	**18.1%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
53.44	0.00	606.2	42.44	297.09	**18.0%**	✓

Colliers Engineering & Design, Architecture,
Landscaping Architecture, Surveying, CT, P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

New/Replacement Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10216291
Colliers Engineering & Design Project #: 23777297 (Rev. 1)

December 21, 2023

Site Information	*Site ID:*	*5000927259-VZW / WASHINGTON DEPOT CT*
	Site Name:	*WASHINGTON DEPOT CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*10 Blackville Road* *Washington, Connecticut 06794* *Litchfield County*
	Latitude:	*41.646557°*
	Longitude:	*-73.316081°*
Structure Information	*Tower Type:*	*134-Ft Monopole*
	Mount Type:	*12.50-Ft T-Arm*

FUZE ID # 16737957

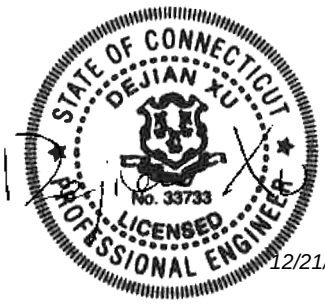
Analysis Results

T-Arm: **57.9% Pass w/ Mount Replacement***
(3) Perfect Vision - PV-MPM-TA36-ST12-AP1

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

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

Report Prepared By: Frank Centone



12/21/2023

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: 617132185, dated December 1, 2023*
Structural Analysis Report	*American Tower Corporation, Asset Number: 209259, dated July 5, 2023*
Mount Specification	*Perfect Vision, Part #: PV-MPM-TA36-ST12-AP1* *Perfect Vision, Part #: PV-XP-DC-2530* *VZWSMART-MSK6*

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}:	115 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.959
Seismic Parameters:	S_S:	0.189 g
	S_1:	0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

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
100.00	100.00	3	Samsung	MT6413-77A	Added
		1	Raycap	RVZDC-6627-PF-48	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		2	JMA Wireless	MX06FHG665-HG	
		4	JMA Wireless	MX06FHG865-HG	

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

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

Standard Conditions:

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

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

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

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

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

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

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

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

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff Horizontal	33.0%	Pass
Face Horizontal	57.9%	Pass
Mount Pipe	11.2%	Pass
Dual Pipe	22.7%	Pass
Mount Connection	19.9%	Pass

Structure Rating – ***(Controlling Utilization of all Components)***	**57.9%**

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 B Standoff	100.0	N1	834	1297	3.326	3.700	1698	328	6.203	0.920

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

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

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	7.7	3.1	17.3	12.7
0.5	10.0	4.2	23.5	17.6
1	12.3	5.1	29.6	22.4

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

Requirements:

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

1. Contractor shall install the proposed T-Arm mount (Perfect Vision, Part #: PV-MPM-TA36-ST12-AP1) in accordance with manufacturer specifications & mount installation sketch. Contact EOR if these documents are not available.
2. Contractor shall replace the mount pipe at pos. 2 (as seen from behind the mount) with 96'' long PIPE 2-1/2 SCH40 pipe. Connect to Face Horizontal with Crossover kit (Perfect Vision, Part #: PV-XP-DC-2530).
3. Contractor shall install proposed OVP on a new 48'' long PIPE 2 SCH40 OVP pipe on standoff arm on the alpha sector standoff with crossover plate (VZWSMART-MSK6).
4. Contractor shall inspect climbing facilities and safety climb, if present, and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – New Mount Passing MA

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

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MDG #: 5000927259 SMART Project #: 10216291 Fuze Project ID: 16737957

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:

1. Contractor shall install the proposed T-Arm mount (Perfect Vision, Part #: PV-MPM-TA36-ST12-AP1) in accordance with manufacturer specifications & mount installation sketch. Contact EOR if these documents are not available. 2. Contractor shall replace the mount pipe at pos. 2 (as seen from behind the mount) with 96'' long PIPE 2-1/2 SCH40 pipe. Connect to Face Horizontal with Crossover kit (Perfect Vision, Part #: PV-XP-DC-2530). 3. Contractor shall install proposed OVP on a new 48'' long PIPE 2 SCH40 OVP pipe on standoff arm on the alpha sector standoff with crossover plate (VZWSMART-MSK6). 4. Contractor shall inspect climbing facilities and safety climb, if present, and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

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:

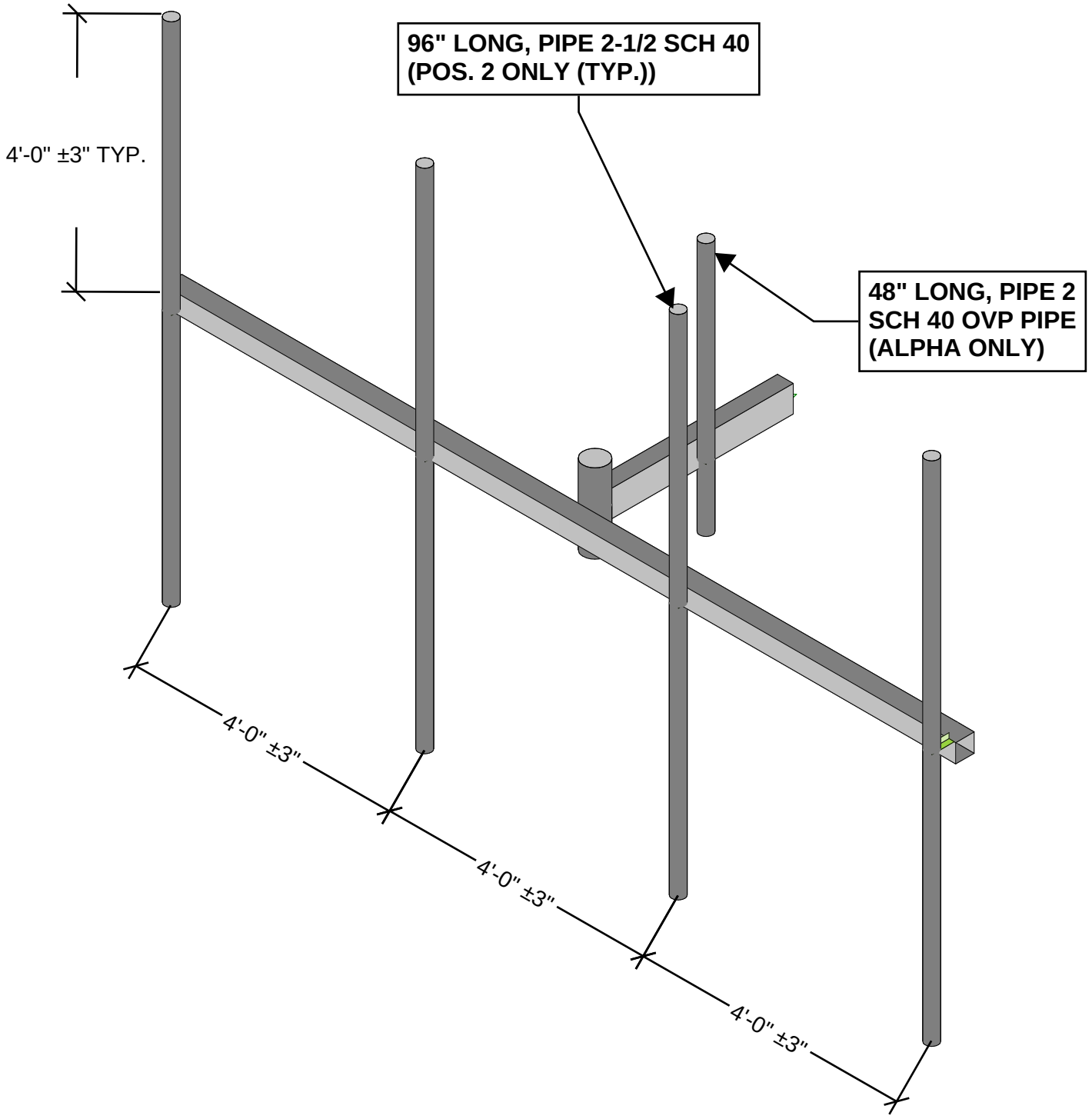
☐ The contractor certifies that the New Mount installed is as specified in the Passing Mount Analysis.

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

Certifying Individual:

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

MOUNT INSTALLATION SKETCH
(Typ. All Sector)



MOUNT ISOMETRIC VIEW
N.T.S

Structure: 5000927259-VZW - WASHINGTON DEPOT CT

Sector: **A**

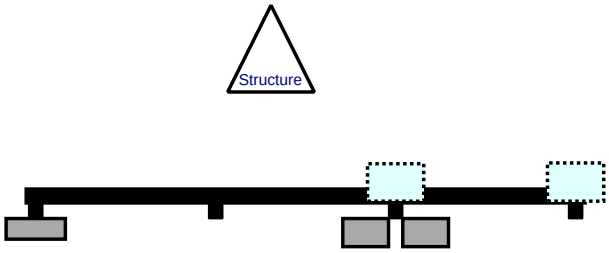
12/21/2023

Structure Type: Monopole

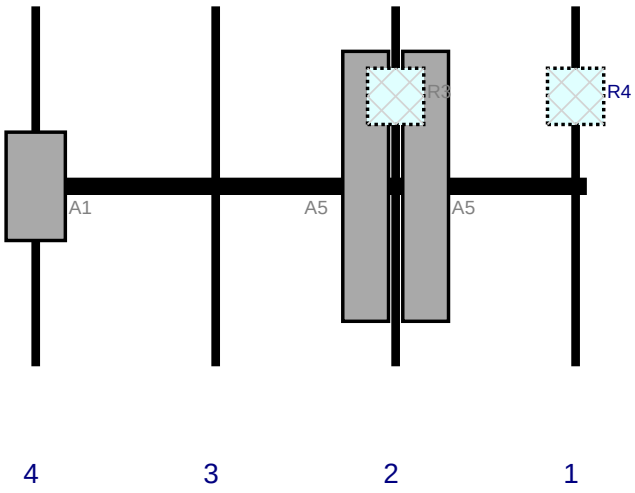
10216291

Mount Elev: 100.00

Plan View

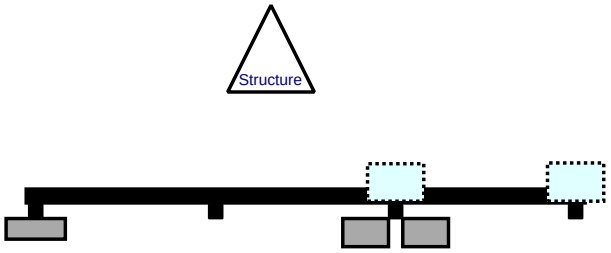


Front View - Looking at Structure

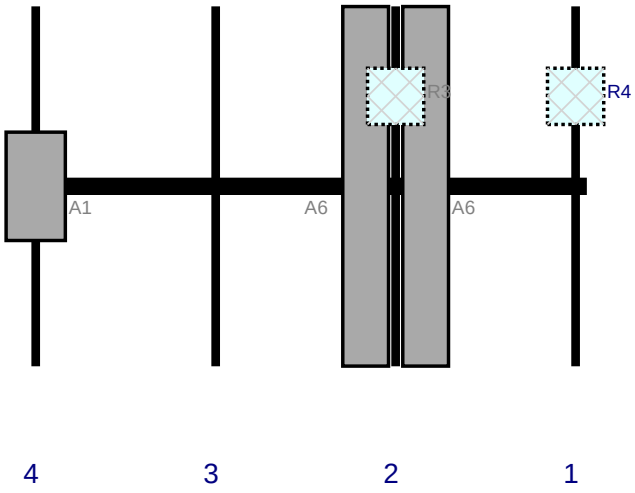


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R4	RF4461d-13A	15	15	147	1	a	Behind	24	0	Added	
A5	MX06FHG665-HG	72	12.2	99	2	a	Front	48	-8	Added	
A5	MX06FHG665-HG	72	12.2	99	2	b	Front	48	8	Added	
R3	RF4439d-25A	15	15	99	2	a	Behind	24	0	Added	
A1	MT6413-77A	28.9	15.8	3	4	a	Front	48	0	Added	
OVP	RVZDC-6627-PF-48	29.5	16.5		Member					Added	

Plan View

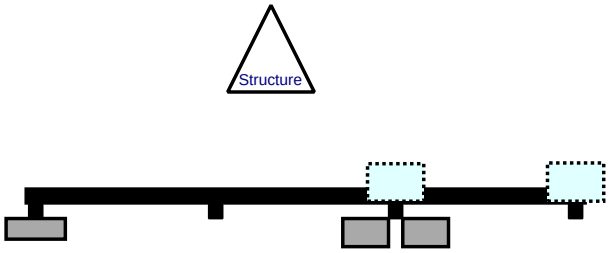


Front View - Looking at Structure

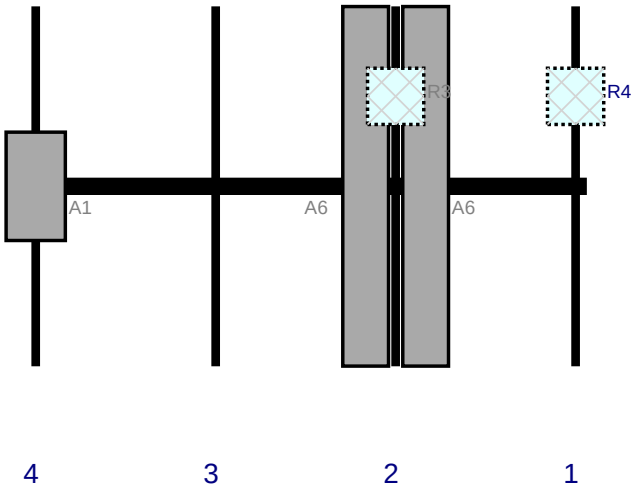


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R4	RF4461d-13A	15	15	147	1	a	Behind	24	0	Added	
A6	MX06FHG865-HG	95.9	12.2	99	2	a	Front	48	8	Added	
A6	MX06FHG865-HG	95.9	12.2	99	2	b	Front	48	-8	Added	
R3	RF4439d-25A	15	15	99	2	a	Behind	24	0	Added	
A1	MT6413-77A	28.9	15.8	3	4	a	Front	48	0	Added	

Plan View



Front View - Looking at Structure



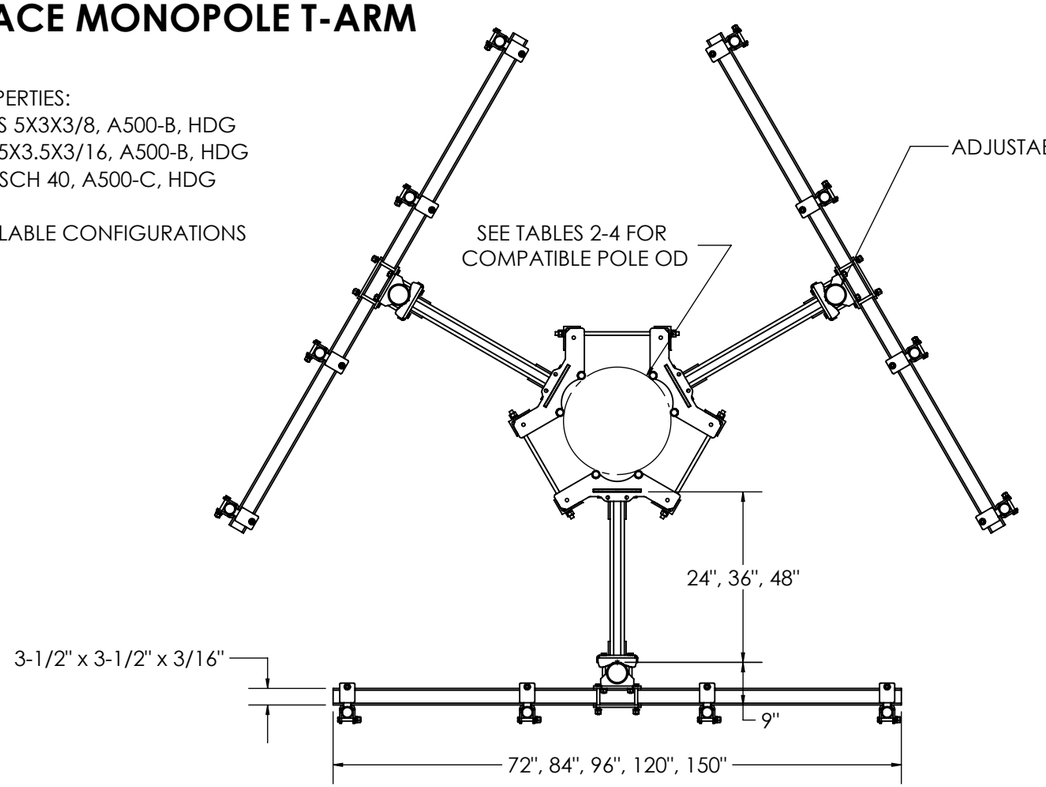
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R4	RF4461d-13A	15	15	147	1	a	Behind	24	0	Added	
A6	MX06FHG865-HG	95.9	12.2	99	2	a	Front	48	8	Added	
A6	MX06FHG865-HG	95.9	12.2	99	2	b	Front	48	-8	Added	
R3	RF4439d-25A	15	15	99	2	a	Behind	24	0	Added	
A1	MT6413-77A	28.9	15.8	3	4	a	Front	48	0	Added	

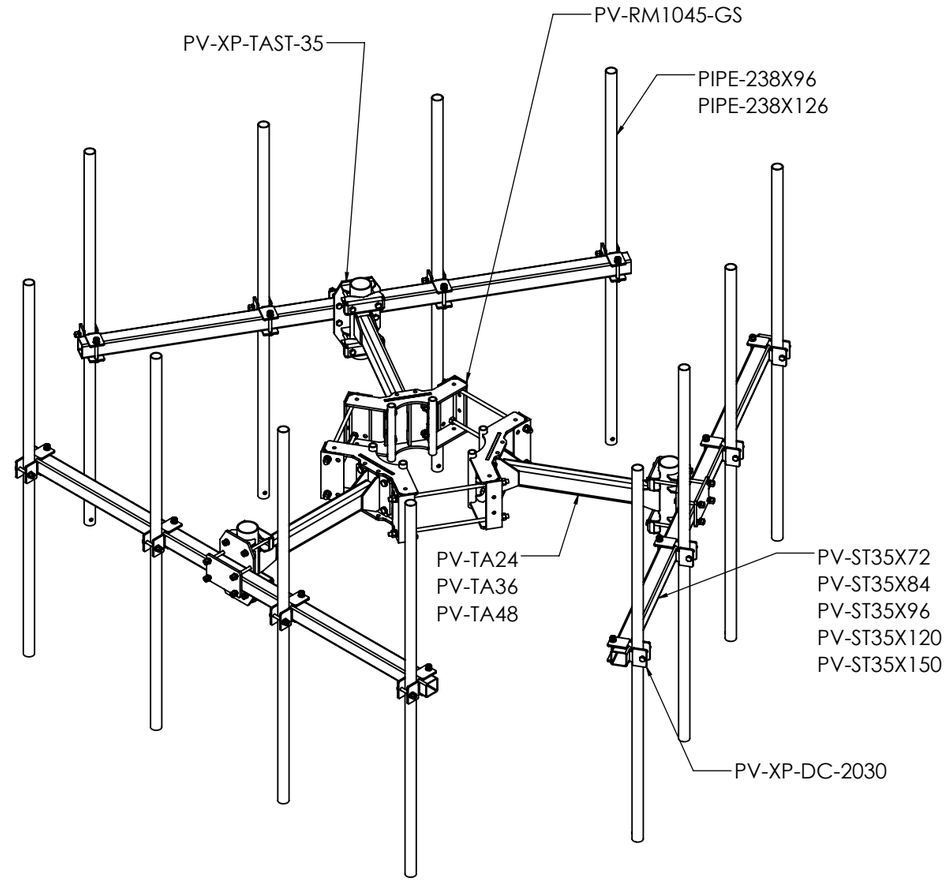
SQUARE TUBE FACE MONOPOLE T-ARM

MATERIALS & SECTION PROPERTIES:

- STANDOFF T-ARM : HSS 5X3X3/8, A500-B, HDG
- FACE MEMBER: HSS 3.5X3.5X3/16, A500-B, HDG
- ANTENNA PIPE: NPS 2 SCH 40, A500-C, HDG

SEE TABLE 2-4 FOR ALL AVAILABLE CONFIGURATIONS





SQUARE TUBE FACE MONOPOLE T-ARM
(PV-MPM-TA36-ST10-AP1 SHOWN)

SHEET: 1 OF 8	THIRD ANGLE PROJECTION	CATEGORY: 02_Monopole	4		
		SERIES: 06_T-Arms	3		
9/29/2020	SCALE: 1:32	TYPE: PV-TA_Pipe Face T-Arm	2	ADDED 5053 CLASSIFICATIONS	9/29/20
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE ±1/4°, BEND ±2° ALL OTHERS: ±1/16"		BY: DJN	1	CHANGED 126" TO 120", ADDED EPA.	8/21/20
		CHECKED: SJS	0	INITIAL RELEASE	7/14/20
		STATUS: APPROVED	REV	DESCRIPTION	DATE

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SQUARE TUBE FACE MONOPOLE T-ARM

DOCUMENT NUMBER: MPM-ENG-08-R2 | REV: 2

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Table 2: 36" Standoff Configs

Part Number	Description	Pole OD	Weight (lbs)	(EPA)A (sqft)*	(EPA)A (0.5" Radial Ice) (sqft)*	Included Parts											
						PV-RM1045-GS	PV-TA24	PV-TA36	PV-TA48	PV-XP-TAST-35	PV-ST35X72	PV-ST35X84	PV-ST35X96	PV-ST35X120	PV-ST35X150	PV-XP-DC-2030	PIPE-238X96	PIPE-238X126
PV-MPM-TA36-ST6-B	Monopole T-Arm, 36" Standoff, 6' 3x3x3/16" Square Tube Face, No Antenna Pipe	10"-45"	880	9.1	10.6	1	-	3	-	3	3	-	-	-	-	-	-
PV-MPM-TA36-ST6-AP19	Monopole T-Arm, 36" Standoff, 6' 3x3x3/16" Square Tube Face, (2) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1110	9.3	10.8	1	-	3	-	3	3	-	-	-	-	6	6	-
PV-MPM-TA36-ST6-AP20	Monopole T-Arm, 36" Standoff, 6' 3x3x3/16" Square Tube Face, (2) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1160	9.3	10.8	1	-	3	-	3	3	-	-	-	-	6	-	6
PV-MPM-TA36-ST6-AP7	Monopole T-Arm, 36" Standoff, 6' 3x3x3/16" Square Tube Face, (3) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1220	9.3	10.8	1	-	3	-	3	3	-	-	-	-	9	9	-
PV-MPM-TA36-ST6-AP8	Monopole T-Arm, 36" Standoff, 6' 3x3x3/16" Square Tube Face, (3) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1300	9.3	10.8	1	-	3	-	3	3	-	-	-	-	9	-	9
PV-MPM-TA36-ST6-AP1	Monopole T-Arm, 36" Standoff, 6' 3x3x3/16" Square Tube Face, (4) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1330	9.4	10.9	1	-	3	-	3	3	-	-	-	-	12	12	-
PV-MPM-TA36-ST6-AP2	Monopole T-Arm, 36" Standoff, 6' 3x3x3/16" Square Tube Face, (4) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1440	9.4	10.9	1	-	3	-	3	3	-	-	-	-	12	-	12
PV-MPM-TA36-ST7-B	Monopole T-Arm, 36" Standoff, 7' 3x3x3/16" Square Tube Face, No Antenna Pipe	10"-45"	910	9.6	11.3	1	-	3	-	3	-	3	-	-	-	-	-	-
PV-MPM-TA36-ST7-AP19	Monopole T-Arm, 36" Standoff, 7' 3x3x3/16" Square Tube Face, (2) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1130	9.8	11.4	1	-	3	-	3	-	3	-	-	-	6	6	-
PV-MPM-TA36-ST7-AP20	Monopole T-Arm, 36" Standoff, 7' 3x3x3/16" Square Tube Face, (2) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1190	9.8	11.4	1	-	3	-	3	-	3	-	-	-	6	-	6
PV-MPM-TA36-ST7-AP7	Monopole T-Arm, 36" Standoff, 7' 3x3x3/16" Square Tube Face, (3) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1250	9.8	11.5	1	-	3	-	3	-	3	-	-	-	9	9	-
PV-MPM-TA36-ST7-AP8	Monopole T-Arm, 36" Standoff, 7' 3x3x3/16" Square Tube Face, (3) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1330	9.8	11.5	1	-	3	-	3	-	3	-	-	-	9	-	9
PV-MPM-TA36-ST7-AP1	Monopole T-Arm, 36" Standoff, 7' 3x3x3/16" Square Tube Face, (4) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1360	9.9	11.6	1	-	3	-	3	-	3	-	-	-	12	12	-
PV-MPM-TA36-ST7-AP2	Monopole T-Arm, 36" Standoff, 7' 3x3x3/16" Square Tube Face, (4) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1470	9.9	11.6	1	-	3	-	3	-	3	-	-	-	12	-	12
PV-MPM-TA36-ST8-B	Monopole T-Arm, 36" Standoff, 8' 3x3x3/16" Square Tube Face, No Antenna Pipe	10"-45"	930	10.1	11.9	1	-	3	-	3	-	-	3	-	-	-	-	-
PV-MPM-TA36-ST8-AP19	Monopole T-Arm, 36" Standoff, 8' 3x3x3/16" Square Tube Face, (2) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1160	10.3	12.1	1	-	3	-	3	-	-	3	-	-	6	6	-
PV-MPM-TA36-ST8-AP20	Monopole T-Arm, 36" Standoff, 8' 3x3x3/16" Square Tube Face, (2) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1210	10.3	12.1	1	-	3	-	3	-	-	3	-	-	6	-	6
PV-MPM-TA36-ST8-AP7	Monopole T-Arm, 36" Standoff, 8' 3x3x3/16" Square Tube Face, (3) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1270	10.3	12.1	1	-	3	-	3	-	-	3	-	-	9	9	-
PV-MPM-TA36-ST8-AP8	Monopole T-Arm, 36" Standoff, 8' 3x3x3/16" Square Tube Face, (3) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1350	10.3	12.1	1	-	3	-	3	-	-	3	-	-	9	-	9
PV-MPM-TA36-ST8-AP1	Monopole T-Arm, 36" Standoff, 8' 3x3x3/16" Square Tube Face, (4) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1380	10.4	12.2	1	-	3	-	3	-	-	3	-	-	12	12	-
PV-MPM-TA36-ST8-AP2	Monopole T-Arm, 36" Standoff, 8' 3x3x3/16" Square Tube Face, (4) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1490	10.4	12.2	1	-	3	-	3	-	-	3	-	-	12	-	12
PV-MPM-TA36-ST10-B	Monopole T-Arm, 36" Standoff, 10' 3x3x3/16" Square Tube Face, No Antenna Pipe	10"-45"	990	11.1	13.2	1	-	3	-	3	-	-	-	3	-	-	-	-
PV-MPM-TA36-ST10-AP19	Monopole T-Arm, 36" Standoff, 10' 3x3x3/16" Square Tube Face, (2) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1220	11.3	13.3	1	-	3	-	3	-	-	-	3	-	6	6	-
PV-MPM-TA36-ST10-AP20	Monopole T-Arm, 36" Standoff, 10' 3x3x3/16" Square Tube Face, (2) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1270	11.3	13.3	1	-	3	-	3	-	-	-	3	-	6	-	6
PV-MPM-TA36-ST10-AP7	Monopole T-Arm, 36" Standoff, 10' 3x3x3/16" Square Tube Face, (3) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1330	11.3	13.4	1	-	3	-	3	-	-	-	3	-	9	9	-
PV-MPM-TA36-ST10-AP8	Monopole T-Arm, 36" Standoff, 10' 3x3x3/16" Square Tube Face, (3) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1410	11.3	13.4	1	-	3	-	3	-	-	-	3	-	9	-	9
PV-MPM-TA36-ST10-AP1	Monopole T-Arm, 36" Standoff, 10' 3x3x3/16" Square Tube Face, (4) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1440	11.4	13.5	1	-	3	-	3	-	-	-	3	-	12	12	-
PV-MPM-TA36-ST10-AP2	Monopole T-Arm, 36" Standoff, 10' 3x3x3/16" Square Tube Face, (4) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1550	11.4	13.5	1	-	3	-	3	-	-	-	3	-	12	-	12
PV-MPM-TA36-ST12-B	Monopole T-Arm, 36" Standoff, 12'6" 3x3x3/16" Square Tube Face, No Antenna Pipe	10"-45"	1040	12.4	14.8	1	-	3	-	3	-	-	-	-	3	-	-	-
PV-MPM-TA36-ST12-AP19	Monopole T-Arm, 36" Standoff, 12'6" 3x3x3/16" Square Tube Face, (2) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1270	12.5	14.9	1	-	3	-	3	-	-	-	-	3	6	6	-
PV-MPM-TA36-ST12-AP20	Monopole T-Arm, 36" Standoff, 12'6" 3x3x3/16" Square Tube Face, (2) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1320	12.5	14.9	1	-	3	-	3	-	-	-	-	3	6	-	6
PV-MPM-TA36-ST12-AP7	Monopole T-Arm, 36" Standoff, 12'6" 3x3x3/16" Square Tube Face, (3) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1380	12.6	15.0	1	-	3	-	3	-	-	-	-	3	9	9	-
PV-MPM-TA36-ST12-AP8	Monopole T-Arm, 36" Standoff, 12'6" 3x3x3/16" Square Tube Face, (3) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1460	12.6	15.0	1	-	3	-	3	-	-	-	-	3	9	-	9
PV-MPM-TA36-ST12-AP1	Monopole T-Arm, 36" Standoff, 12'6" 3x3x3/16" Square Tube Face, (4) 2-3/8"x96" Antenna Pipe Per Sector	10"-45"	1490	12.6	15.1	1	-	3	-	3	-	-	-	-	3	12	12	-
PV-MPM-TA36-ST12-AP2	Monopole T-Arm, 36" Standoff, 12'6" 3x3x3/16" Square Tube Face, (4) 2-3/8"x126" Antenna Pipe Per Sector	10"-45"	1600	12.6	15.1	1	-	3	-	3	-	-	-	-	3	12	-	12

*(EPA)A DOES NOT INCLUDE ANTENNA PIPE

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SHEET 4 OF 8	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4		
		SERIES 06_T-Arms	3		
9/29/2020	SCALE 1:64	TYPE PV-TA_Pipe Face T-Arm	2	ADDED 5053 CLASSIFICATIONS	9/29/20
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE ±1/4°, BEND ±2° ALL OTHERS: ±1/16"		BY DJN	1	CHANGED 126" TO 120". ADDED EPA.	8/21/20
		CHECKED SJS	0	INITIAL RELEASE	7/14/20
		STATUS APPROVED	REV	DESCRIPTION	DATE

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SQUARE TUBE FACE MONOPOLE T-ARM

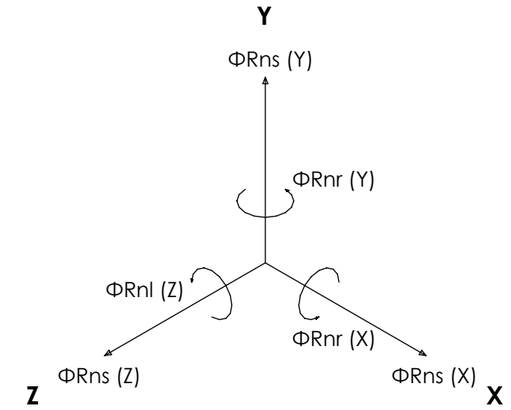
DOCUMENT NUMBER MPM-ENG-08-R2 | REV 2

PV-XP-DC

DUALCROSS 90° CROSSOVER BRACKET

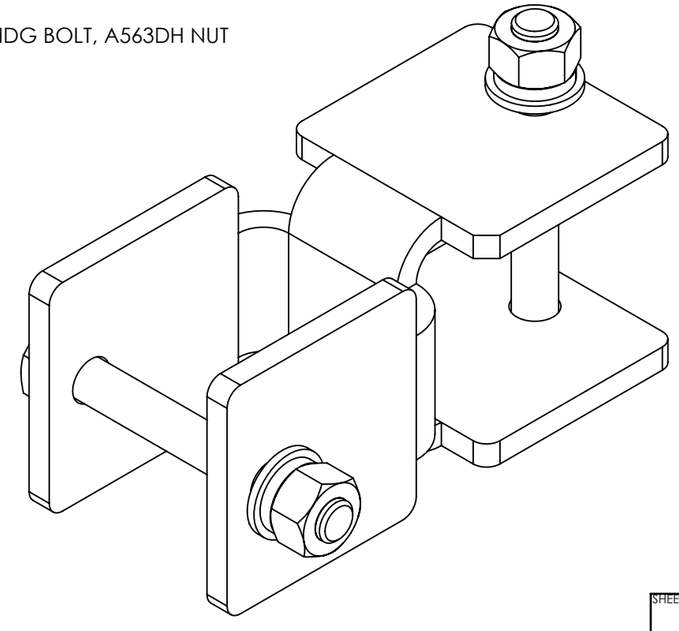
Table 2: Crossover Configurations and Capacities (Square Tube)

Part Number	Weight	Pipe 1 Size (Vertical)	Tube 2 Size (Horizontal)	Pipe 1 Bolt Size	Tube 2 Bolt Size	Available Sliding Strength (Φ=0.7)			Available Torsional Strength (Φ=0.7)		Available Lateral Twist Strength (Φ=0.9)
						ΦRns (X)	ΦRns (Y)	ΦRns (Z)	ΦRnr (X)	ΦRnr (Y)	ΦRnl (Z)
	lbs	*in*	*in*	*in*	*in*	*kip*	*kip*	*kip*	*kip-in*	*kip-in*	*kip-in*
PV-XP-DC-2030	8.1	∅2.375	HSS 3.5x3.5	∅5/8 x 4-1/2	∅5/8 x 5-1/2	3.85	3.85	Fixed	8.4	6.0	14.0
PV-XP-DC-2530	9.3	∅2.875	HSS 3.5x3.5	∅5/8 x 5	∅5/8 x 5-1/2	3.85	3.85	Fixed	8.4	6.0	20.0
PV-XP-DC-3030	10.7	∅3.5	HSS 3.5x3.5	∅5/8 x 5-1/2	∅5/8 x 5-1/2	3.85	3.85	Fixed	8.4	6.8	27.0

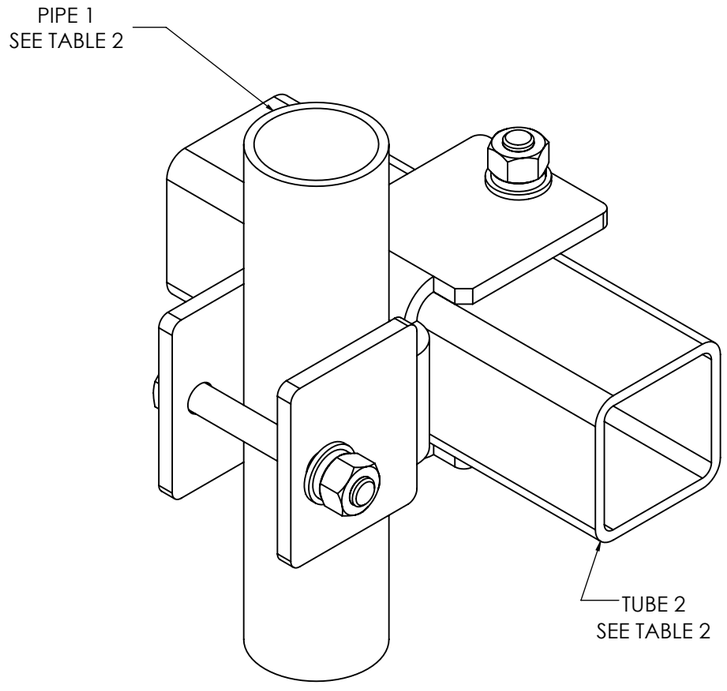


NOTES:

- CAPACITY VALUES EXPERIMENTALLY DETERMINED
- INSTALLATION REQUIREMENTS:
  - MINIMUM BOLT TORQUE: 100 FT-LBS
  - CLEAN, DRY ASSEMBLY
  - GALVANIZED BRACKET AND HARDWARE
  - COLORED WAX COATING ON NUTS
- MATERIALS
  - BRACKET: A36 HDG
  - HARDWARE: A325 HDG BOLT, A563DH NUT



PV-XP-DC
DUALCROSS 90° CROSSOVER



SHEET: 2 OF 3	THIRD ANGLE PROJECTION	CATEGORY: 06_Pipe & Attachment HW	4		
		SERIES: 01_Crossovers	3		
5/13/2021	SCALE: 1:2	TYPE: PV-XP-DC_DualCross	2	ADDED RECT TUBE	5/13/21
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE ±1/4°, BEND ±2° ALL OTHERS: ±1/16"		BY: DJN	1	ADDED CAPACITIES	7/23/19
		CHECKED: SJS	0	INITIAL RELEASE	11/8/18
		STATUS: APPROVED	REV	DESCRIPTION	DATE

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DUALCROSS 90DEG CROSSOVER BRACKET

DOCUMENT NUMBER: XP-ENG-01-R2 | REV: 2

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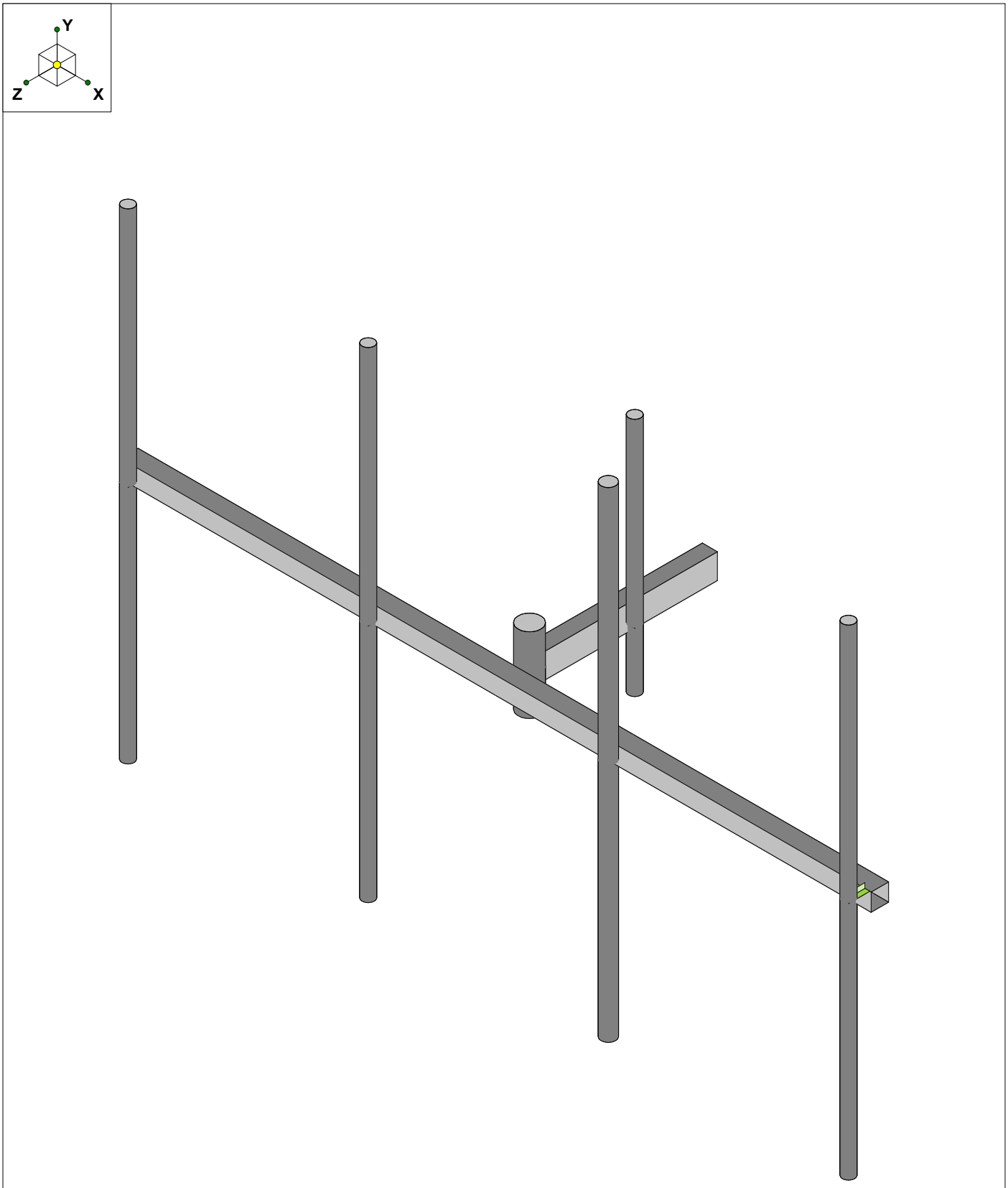
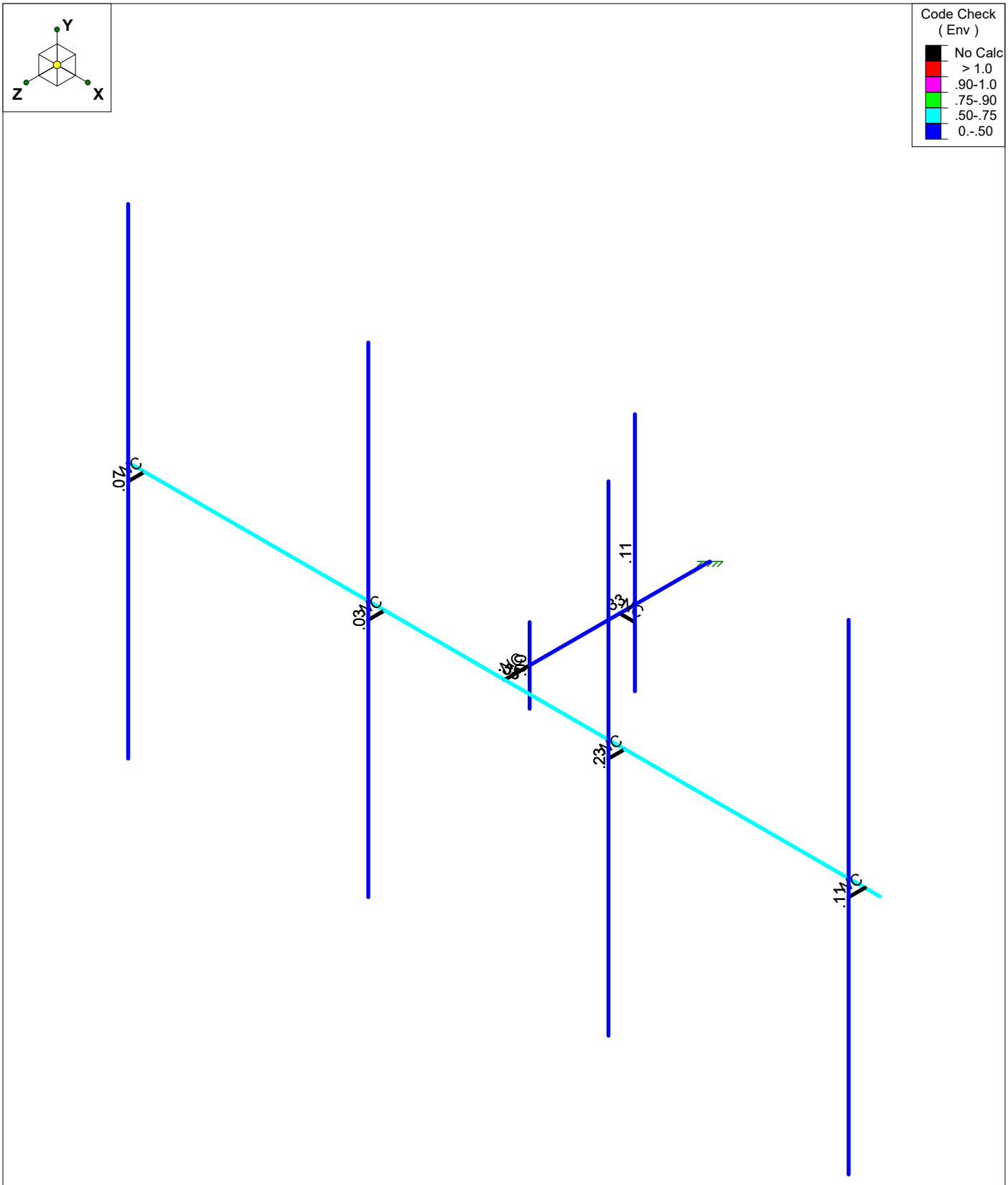


Colliers Engineering & De...	5000927259-VZW_MT_LOT_SectorB_H	SK - 4
		Dec 21, 2023 at 10:44 AM
		5000927259-VZW_MT_LOT_B_...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Colliers Engineering & De...	5000927259-VZW_MT_LOT_SectorB_H	SK - 5
		Dec 21, 2023 at 10:44 AM
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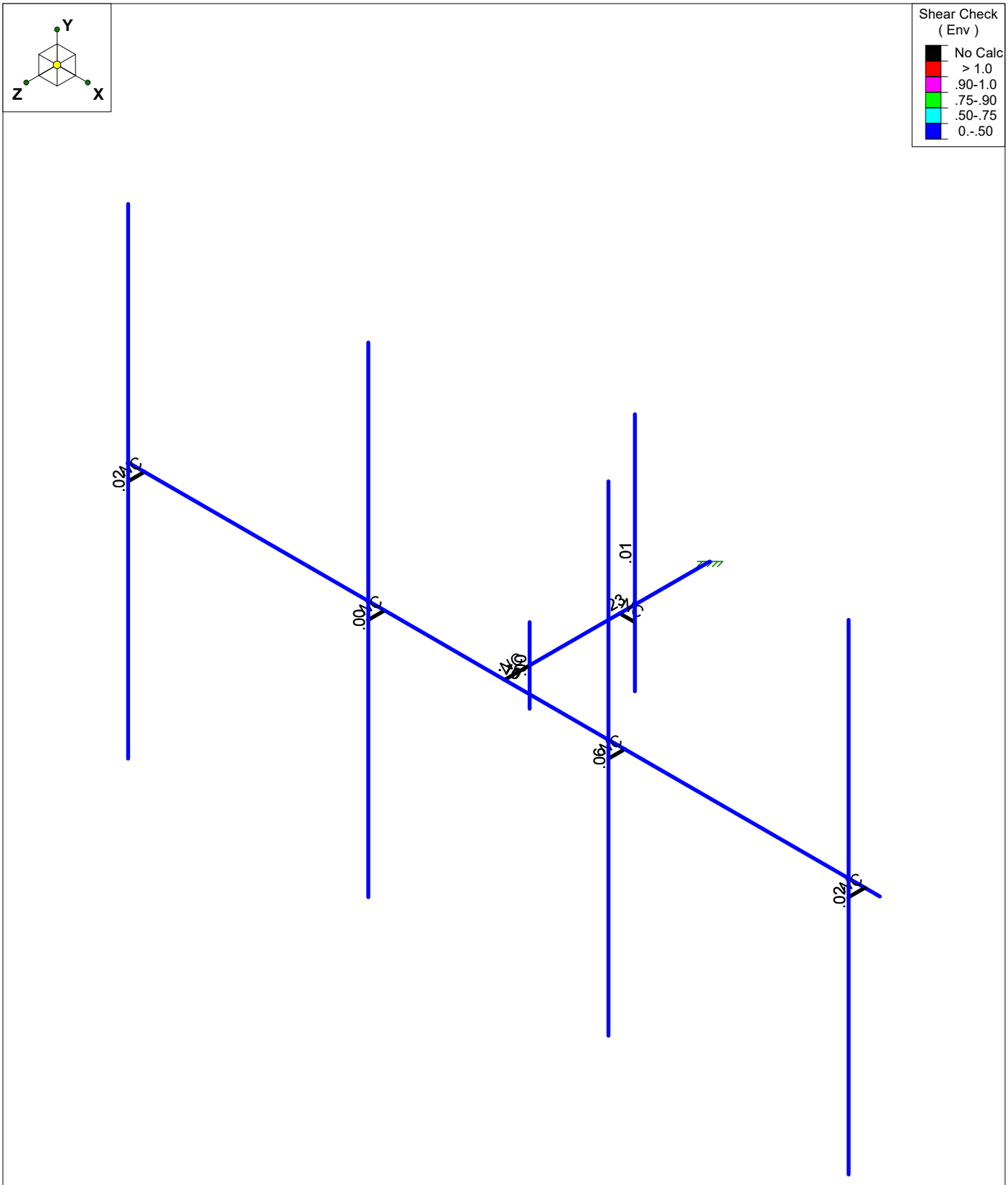


Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Colliers Engineering & De...	5000927259-VZW_MT_LOT_SectorB_H	SK - 6
		Dec 21, 2023 at 10:44 AM
		5000927259-VZW_MT_LOT_B_...

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
59	Structure Wi (180 Deg)	None						16		
60	Structure Wi (210 Deg)	None						16		
61	Structure Wi (240 Deg)	None						16		
62	Structure Wi (270 Deg)	None						16		
63	Structure Wi (300 Deg)	None						16		
64	Structure Wi (330 Deg)	None						16		
65	Structure Wm (0 Deg)	None						16		
66	Structure Wm (30 Deg)	None						16		
67	Structure Wm (60 Deg)	None						16		
68	Structure Wm (90 Deg)	None						16		
69	Structure Wm (120 Deg)	None						16		
70	Structure Wm (150 Deg)	None						16		
71	Structure Wm (180 Deg)	None						16		
72	Structure Wm (210 Deg)	None						16		
73	Structure Wm (240 Deg)	None						16		
74	Structure Wm (270 Deg)	None						16		
75	Structure Wm (300 Deg)	None						16		
76	Structure Wm (330 Deg)	None						16		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					27			
82	Antenna Eh (0 Deg)	None					18			
83	Antenna Eh (90 Deg)	None					18			
84	Structure Ev	ELY		-.04						
85	Structure Eh (0 Deg)	ELZ			-.101					
86	Structure Eh (90 Deg)	ELX	.101							

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 D...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 D...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 D...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 ...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 ...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 ...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 ...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 ...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 ...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 ...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 ...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
27	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX					
53	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5	ELZ	.866	ELX	.5				
54	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866	ELZ	.5	ELX	.866				
55	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1				
56	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866	ELZ	-.5	ELX	.866				
57	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5	ELZ	-.866	ELX	.5				
58	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX					
59	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5				
60	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866				
61	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1				
62	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866	ELZ	.5	ELX	-.866				
63	1.2D + 1.0Ev + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5	ELZ	.866	ELX	-.5				
64	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX					
65	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5	ELZ	.866	ELX	.5				
66	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866	ELZ	.5	ELX	.866				
67	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1				
68	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866	ELZ	-.5	ELX	.866				
69	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5	ELZ	-.866	ELX	.5				
70	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX					
71	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5				
72	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866				
73	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1				
74	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866	ELZ	.5	ELX	-.866				
75	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5	ELZ	.866	ELX	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	HSS3.5X3.5X3	Beam	SquareT...	A500 Gr. B 46	Typical	2.24	4.05	4.05	6.56
3	Mast Pipe	PIPE_4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
4	Standoff Horizontal	HSS5X3X6	Beam	SquareT...	A500 Gr. B 46	Typical	4.78	6.25	14.1	14.9
5	Dual Pipe	PIPE_2.5	Beam	SquareT...	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Standoff Horiz...	Beam	SquareTube	A500 Gr. ...	Typical
2	M2	N3	N4			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
3	M3	N2	N5			RIGID	None	None	RIGID	Typical
4	FACE	N7	N6			Face Horizontal	Beam	SquareTube	A500 Gr. ...	Typical
5	LL	N8	N9			RIGID	None	None	RIGID	Typical
6	MP4A	N10	N11			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
7	M7	N12	N13			RIGID	None	None	RIGID	Typical
8	MP3A	N14	N15			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
9	L	N16	N17			RIGID	None	None	RIGID	Typical
10	MP2A	N18	N19			Dual Pipe	Beam	SquareTube	A53 Gr. B	Typical
11	M11	N20	N21			RIGID	None	None	RIGID	Typical
12	MP1A	N22	N23			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
13	M13	N24	N25			RIGID	None	None	RIGID	Typical
14	OVP	N27	N26			Mount Pipe	Column	Pipe	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	FACE						Yes				None
5	LL						Yes	** NA **			None
6	MP4A						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	MP3A						Yes	** NA **			None
9	L						Yes	** NA **			None
10	MP2A						Yes				None
11	M11						Yes	** NA **			None
12	MP1A						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	OVP						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-28.65	3
2	MP4A	My	-.019	3
3	MP4A	Mz	0	3
4	MP4A	Y	-28.65	5
5	MP4A	My	-.019	5
6	MP4A	Mz	0	5
7	OVP	Y	-32	1
8	OVP	My	0	1
9	OVP	Mz	0	1
10	MP2A	Y	-74.7	2
11	MP2A	My	.037	2
12	MP2A	Mz	0	2
13	MP1A	Y	-79.1	2
14	MP1A	My	.04	2
15	MP1A	Mz	0	2
16	MP2A	Y	-38.5	2
17	MP2A	My	-.026	2
18	MP2A	Mz	.026	2
19	MP2A	Y	-38.5	6
20	MP2A	My	-.026	6
21	MP2A	Mz	.026	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP2A	Y	-38.5	2
23	MP2A	My	-.026	2
24	MP2A	Mz	-.026	2
25	MP2A	Y	-38.5	6
26	MP2A	My	-.026	6
27	MP2A	Mz	-.026	6

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-28.719	3
2	MP4A	My	-.019	3
3	MP4A	Mz	0	3
4	MP4A	Y	-28.719	5
5	MP4A	My	-.019	5
6	MP4A	Mz	0	5
7	OVP	Y	-84.855	1
8	OVP	My	0	1
9	OVP	Mz	0	1
10	MP2A	Y	-43.29	2
11	MP2A	My	.022	2
12	MP2A	Mz	0	2
13	MP1A	Y	-43.75	2
14	MP1A	My	.022	2
15	MP1A	Mz	0	2
16	MP2A	Y	-79.156	2
17	MP2A	My	-.053	2
18	MP2A	Mz	.053	2
19	MP2A	Y	-79.156	6
20	MP2A	My	-.053	6
21	MP2A	Mz	.053	6
22	MP2A	Y	-79.156	2
23	MP2A	My	-.053	2
24	MP2A	Mz	-.053	2
25	MP2A	Y	-79.156	6
26	MP2A	My	-.053	6
27	MP2A	Mz	-.053	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	3
2	MP4A	Z	-52.011	3
3	MP4A	Mx	0	3
4	MP4A	X	0	5
5	MP4A	Z	-52.011	5
6	MP4A	Mx	0	5
7	OVP	X	0	1
8	OVP	Z	-84.566	1
9	OVP	Mx	0	1
10	MP2A	X	0	2
11	MP2A	Z	-42.542	2
12	MP2A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	-51.325	2
15	MP1A	Mx	0	2
16	MP2A	X	0	2
17	MP2A	Z	-159.328	2
18	MP2A	Mx	-.106	2
19	MP2A	X	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP2A	Z	-159.328	6
21	MP2A	Mx	-.106	6
22	MP2A	X	0	2
23	MP2A	Z	-159.328	2
24	MP2A	Mx	.106	2
25	MP2A	X	0	6
26	MP2A	Z	-159.328	6
27	MP2A	Mx	.106	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	22.008	3
2	MP4A	Z	-38.12	3
3	MP4A	Mx	-.015	3
4	MP4A	X	22.008	5
5	MP4A	Z	-38.12	5
6	MP4A	Mx	-.015	5
7	OVP	X	37.383	1
8	OVP	Z	-64.748	1
9	OVP	Mx	0	1
10	MP2A	X	19.521	2
11	MP2A	Z	-33.812	2
12	MP2A	Mx	.01	2
13	MP1A	X	23.621	2
14	MP1A	Z	-40.913	2
15	MP1A	Mx	.012	2
16	MP2A	X	73.396	2
17	MP2A	Z	-127.126	2
18	MP2A	Mx	-.134	2
19	MP2A	X	73.396	6
20	MP2A	Z	-127.126	6
21	MP2A	Mx	-.134	6
22	MP2A	X	73.396	2
23	MP2A	Z	-127.126	2
24	MP2A	Mx	.036	2
25	MP2A	X	73.396	6
26	MP2A	Z	-127.126	6
27	MP2A	Mx	.036	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	24.272	3
2	MP4A	Z	-14.014	3
3	MP4A	Mx	-.016	3
4	MP4A	X	24.272	5
5	MP4A	Z	-14.014	5
6	MP4A	Mx	-.016	5
7	OVP	X	57.829	1
8	OVP	Z	-33.388	1
9	OVP	Mx	0	1
10	MP2A	X	27.751	2
11	MP2A	Z	-16.022	2
12	MP2A	Mx	.014	2
13	MP1A	X	33.842	2
14	MP1A	Z	-19.539	2
15	MP1A	Mx	.017	2
16	MP2A	X	105.413	2
17	MP2A	Z	-60.86	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2A	Mx	-.111	2
19	MP2A	X	105.413	6
20	MP2A	Z	-60.86	6
21	MP2A	Mx	-.111	6
22	MP2A	X	105.413	2
23	MP2A	Z	-60.86	2
24	MP2A	Mx	-.03	2
25	MP2A	X	105.413	6
26	MP2A	Z	-60.86	6
27	MP2A	Mx	-.03	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	20.032	3
2	MP4A	Z	0	3
3	MP4A	Mx	-.013	3
4	MP4A	X	20.032	5
5	MP4A	Z	0	5
6	MP4A	Mx	-.013	5
7	OVP	X	68.587	1
8	OVP	Z	0	1
9	OVP	Mx	0	1
10	MP2A	X	28.545	2
11	MP2A	Z	0	2
12	MP2A	Mx	.014	2
13	MP1A	X	34.995	2
14	MP1A	Z	0	2
15	MP1A	Mx	.017	2
16	MP2A	X	109.185	2
17	MP2A	Z	0	2
18	MP2A	Mx	-.073	2
19	MP2A	X	109.185	6
20	MP2A	Z	0	6
21	MP2A	Mx	-.073	6
22	MP2A	X	109.185	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.073	2
25	MP2A	X	109.185	6
26	MP2A	Z	0	6
27	MP2A	Mx	-.073	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	24.272	3
2	MP4A	Z	14.014	3
3	MP4A	Mx	-.016	3
4	MP4A	X	24.272	5
5	MP4A	Z	14.014	5
6	MP4A	Mx	-.016	5
7	OVP	X	67.885	1
8	OVP	Z	39.194	1
9	OVP	Mx	0	1
10	MP2A	X	27.751	2
11	MP2A	Z	16.022	2
12	MP2A	Mx	.014	2
13	MP1A	X	33.842	2
14	MP1A	Z	19.539	2
15	MP1A	Mx	.017	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP2A	X	105.413	2
17	MP2A	Z	60.86	2
18	MP2A	Mx	-.03	2
19	MP2A	X	105.413	6
20	MP2A	Z	60.86	6
21	MP2A	Mx	-.03	6
22	MP2A	X	105.413	2
23	MP2A	Z	60.86	2
24	MP2A	Mx	-.111	2
25	MP2A	X	105.413	6
26	MP2A	Z	60.86	6
27	MP2A	Mx	-.111	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	22.008	3
2	MP4A	Z	38.12	3
3	MP4A	Mx	-.015	3
4	MP4A	X	22.008	5
5	MP4A	Z	38.12	5
6	MP4A	Mx	-.015	5
7	OVP	X	43.188	1
8	OVP	Z	74.805	1
9	OVP	Mx	0	1
10	MP2A	X	19.521	2
11	MP2A	Z	33.812	2
12	MP2A	Mx	.01	2
13	MP1A	X	23.621	2
14	MP1A	Z	40.913	2
15	MP1A	Mx	.012	2
16	MP2A	X	73.396	2
17	MP2A	Z	127.126	2
18	MP2A	Mx	.036	2
19	MP2A	X	73.396	6
20	MP2A	Z	127.126	6
21	MP2A	Mx	.036	6
22	MP2A	X	73.396	2
23	MP2A	Z	127.126	2
24	MP2A	Mx	-.134	2
25	MP2A	X	73.396	6
26	MP2A	Z	127.126	6
27	MP2A	Mx	-.134	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	3
2	MP4A	Z	52.011	3
3	MP4A	Mx	0	3
4	MP4A	X	0	5
5	MP4A	Z	52.011	5
6	MP4A	Mx	0	5
7	OVP	X	0	1
8	OVP	Z	84.566	1
9	OVP	Mx	0	1
10	MP2A	X	0	2
11	MP2A	Z	42.542	2
12	MP2A	Mx	0	2
13	MP1A	X	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP1A	Z	51.325	2
15	MP1A	Mx	0	2
16	MP2A	X	0	2
17	MP2A	Z	159.328	2
18	MP2A	Mx	.106	2
19	MP2A	X	0	6
20	MP2A	Z	159.328	6
21	MP2A	Mx	.106	6
22	MP2A	X	0	2
23	MP2A	Z	159.328	2
24	MP2A	Mx	-.106	2
25	MP2A	X	0	6
26	MP2A	Z	159.328	6
27	MP2A	Mx	-.106	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-22.008	3
2	MP4A	Z	38.12	3
3	MP4A	Mx	.015	3
4	MP4A	X	-22.008	5
5	MP4A	Z	38.12	5
6	MP4A	Mx	.015	5
7	OVP	X	-37.383	1
8	OVP	Z	64.748	1
9	OVP	Mx	0	1
10	MP2A	X	-19.521	2
11	MP2A	Z	33.812	2
12	MP2A	Mx	-.01	2
13	MP1A	X	-23.621	2
14	MP1A	Z	40.913	2
15	MP1A	Mx	-.012	2
16	MP2A	X	-73.396	2
17	MP2A	Z	127.126	2
18	MP2A	Mx	.134	2
19	MP2A	X	-73.396	6
20	MP2A	Z	127.126	6
21	MP2A	Mx	.134	6
22	MP2A	X	-73.396	2
23	MP2A	Z	127.126	2
24	MP2A	Mx	-.036	2
25	MP2A	X	-73.396	6
26	MP2A	Z	127.126	6
27	MP2A	Mx	-.036	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-24.272	3
2	MP4A	Z	14.014	3
3	MP4A	Mx	.016	3
4	MP4A	X	-24.272	5
5	MP4A	Z	14.014	5
6	MP4A	Mx	.016	5
7	OVP	X	-57.829	1
8	OVP	Z	33.388	1
9	OVP	Mx	0	1
10	MP2A	X	-27.751	2
11	MP2A	Z	16.022	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP2A	Mx	-.014	2
13	MP1A	X	-33.842	2
14	MP1A	Z	19.539	2
15	MP1A	Mx	-.017	2
16	MP2A	X	-105.413	2
17	MP2A	Z	60.86	2
18	MP2A	Mx	.111	2
19	MP2A	X	-105.413	6
20	MP2A	Z	60.86	6
21	MP2A	Mx	.111	6
22	MP2A	X	-105.413	2
23	MP2A	Z	60.86	2
24	MP2A	Mx	.03	2
25	MP2A	X	-105.413	6
26	MP2A	Z	60.86	6
27	MP2A	Mx	.03	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-20.032	3
2	MP4A	Z	0	3
3	MP4A	Mx	.013	3
4	MP4A	X	-20.032	5
5	MP4A	Z	0	5
6	MP4A	Mx	.013	5
7	OVP	X	-68.587	1
8	OVP	Z	0	1
9	OVP	Mx	0	1
10	MP2A	X	-28.545	2
11	MP2A	Z	0	2
12	MP2A	Mx	-.014	2
13	MP1A	X	-34.995	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.017	2
16	MP2A	X	-109.185	2
17	MP2A	Z	0	2
18	MP2A	Mx	.073	2
19	MP2A	X	-109.185	6
20	MP2A	Z	0	6
21	MP2A	Mx	.073	6
22	MP2A	X	-109.185	2
23	MP2A	Z	0	2
24	MP2A	Mx	.073	2
25	MP2A	X	-109.185	6
26	MP2A	Z	0	6
27	MP2A	Mx	.073	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-24.272	3
2	MP4A	Z	-14.014	3
3	MP4A	Mx	.016	3
4	MP4A	X	-24.272	5
5	MP4A	Z	-14.014	5
6	MP4A	Mx	.016	5
7	OVP	X	-67.885	1
8	OVP	Z	-39.194	1
9	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP2A	X	-27.751	2
11	MP2A	Z	-16.022	2
12	MP2A	Mx	-.014	2
13	MP1A	X	-33.842	2
14	MP1A	Z	-19.539	2
15	MP1A	Mx	-.017	2
16	MP2A	X	-105.413	2
17	MP2A	Z	-60.86	2
18	MP2A	Mx	.03	2
19	MP2A	X	-105.413	6
20	MP2A	Z	-60.86	6
21	MP2A	Mx	.03	6
22	MP2A	X	-105.413	2
23	MP2A	Z	-60.86	2
24	MP2A	Mx	.111	2
25	MP2A	X	-105.413	6
26	MP2A	Z	-60.86	6
27	MP2A	Mx	.111	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-22.008	3
2	MP4A	Z	-38.12	3
3	MP4A	Mx	.015	3
4	MP4A	X	-22.008	5
5	MP4A	Z	-38.12	5
6	MP4A	Mx	.015	5
7	OVP	X	-43.188	1
8	OVP	Z	-74.805	1
9	OVP	Mx	0	1
10	MP2A	X	-19.521	2
11	MP2A	Z	-33.812	2
12	MP2A	Mx	-.01	2
13	MP1A	X	-23.621	2
14	MP1A	Z	-40.913	2
15	MP1A	Mx	-.012	2
16	MP2A	X	-73.396	2
17	MP2A	Z	-127.126	2
18	MP2A	Mx	-.036	2
19	MP2A	X	-73.396	6
20	MP2A	Z	-127.126	6
21	MP2A	Mx	-.036	6
22	MP2A	X	-73.396	2
23	MP2A	Z	-127.126	2
24	MP2A	Mx	.134	2
25	MP2A	X	-73.396	6
26	MP2A	Z	-127.126	6
27	MP2A	Mx	.134	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	3
2	MP4A	Z	-11.194	3
3	MP4A	Mx	0	3
4	MP4A	X	0	5
5	MP4A	Z	-11.194	5
6	MP4A	Mx	0	5
7	OVP	X	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	OVP	Z	-23.156	1
9	OVP	Mx	0	1
10	MP2A	X	0	2
11	MP2A	Z	-11.545	2
12	MP2A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	-11.545	2
15	MP1A	Mx	0	2
16	MP2A	X	0	2
17	MP2A	Z	-32.853	2
18	MP2A	Mx	-.022	2
19	MP2A	X	0	6
20	MP2A	Z	-32.853	6
21	MP2A	Mx	-.022	6
22	MP2A	X	0	2
23	MP2A	Z	-32.853	2
24	MP2A	Mx	.022	2
25	MP2A	X	0	6
26	MP2A	Z	-32.853	6
27	MP2A	Mx	.022	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	4.787	3
2	MP4A	Z	-8.291	3
3	MP4A	Mx	-.003	3
4	MP4A	X	4.787	5
5	MP4A	Z	-8.291	5
6	MP4A	Mx	-.003	5
7	OVP	X	10.358	1
8	OVP	Z	-17.94	1
9	OVP	Mx	0	1
10	MP2A	X	5.332	2
11	MP2A	Z	-9.235	2
12	MP2A	Mx	.003	2
13	MP1A	X	5.35	2
14	MP1A	Z	-9.266	2
15	MP1A	Mx	.003	2
16	MP2A	X	15.216	2
17	MP2A	Z	-26.354	2
18	MP2A	Mx	-.028	2
19	MP2A	X	15.216	6
20	MP2A	Z	-26.354	6
21	MP2A	Mx	-.028	6
22	MP2A	X	15.216	2
23	MP2A	Z	-26.354	2
24	MP2A	Mx	.007	2
25	MP2A	X	15.216	6
26	MP2A	Z	-26.354	6
27	MP2A	Mx	.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	5.485	3
2	MP4A	Z	-3.166	3
3	MP4A	Mx	-.004	3
4	MP4A	X	5.485	5
5	MP4A	Z	-3.166	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
6	MP4A	Mx	-.004	5
7	OVP	X	16.217	1
8	OVP	Z	-9.363	1
9	OVP	Mx	0	1
10	MP2A	X	7.709	2
11	MP2A	Z	-4.451	2
12	MP2A	Mx	.004	2
13	MP1A	X	7.8	2
14	MP1A	Z	-4.504	2
15	MP1A	Mx	.004	2
16	MP2A	X	22.159	2
17	MP2A	Z	-12.793	2
18	MP2A	Mx	-.023	2
19	MP2A	X	22.159	6
20	MP2A	Z	-12.793	6
21	MP2A	Mx	-.023	6
22	MP2A	X	22.159	2
23	MP2A	Z	-12.793	2
24	MP2A	Mx	-.006	2
25	MP2A	X	22.159	6
26	MP2A	Z	-12.793	6
27	MP2A	Mx	-.006	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	4.713	3
2	MP4A	Z	0	3
3	MP4A	Mx	-.003	3
4	MP4A	X	4.713	5
5	MP4A	Z	0	5
6	MP4A	Mx	-.003	5
7	OVP	X	19.177	1
8	OVP	Z	0	1
9	OVP	Mx	0	1
10	MP2A	X	8.02	2
11	MP2A	Z	0	2
12	MP2A	Mx	.004	2
13	MP1A	X	8.161	2
14	MP1A	Z	0	2
15	MP1A	Mx	.004	2
16	MP2A	X	23.164	2
17	MP2A	Z	0	2
18	MP2A	Mx	-.015	2
19	MP2A	X	23.164	6
20	MP2A	Z	0	6
21	MP2A	Mx	-.015	6
22	MP2A	X	23.164	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.015	2
25	MP2A	X	23.164	6
26	MP2A	Z	0	6
27	MP2A	Mx	-.015	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	5.485	3
2	MP4A	Z	3.166	3
3	MP4A	Mx	-.004	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP4A	X	5.485	5
5	MP4A	Z	3.166	5
6	MP4A	Mx	-.004	5
7	OVP	X	18.721	1
8	OVP	Z	10.809	1
9	OVP	Mx	0	1
10	MP2A	X	7.709	2
11	MP2A	Z	4.451	2
12	MP2A	Mx	.004	2
13	MP1A	X	7.8	2
14	MP1A	Z	4.504	2
15	MP1A	Mx	.004	2
16	MP2A	X	22.159	2
17	MP2A	Z	12.793	2
18	MP2A	Mx	-.006	2
19	MP2A	X	22.159	6
20	MP2A	Z	12.793	6
21	MP2A	Mx	-.006	6
22	MP2A	X	22.159	2
23	MP2A	Z	12.793	2
24	MP2A	Mx	-.023	2
25	MP2A	X	22.159	6
26	MP2A	Z	12.793	6
27	MP2A	Mx	-.023	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	4.787	3
2	MP4A	Z	8.291	3
3	MP4A	Mx	-.003	3
4	MP4A	X	4.787	5
5	MP4A	Z	8.291	5
6	MP4A	Mx	-.003	5
7	OVP	X	11.804	1
8	OVP	Z	20.444	1
9	OVP	Mx	0	1
10	MP2A	X	5.332	2
11	MP2A	Z	9.235	2
12	MP2A	Mx	.003	2
13	MP1A	X	5.35	2
14	MP1A	Z	9.266	2
15	MP1A	Mx	.003	2
16	MP2A	X	15.216	2
17	MP2A	Z	26.354	2
18	MP2A	Mx	.007	2
19	MP2A	X	15.216	6
20	MP2A	Z	26.354	6
21	MP2A	Mx	.007	6
22	MP2A	X	15.216	2
23	MP2A	Z	26.354	2
24	MP2A	Mx	-.028	2
25	MP2A	X	15.216	6
26	MP2A	Z	26.354	6
27	MP2A	Mx	-.028	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP4A	Z	11.194	3
3	MP4A	Mx	0	3
4	MP4A	X	0	5
5	MP4A	Z	11.194	5
6	MP4A	Mx	0	5
7	OVP	X	0	1
8	OVP	Z	23.156	1
9	OVP	Mx	0	1
10	MP2A	X	0	2
11	MP2A	Z	11.545	2
12	MP2A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	11.545	2
15	MP1A	Mx	0	2
16	MP2A	X	0	2
17	MP2A	Z	32.853	2
18	MP2A	Mx	.022	2
19	MP2A	X	0	6
20	MP2A	Z	32.853	6
21	MP2A	Mx	.022	6
22	MP2A	X	0	2
23	MP2A	Z	32.853	2
24	MP2A	Mx	-.022	2
25	MP2A	X	0	6
26	MP2A	Z	32.853	6
27	MP2A	Mx	-.022	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-4.787	3
2	MP4A	Z	8.291	3
3	MP4A	Mx	.003	3
4	MP4A	X	-4.787	5
5	MP4A	Z	8.291	5
6	MP4A	Mx	.003	5
7	OVP	X	-10.358	1
8	OVP	Z	17.94	1
9	OVP	Mx	0	1
10	MP2A	X	-5.332	2
11	MP2A	Z	9.235	2
12	MP2A	Mx	-.003	2
13	MP1A	X	-5.35	2
14	MP1A	Z	9.266	2
15	MP1A	Mx	-.003	2
16	MP2A	X	-15.216	2
17	MP2A	Z	26.354	2
18	MP2A	Mx	.028	2
19	MP2A	X	-15.216	6
20	MP2A	Z	26.354	6
21	MP2A	Mx	.028	6
22	MP2A	X	-15.216	2
23	MP2A	Z	26.354	2
24	MP2A	Mx	-.007	2
25	MP2A	X	-15.216	6
26	MP2A	Z	26.354	6
27	MP2A	Mx	-.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-5.485	3
2	MP4A	Z	3.166	3
3	MP4A	Mx	.004	3
4	MP4A	X	-5.485	5
5	MP4A	Z	3.166	5
6	MP4A	Mx	.004	5
7	OVP	X	-16.217	1
8	OVP	Z	9.363	1
9	OVP	Mx	0	1
10	MP2A	X	-7.709	2
11	MP2A	Z	4.451	2
12	MP2A	Mx	-.004	2
13	MP1A	X	-7.8	2
14	MP1A	Z	4.504	2
15	MP1A	Mx	-.004	2
16	MP2A	X	-22.159	2
17	MP2A	Z	12.793	2
18	MP2A	Mx	.023	2
19	MP2A	X	-22.159	6
20	MP2A	Z	12.793	6
21	MP2A	Mx	.023	6
22	MP2A	X	-22.159	2
23	MP2A	Z	12.793	2
24	MP2A	Mx	.006	2
25	MP2A	X	-22.159	6
26	MP2A	Z	12.793	6
27	MP2A	Mx	.006	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-4.713	3
2	MP4A	Z	0	3
3	MP4A	Mx	.003	3
4	MP4A	X	-4.713	5
5	MP4A	Z	0	5
6	MP4A	Mx	.003	5
7	OVP	X	-19.177	1
8	OVP	Z	0	1
9	OVP	Mx	0	1
10	MP2A	X	-8.02	2
11	MP2A	Z	0	2
12	MP2A	Mx	-.004	2
13	MP1A	X	-8.161	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.004	2
16	MP2A	X	-23.164	2
17	MP2A	Z	0	2
18	MP2A	Mx	.015	2
19	MP2A	X	-23.164	6
20	MP2A	Z	0	6
21	MP2A	Mx	.015	6
22	MP2A	X	-23.164	2
23	MP2A	Z	0	2
24	MP2A	Mx	.015	2
25	MP2A	X	-23.164	6
26	MP2A	Z	0	6
27	MP2A	Mx	.015	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-5.485	3
2	MP4A	Z	-3.166	3
3	MP4A	Mx	.004	3
4	MP4A	X	-5.485	5
5	MP4A	Z	-3.166	5
6	MP4A	Mx	.004	5
7	OVP	X	-18.721	1
8	OVP	Z	-10.809	1
9	OVP	Mx	0	1
10	MP2A	X	-7.709	2
11	MP2A	Z	-4.451	2
12	MP2A	Mx	-.004	2
13	MP1A	X	-7.8	2
14	MP1A	Z	-4.504	2
15	MP1A	Mx	-.004	2
16	MP2A	X	-22.159	2
17	MP2A	Z	-12.793	2
18	MP2A	Mx	.006	2
19	MP2A	X	-22.159	6
20	MP2A	Z	-12.793	6
21	MP2A	Mx	.006	6
22	MP2A	X	-22.159	2
23	MP2A	Z	-12.793	2
24	MP2A	Mx	.023	2
25	MP2A	X	-22.159	6
26	MP2A	Z	-12.793	6
27	MP2A	Mx	.023	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-4.787	3
2	MP4A	Z	-8.291	3
3	MP4A	Mx	.003	3
4	MP4A	X	-4.787	5
5	MP4A	Z	-8.291	5
6	MP4A	Mx	.003	5
7	OVP	X	-11.804	1
8	OVP	Z	-20.444	1
9	OVP	Mx	0	1
10	MP2A	X	-5.332	2
11	MP2A	Z	-9.235	2
12	MP2A	Mx	-.003	2
13	MP1A	X	-5.35	2
14	MP1A	Z	-9.266	2
15	MP1A	Mx	-.003	2
16	MP2A	X	-15.216	2
17	MP2A	Z	-26.354	2
18	MP2A	Mx	-.007	2
19	MP2A	X	-15.216	6
20	MP2A	Z	-26.354	6
21	MP2A	Mx	-.007	6
22	MP2A	X	-15.216	2
23	MP2A	Z	-26.354	2
24	MP2A	Mx	.028	2
25	MP2A	X	-15.216	6
26	MP2A	Z	-26.354	6
27	MP2A	Mx	.028	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	3
2	MP4A	Z	-3.54	3
3	MP4A	Mx	0	3
4	MP4A	X	0	5
5	MP4A	Z	-3.54	5
6	MP4A	Mx	0	5
7	OVP	X	0	1
8	OVP	Z	-5.755	1
9	OVP	Mx	0	1
10	MP2A	X	0	2
11	MP2A	Z	-2.895	2
12	MP2A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	-3.493	2
15	MP1A	Mx	0	2
16	MP2A	X	0	2
17	MP2A	Z	-10.843	2
18	MP2A	Mx	-.007	2
19	MP2A	X	0	6
20	MP2A	Z	-10.843	6
21	MP2A	Mx	-.007	6
22	MP2A	X	0	2
23	MP2A	Z	-10.843	2
24	MP2A	Mx	.007	2
25	MP2A	X	0	6
26	MP2A	Z	-10.843	6
27	MP2A	Mx	.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	1.498	3
2	MP4A	Z	-2.594	3
3	MP4A	Mx	-.000999	3
4	MP4A	X	1.498	5
5	MP4A	Z	-2.594	5
6	MP4A	Mx	-.000999	5
7	OVP	X	2.544	1
8	OVP	Z	-4.406	1
9	OVP	Mx	0	1
10	MP2A	X	1.328	2
11	MP2A	Z	-2.301	2
12	MP2A	Mx	.000664	2
13	MP1A	X	1.607	2
14	MP1A	Z	-2.784	2
15	MP1A	Mx	.000804	2
16	MP2A	X	4.995	2
17	MP2A	Z	-8.651	2
18	MP2A	Mx	-.009	2
19	MP2A	X	4.995	6
20	MP2A	Z	-8.651	6
21	MP2A	Mx	-.009	6
22	MP2A	X	4.995	2
23	MP2A	Z	-8.651	2
24	MP2A	Mx	.002	2
25	MP2A	X	4.995	6
26	MP2A	Z	-8.651	6
27	MP2A	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	1.652	3
2	MP4A	Z	-.954	3
3	MP4A	Mx	-.001	3
4	MP4A	X	1.652	5
5	MP4A	Z	-.954	5
6	MP4A	Mx	-.001	5
7	OVP	X	3.935	1
8	OVP	Z	-2.272	1
9	OVP	Mx	0	1
10	MP2A	X	1.889	2
11	MP2A	Z	-1.09	2
12	MP2A	Mx	.000944	2
13	MP1A	X	2.303	2
14	MP1A	Z	-1.33	2
15	MP1A	Mx	.001	2
16	MP2A	X	7.174	2
17	MP2A	Z	-4.142	2
18	MP2A	Mx	-.008	2
19	MP2A	X	7.174	6
20	MP2A	Z	-4.142	6
21	MP2A	Mx	-.008	6
22	MP2A	X	7.174	2
23	MP2A	Z	-4.142	2
24	MP2A	Mx	-.002	2
25	MP2A	X	7.174	6
26	MP2A	Z	-4.142	6
27	MP2A	Mx	-.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	1.363	3
2	MP4A	Z	0	3
3	MP4A	Mx	-.000909	3
4	MP4A	X	1.363	5
5	MP4A	Z	0	5
6	MP4A	Mx	-.000909	5
7	OVP	X	4.668	1
8	OVP	Z	0	1
9	OVP	Mx	0	1
10	MP2A	X	1.943	2
11	MP2A	Z	0	2
12	MP2A	Mx	.000972	2
13	MP1A	X	2.381	2
14	MP1A	Z	0	2
15	MP1A	Mx	.001	2
16	MP2A	X	7.43	2
17	MP2A	Z	0	2
18	MP2A	Mx	-.005	2
19	MP2A	X	7.43	6
20	MP2A	Z	0	6
21	MP2A	Mx	-.005	6
22	MP2A	X	7.43	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.005	2
25	MP2A	X	7.43	6
26	MP2A	Z	0	6
27	MP2A	Mx	-.005	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	1.652	3
2	MP4A	Z	.954	3
3	MP4A	Mx	-.001	3
4	MP4A	X	1.652	5
5	MP4A	Z	.954	5
6	MP4A	Mx	-.001	5
7	OVP	X	4.62	1
8	OVP	Z	2.667	1
9	OVP	Mx	0	1
10	MP2A	X	1.889	2
11	MP2A	Z	1.09	2
12	MP2A	Mx	.000944	2
13	MP1A	X	2.303	2
14	MP1A	Z	1.33	2
15	MP1A	Mx	.001	2
16	MP2A	X	7.174	2
17	MP2A	Z	4.142	2
18	MP2A	Mx	-.002	2
19	MP2A	X	7.174	6
20	MP2A	Z	4.142	6
21	MP2A	Mx	-.002	6
22	MP2A	X	7.174	2
23	MP2A	Z	4.142	2
24	MP2A	Mx	-.008	2
25	MP2A	X	7.174	6
26	MP2A	Z	4.142	6
27	MP2A	Mx	-.008	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	1.498	3
2	MP4A	Z	2.594	3
3	MP4A	Mx	-.000999	3
4	MP4A	X	1.498	5
5	MP4A	Z	2.594	5
6	MP4A	Mx	-.000999	5
7	OVP	X	2.939	1
8	OVP	Z	5.091	1
9	OVP	Mx	0	1
10	MP2A	X	1.328	2
11	MP2A	Z	2.301	2
12	MP2A	Mx	.000664	2
13	MP1A	X	1.607	2
14	MP1A	Z	2.784	2
15	MP1A	Mx	.000804	2
16	MP2A	X	4.995	2
17	MP2A	Z	8.651	2
18	MP2A	Mx	.002	2
19	MP2A	X	4.995	6
20	MP2A	Z	8.651	6
21	MP2A	Mx	.002	6
22	MP2A	X	4.995	2
23	MP2A	Z	8.651	2
24	MP2A	Mx	-.009	2
25	MP2A	X	4.995	6
26	MP2A	Z	8.651	6
27	MP2A	Mx	-.009	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	3
2	MP4A	Z	3.54	3
3	MP4A	Mx	0	3
4	MP4A	X	0	5
5	MP4A	Z	3.54	5
6	MP4A	Mx	0	5
7	OVP	X	0	1
8	OVP	Z	5.755	1
9	OVP	Mx	0	1
10	MP2A	X	0	2
11	MP2A	Z	2.895	2
12	MP2A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	3.493	2
15	MP1A	Mx	0	2
16	MP2A	X	0	2
17	MP2A	Z	10.843	2
18	MP2A	Mx	.007	2
19	MP2A	X	0	6
20	MP2A	Z	10.843	6
21	MP2A	Mx	.007	6
22	MP2A	X	0	2
23	MP2A	Z	10.843	2
24	MP2A	Mx	-.007	2
25	MP2A	X	0	6
26	MP2A	Z	10.843	6
27	MP2A	Mx	-.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-1.498	3
2	MP4A	Z	2.594	3
3	MP4A	Mx	.000999	3
4	MP4A	X	-1.498	5
5	MP4A	Z	2.594	5
6	MP4A	Mx	.000999	5
7	OVP	X	-2.544	1
8	OVP	Z	4.406	1
9	OVP	Mx	0	1
10	MP2A	X	-1.328	2
11	MP2A	Z	2.301	2
12	MP2A	Mx	-.000664	2
13	MP1A	X	-1.607	2
14	MP1A	Z	2.784	2
15	MP1A	Mx	-.000804	2
16	MP2A	X	-4.995	2
17	MP2A	Z	8.651	2
18	MP2A	Mx	.009	2
19	MP2A	X	-4.995	6
20	MP2A	Z	8.651	6
21	MP2A	Mx	.009	6
22	MP2A	X	-4.995	2
23	MP2A	Z	8.651	2
24	MP2A	Mx	-.002	2
25	MP2A	X	-4.995	6
26	MP2A	Z	8.651	6
27	MP2A	Mx	-.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-1.652	3
2	MP4A	Z	.954	3
3	MP4A	Mx	.001	3
4	MP4A	X	-1.652	5
5	MP4A	Z	.954	5
6	MP4A	Mx	.001	5
7	OVP	X	-3.935	1
8	OVP	Z	2.272	1
9	OVP	Mx	0	1
10	MP2A	X	-1.889	2
11	MP2A	Z	1.09	2
12	MP2A	Mx	-.000944	2
13	MP1A	X	-2.303	2
14	MP1A	Z	1.33	2
15	MP1A	Mx	-.001	2
16	MP2A	X	-7.174	2
17	MP2A	Z	4.142	2
18	MP2A	Mx	.008	2
19	MP2A	X	-7.174	6
20	MP2A	Z	4.142	6
21	MP2A	Mx	.008	6
22	MP2A	X	-7.174	2
23	MP2A	Z	4.142	2
24	MP2A	Mx	.002	2
25	MP2A	X	-7.174	6
26	MP2A	Z	4.142	6
27	MP2A	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-1.363	3
2	MP4A	Z	0	3
3	MP4A	Mx	.000909	3
4	MP4A	X	-1.363	5
5	MP4A	Z	0	5
6	MP4A	Mx	.000909	5
7	OVP	X	-4.668	1
8	OVP	Z	0	1
9	OVP	Mx	0	1
10	MP2A	X	-1.943	2
11	MP2A	Z	0	2
12	MP2A	Mx	-.000972	2
13	MP1A	X	-2.381	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.001	2
16	MP2A	X	-7.43	2
17	MP2A	Z	0	2
18	MP2A	Mx	.005	2
19	MP2A	X	-7.43	6
20	MP2A	Z	0	6
21	MP2A	Mx	.005	6
22	MP2A	X	-7.43	2
23	MP2A	Z	0	2
24	MP2A	Mx	.005	2
25	MP2A	X	-7.43	6
26	MP2A	Z	0	6
27	MP2A	Mx	.005	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-1.652	3
2	MP4A	Z	-.954	3
3	MP4A	Mx	.001	3
4	MP4A	X	-1.652	5
5	MP4A	Z	-.954	5
6	MP4A	Mx	.001	5
7	OVP	X	-4.62	1
8	OVP	Z	-2.667	1
9	OVP	Mx	0	1
10	MP2A	X	-1.889	2
11	MP2A	Z	-1.09	2
12	MP2A	Mx	-.000944	2
13	MP1A	X	-2.303	2
14	MP1A	Z	-1.33	2
15	MP1A	Mx	-.001	2
16	MP2A	X	-7.174	2
17	MP2A	Z	-4.142	2
18	MP2A	Mx	.002	2
19	MP2A	X	-7.174	6
20	MP2A	Z	-4.142	6
21	MP2A	Mx	.002	6
22	MP2A	X	-7.174	2
23	MP2A	Z	-4.142	2
24	MP2A	Mx	.008	2
25	MP2A	X	-7.174	6
26	MP2A	Z	-4.142	6
27	MP2A	Mx	.008	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-1.498	3
2	MP4A	Z	-2.594	3
3	MP4A	Mx	.000999	3
4	MP4A	X	-1.498	5
5	MP4A	Z	-2.594	5
6	MP4A	Mx	.000999	5
7	OVP	X	-2.939	1
8	OVP	Z	-5.091	1
9	OVP	Mx	0	1
10	MP2A	X	-1.328	2
11	MP2A	Z	-2.301	2
12	MP2A	Mx	-.000664	2
13	MP1A	X	-1.607	2
14	MP1A	Z	-2.784	2
15	MP1A	Mx	-.000804	2
16	MP2A	X	-4.995	2
17	MP2A	Z	-8.651	2
18	MP2A	Mx	-.002	2
19	MP2A	X	-4.995	6
20	MP2A	Z	-8.651	6
21	MP2A	Mx	-.002	6
22	MP2A	X	-4.995	2
23	MP2A	Z	-8.651	2
24	MP2A	Mx	.009	2
25	MP2A	X	-4.995	6
26	MP2A	Z	-8.651	6
27	MP2A	Mx	.009	6

Member Point Loads (BLC 77 : Lm1)

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

Member Point Loads (BLC 78 : Lm2)

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

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-1.155	3
2	MP4A	My	-.00077	3
3	MP4A	Mz	0	3
4	MP4A	Y	-1.155	5
5	MP4A	My	-.00077	5
6	MP4A	Mz	0	5
7	OVP	Y	-1.29	1
8	OVP	My	0	1
9	OVP	Mz	0	1
10	MP2A	Y	-3.012	2
11	MP2A	My	.002	2
12	MP2A	Mz	0	2
13	MP1A	Y	-3.189	2
14	MP1A	My	.002	2
15	MP1A	Mz	0	2
16	MP2A	Y	-1.552	2
17	MP2A	My	-.001	2
18	MP2A	Mz	.001	2
19	MP2A	Y	-1.552	6
20	MP2A	My	-.001	6
21	MP2A	Mz	.001	6
22	MP2A	Y	-1.552	2
23	MP2A	My	-.001	2
24	MP2A	Mz	-.001	2
25	MP2A	Y	-1.552	6
26	MP2A	My	-.001	6
27	MP2A	Mz	-.001	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Z	-2.888	3
2	MP4A	Mx	0	3
3	MP4A	Z	-2.888	5
4	MP4A	Mx	0	5
5	OVP	Z	-3.226	1
6	OVP	Mx	0	1
7	MP2A	Z	-7.53	2
8	MP2A	Mx	0	2
9	MP1A	Z	-7.973	2
10	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2A	Z	-3.881	2
12	MP2A	Mx	-.003	2
13	MP2A	Z	-3.881	6
14	MP2A	Mx	-.003	6
15	MP2A	Z	-3.881	2
16	MP2A	Mx	.003	2
17	MP2A	Z	-3.881	6
18	MP2A	Mx	.003	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	2.888	3
2	MP4A	Mx	-.002	3
3	MP4A	X	2.888	5
4	MP4A	Mx	-.002	5
5	OVP	X	3.226	1
6	OVP	Mx	0	1
7	MP2A	X	7.53	2
8	MP2A	Mx	.004	2
9	MP1A	X	7.973	2
10	MP1A	Mx	.004	2
11	MP2A	X	3.881	2
12	MP2A	Mx	-.003	2
13	MP2A	X	3.881	6
14	MP2A	Mx	-.003	6
15	MP2A	X	3.881	2
16	MP2A	Mx	-.003	2
17	MP2A	X	3.881	6
18	MP2A	Mx	-.003	6

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	892.212	10	1698.272	24	1297.138	1	-2.011	64	3.7	9	3.11	49
2		min	-892.212	4	597.271	68	-1297.138	7	-6.034	19	-3.697	3	-3.763	34
3	Totals:	max	892.212	10	1698.272	24	1297.138	1						
4		min	-892.212	4	597.271	68	-1297.138	7						

Joint Reactions

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N1	-.001	833.713	1297.138	-2.484	-1.102	.76
2	1	Totals:	-.001	833.713	1297.138			
3	1	COG (ft):	X: .909	Y: .555	Z: 3.34			
4	2	N1	-595.044	833.712	1030.683	-2.565	-3.187	.929
5	2	Totals:	-595.044	833.712	1030.683			
6	2	COG (ft):	X: .909	Y: .555	Z: 3.34			
7	3	N1	-855.315	833.712	493.854	-2.714	-3.697	1.014
8	3	Totals:	-855.315	833.712	493.854			
9	3	COG (ft):	X: .909	Y: .555	Z: 3.34			
10	4	N1	-892.212	833.711	.03	-2.862	-3.294	1.042
11	4	Totals:	-892.212	833.711	.03			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
12	4	COG (ft):	X: .909	Y: .555	Z: 3.34			
13	5	N1	-865.37	833.711	-499.601	-3.022	-2.725	1.034
14	5	Totals:	-865.37	833.711	-499.601			
15	5	COG (ft):	X: .909	Y: .555	Z: 3.34			
16	6	N1	-600.847	833.711	-1040.699	-3.178	-1.358	.941
17	6	Totals:	-600.847	833.711	-1040.699			
18	6	COG (ft):	X: .909	Y: .555	Z: 3.34			
19	7	N1	.001	833.711	-1297.138	-3.238	1.084	.76
20	7	Totals:	.001	833.711	-1297.138			
21	7	COG (ft):	X: .909	Y: .555	Z: 3.34			
22	8	N1	595.044	833.711	-1030.683	-3.158	3.171	.591
23	8	Totals:	595.044	833.711	-1030.683			
24	8	COG (ft):	X: .909	Y: .555	Z: 3.34			
25	9	N1	855.315	833.712	-493.854	-3.01	3.7	.505
26	9	Totals:	855.315	833.712	-493.854			
27	9	COG (ft):	X: .909	Y: .555	Z: 3.34			
28	10	N1	892.212	833.712	-.03	-2.862	3.307	.477
29	10	Totals:	892.212	833.712	-.03			
30	10	COG (ft):	X: .909	Y: .555	Z: 3.34			
31	11	N1	865.37	833.713	499.601	-2.702	2.739	.485
32	11	Totals:	865.37	833.713	499.601			
33	11	COG (ft):	X: .909	Y: .555	Z: 3.34			
34	12	N1	600.847	833.713	1040.699	-2.545	1.36	.579
35	12	Totals:	600.847	833.713	1040.699			
36	12	COG (ft):	X: .909	Y: .555	Z: 3.34			
37	13	N1	0	1698.272	328.327	-5.835	-.234	1.439
38	13	Totals:	0	1698.272	328.327			
39	13	COG (ft):	X: .844	Y: .486	Z: 3.326			
40	14	N1	-151.946	1698.272	263.18	-5.856	-.758	1.484
41	14	Totals:	-151.946	1698.272	263.18			
42	14	COG (ft):	X: .844	Y: .486	Z: 3.326			
43	15	N1	-223.347	1698.271	128.956	-5.894	-.92	1.508
44	15	Totals:	-223.347	1698.271	128.956			
45	15	COG (ft):	X: .844	Y: .486	Z: 3.326			
46	16	N1	-236.348	1698.271	.008	-5.935	-.849	1.516
47	16	Totals:	-236.348	1698.271	.008			
48	16	COG (ft):	X: .844	Y: .486	Z: 3.326			
49	17	N1	-225.851	1698.271	-130.388	-5.978	-.711	1.513
50	17	Totals:	-225.851	1698.271	-130.388			
51	17	COG (ft):	X: .844	Y: .486	Z: 3.326			
52	18	N1	-153.391	1698.271	-265.674	-6.018	-.368	1.487
53	18	Totals:	-153.391	1698.271	-265.674			
54	18	COG (ft):	X: .844	Y: .486	Z: 3.326			
55	19	N1	0	1698.271	-328.327	-6.034	.233	1.439
56	19	Totals:	0	1698.271	-328.327			
57	19	COG (ft):	X: .844	Y: .486	Z: 3.326			
58	20	N1	151.946	1698.271	-263.18	-6.013	.757	1.394
59	20	Totals:	151.946	1698.271	-263.18			
60	20	COG (ft):	X: .844	Y: .486	Z: 3.326			
61	21	N1	223.347	1698.271	-128.956	-5.975	.92	1.371
62	21	Totals:	223.347	1698.271	-128.956			
63	21	COG (ft):	X: .844	Y: .486	Z: 3.326			
64	22	N1	236.348	1698.272	-.008	-5.935	.85	1.362
65	22	Totals:	236.348	1698.272	-.008			
66	22	COG (ft):	X: .844	Y: .486	Z: 3.326			
67	23	N1	225.851	1698.272	130.388	-5.892	.712	1.366
68	23	Totals:	225.851	1698.272	130.388			
69	23	COG (ft):	X: .844	Y: .486	Z: 3.326			
70	24	N1	153.391	1698.272	265.674	-5.851	.369	1.392

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
71	24	Totals:	153.391	1698.272	265.674			
72	24	COG (ft):	X: .844	Y: .486	Z: 3.326			
73	25	N1	0	1583.657	88.276	-5.4	-.074	-3.744
74	25	Totals:	0	1583.657	88.276			
75	25	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
76	26	N1	-40.495	1583.657	70.139	-5.405	-.216	-3.732
77	26	Totals:	-40.495	1583.657	70.139			
78	26	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
79	27	N1	-58.208	1583.657	33.61	-5.415	-.252	-3.726
80	27	Totals:	-58.208	1583.657	33.61			
81	27	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
82	28	N1	-60.716	1583.657	.002	-5.425	-.225	-3.724
83	28	Totals:	-60.716	1583.657	.002			
84	28	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
85	29	N1	-58.893	1583.657	-34.001	-5.436	-.186	-3.725
86	29	Totals:	-58.893	1583.657	-34.001			
87	29	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
88	30	N1	-40.89	1583.657	-70.821	-5.446	-.092	-3.732
89	30	Totals:	-40.89	1583.657	-70.821			
90	30	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
91	31	N1	0	1583.657	-88.276	-5.45	.074	-3.744
92	31	Totals:	0	1583.657	-88.276			
93	31	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
94	32	N1	40.495	1583.657	-70.139	-5.445	.216	-3.755
95	32	Totals:	40.495	1583.657	-70.139			
96	32	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
97	33	N1	58.208	1583.657	-33.61	-5.435	.252	-3.761
98	33	Totals:	58.208	1583.657	-33.61			
99	33	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
100	34	N1	60.716	1583.657	-.002	-5.425	.225	-3.763
101	34	Totals:	60.716	1583.657	-.002			
102	34	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
103	35	N1	58.893	1583.657	34.001	-5.414	.186	-3.763
104	35	Totals:	58.893	1583.657	34.001			
105	35	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
106	36	N1	40.89	1583.657	70.821	-5.404	.092	-3.756
107	36	Totals:	40.89	1583.657	70.821			
108	36	COG (ft):	X: -2.363	Y: .292	Z: 3.376			
109	37	N1	0	1583.707	88.276	-5.4	-.074	2.263
110	37	Totals:	0	1583.707	88.276			
111	37	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
112	38	N1	-40.495	1583.707	70.139	-5.406	-.216	2.274
113	38	Totals:	-40.495	1583.707	70.139			
114	38	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
115	39	N1	-58.208	1583.707	33.61	-5.415	-.252	2.28
116	39	Totals:	-58.208	1583.707	33.61			
117	39	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
118	40	N1	-60.716	1583.707	.002	-5.425	-.225	2.282
119	40	Totals:	-60.716	1583.707	.002			
120	40	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
121	41	N1	-58.893	1583.707	-34.001	-5.436	-.186	2.281
122	41	Totals:	-58.893	1583.707	-34.001			
123	41	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
124	42	N1	-40.89	1583.707	-70.821	-5.447	-.092	2.275
125	42	Totals:	-40.89	1583.707	-70.821			
126	42	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
127	43	N1	0	1583.707	-88.276	-5.451	.074	2.263
128	43	Totals:	0	1583.707	-88.276			
129	43	COG (ft):	X: 1.426	Y: .292	Z: 3.376			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
130	44	N1	40.495	1583.707	-70.139	-5.445	.216	2.252
131	44	Totals:	40.495	1583.707	-70.139			
132	44	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
133	45	N1	58.208	1583.707	-33.61	-5.435	.252	2.246
134	45	Totals:	58.208	1583.707	-33.61			
135	45	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
136	46	N1	60.716	1583.707	-.002	-5.425	.225	2.244
137	46	Totals:	60.716	1583.707	-.002			
138	46	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
139	47	N1	58.893	1583.707	34.001	-5.415	.186	2.245
140	47	Totals:	58.893	1583.707	34.001			
141	47	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
142	48	N1	40.89	1583.707	70.821	-5.404	.092	2.251
143	48	Totals:	40.89	1583.707	70.821			
144	48	COG (ft):	X: 1.426	Y: .292	Z: 3.376			
145	49	N1	0	1208.7	0	-4.144	0	3.11
146	49	Totals:	0	1208.7	0			
147	49	COG (ft):	X: 2.566	Y: .383	Z: 3.364			
148	50	N1	0	1208.709	0	-4.144	0	.76
149	50	Totals:	0	1208.709	0			
150	50	COG (ft):	X: .627	Y: .383	Z: 3.364			
151	51	N1	0	972.664	0	-3.339	0	.888
152	51	Totals:	0	972.664	0			
153	51	COG (ft):	X: .909	Y: .555	Z: 3.34			
154	52	N1	0	861.725	70.035	-2.92	-.064	.786
155	52	Totals:	0	861.725	70.035			
156	52	COG (ft):	X: .909	Y: .555	Z: 3.34			
157	53	N1	-35.017	861.725	60.651	-2.925	-.175	.805
158	53	Totals:	-35.017	861.725	60.651			
159	53	COG (ft):	X: .909	Y: .555	Z: 3.34			
160	54	N1	-60.649	861.724	35.019	-2.939	-.24	.819
161	54	Totals:	-60.649	861.724	35.019			
162	54	COG (ft):	X: .909	Y: .555	Z: 3.34			
163	55	N1	-70.034	861.724	.002	-2.958	-.24	.824
164	55	Totals:	-70.034	861.724	.002			
165	55	COG (ft):	X: .909	Y: .555	Z: 3.34			
166	56	N1	-60.649	861.724	-35.016	-2.978	-.176	.819
167	56	Totals:	-60.649	861.724	-35.016			
168	56	COG (ft):	X: .909	Y: .555	Z: 3.34			
169	57	N1	-35.017	861.724	-60.649	-2.992	-.065	.805
170	57	Totals:	-35.017	861.724	-60.649			
171	57	COG (ft):	X: .909	Y: .555	Z: 3.34			
172	58	N1	0	861.724	-70.035	-2.997	.064	.786
173	58	Totals:	0	861.724	-70.035			
174	58	COG (ft):	X: .909	Y: .555	Z: 3.34			
175	59	N1	35.017	861.725	-60.651	-2.992	.175	.767
176	59	Totals:	35.017	861.725	-60.651			
177	59	COG (ft):	X: .909	Y: .555	Z: 3.34			
178	60	N1	60.649	861.725	-35.019	-2.978	.24	.753
179	60	Totals:	60.649	861.725	-35.019			
180	60	COG (ft):	X: .909	Y: .555	Z: 3.34			
181	61	N1	70.034	861.725	-.002	-2.958	.24	.748
182	61	Totals:	70.034	861.725	-.002			
183	61	COG (ft):	X: .909	Y: .555	Z: 3.34			
184	62	N1	60.649	861.725	35.016	-2.939	.176	.753
185	62	Totals:	60.649	861.725	35.016			
186	62	COG (ft):	X: .909	Y: .555	Z: 3.34			
187	63	N1	35.017	861.725	60.649	-2.925	.065	.767
188	63	Totals:	35.017	861.725	60.649			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
189	63	COG (ft):	X: .909	Y: .555	Z: 3.34			
190	64	N1	0	597.271	70.035	-2.011	-.064	.544
191	64	Totals:	0	597.271	70.035			
192	64	COG (ft):	X: .909	Y: .555	Z: 3.34			
193	65	N1	-35.017	597.271	60.651	-2.017	-.175	.564
194	65	Totals:	-35.017	597.271	60.651			
195	65	COG (ft):	X: .909	Y: .555	Z: 3.34			
196	66	N1	-60.649	597.271	35.019	-2.031	-.24	.578
197	66	Totals:	-60.649	597.271	35.019			
198	66	COG (ft):	X: .909	Y: .555	Z: 3.34			
199	67	N1	-70.034	597.271	.002	-2.05	-.24	.583
200	67	Totals:	-70.034	597.271	.002			
201	67	COG (ft):	X: .909	Y: .555	Z: 3.34			
202	68	N1	-60.649	597.271	-35.016	-2.07	-.176	.578
203	68	Totals:	-60.649	597.271	-35.016			
204	68	COG (ft):	X: .909	Y: .555	Z: 3.34			
205	69	N1	-35.017	597.271	-60.649	-2.084	-.065	.564
206	69	Totals:	-35.017	597.271	-60.649			
207	69	COG (ft):	X: .909	Y: .555	Z: 3.34			
208	70	N1	0	597.271	-70.035	-2.089	.064	.544
209	70	Totals:	0	597.271	-70.035			
210	70	COG (ft):	X: .909	Y: .555	Z: 3.34			
211	71	N1	35.017	597.271	-60.651	-2.084	.175	.525
212	71	Totals:	35.017	597.271	-60.651			
213	71	COG (ft):	X: .909	Y: .555	Z: 3.34			
214	72	N1	60.649	597.271	-35.019	-2.07	.24	.511
215	72	Totals:	60.649	597.271	-35.019			
216	72	COG (ft):	X: .909	Y: .555	Z: 3.34			
217	73	N1	70.034	597.271	-.002	-2.05	.24	.506
218	73	Totals:	70.034	597.271	-.002			
219	73	COG (ft):	X: .909	Y: .555	Z: 3.34			
220	74	N1	60.649	597.271	35.016	-2.031	.176	.511
221	74	Totals:	60.649	597.271	35.016			
222	74	COG (ft):	X: .909	Y: .555	Z: 3.34			
223	75	N1	35.017	597.271	60.649	-2.017	.065	.525
224	75	Totals:	35.017	597.271	60.649			
225	75	COG (ft):	X: .909	Y: .555	Z: 3.34			

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	M1	HSS5X3X6	.330	0	9	.234	0	y	34	185127.8...	197892	17.595	25.323	1....	H1-1b
2	M2	PIPE_4.0	.000	.625	6	.000	.625		6	92775.137	93240	10.631	10.631	1....	H1-1b
3	FACE	HSS3.5X3.5X3	.579	6.25	25	.104	6.25	y	19	40150.916	92736	9.522	9.522	1....	H1-1b
4	MP4A	PIPE_2.0	.070	4	7	.016	4		8	14916.096	32130	1.872	1.872	1....	H1-1b
5	MP3A	PIPE_2.0	.028	4	7	.003	4		7	14916.096	32130	1.872	1.872	1	H1-1b
6	MP2A	PIPE_2.5	.227	4	7	.065	4		5	30038.461	50715	3.596	3.596	1....	H1-1b
7	MP1A	PIPE_2.0	.112	4	1	.017	4		5	14916.096	32130	1.872	1.872	1....	H1-1b
8	OVP	PIPE_2.0	.108	3	6	.011	3		6	26521.424	32130	1.872	1.872	1....	H1-1b

VzW SMART Tool© Vendor

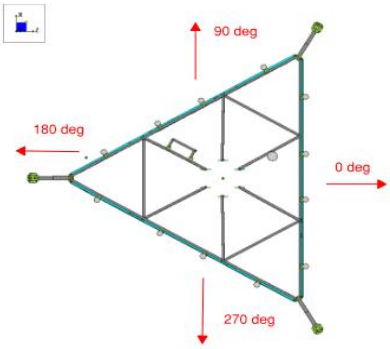
Client:	VERIZON WIRELESS	Date:	12/21/2023
Site Name:	WASHINGTON DEPOT CT		
MDG #:	5000927259		
Fuze ID #:	16737957	Page:	1

Version 2.00

I. Mount-to-Tower Connection Check

Custom Orientation Required — Yes

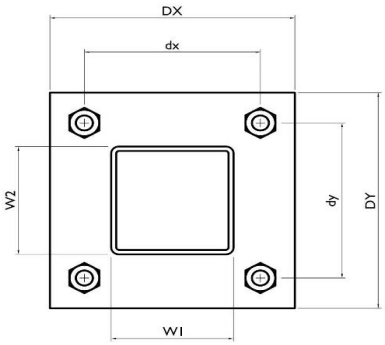
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N1	0



Tower Connection Bolt Checks — Yes

Bolt Orientation — Parallel

Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)*:	7
d_y (in) *(Delta Y of typ. bolt config. sketch)*:	7
Bolt Type:	A325N
Bolt Diameter (in):	0.75
Required Tensile Strength / bolt (kips):	4.9
Required Shear Strength / bolt (kips):	2.6
Tensile Capacity / bolt (kips):	29.8
Shear Capacity / bolt (kips):	17.9
Bolt Overall Utilization:	**19.9%**



Tower Connection Baseplate Checks — No

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Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:
209259

Site Name:
Washington 2

Location:
Washington, Connecticut

Tenants:
AT&T Mobility, T-Mobile, & Verizon Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

August 9th, 2023

260096 P-403779

Prepared By:

Adam Carlson MS, CBRE, CPI
Program Manager RF Design & Service
Tower Engineering Professionals

Approved By:

08/11/2023

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Contents

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Non-Ionizing Electromagnetic Radiation (NIER) Study

209259 Washington 2
Washington, Connecticut

INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

SITE AND FACILITY CONSIDERATIONS

Site 209259 Washington 2 is located at 10 Blackville Rd., in Washington, Connecticut at coordinates 41.646557, -73.316081. The support structure is a 135' monopine. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are AT&T Mobility (AT&T), T-Mobile (T-Mobile), & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.

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All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 209259 Washington 2.RF NIER Study 7/25/23.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the base of the tower and all compound access points to alert workers of potential exposure to RF fields while working on or near the antennae.

TEP recommends that all personnel working on this tower be trained in RF safety procedures and carry a personal RF monitor at all times.

COMPLIANCE DETERMINATION

This installation ***IS*** in compliance with current FCC MPE limits as described in FCC OET-65.

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APPENDIX 1 Site Photos

Aerial View of Site

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Appendix 2.1 Antenna Inventory

209259 Washington 2							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	AT&T	CCI	HPA-65R-BUU-H8	700/800/1900/2100	000	130517	126
2	AT&T	CCI	HPA-65R-BUU-H8	700/800/1900/2100	110	130517	126
3	AT&T	CCI	HPA-65R-BUU-H8	700/800/1900/2100	220	130517	126
4	AT&T	CCI	HPA-65R-BUU-H8	700/800/1900/2100	000	130517	126
5	AT&T	CCI	HPA-65R-BUU-H8	700/800/1900/2100	110	130517	126
6	AT&T	CCI	HPA-65R-BUU-H8	700/800/1900/2100	220	130517	126
7	AT&T	CCI	DMP65R-BU8D	700/800/1900/2100	000	130517	126
8	AT&T	CCI	DMP65R-BU8D	700/800/1900/2100	110	130517	126
9	AT&T	CCI	DMP65R-BU8D	700/800/1900/2100	220	130517	126
10	AT&T	CCI	DMP65R-BU8D	700/800/1900/2100	000	130517	126
11	AT&T	CCI	DMP65R-BU8D	700/800/1900/2100	110	130517	126
12	AT&T	CCI	DMP65R-BU8D	700/800/1900/2100	220	130517	126
13	T-Mobile	Ericsson	Air6419	25000/26000	030	24345	115
14	T-Mobile	Ericsson	Air6419	25000/26000	150	24345	115
15	T-Mobile	Ericsson	Air6419	25000/26000	270	24345	115
16	T-Mobile	RFS	APXVAALL24	600	030	12190	115
17	T-Mobile	RFS	APXVAALL24	600	150	12190	115
18	T-Mobile	RFS	APXVAALL24	600	270	12190	115
19	T-Mobile	Commscope	VV-65A-R1B	1900/2100	030	13150	115
20	T-Mobile	Commscope	VV-65A-R1B	1900/2100	150	13150	115
21	T-Mobile	Commscope	VV-65A-R1B	1900/2100	270	13150	115
22	Verizon	Samsung	MT6407-77A	3700/3800/3900	080	14245	100
23	Verizon	Samsung	MT6407-77A	3700/3800/3900	200	14245	100
24	Verizon	Samsung	MT6407-77A	3700/3800/3900	320	14245	100
25	Verizon	JMA	MX06FIT665-02	700/800/1900/2100	080	26630	100
26	Verizon	JMA	MX06FIT665-02	700/800/1900/2100	200	26630	100
27	Verizon	JMA	MX06FIT665-02	700/800/1900/2100	320	26630	100
28	Verizon	JMA	MX06FIT665-02	700/800/1900/2100	080	26630	100
29	Verizon	JMA	MX06FIT665-02	700/800/1900/2100	200	26630	100
30	Verizon	JMA	MX06FIT665-02	700/800/1900/2100	320	26630	100

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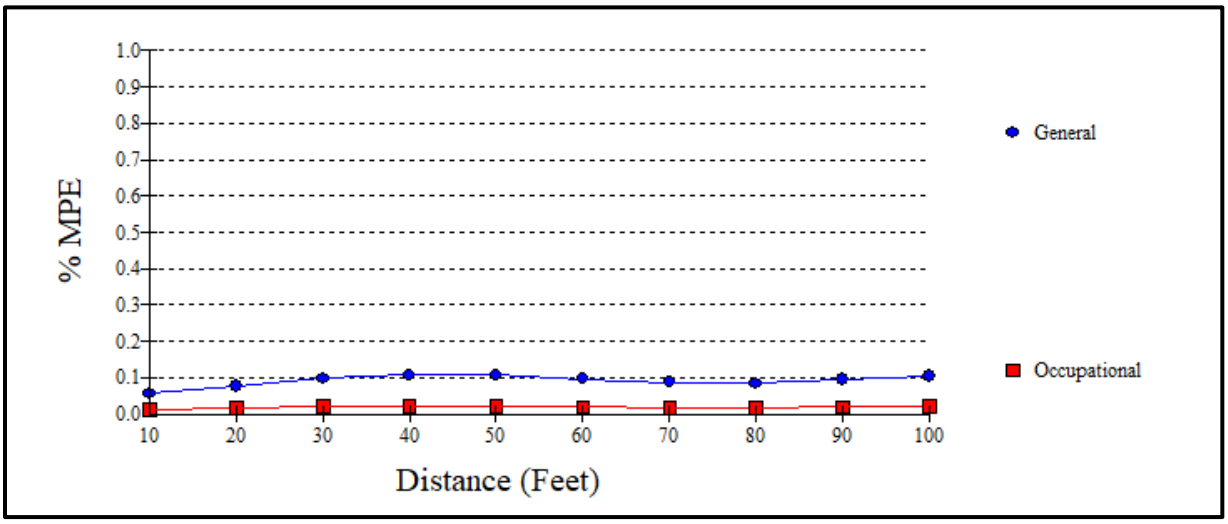
Appendix 3.1 MPE Limit Study



Maximum Power Density (@40'):	0.0007 mW/cm²
General Population MPE (@40'):	0.1073%
Occupational MPE (@40'):	0.0215%

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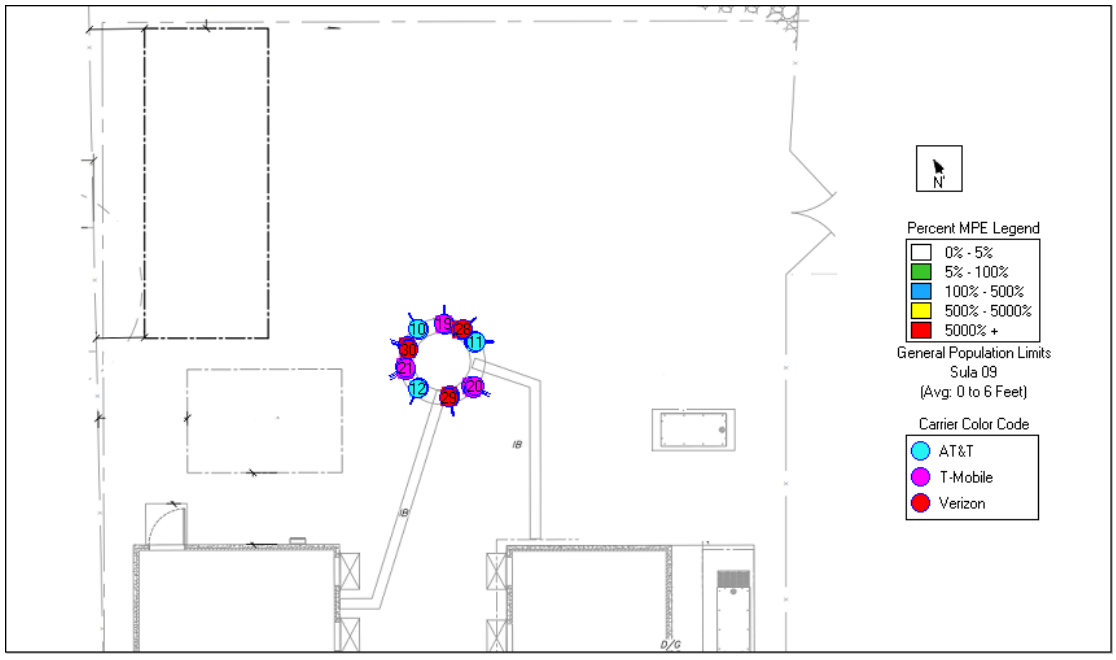
Appendix 3.2 MPE Limit Study



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Appendix 4 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

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MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

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

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.

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Appendix 5 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

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The FCC's limits for exposure at different frequencies are shown in the following Tables.

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

f = frequency

* = Plane-wave equivalent power density

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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.

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

f = frequency

* = Plane-wave equivalent power density

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.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

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The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex, and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature, but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

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Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered, and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

AMERICAN TOWER®
CORPORATION

LETTER OF AUTHORIZATION FOR PERMITTING

ATC SITE#/NAME/PROJECT: 209259 / Washington 2 / 14482869
SITE ADDRESS: 10 Blackville Rd, Washington Depot, CT 06794
APN: WASH M:0008 B:0007 L:23
LICENSEE: VERIZON WIRELESS d/b/a CELLCO PARTNERSHIP

I, Margaret Robinson, Vice President, UST Legal for American Tower*, owner of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize VERIZON WIRELESS d/b/a CELLCO PARTNERSHIP, its successors and assigns, and/or its agent, (collectively, the "Licensee") to act as American Tower's non-exclusive agent for the sole purpose of filing and consummating any land-use or building permit application(s) as may be required by the applicable permitting authorities for Licensee's telecommunications' installation.

I understand that these applications may be approved with conditions. The above authorization is limited to the acceptance by Licensee only of conditions related to Licensee's installation and any such conditions of approval or modifications will be Licensee's sole responsibility.

Signature:

Print Name: Margaret Robinson
Vice President, UST Legal
American Tower*

NOTARY BLOCK

Commonwealth of MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Vice President, UST Legal for American Tower*, personally known to me (or proved to me based on satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

WITNESS my hand and official seal, this 30th day of June 2023.

NOTARY SEAL

GERARD T. HEFFRON
Notary Public
Commonwealth of Massachusetts
My Commission Expires
August 9, 2024

Notary Public
My Commission Expires: August 9th, 2024

*American Tower includes all affiliates and subsidiaries of American Tower Corporation.

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

March 20, 2024

Cassandra Darmody
Agent for American Tower
c/o Pyramid Network Services, LLC
6615 Towpath Road
East Syracuse, NY 13057
cdarmody@pyramidns.com

RE: **TS-VER-150-240220** – Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 10 Blackville Road, Washington, Connecticut. **Notice of Incomplete Request**.

Dear Cassandra Darmody:

The Connecticut Siting Council (Council) received the tower share request for the above-referenced facility on February 20, 2024.

According to Section 16-50j-90 of the Regulations of Connecticut State Agencies, "no tower share application shall be approved until a complete application containing all information deemed relevant by the Council has been filed. Relevant information shall at a minimum include that listed in Section 16-50j-89 of the Regulations of Connecticut State Agencies…"

Staff has reviewed this tower share request for completeness and has identified a deficiency in the construction drawings last revised on January 22, 2024 provided with the filing. The construction drawings cite the 2018 Connecticut State Building Code (CSBC); however, the State of Connecticut has adopted the 2022 CSBC effective October 1, 2022.

Therefore, the tower share request is incomplete at this time. The Council recommends that Verizon provide updated construction drawings that comport with the current 2022 CSBC on or before April 19, 2024. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to April 19, 2024. **Please provide an electronic version and one hard copy of the requested information for the incomplete tower share filing to be rendered complete and processed. Please include the Council's tower share identification number referenced above with the submittal.**

This notice of incompletion shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/ANM/laf

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

April 26, 2024

Cassandra Darmody
Agent for American Tower
c/o Pyramid Network Services, LLC
6615 Towpath Road
East Syracuse, NY 13057
cdarmody@pyramidns.com

RE: **TS-VER-150-240220** – Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 10 Blackville Road, Washington, Connecticut. **Denial.**

Dear Cassandra Darmody:

The Connecticut Siting Council (Council) hereby denies your request to share the above-referenced existing telecommunications facility, pursuant to Section 16-50j-90 of the Regulations of Connecticut State Agencies.

This tower share request was submitted to the Council on February 20, 2024. Council staff reviewed this request for completeness and identified deficiencies that were more fully described in a notice of incompletion letter to the requesting entity dated March 20, 2024 and recommended that Verizon provide updated construction drawings that comport with the current 2022 Connecticut State Building Code on or before April 19, 2024.

To date the Council has not received the requested information.

Thus, the proposed tower share request is not in compliance with the criteria in Section 16-50j-89 of the Regulations of Connecticut State Agencies and is hereby denied.

Sincerely,

Melanie Bachman
Executive Director

MAB/ANM/laf

c: Council Members
The Honorable James L. Brinton, First Selectperson, Town of Washington
(selectman@washingtonct.org)

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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