Robinson+Cole

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Also admitted in Massachusetts

April 9, 2026

Via Electronic and U.S. Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
303 Slater Avenue, Griswold, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of a single canister antenna and a remote radio head ("RRH") on a rooftop tower. The antenna and tower are concealed inside a faux vent pipe. The RRH is attached to the ballast-mount frame. Associated equipment is located on the ground near the southeast corner of the building. The existing telecommunications facility was approved by the Siting Council ("Council") on November 17, 2015 (Petition No. 1187). A copy of the Council's Petition No. 1187 approval letter is included in Attachment 1.

Cellco now intends to modify its facility by removing its existing antenna and remote radio head ("RRH") and installing a new canister antenna inside the faux vent pipe and two (2) RRHs attached to the ballast-mount. The height of the antenna will be the same as the existing antenna. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's new antenna and RRHs are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Griswold's Chief Elected Official and Land Use Officer. The Town of Griswold is the owner of the Property.

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

The proposed modifications will not result in an increase in the height of the existing structure. Cellco's new antenna and RRHs will be installed at the same height on the rooftop tower.

1. The proposed modifications will not require the extension of the project site boundary.

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

3. The installation of Cellco's new cannister antenna and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Included in Attachment 3 is a far field approximation table demonstrating that the proposed modified facility will comply with the FCC safety standards. The modified facility will be capable of providing Cellco's 5G wireless service.

4. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

5. According to the attached Structural Analysis Report ("SA"), the existing antenna frame and host building can support Cellco's proposed modifications. A copy of the SA is included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Tina Falck, First Selectman
Mario J. Tristany, Jr., Town Planner
Nicole O'Brien, Verizon Wireless (via email)
Stan Gvinter, Verizon Wireless (via email)

ATTACHMENT 1

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
www.ct.gov/csc

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

November 17, 2015

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **PETITION NO. 1187** - Cellco Partnership d/b/a Verizon Wireless petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a small cell telecommunications facility on the roof of the existing Griswold High School located at 303 Slater Avenue, Griswold, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on November 12, 2015, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

- Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility 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 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 facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;

- Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of Griswold;

- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;

- The facility owner/operator 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;

- This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v; and

- If the facility owner/operator 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 facility within 30 days of the sale and/or transfer.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated September 2, 2015.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Robert Stein MAB

Robert Stein
Chairman

RS/CH/lm

Enclosure: Staff Report dated November 12, 2015

c: The Honorable Kevin A. Skulczyck, First Selectman, Town of Griswold
Mario J. Tristany, Jr, Town Planner, Town of Griswold

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
www.ct.gov/csc

Petition No. 1187
Cellco Partnership d/b/a Verizon Wireless
303 Slater Avenue, Griswold
Staff Report
November 12, 2015

On September 3, 2015, the Connecticut Siting Council (Council) received a petition from Cellco Partnership d/b/a Verizon Wireless (Cellco) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a small cell telecommunications facility attached to the roof of the Griswold High School at 303 Slater Avenue, Griswold, owned by the Town of Griswold. The facility would provide coverage to existing gaps in service, and capacity relief to Cellco's network in the 2100 MHz frequency range to western portions of Griswold and eastern portions of Lisbon, particularly the Griswold High School campus.

Specifically, Cellco would install a single canister-type antenna and remote radio head to the top of a small tower, attached to the roof of the existing building. The tower, antenna, remote radio head, and related equipment would all be concealed within a faux vent pipe-type structure. The top of the faux vent stack would extend to a height of approximately ten feet above the roof of the building, to an overall height of approximately 38.1 feet above ground level. Equipment associated with the facility would be located in two ground-mounted equipment cabinets located near the southeast corner of the building. Power and telephone service to this facility would extend from existing service on the property. The 49.74 -acre parcel is within Griswold's R-40 Residential zone district. The property is surrounded by educational uses including the Griswold Elementary and Middle School buildings as well as residential and commercial uses along Routes 138 and 164.

The visual impact of the project is expected to be negligible as the small cell facility would be concealed within a faux vent pipe and two equipment cabinets on the ground adjacent to the building. The placement of two equipment cabinets on the ground adjacent to the building, would not involve a significant alteration in the physical and environmental characteristics of the property.

The maximum worst-case power density would be 0.41 percent of the applicable limit using a -10 dB off-beam adjustment. No notice to the Federal Aviation Administration is required.

Notice was provided to Griswold's First Selectman Kevin A. Skulczyck. The Town of Griswold owns the Property. A copy of the Petition was also sent to Lisbon's First Selectman Thomas W. Sparkman, because portions of the Property are within 2,500 feet of the Lisbon/Griswold Town line. A copy of the Petition was also sent to the owners of land that abuts the Property. No comments have been received to date.

Cellco contends that this proposed project would not have a substantial adverse environmental effect.

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
5	HOST PROPERTY (24mm Focal Length)	WEST	+/- 108 FEET

ALL-POINTS TECHNOLOGY CORPORATION

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	HOST PROPERTY	NORTH	+/- 367 FEET

ALL-POINTS TECHNOLOGY CORPORATION

ATTACHMENT 2

verizon

JEWETT CITY CT SC 2

303 SLATER AVENUE
JEWETT CITY, CT 06351

PROJECT ID: 17037701
PSLC: 467513

VICINITY MAP N.T.S.

ENGINEER:
DEWBERRY ENGINEERS INC.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110

PHONE #: (617) 531-0800

CONTACT: BENJAMIN REVETTE, P.E.

CONSTRUCTION:
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

COORDINATES*:
LATITUDE: 41° 35' 43.25" (41.595348') N
LONGITUDE: 71° 58' 45.74" (-71.979372') W
*PER RFDS

GROUND ELEVATION*:
190'±
*PER GOOGLE EARTH

PROJECT INFORMATION

VZW LOCATION CODE (PSLC):	467513
PROJECT ID:	17037701

CONTRACTOR PMI REQUIREMENTS

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

- REMOVE & REPLACE (1) CANISTER ANTENNA ON EXISTING NON-PENETRATING BALLAST FRAME.
- REMOVE (1) EXISTING RRH ON EXISTING PIPE MAST.
- INSTALL (2) RRH UNITS ON EXISTING PIPE MAST.
- INSTALL (2) RECTIFIERS ON PROPOSED UNISTRUT FRAME.
- REMOVE AND REPLACE EXISTING POWER PANEL WITH NEW LOAD CENTER.
- INSTALL ADDITIONAL BALLAST BLOCKS PER BALLAST SCHEDULE.

NOTE:
1. SCOPE OF WORK BASED ON ANTENNA REC FOR JEWETT CITY CT SC2 DATED 07/08/25. VERIFY SCOPE OF WORK WITH FINAL RFDS PRIOR TO CONSTRUCTION.

SCOPE OF WORK

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
C-1	SITE PLAN
C-2	WEST ELEVATION & ANTENNA PLANS
C-3	CONSTRUCTION DETAILS
C-4	ELECTRICAL & GROUNDING DETAILS

SHEET INDEX

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

JEWETT CITY CT SC 2

CONSTRUCTION DRAWINGS

0	10/24/25	FOR SUBMITTAL

Dewberry

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

STATE OF CONNECTICUT
28971
LICENSED
PROFESSIONAL ENGINEER

10/24/2025

DRAWN BY:	FG
REVIEWED BY:	KE/OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50189519
SITE ADDRESS:	

303 SLATER AVENUE
JEWETT CITY, CT 06351

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL CONSTRUCTION NOTES :

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND COMPLY WITH VERIZON WIRELESS SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT "DIG SAFE" (888-344-7233) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. 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.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, VERIZON WIRELESS PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. ALL ROOF WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED ROOFING CONTRACTOR IN COORDINATION WITH ANY CONTRACTOR WARRANTING THE ROOF TO ENSURE THAT THE WARRANTY IS MAINTAINED.
17. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
18. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
19. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH THREE AS-BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
20. ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY VERIZON WIRELESS. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH PROJECT MANAGER TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY VERIZON WIRELESS. ALL ITEMS NOT PROVIDED BY VERIZON WIRELESS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY VERIZON WIRELESS.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH VERIZON WIRELESS PROJECT MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY VERIZON WIRELESS. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
22. GENERAL CONTRACTOR SHALL HAVE A LICENSED HVAC CONTRACTOR START THE HVAC UNITS, SYNCHRONIZE THE THERMOSTATS, ADJUST ALL SETTINGS ON EACH UNIT ACCORDING TO VERIZON WIRELESS CONSTRUCTION MANAGER'S SPECIFICATIONS, AND THOROUGHLY TEST AND BALANCE EACH UNIT TO ENSURE PROPER OPERATION PRIOR TO TURNING THE SITE OVER TO OWNER.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. UNLESS OTHERWISE NOTED VERIZON WIRELESS SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, DIAS-I'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
26. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY VERIZON WIRELESS FOR INSTALLATION BY CONTRACTOR.
27. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
28. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
29. 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.
30. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START, MORE SPECIFICALLY BEFORE; SEALING ANY FLOOR, WALL OR ROOF PENETRATION, FINAL UTILITY CONNECTIONS, POURING CONCRETE, BACKFILLING UTILITY TRENCHES AND STRUCTURAL POST OR MOUNTING CONNECTIONS, FOR ENGINEERING REVIEW AND INSPECTION.
31. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
32. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND LANDLORD.
33. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.

CODE SPECIFICATIONS:

1. ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

   2022 CONNECTICUT STATE BUILDING CODE WITH THE FOLLOWING APPLICABLE CODES:
   2021 INTERNATIONAL RESIDENTIAL CODE (IRC)
   2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
   2021 INTERNATIONAL BUILDING CODE (IBC)
   2021 INTERNATIONAL MECHANICAL CODE (IMC)
   2020 NATIONAL ELECTRICAL CODE (NEC) (NFPA 70)
   2021 INTERNATIONAL PLUMBING CODE (IPC)
   2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

   IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.
2. ALL STRUCTURAL WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL, 13TH EDITION (AISC 13TH ED.)
3. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
4. ALL REINFORCING STEEL WORK TO BE DONE IN ACCORDANCE WITH THE (ACI 315) MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

GROUNDING NOTES:

1. GROUNDING SHALL COMPLY WITH NEC ART. 250.
2. GROUNDING CONDUCTORS SHALL BE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
3. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
4. ROUTE GROUNDING CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 8" RADIUS WHEN NECESSARY.
5. CONNECTIONS TO GROUNDING BAR SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
6. TEST COMPLETED GROUNDING SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE-OUT DOCUMENTATION. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
7. GROUNDING CONDUCTORS BETWEEN MGB AND WATERMAIN SHALL BE #2/0, BONDING JUMPERS FROM METALLIC SURFACES SHALL BE #2 MINIMUM. ALL GROUND CONDUCTORS AND BONDING JUMPERS SHALL BE SOFT DRAWN ANNEALED, TINNED, BARE STRANDED COPPER WIRE. COAXIAL CABLES SHALL BE GROUNDED AT A MINIMUM OF TWO LOCATIONS USING VERIZON PROVIDED GROUNDING KITS. EXACT LOCATIONS SHALL BE FINALIZED IN THE FIELD BY THE CONSTRUCTION MANAGER.

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:

ASTM A-992, GRADE 50	ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE.
ASTM A-36	ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
ASTM A-500, GRADE B	HSS SECTION (SQUARE, RECTANGULAR, ROUND)
ASTM A-325, TYPE SC OR N	ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS.
F1554, GRADE 36	ALL ANCHORS BOLTS, UNLESS NOTED OTHERWISE.
ASTM A-53, GRADE B	STEEL PIPE

3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 14TH EDITION. WHERE WELD LENGTH IS NOT INDICATED, USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA.) SUPPLIED WITH A NUT AND WASHER UNDER TURNED END AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
7. USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
8. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
9. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
10. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M-00 HOT-DIP GALVANIZED FINISH UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED ITEMS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS. PRIOR TO COMPLETION OF WORK, TOUCHUP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVAHOT", "DRY GALV", "ZINC-IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCHUP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.
11. ALL WELDED COMPONENTS TO BE SHOP WELDED PRIOR TO INSTALLATION. NO WELDING ACTIVITIES IS PERMITTED DURING INSTALLATION OF PROPOSED EQUIPMENTS AND/OR HARDWARE ON SITE.

GENERAL ELECTRICAL NOTES:

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. HEIGHTS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, J-BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "U" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
8. CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
9. CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES
10. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
11. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.
12. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
13. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
14. USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE.
15. ALL CONDUCTORS SHALL BE COPPER.
16. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED.
17. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY NEC.
18. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
19. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, M PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
20. LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND, THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
21. PENETRATIONS IN FIRE RATED WALLS SHALL BE INTERNATIONAL BUILDING CODE 2009, CONNECTICUT EDITION.
22. WIRE AND CABLE CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY STATED OTHERWISE ON DRAWINGS.
23. VERIFY ALL CONDUIT ROUTING W/OWNER REP. & VERIZON WIRELESS C.M.
24. ALL MATERIALS SHALL BE U.L. LISTED.
25. CONDUIT:

a. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.

b. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL. FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.

c. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "LANCE" OR "SQUEEZZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.

d. CONDUIT RUNS MAY BE SURFACE MOUNTED IN CEILINGS OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT INDICATED SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ARCHITECT PRIOR TO INSTALLING.

26. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
27. COORDINATE THE ELECTRICAL SERVICE SHUTDOWN WITH BUILDING OWNER.
28. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO DISPATCH COMMUNICATIONS ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
29. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
30. ALL WALL PENETRATIONS SHALL BE FIRE STOPPED WITH FS-ONE HIGH PERFORMANCE INTUMESCENT FIRE STOP BY HILTI OR APPROVED EQUAL. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

JEWETT CITY CT SC 2

CONSTRUCTION DRAWINGS		
0	10/24/25	FOR SUBMITTAL

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

STATE OF CONNECTICUT
28971
LICENSED
PROFESSIONAL ENGINEER

10/24/2025

DRAWN BY:	FG
REVIEWED BY:	KE/OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50189519
SITE ADDRESS:	

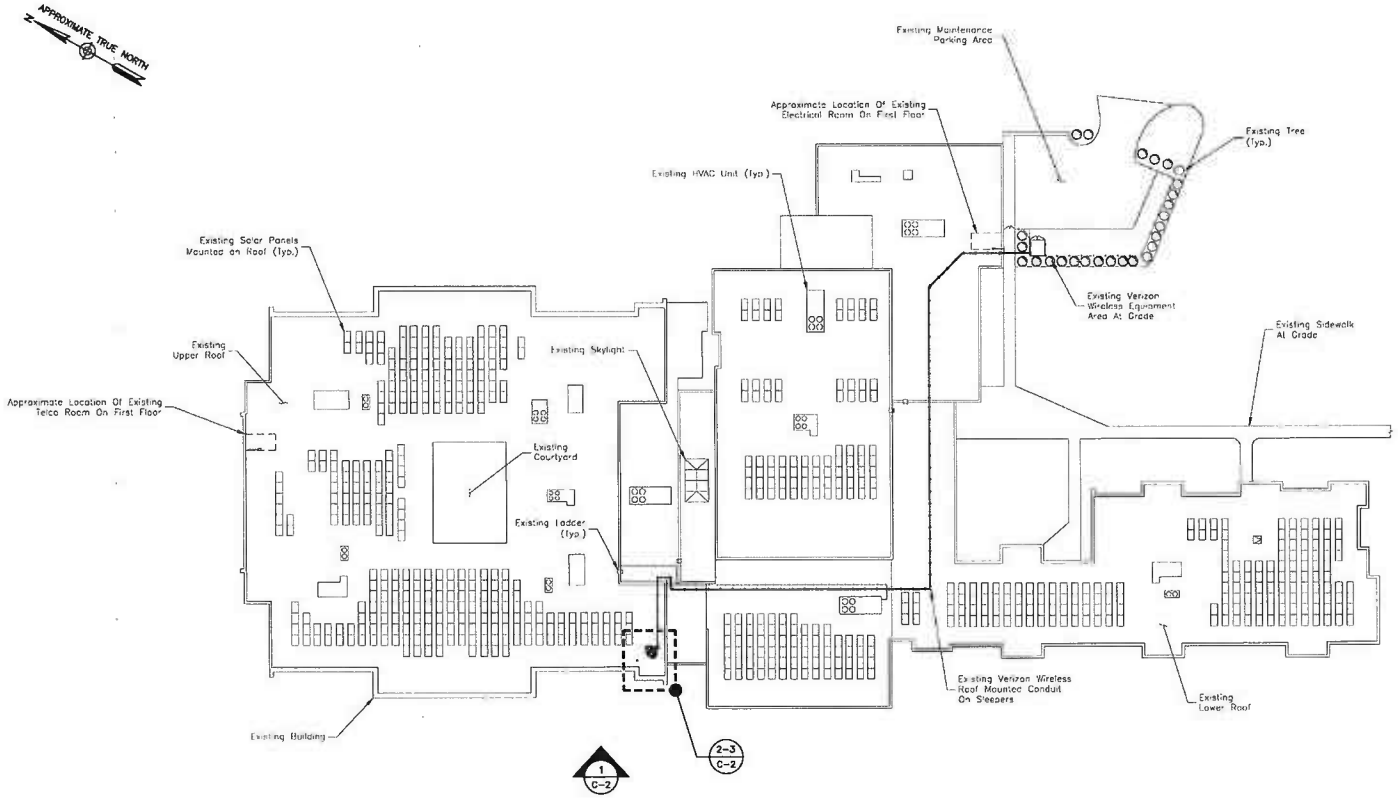
303 SLATER AVENUE
JEWETT CITY, CT 06351

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1



SITE PLAN 1
SCALE: 1"=60' FOR 11"x17"
1"=30' FOR 22"x34"

0' 30' 60'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. LOCATION & ORIENTATION OF ALL ANTENNAS, CABLES, EQUIPMENT, ETC. BASED ON STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 10/23/25.
4. ALL PROPOSED ROOF WORK TO BE COMPLETED BY LANDLORD APPROVED ROOFER.
5. SITE PLAN & ELEVATION BASED ON EXISTING PLANS BY DEWBERRY ENGINEERS INC. DATED 07/13/16 & SITE VISIT BY DEWBERRY ENGINEERS INC. ON 07/08/25.
6. CONTRACTOR TO INSPECT/DOCUMENT ROOF CONDITIONS PRIOR TO INSTALLATION. ANY EXISTING DAMAGE TO ROOF AT LOCATION EQUIPMENT PROPOSED, NOTIFY BUILDING OWNER AND VERIZON WIRELESS CM PRIOR TO EQUIPMENT INSTALLATION.

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

JEWETT CITY CT SC 2

CONSTRUCTION DRAWINGS		
0	10/24/25	FOR SUBMITTAL

Dewberry

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SUITE 700
BOSTON, MA 02110
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FAX: 617.695.3310

STATE OF CONNECTICUT
BRIAN B. REARDON
28971
LICENSED
PROFESSIONAL ENGINEER

10/24/2025

DRAWN BY:	FG
REVIEWED BY:	KE/OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50169519
SITE ADDRESS:	

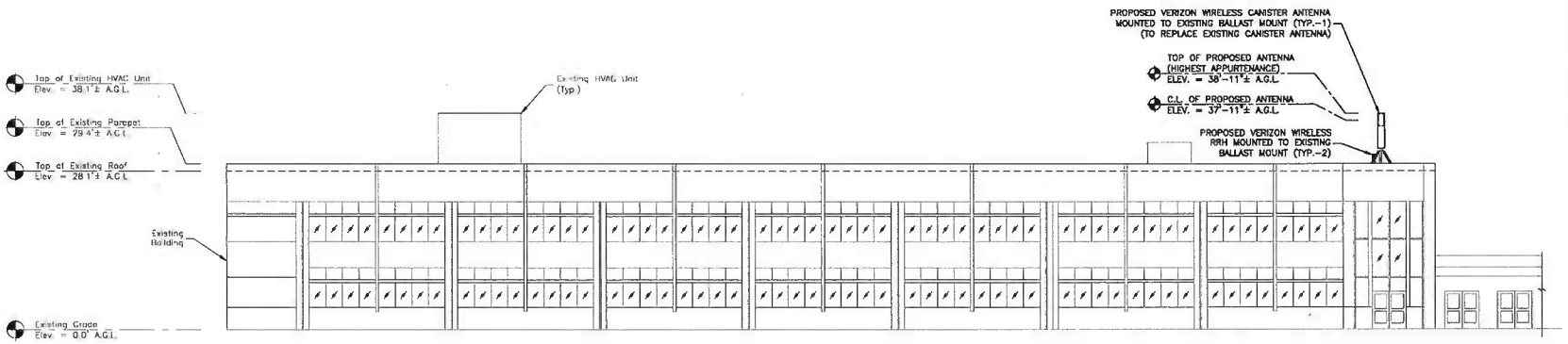
303 SLATER AVENUE
JEWETT CITY, CT 06351

SHEET TITLE

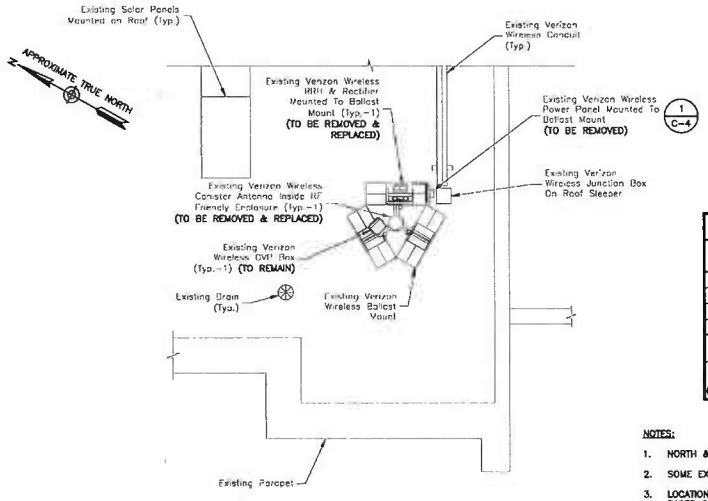
SITE PLAN

SHEET NUMBER

C-1



WEST ELEVATION (1)
SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"
0' 10' 20'

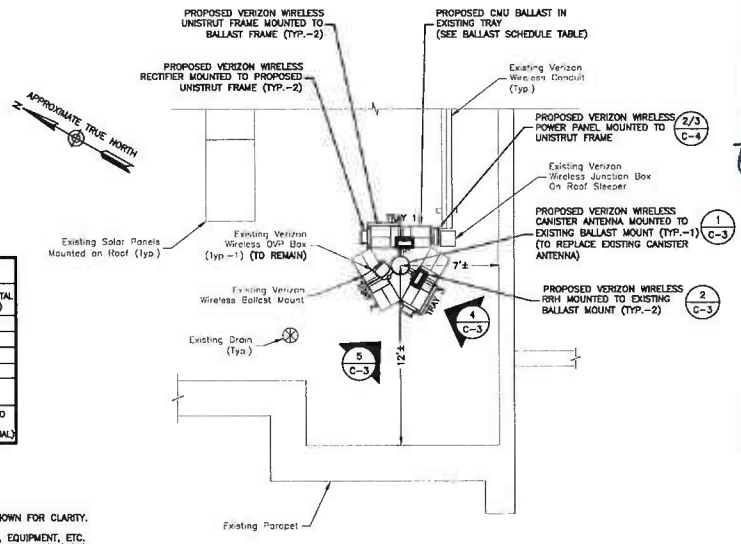


EXISTING ANTENNA PLAN (2)
SCALE: 1/8"=1' FOR 11"x17"
1/4"=1' FOR 22"x34"
0' 2' 4' 8'

BALLAST SCHEDULE	
LOCATION	(QTY)x(WEIGHT) = SUBTOTAL (LBS.)
TRAY 1	(7)x34) = 238
TRAY 2	(7)x34) = 238
TRAY 3	(7)x34) = 238
TOTAL BALLAST	714
CALCULATION BASED ON SOLID CMU BLOCK 4"x8"X16", 34 LBS. EACH	
CONTRACTOR TO INSTALL TIE DOWN CABLES TO SECURE ALL CMU BALLAST TO STEEL FRAME (SITE PRO1 P/N: CSRT-BTD OR APPROVED EQUAL)	

NOTES:

1. NORTH & ELEVATION SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. LOCATION & ORIENTATION OF ALL ANTENNAS, CABLES, EQUIPMENT, ETC. BASED ON STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 10/23/25.
4. ALL PROPOSED ROOF WORK TO BE COMPLETED BY LANDLORD APPROVED ROOFER.
5. SITE PLAN & ELEVATION BASED ON EXISTING PLANS BY DEWBERRY ENGINEERS INC. DATED 07/13/18 & SITE VISIT BY DEWBERRY ENGINEERS INC. ON 07/08/25.
6. CONTRACTOR TO INSPECT/DOCUMENT ROOF CONDITIONS PRIOR TO INSTALLATION. ANY EXISTING DAMAGE TO ROOF AT LOCATION EQUIPMENT PROPOSED, NOTIFY BUILDING OWNER AND VERIZON WIRELESS CM PRIOR TO EQUIPMENT INSTALLATION.



PROPOSED ANTENNA PLAN (3)
SCALE: 1/8"=1' FOR 11"x17"
1/4"=1' FOR 22"x34"
0' 2' 4' 8'

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VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

JEWETT CITY CT SC 2

CONSTRUCTION DRAWINGS		
0	10/24/25	FOR SUBMITTAL

Dewberry

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STATE OF CONNECTICUT
28971
LICENSED
PROFESSIONAL ENGINEER

10/24/2025

DRAWN BY:	FG
REVIEWED BY:	KE/OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50189519
SITE ADDRESS:	

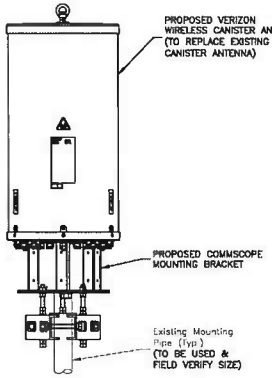
303 SLATER AVENUE
JEWETT CITY, CT 06351

SHEET TITLE

WEST ELEVATION & ANTENNA PLANS

SHEET NUMBER

C-2



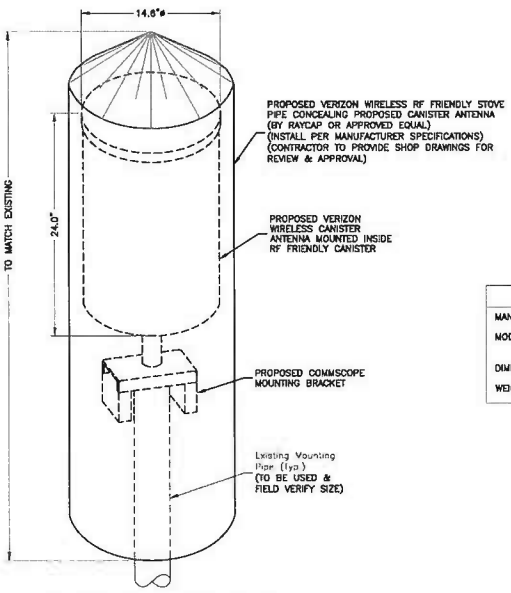
EXISTING ANTENNA		PROPOSED ANTENNA	
MANUFACTURER:	Andrew	MANUFACTURER:	COMMSCOPE
MODEL:	NHH-80OS-DG-FOV	MODEL:	NNVV54-360S-BF2
DIMENSIONS:	28.7"H X 12.0"ø	DIMENSIONS:	24.0"H X 14.6"ø
WEIGHT:	25.4 LBS	WEIGHT:	32.2 LBS

NOTES:

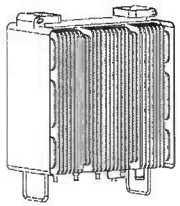
1. INSTALL CONCEALFAB UNIVERSAL POLE-TOP MOUNTING SYSTEM OR APPROVED EQUAL PER MANUFACTURER'S SPECIFICATIONS.
2. INSTALL ALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.

CANISTER ANTENNA DETAIL (1)

SCALE: N.T.S.



ANTENNA MOUNTING DETAIL



PROPOSED 5G		PROPOSED LTE 700/850	
MANUFACTURER:	SAMSUNG	MANUFACTURER:	SAMSUNG
MODEL:	5G RRH RT-8808-77A	MODEL:	700/850 MACRO RADIO RF4461d-13A
DIMENSIONS:	15.0"H X 15.0"W X 6.6"D	DIMENSIONS:	14.9"H X 14.9"W X 10.2"D
WEIGHT:	59.5 LBS	WEIGHT:	79.2 LBS

NOTE:

1. CONTRACTOR TO VERIFY WITH CONSTRUCTION MANAGER FOR FINAL MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.

RRH DETAILS (2)

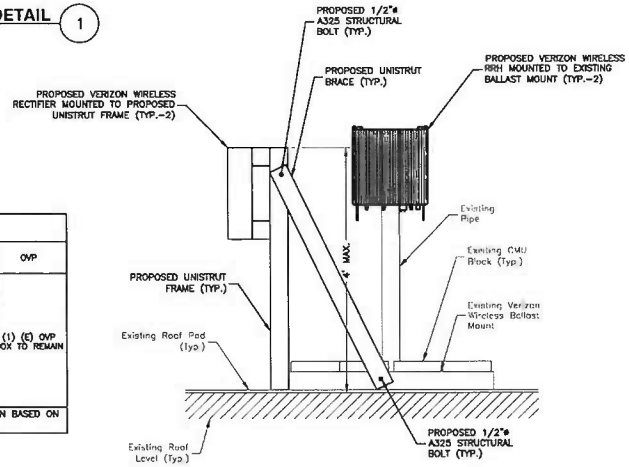
SCALE: N.T.S.

FINAL EQUIPMENT CONFIGURATION							
SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (QTY./MODEL)	CENTERLINE	OVP
ALPHA/BETA /GAMMA	1	LTE 700/850 LSUB8 5G	NNVV54-360S-BF2	COMMSCOPE	(1) (P) RT-8808-77A (1) (P) RF4461d-13A	36'-11"±	(1) (E) OVP BOX TO REMAIN

*CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. EQUIPMENT CONFIGURATION BASED ON RFDS DATED 07/08/25.

FINAL EQUIPMENT CONFIGURATION (3)

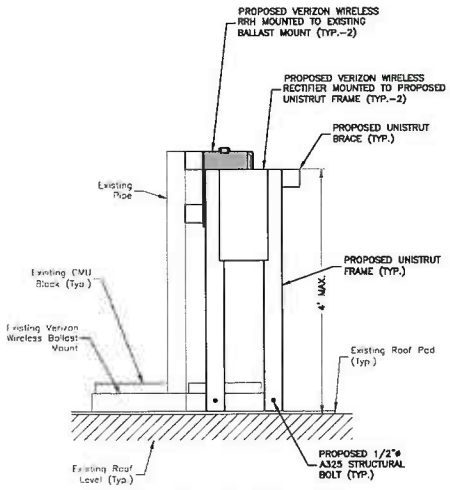
SCALE: N.T.S.



CONVERTER/RRH DETAIL (4)

SCALE: 1"=2' FOR 11"x17"
1"=1' FOR 22"x34"

0' 1' 2'



CONVERTER/RRH DETAIL (5)

SCALE: 1"=2' FOR 11"x17"
1"=1' FOR 22"x34"

0' 1' 2'

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

JEWETT CITY CT SC 2

CONSTRUCTION DRAWINGS		
0	10/24/25	FOR SUBMITTAL

Dewberry

Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617 695 2400
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10/24/2025

DRAWN BY:	FG
REVIEWED BY:	KE/GAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50189519
SITE ADDRESS:	

303 SLATER AVENUE
JEWETT CITY, CT 06351

SHEET TITLE

CONSTRUCTION DETAILS

SHEET NUMBER

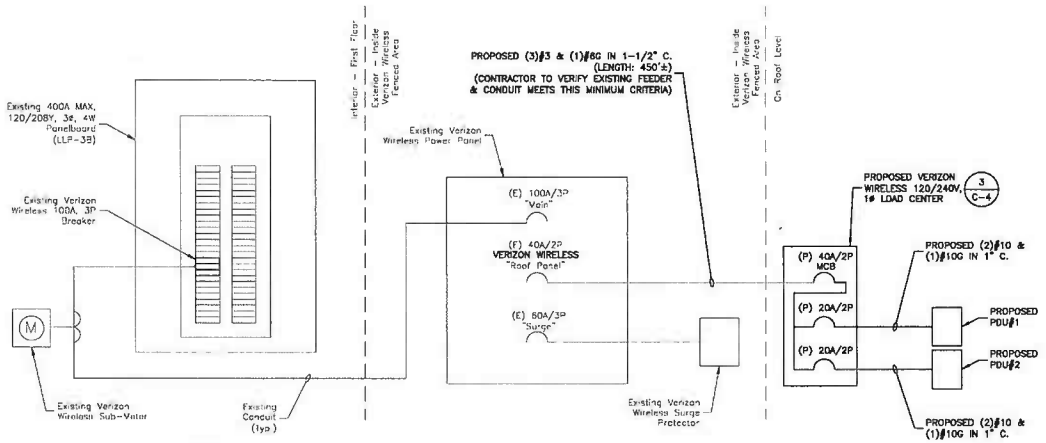
C-3

NOTE:

1. PHOTO TAKEN ON 08/07/25.

EXISTING POWER PANEL @ ROOF (1)

SCALE: N.T.S.



NOTES:

1. SEE GENERAL ELECTRICAL NOTES ON SHEET GN-1 FOR CONDUIT SPECIFICATIONS.
2. CONDUIT LENGTHS SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY CONDUIT LENGTH & ROUTE PRIOR TO CONSTRUCTION. OWNER & VERIZON WIRELESS C.M. TO APPROVE FINAL ROUTINGS.
3. CONTRACTOR TO IDENTIFY ALL CONDUIT PENETRATIONS, TURNS, PULL BOXES, EXPANSION JOINTS & VERIFY ROUTE WITH VERIZON WIRELESS CM & BUILDING OWNER PRIOR TO CONSTRUCTION.
4. PAINT CONDUIT TO MATCH EXISTING SURROUNDINGS AS REQUIRED BY BUILDING OWNER & PROVIDE LABELS PER VERIZON WIRELESS REQUIREMENTS.
5. FIRE STOP ALL INTERIOR WALL PENETRATIONS. WEATHER SEAL ALL EXTERIOR WALL PENETRATIONS.
6. COORDINATE ROUTING OF CONDUITS WITH BUILDING OWNER REPRESENTATIVES.
7. COORDINATE POWER SHUT-DOWN WITH UTILITY COMPANY, BUILDING OWNER, & TENANTS.
8. PROVIDE PULL BOXES AND EXPANSION JOINTS AS REQUIRED BY CODE AND JOB CONDITIONS.
9. INSTALL ALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.
10. ALL GROUNDING SHALL COMPLY WITH NEC ARTICLE 250.
11. SEE SHEET C-2 FOR EQUIPMENT LAYOUT.

ELECTRICAL ONE LINE DIAGRAM (2)

SCALE: N.T.S.

NEMA 3R

POWER PANEL SCHEDULE

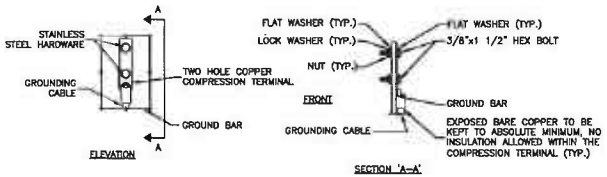
100A, 240/120V, 1ø W/100A MAIN C/B

CKT #	DESCRIPTION	AMP	AMP	DESCRIPTION	CKT #
1	MAIN BREAKER	40	—	SPACE	2
3			—	SPACE	4
5	PDU	20	20	PDU	6
7					8
9	SPACE	—	—	SPACE	10
11	SPACE	—	—	SPACE	12

VERIFY ALL BREAKER SIZES WITH EQUIPMENT MANUFACTURER AND VERIZON WIRELESS PRIOR TO CONSTRUCTION.

LOAD CENTER SCHEDULE (3)

SCALE: N.T.S.

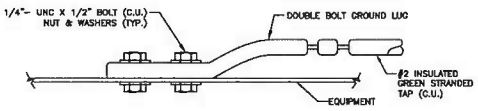


NOTES:

1. DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

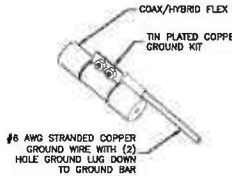
TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL (4)

SCALE: N.T.S.



CONNECTION TO EQUIPMENT DETAIL (5)

SCALE: N.T.S.



NOTES:

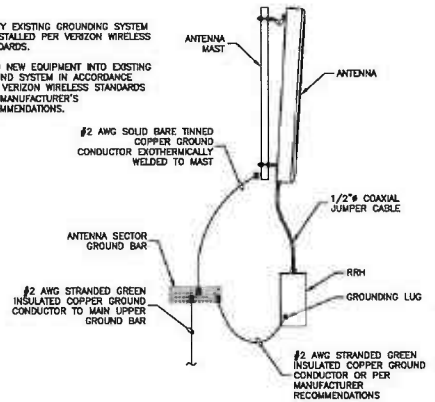
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
3. WEATHER SEAL GROUND KIT PER CARRIER REQUIREMENTS.
4. COAX CABLE GROUND KIT LOCATION & QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

COAX/HYBRID FLEX GROUNDING DETAIL (6)

SCALE: N.T.S.

NOTES:

1. VERIFY EXISTING GROUNDING SYSTEM IS INSTALLED PER VERIZON WIRELESS STANDARDS.
2. BOND NEW EQUIPMENT INTO EXISTING GROUND SYSTEM IN ACCORDANCE WITH VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.



TYPICAL ANTENNA/RRH GROUNDING DETAIL (7)

SCALE: N.T.S

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

JEWETT CITY CT SC 2

CONSTRUCTION DRAWINGS		
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Dewberry

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STATE OF CONNECTICUT
28971
LICENSED
PROFESSIONAL ENGINEER

10/24/2025

DRAWN BY:	FG
REVIEWED BY:	KE/OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50189519
SITE ADDRESS:	

303 SLATER AVENUE
JEWETT CITY, CT 06351

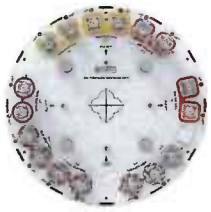
SHEET TITLE

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER

C-4

NNVVS4-360S-BF2



16-port small cell antenna, 4x 698-896, 4x 1695–2690 and 8x Beamforming 3300- 4000, 360° Horizontal Beamwidth, fixed tilt.

- Two broadband low band arrays (Bands 12/13/29/14/5) with 4T4R (4X MIMO) capability
- Two broadband mid band arrays (Bands 25/66/30/40/41) with 4T4R (4X MIMO) capability
- 8T8R omni beamforming array with calibration port for 3.5 GHz (Bands 48, 77, 78)

General Specifications

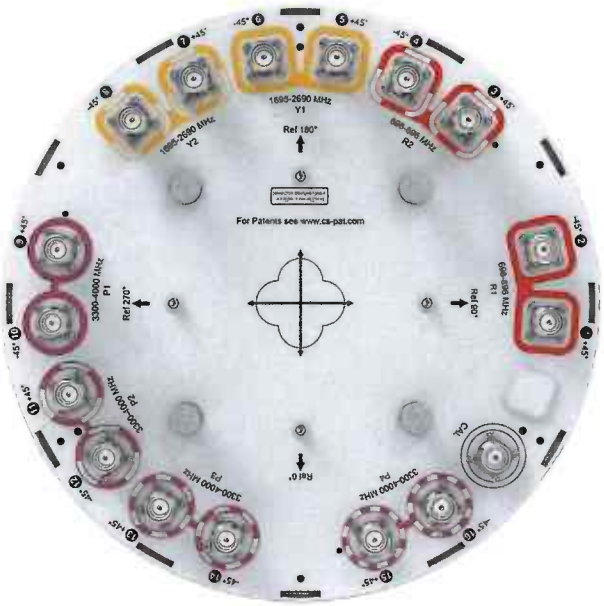
Antenna Type	Small Cell
Band	Multiband
Calibration Connector Interface	4.3-10 Female
Calibration Connector Quantity	1
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	ASA
Radiator Material	Aluminum | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, mid band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	16

Dimensions

Length	610 mm | 24.016 in
Net Weight, antenna only	14.8 kg | 32.628 lb
Outer Diameter	370 mm | 14.567 in

Port Configuration

NNVVS4-360S-BF2



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz | 3300 – 4000 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,200 W @ 50 °C

Electrical Specifications

	R1,R2	R1,R2	Y1-Y2	Y1-Y2	Y1-Y2	Y1-Y2	P1-P4	P1-P4	P1-P4
Frequency Band, MHz	**698–806**	**806–896**	**1695–1920**	**1920–2180**	**2300–2360**	**2360–2690**	**3300–3550**	**3550–3700**	**3700–4000**
RF Port	1-4	1-4	5-8	5-8	5-8	5-8	9-16	9-16	9-16
Gain, dBi	5.3	5.5	7.8	8.3	8.8	8.6	8.3	8.8	8.8
Beamwidth, Horizontal, degrees	360	360	360	360	360	360	360	360	360
Beamwidth, Vertical,	45.9	42	21	18.2	16.4	15.6	9.5	9	8.5

NNVVS4-360S-BF2

degrees									
Beam Tilt, degrees	2	2	2	2	2	2	2	2	2
Coupling level, Amp, Antenna port to Cal port, dB							26	26	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB							±2	±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB							1	1	1
Coupler, max Phase Δ, Antenna port to Cal port, degrees							10	10	10
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25	25
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153	-145	-145	-145
Input Power per Port at 50° C, maximum, watts	100	100	100	100	100	100	75	75	75

Electrical Specifications, Service Beam

Frequency Band, MHz	**3300–3550**	**3550–3700**	**3700–4000**
Steered 0° Gain, dBi	12.1	12.2	12.3
Steered 0° Beamwidth, Horizontal, degrees	63	63	61

Electrical Specifications, Broadcast 360°

Frequency Band, MHz	**3300–3550**	**3550–3700**	**3700–4000**
Gain, dBi	8.5	8.5	8.7
Beamwidth, Horizontal at 3 dB, degrees	360	360	360
Beamwidth, Vertical, degrees	9.6	8.7	8

Mechanical Specifications

Wind Loading @ Velocity, frontal	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)

NNVVS4-360S-BF2

Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	478 mm | 18.819 in
Depth, packed	464 mm | 18.268 in
Length, packed	894 mm | 35.197 in
Weight, gross	19 kg | 41.888 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

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

SAMSUNG

Specifications

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

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

SAMSUNG

Radio Access Network

102 RRU
Product Specification

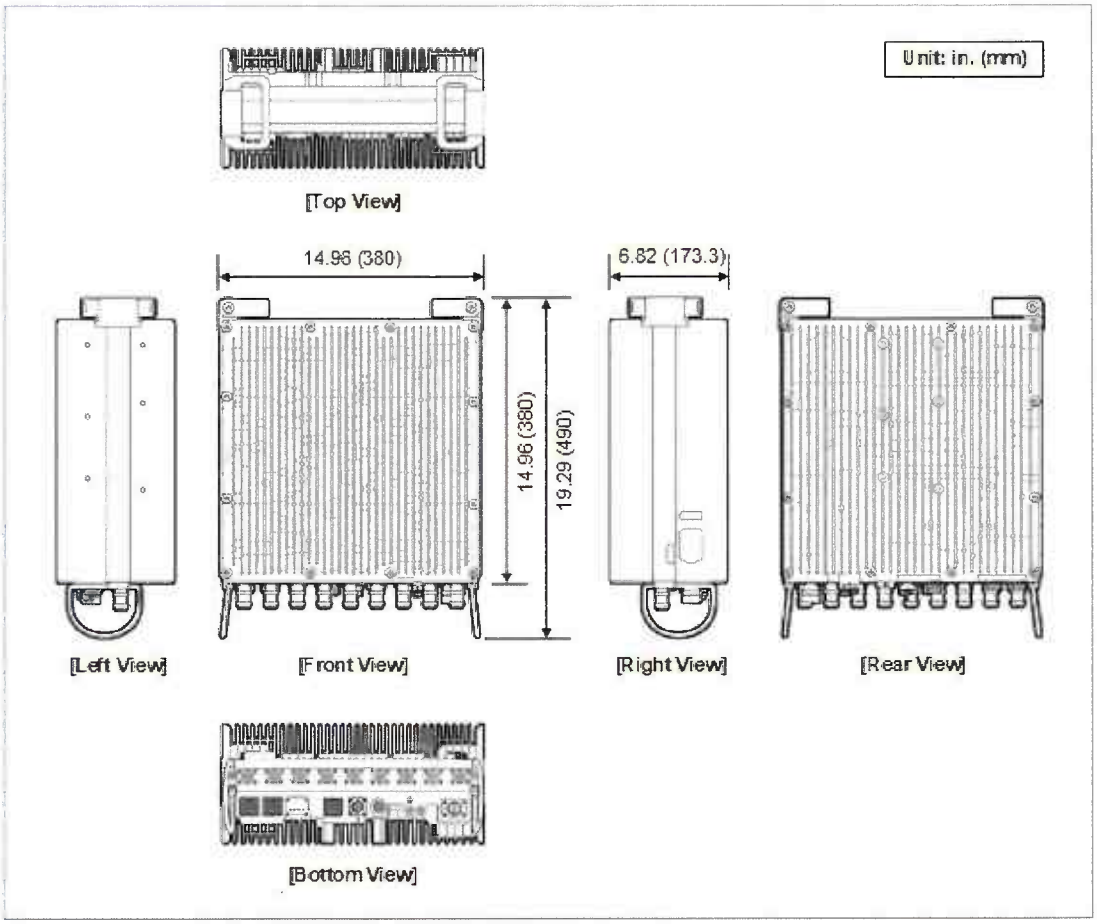
for RT8808-77A

Specifies hardware configuration, functions, specifications, components, ports, and LED information for the radio units.

Document Version 1.0
June 2021

Document Number: 2600-00T7PZGA2

Figure 1. Appearance



The RT8808-77A can be mounted on a wall or pole as displayed in the following installation scenario:

Specifications

The following table outlines the main specifications of RT8808-77A.

Table 2. Specifications (RT8808-77A)

Item	RT8808-77A
Radio Technology	5G NR
Operating Frequency	3700 to 3980 MHz
Channel Bandwidth	20/40/60/80/100 MHz
RF Chain	• 8T8R, 4T4R+4T4R Bi-sector • 2T2R+2T2R+2T2R Tri-sector • 4T8R+4T8R split mode
RF Output Power	Max. 320W (8 x 40W)
Capacity	Total Max 2C
CPRI interface	15km, 2 ports (25Gbps x 2), SFP28, single mode, Bi-di (Option: Duplex)
Input Voltage	-48 V DC (-38 V DC to -57 V DC)
Power Consumption (Max.)	1,192 W (100% load, 25°C) (w/o RET)
Operating Humidity	5% to 100%RH (Condensing, not to exceed 30g/m3 absolute humidity)
Operating Temperature	-40°C to 55°C (without solar load)
Dimension (in./mm)	14.96/380 (W) × 6.82/173.3(D) × 14.96/380 (H)
Weight (kg)	27 or less than
Cooling	Natural convection
Waterproof/Dustproof	IP65
Wind Resistance	Telcordia GR-487-CORE Issue5 • Wind Resistance (Section 3.36)
Earthquake Specification	Telcordia GR-63-CORE, Issue5, □ Earthquake (Section 4.4.1)
Vibration Specification	Telcordia GR-63-CORE, Issue5, • Office Vibration (Section 4.4.4) • Transportation Vibration (Section 4.4.5)
Altitude	Telcordia GR-63-CORE, Issue5, • Altitude (Section 4.1.3)
EMC	FCC Title 47 CFR Part 15
RF	FCC Title 47 CFR Part 27, 24
Safety	UL 62368-1, 2nd Edition
Installation	Pole, Wall, Tower

The power consumption is predicted with a simulation and the measured value is subject to change by ±10%

ATTACHMENT 3

Location	Jewett City CT SC 2		
Date	3/12/2026		
Band	C-Band	850	700
Operating Frequency (MHz)	3,700	869	746
General Population MPE (mW/cm^2)	1	0.57933333	0.49733333
ERP Per Transmitter (Watts)	3,516	121	117
Number of Transmitters	2	4	4
Antenna Centerline (CL) (feet)	37.9	37.9	37.9
Total ERP (Watts)	7,032	484	468
Total ERP (dBm)	68	57	57
Maximum % of General Population MPE Limit	11.97%		

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.1310 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period;
3. calculation takes into account a point of interest of 2m or 6.56ft

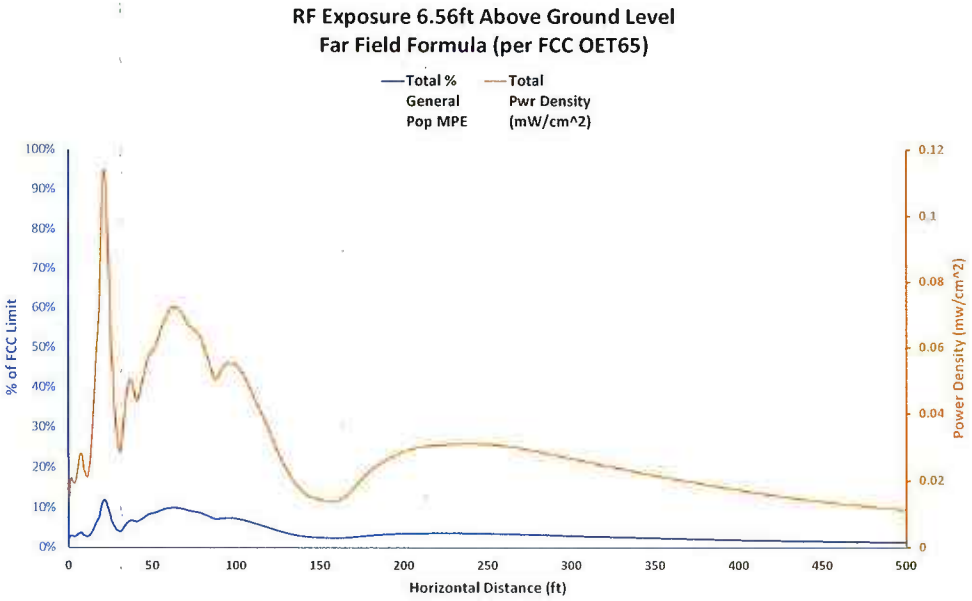
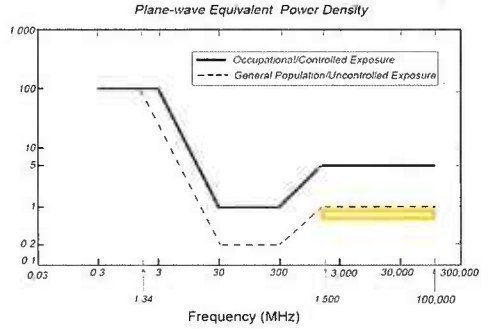
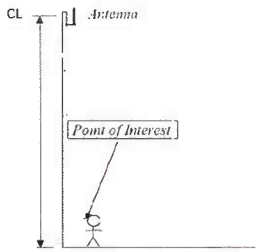


Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)





Angle Below Horizon	Power Density (mW/cm^2)			Percent of General Population MPE									Distance	Total Pwr Density (mW/cm^2)	Total % General Pop MPE
	C-Band	850	700 MHz	1 GHz	2 GHz	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz			
90	0.007256458	0.004251001	0.004304193	0.00%	0.00%	0.73%	0.00%	0.00%	0.00%	0.73%	0.00%	0.87%	0	0.015811652	2.32%
89	0.005631027	0.005109215	0.00461057	0.00%	0.00%	0.56%	0.00%	0.00%	0.00%	0.88%	0.00%	0.93%	0.556816571	0.015350812	2.37%
88	0.008916129	0.006575713	0.005168248	0.00%	0.00%	0.89%	0.00%	0.00%	0.00%	1.14%	0.00%	1.04%	1.113972547	0.020660091	3.07%
87	0.009538732	0.006565339	0.004927852	0.00%	0.00%	0.95%	0.00%	0.00%	0.00%	1.13%	0.00%	0.99%	1.671808159	0.021031922	3.08%
86	0.009089293	0.006401719	0.004588779	0.00%	0.00%	0.91%	0.00%	0.00%	0.00%	1.11%	0.00%	0.92%	2.230665301	0.02007979	2.94%
85	0.008655541	0.006532219	0.004270328	0.00%	0.00%	0.87%	0.00%	0.00%	0.00%	1.13%	0.00%	0.86%	2.790888366	0.019458088	2.85%
84	0.008429122	0.006661144	0.004063959	0.00%	0.00%	0.84%	0.00%	0.00%	0.00%	1.15%	0.00%	0.82%	3.352825105	0.019154226	2.81%
83	0.008790096	0.006788286	0.003955129	0.00%	0.00%	0.88%	0.00%	0.00%	0.00%	1.17%	0.00%	0.80%	3.916827493	0.019533511	2.85%
82	0.009815831	0.00691343	0.004028043	0.00%	0.00%	0.98%	0.00%	0.00%	0.00%	1.19%	0.00%	0.81%	4.483252627	0.020757304	2.98%
81	0.01173766	0.006876193	0.004006347	0.00%	0.00%	1.17%	0.00%	0.00%	0.00%	1.19%	0.00%	0.81%	5.052463646	0.022620199	3.17%
80	0.01370742	0.006834743	0.004074954	0.00%	0.00%	1.37%	0.00%	0.00%	0.00%	1.18%	0.00%	0.82%	5.624830685	0.024617117	3.37%
79	0.015633209	0.006789138	0.004142048	0.00%	0.00%	1.56%	0.00%	0.00%	0.00%	1.17%	0.00%	0.83%	6.200731861	0.026564394	3.57%
78	0.017015986	0.006586029	0.004305505	0.00%	0.00%	1.70%	0.00%	0.00%	0.00%	1.14%	0.00%	0.87%	6.780554317	0.027907521	3.70%
77	0.017675874	0.006097438	0.004472475	0.00%	0.00%	1.77%	0.00%	0.00%	0.00%	1.05%	0.00%	0.90%	7.364695297	0.028245787	3.72%
76	0.017523363	0.005512949	0.004750994	0.00%	0.00%	1.75%	0.00%	0.00%	0.00%	0.95%	0.00%	0.96%	7.953563291	0.027787305	3.66%
75	0.01583305	0.004867781	0.004928691	0.00%	0.00%	1.58%	0.00%	0.00%	0.00%	0.84%	0.00%	0.99%	8.547579239	0.025629522	3.41%
74	0.013970756	0.004101913	0.0051096	0.00%	0.00%	1.40%	0.00%	0.00%	0.00%	0.71%	0.00%	1.03%	9.147177806	0.023182268	3.13%

73	0.01414428	0.003298734	0.00529356	0.00%	0.00%	1.41%	0.00%	0.00%	0.00%	0.57%	0.00%	1.06%	9.752808739	0.022736574	3.05%
72	0.013666101	0.002651009	0.005355643	0.00%	0.00%	1.37%	0.00%	0.00%	0.00%	0.46%	0.00%	1.08%	10.36493831	0.021672752	2.90%
71	0.013502315	0.002080534	0.00541471	0.00%	0.00%	1.35%	0.00%	0.00%	0.00%	0.36%	0.00%	1.09%	10.98405086	0.020997559	2.80%
70	0.014617343	0.00163168	0.00534608	0.00%	0.00%	1.46%	0.00%	0.00%	0.00%	0.28%	0.00%	1.07%	11.61065047	0.021595102	2.82%
69	0.016944228	0.001339024	0.005397452	0.00%	0.00%	1.69%	0.00%	0.00%	0.00%	0.23%	0.00%	1.09%	12.24526272	0.023680703	3.01%
68	0.020084662	0.001098073	0.005200337	0.00%	0.00%	2.01%	0.00%	0.00%	0.00%	0.19%	0.00%	1.05%	12.8884366	0.026383072	3.24%
67	0.024344046	0.000899827	0.005123417	0.00%	0.00%	2.43%	0.00%	0.00%	0.00%	0.16%	0.00%	1.03%	13.54074664	0.03036729	3.62%
66	0.030171867	0.00072006	0.004929118	0.00%	0.00%	3.02%	0.00%	0.00%	0.00%	0.12%	0.00%	0.99%	14.20279506	0.035821044	4.13%
65	0.036516429	0.000501481	0.004738657	0.00%	0.00%	3.65%	0.00%	0.00%	0.00%	0.09%	0.00%	0.95%	14.8752143	0.041756567	4.69%
64	0.043156506	0.000373949	0.004658148	0.00%	0.00%	4.32%	0.00%	0.00%	0.00%	0.06%	0.00%	0.94%	15.55866958	0.048188603	5.32%
63	0.049804773	0.000367314	0.004471343	0.00%	0.00%	4.98%	0.00%	0.00%	0.00%	0.06%	0.00%	0.90%	16.25386184	0.05464343	5.94%
62	0.05612507	0.000423568	0.004388579	0.00%	0.00%	5.61%	0.00%	0.00%	0.00%	0.07%	0.00%	0.88%	16.96153087	0.060937217	6.57%
61	0.061758711	0.000573409	0.00430393	0.00%	0.00%	6.18%	0.00%	0.00%	0.00%	0.10%	0.00%	0.87%	17.68245874	0.066636051	7.14%
60	0.067902966	0.000793698	0.004217506	0.00%	0.00%	6.79%	0.00%	0.00%	0.00%	0.14%	0.00%	0.85%	18.41747359	0.072914171	7.78%
59	0.083699305	0.000978337	0.004324031	0.00%	0.00%	8.37%	0.00%	0.00%	0.00%	0.17%	0.00%	0.87%	19.16745375	0.089001673	9.41%
58	0.098444283	0.001150686	0.0043287	0.00%	0.00%	9.84%	0.00%	0.00%	0.00%	0.20%	0.00%	0.87%	19.93333233	0.103923669	10.91%
57	0.105508441	0.00135224	0.004430515	0.00%	0.00%	10.55%	0.00%	0.00%	0.00%	0.23%	0.00%	0.89%	20.71610222	0.111291195	11.68%
56	0.107895665	0.001551567	0.004530759	0.00%	0.00%	10.79%	0.00%	0.00%	0.00%	0.27%	0.00%	0.91%	21.51682169	0.113977991	11.97%
55	0.10288034	0.001778684	0.004736956	0.00%	0.00%	10.29%	0.00%	0.00%	0.00%	0.31%	0.00%	0.95%	22.33662047	0.10939598	11.55%
54	0.093597305	0.002037182	0.004948007	0.00%	0.00%	9.36%	0.00%	0.00%	0.00%	0.35%	0.00%	0.99%	23.17670664	0.100582495	10.71%
53	0.079393918	0.002278	0.005283896	0.00%	0.00%	7.94%	0.00%	0.00%	0.00%	0.39%	0.00%	1.06%	24.0383742	0.086955813	9.40%
52	0.065749703	0.002544839	0.005508848	0.00%	0.00%	6.57%	0.00%	0.00%	0.00%	0.44%	0.00%	1.11%	24.92301149	0.07380339	8.12%
51	0.050765899	0.002775483	0.005871365	0.00%	0.00%	5.08%	0.00%	0.00%	0.00%	0.48%	0.00%	1.18%	25.83211066	0.059412747	6.74%
50	0.041957578	0.003023966	0.006251402	0.00%	0.00%	4.20%	0.00%	0.00%	0.00%	0.52%	0.00%	1.26%	26.76727823	0.051232946	5.97%
49	0.032329302	0.003216346	0.006803985	0.00%	0.00%	3.23%	0.00%	0.00%	0.00%	0.56%	0.00%	1.37%	27.73024694	0.042349633	5.16%
48	0.023763833	0.003496898	0.007229088	0.00%	0.00%	2.38%	0.00%	0.00%	0.00%	0.60%	0.00%	1.45%	28.72288901	0.034489819	4.43%
47	0.020500132	0.003626796	0.007850976	0.00%	0.00%	2.05%	0.00%	0.00%	0.00%	0.63%	0.00%	1.58%	29.74723125	0.031977905	4.25%
46	0.016110224	0.00384475	0.008516646	0.00%	0.00%	1.61%	0.00%	0.00%	0.00%	0.66%	0.00%	1.71%	30.80547192	0.02847162	3.99%
45	0.017455606	0.004165829	0.009442824	0.00%	0.00%	1.75%	0.00%	0.00%	0.00%	0.72%	0.00%	1.90%	31.9	0.031064259	4.36%
44	0.022711151	0.004405606	0.010218947	0.00%	0.00%	2.27%	0.00%	0.00%	0.00%	0.76%	0.00%	2.05%	33.03341701	0.037335703	5.09%
43	0.026915064	0.004761699	0.011302185	0.00%	0.00%	2.69%	0.00%	0.00%	0.00%	0.82%	0.00%	2.27%	34.20856185	0.042978948	5.79%
42	0.030421704	0.005139845	0.012199739	0.00%	0.00%	3.04%	0.00%	0.00%	0.00%	0.89%	0.00%	2.45%	35.42853922	0.047761287	6.38%
41	0.031317112	0.005669545	0.013150695	0.00%	0.00%	3.13%	0.00%	0.00%	0.00%	0.98%	0.00%	2.64%	36.69675219	0.050137351	6.75%
40	0.029360703	0.006102854	0.014155768	0.00%	0.00%	2.94%	0.00%	0.00%	0.00%	1.05%	0.00%	2.85%	38.0169396	0.049619325	6.84%
39	0.025067581	0.006712417	0.015215262	0.00%	0.00%	2.51%	0.00%	0.00%	0.00%	1.16%	0.00%	3.06%	39.39321929	0.04699526	6.72%
38	0.020407615	0.007371549	0.015957294	0.00%	0.00%	2.04%	0.00%	0.00%	0.00%	1.27%	0.00%	3.21%	40.83013807	0.043736458	6.52%
37	0.020882199	0.008082444	0.016708721	0.00%	0.00%	2.09%	0.00%	0.00%	0.00%	1.40%	0.00%	3.36%	42.33272981	0.045673365	6.84%
36	0.02285768	0.00864567	0.017466229	0.00%	0.00%	2.29%	0.00%	0.00%	0.00%	1.49%	0.00%	3.51%	43.90658326	0.048969579	7.29%
35	0.024976122	0.009231909	0.018226027	0.00%	0.00%	2.50%	0.00%	0.00%	0.00%	1.59%	0.00%	3.66%	45.55792142	0.052434058	7.76%
34	0.0272406	0.010068927	0.018983823	0.00%	0.00%	2.72%	0.00%	0.00%	0.00%	1.74%	0.00%	3.82%	47.2936949	0.056293349	8.28%
33	0.02831819	0.010711049	0.01928557	0.00%	0.00%	2.83%	0.00%	0.00%	0.00%	1.85%	0.00%	3.88%	49.12169235	0.058314809	8.56%
32	0.028709517	0.011112004	0.019552076	0.00%	0.00%	2.87%	0.00%	0.00%	0.00%	1.92%	0.00%	3.93%	51.05067148	0.059373597	8.72%
31	0.030412202	0.011771027	0.019329243	0.00%	0.00%	3.04%	0.00%	0.00%	0.00%	2.03%	0.00%	3.89%	53.09051549	0.061512472	8.96%
30	0.033657078	0.012157462	0.019509377	0.00%	0.00%	3.37%	0.00%	0.00%	0.00%	2.10%	0.00%	3.92%	55.25242076	0.065323916	9.39%
29	0.036312055	0.012526142	0.019196313	0.00%	0.00%	3.63%	0.00%	0.00%	0.00%	2.16%	0.00%	3.86%	57.54912339	0.06803451	9.65%
28	0.039075448	0.012872724	0.018839569	0.00%	0.00%	3.91%	0.00%	0.00%	0.00%	2.22%	0.00%	3.79%	59.99517424	0.07078774	9.92%
27	0.040978987	0.01289222	0.018438611	0.00%	0.00%	4.10%	0.00%	0.00%	0.00%	2.23%	0.00%	3.71%	62.60727513	0.072309819	10.03%
26	0.040920363	0.013173646	0.017583546	0.00%	0.00%	4.09%	0.00%	0.00%	0.00%	2.27%	0.00%	3.54%	65.40469255	0.071677555	9.90%
25	0.039805745	0.013113308	0.017104593	0.00%	0.00%	3.98%	0.00%	0.00%	0.00%	2.26%	0.00%	3.44%	68.40977076	0.070023645	9.68%
24	0.037711652	0.013008944	0.016204758	0.00%	0.00%	3.77%	0.00%	0.00%	0.00%	2.25%	0.00%	3.26%	71.64857309	0.066925354	9.27%
23	0.037274428	0.012858121	0.015296004	0.00%	0.00%	3.73%	0.00%	0.00%	0.00%	2.22%	0.00%	3.08%	75.15169047	0.065428553	9.02%
22	0.035860664	0.012370431	0.014715849	0.00%	0.00%	3.59%	0.00%	0.00%	0.00%	2.14%	0.00%	2.96%	78.95527062	0.062946944	8.68%
21	0.031328895	0.012125833	0.013775649	0.00%	0.00%	3.13%	0.00%	0.00%	0.00%	2.09%	0.00%	2.77%	83.10234116	0.057230377	8.00%
20	0.026014551	0.011560665	0.012834629	0.00%	0.00%	2.60%	0.00%	0.00%	0.00%	2.00%	0.00%	2.58%	87.64452968	0.050409845	7.18%
19	0.031062052	0.010964697	0.012172986	0.00%	0.00%	3.11%	0.00%	0.00%	0.00%	1.89%	0.00%	2.45%	92.644327	0.054199736	7.45%
18	0.033631926	0.010339945	0.011218085	0.00%	0.00%	3.36%	0.00%	0.00%	0.00%	1.78%	0.00%	2.26%	98.17810484	0.055189956	7.40%
17	0.032248232	0.009468309	0.010272423	0.00%	0.00%	3.22%	0.00%	0.00%	0.00%	1.63%	0.00%	2.07%	104.3401985	0.051988964	6.92%
16	0.026131679	0.008809146	0.00955728	0.00%	0.00%	2.61%	0.00%	0.00%	0.00%	1.52%	0.00%	1.92%	111.2485208	0.044498105	6.06%
15	0.019604123	0.007945366	0.008620142	0.00%	0.00%	1.96%	0.00%	0.00%	0.00%	1.37%	0.00%	1.73%	119.0524208	0.036169632	5.07%
14	0.010803816	0.007101395	0.007704495	0.00%	0.00%	1.08%	0.00%	0.00%	0.00%	1.23%	0.00%	1.55%	127.9439118	0.025609705	3.86%
13	0.004268575	0.006281298	0.006973485	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	1.08%	0.00%	1.40%	138.1740804	0.017523358	2.91%
12	0.002963146	0.005489332	0.006094246	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	0.95%	0.00%	1.23%	150.0777005	0.014546723	2.47%
11	0.004978398	0.004729946	0.005251177	0.00%	0.00%	0.50%	0.00%	0.00%	0.00%	0.82%	0.00%	1.06%	164.1112731	0.014959521	2.37%
10	0.014967104	0.004007784	0.004449434	0.00%	0.00%	1.50%	0.00%	0.00%	0.00%	0.69%	0.00%	0.89%	180.91389	0.023424322	3.08%
9	0.022099184	0.003251942	0.003694394	0.00%	0.00%	2.21%	0.00%	0.00%	0.00%	0.56%	0.00%	0.74%	201.4086733	0.02904552	3.51%
8	0.025278121	0.002633366	0.002991657	0.00%	0.00%	2.53%	0.00%	0.00%	0.00%	0.45%	0.00%	0.60%	226.9802941	0.030903144	3.58%
7	0.026142963	0.00201893	0.002347047	0.00%	0.00%	2.61%	0.00%	0.00%	0.00%	0.35%	0.00%	0.47%	259.8046511	0.03050894	3.43%
6	0.023119351	0.001519645	0.001726405	0.00%	0.00%	2.31%	0.00%	0.00%	0.00%	0.26%	0.00%	0.35%	303.5082261	0.026365401	2.92%
5	0.018032177	0.001056367	0.001228047	0.00%	0.00%	1.80%	0.00%	0.00%	0.00%	0.18%	0.00%	0.25%	364.6186685	0.020316592	2.23%
4	0.012094389	0.000676629	0.000786595	0.00%	0.00%	1.21%	0.00%	0.00%	0.00%	0.12%	0.00%	0.16%	456.1912536	0.013557612	1.48%
3	0.006807428	0.000389717	0.000453054	0.00%	0.00%	0.68%	0.00%	0.00%	0.00%	0.07%	0.00%	0.09%	608.6882603	0.007650199	0.84%
2	0.0030269	0.000173286	0.000201449	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	0.03%	0.00%	0.04%	913.4964797	0.003401635	0.37%
1	0.000756931	4.33334E-05	5.0376E-05	0.00%	0.00%	0.08%	0.00%	0.00%	0.00%	0.01%	0.00%	0.01%	1827.549776	0.000850641	0.09%

ATTACHMENT 4

verizon

Dewberry

Prepared for:
Verizon Wireless
1831 Rady Court
Richmond, VA 23222

Prepared by:
Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, VA 23060
Project Number: 50186121

Structural Analysis Report and Design Calculations For a Wireless Telecommunications Small Cell

March 16, 2026
(Rev.1)

Carrier Information:	**Site Name**	Jewett City CT SC 2
Analysis Criteria:	**Codes**	TIA-222-H, ASCE 7-16 & IBC 2021
	V_{ult}:	130-mph (per CSBC 2022, Appendix P)
	Parameters	Structure Class: III, Exposure Cat: C, Topo Cat: 1.0
	Address	303 Slater Avenue, Jewett City, CT 06351

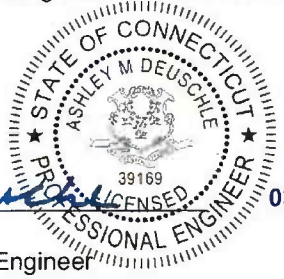
Site Data:
Verizon has proposed to remove and replace one (1) existing antenna (Model# NH180QS-DG-FOM) with one (1) new CommScope NNVVS4-360S-BF2 antenna, and one (1) existing radios with two (2) new radios on an existing ballasted rooftop sled at the address referenced above. Verizon has also proposed the replacement of one (1) existing power panel and two (2) rectifiers.

Dewberry Engineers Inc. (Dewberry) has reviewed the RFDS (dated 07/08/25) provided by Verizon and has determined that the existing ballasted sled, pipe mast, antenna mounting bracket and existing roof have adequate structural capacity and stiffness to support the proposed antennas and equipment. The current installation has a maximum strength utilization of 99.3%. This utilization is predicated on the stated required connection capacity shown on the original roof framing plans prepared for bidding and construction.

Our assessment is based on the assumption that the existing structure, ballasted sled, pipe mount and all associated hardware is in good condition and was constructed in conformance with all applicable state and local building codes. If, during construction, any damage, deterioration, and/or discrepancies are noticed, Dewberry is to be notified to assess any deviation from the assumed condition. Any alteration in equipment loading described above and on the associated plans will void any conclusions expressed herein and will require further analysis and design. No structural qualification is made or implied by this structural report for existing structural members not supporting the proposed installation. If you have any questions, please give us a call at 309-282-8169.

Analysis Results: Existing ballasted sled and roof: **Sufficient with Additional Ballast Weight**

Prepared by:



03/16/2026

Ashley Deuschle, P.E.
Connecticut Professional Engineer
License No.: 39169

Dewberry Engineers, Inc.
Structural Analysis Summary Sheet

Job No.:	501895919	**By:**	JCS	**Date:**	10/22/2025
Job Name:	Jewett City CT SC 2	**Checked:**	AMD	**Date:**	10/22/2025

Scope of Work:

- Proposed removal of one (1) Andrew NH180QS-DG-FOM antenna from the existing sled.
- Proposed removal of one (1) Nokia UHIC B4 RRH 2x60-4R from the existing sled.
- Proposed removal of one (1) power panel from the existing sled.
- Proposed removal of one (1) Rectifier from the existing sled.
- Proposed removal of one (1) false vent enclosure from the existing sled.
- Proposed installation of one (1) CommScope NNVVS4-360S-BF2 antenna on the existing sled.
- Proposed installation of one (1) Samsung RF4461d-13A RRH on the existing sled.
- Proposed installation of one (1) Samsung RT-8808-77A RRH on the existing sled.
- Proposed installation of two (2) Rectifiers on the existing sled.
- Proposed installation of one (1) power panel on the existing sled.
- Proposed installation of one (1) new false vent enclosure.
- Existing one (1) OVP to remain.

Table 1: FINAL APPURTENANCE LOADING

Elev.	Status	#	Appurtenance Description	Location	Weight (lb)
36.9'	Removed	(1)	Andrew NH180QS-DG-FOM	Existing sled	25.4
31.1'	Removed	(1)	Nokia UHIC B4 RRH 2x60-4R RRH	Existing sled	55.0
31.1'	Removed	(1)	Power Panel	Existing sled	32.0
31.1'	Removed	(1)	Rectifier	Existing sled	3.1
37.9'	Proposed	(1)	CommScope NNVVS4-360S-BF2	Existing sled	32.2
31.1'	Proposed	(1)	Samsung RF4461d-13A RRH	Existing sled	79.2
31.1'	Proposed	(1)	Samsung RT-8808-77A RRH	Existing sled	59.5
31.1'	Proposed	(2)	Rectifier	Existing sled	3.1
31.1'	Proposed	(1)	Power Panel	Existing sled	15.0
31.1'	Remain	(1)	Existing OVP	Existing sled	32.0

Codes / Standards / References:

- Connecticut State Building Code (CSBC) 2022, Appendix P
- IBC 2021
- TIA-222-H
- ASCE 7-16
- AISC 15th Ed.
- Radio Frequency Data Sheet (RFDS) by Verizon Wireless date updated 07/08/2025
- Previous Structural Analysis Report by Dewberry Engineers, Inc. dated 01/08/2025.
- Original bidding and construction document - Roof Framing Plan S3.01 dated 05/04/2009.
- Latest construction drawings by Dewberry Engineers, Inc.

Design & Analysis Assumptions:

- Existing building structure and sled are assumed to be in good condition.
- Design and analysis are based on dead and wind loads. The analysis checks for normal bending and shear stresses as well as overturning stability.

Conclusion / Recommendations:

- The proposed equipment can be mounted on the existing sled with the addition of ballast weight to the non-penetrating sled. Based on the pictures provided from the field survey, the existing three-sided ballasted sled has three separate steel trays containing masonry blocks. Each tray appears to contain four (4) solid CMU blocks measuring nominally 4"x8"x16". The contractor should verify the number and size of these blocks which are to remain. In addition to these blocks, add three (3) additional masonry blocks to each tray. The additional blocks shall weigh approximately 32 lb each. These blocks can be either solid CMU measuring 4"x8"x16" or hollow CMU measuring 8"x8"x16". A total of 7 blocks should be present on each of the 3 trays for a total of 21 masonry blocks. Ballast tie down kits may be used to secure the existing and new ballast to premanufactured non-penetrating sled.

Dewberry

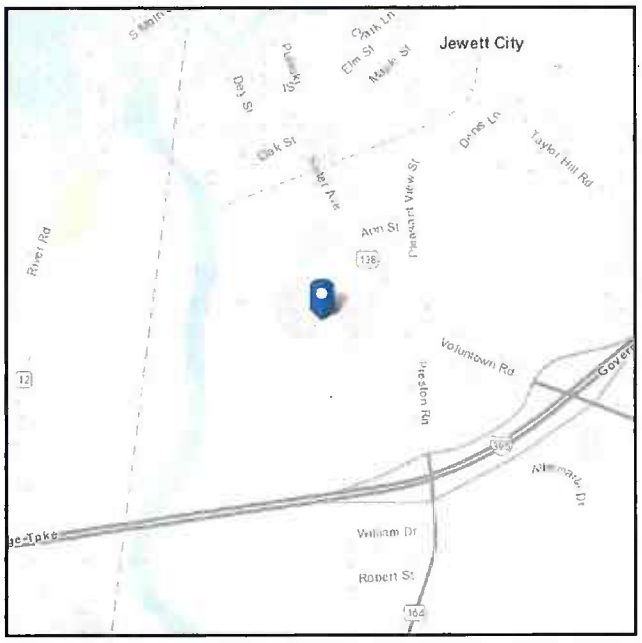
APPENDIX A – CALCULATIONS

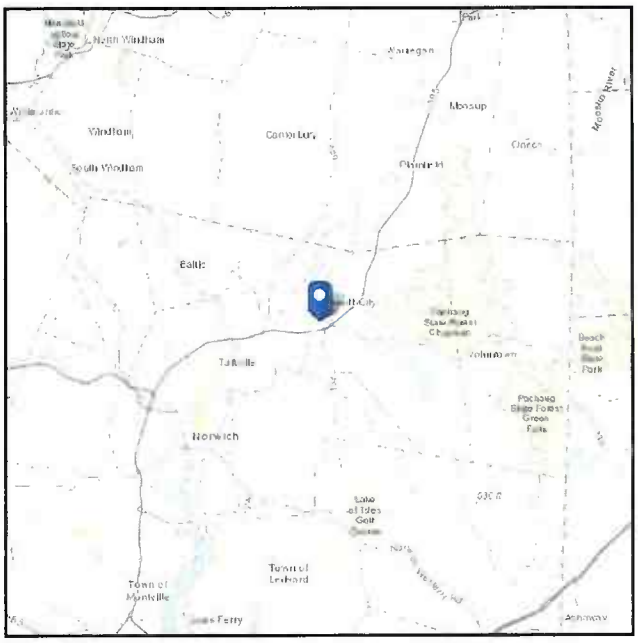
ASCE Hazards Report

Address:
303 Slater Ave
Jewett City, Connecticut
06351

Standard: ASCE/SEI 7-16
Risk Category: III
Soil Class: D - Default (see Section 11.4.3)

Latitude: 41.595338
Longitude: -71.980158
Elevation: 178.55488354840176 ft (NAVD 88)





Wind

Results:

Wind Speed	133 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	97 Vmph
100-year MRI	102 Vmph

Connecticut 2022 State Building Code overrides this value as 130 Vmph.

Data Source: ASCE/SEI 7-16, Fig. 26.5-1C and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Mon Oct 06 2025

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

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

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

Snow

Results:

Ground Snow Load, p_g:	30 lb/ft^2
Mapped Elevation:	178.6 ft
Data Source:	ASCE/SEI 7-16, Table 7.2-8
Date Accessed:	Mon Oct 06 2025

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.

Dewberry

Job Number	50189519
Made by:	JCS
Date:	10/22/2025
Checked by:	AMD
Date:	10/22/2025

(Jewett City CT SC 2) - Design Wind Load

Wind Load Design Criteria

Site Name: Jewett City CT SC 2

General Information & Design Input ASCE 7-16

Item	Value	Description	Reference
V_{ult} =	130.00	Ultimate Design Wind Speed	*CT 2022 State Building Code*
V_{asd} =	100.70	$(\sqrt{0.6}) * V_{ult}$	*Adjustment for ASD Load Combo. 1.0D+0.6W*
K_d =	0.95	Wind Direction Probability Factor	*Table 26.6-1*
Class	III	Structure Classification	*Table 1.5-1*
I =	1.15	Importance Factor (Without Ice)	*Table 1.5-2*
z = h =	36.90	ft. (A.G.L.)	*Max. Center of Appurtenance*
Exp. Cat.	C	Exposure Category	*Sect. 26.7.3*
z_g =	900.00	Terrain Exposure Constant	*Table 26.9-1*
α =	9.50	Terrain Exposure Constant	*Table 26.9-2*
K_z =	1.03	Velocity Pressure Coefficient	*Table 29.3-1*
Topo. Cat.	1.00	Topographic Category (1-5)	*Sect. 26.8.1*
e =	2.72	Natural Logarithmic base	
γ =	N/A	Height attenuation Factor	
L_h =	N/A	Distace upwind of crest	
H =	N/A	ft. Height of crest above surrounding terrain	
K_1 =	N/A	Topographic Multiplier	*Figure 26.8-1*
K_2 =	N/A	Topographic Multiplier	*Figure 26.8-1*
K_3 =	N/A	Topographic Multiplier	*Figure 26.8-1*
K_{zt} =	1.00	$= (1+K_1K_2K_3)^2$	*Sect. 26.8.2*
G_h =	0.85	Gust Effect Factor	*Sect. 26.9.1*
$q_{z\ design}$ =	29.1 psf	$= 0.00256(K_z)(K_{zt})(K_d)(V_{asd}^2)(I)$	*Sect.29.3.2*

Design Wind Forces:

Section 2.6.9.2

$F_a = q_{z\ design} G_h (EPA)_a$ *(where $(EPA)_a$ = effective projected area of the appurtenance = $C_a A_a$)*

(see calculation tables on following pages)

Design Wind Service Force (as a percentage of Design Load):

V_{serv}=	60.00		Serviceability Design Wind Speed	*TIA 2.8.3*
q_{zserv}=	$0.00256(K_z)(K_{zt})(K_{dserv})(V_{serv}^2)(I_{wserv})$ (psf)			
q_{zserv}=	9.24	psf	Service Design Wind Pressure	
q_{z_max}=	$0.00256(K_z)(K_{zt})(K_{dt})(K_d)(V_{asd})(I_w)$ (psf)			
q_{z_max}=	29.10	psf	Ultimate Design Wind Pressure	

Service Load as a percentage of Design Load: 31.8%

Dewberry

Job Number	50189519
Made by:	JCS
Date:	10/22/2025
Checked by:	AMD
Date:	10/22/2025

(Jewett City CT SC 2) - Design Wind Load

Q:\Structural Projects Early Phase\Telecom Projects\Jewett City CT SC 2 SA\Analysis\Ballast Sled Calcs 07-30-25 (ASCE7-16, V2.1).xlsx

Element Definition

Jewett City CT SC 2

Description	Dimensions (in.)			Weight (lb)	Length / # Supports
	W	D	H		
Non-Penetrating Roof Mount	-	-	-	205.7	1.00
CommScope NNVVS4-360S-BF2	-	-	-	32.20	1.00
RRH 5G RT-8808-77A	15.00	6.80	15.00	59.50	1.00
RRH 700/850 RF4461d-13A	14.90	10.20	14.90	79.20	1.00
Rectifier OmniOn ep1600	4.59	1.59	8.56	3.10	1.00
OVP Box	15.73	10.30	28.93	32.00	1.00
Hoffman Power Panel	12.00	6.00	12.00	15.00	1.00
			Total:	**426.68**	

Design Wind Load

Members	Dimensions (ft.)			$Area\ (A_a)_n$	$Area\ (A_a)_t$	Aspect Ratio	Aspect Ratio	C_{an}	C_{at}
	Width *(Normal)*	Depth *(Tangent)*	Height *(or span)*	*(normal)* *(sf)*	*(tangent)* *(sf)*	*(normal)*	*(tangent)*	*(normal)* *Table 2-8*	*(tangent)* *Table 2-8*
Non-Penetrating Roof Mount	-	-	-	-	-	-	-	-	-
CommScope NNVVS4-360S-BF2	-	-	-	-	-	-	-	-	-
RRH 5G RT-8808-77A	1.25	0.57	1.25	1.56	0.71	1.00	2.19	1.20	1.20
RRH 700/850 RF4461d-13A	1.24	0.85	1.24	1.54	1.05	1.00	1.46	1.20	1.20
Rectifier OmniOn ep1600	0.38	0.13	0.71	0.27	0.09	1.87	5.46	1.20	1.33
OVP Box	1.31	0.86	2.41	3.16	2.07	1.84	2.80	1.20	1.21
Hoffman Power Panel	1.00	0.50	1.00	1.00	0.50	1.00	2.00	1.20	1.20

Design Effective Projected Area & Wind Loads

Members	EPA_a @ 0.0° *(sf)*	EPA_a @ 30.0° *(sf)*	EPA_a @ 60.0° *(sf)*	EPA_a @ 90.0° *(sf)*	F_a @ 0.0° *(lb)*	F_a @ 30.0° *(lb)*	F_a @ 60.0° *(lb)*	F_a @ 90.0° *(lb)*	Gravity Load @ Support *(lb)*
Non-Penetrating Roof Mount	-	-	-	-	-	-	-	-	205.7
CommScope NNVVS4-360S-BF2	-	-	-	-	-	-	-	-	32.2
RRH 5G RT-8808-77A	1.87	1.62	1.11	0.85	46.3	40.0	27.4	21.1	59.5
RRH 700/850 RF4461d-13A	1.85	1.70	1.41	1.26	45.7	42.1	34.8	31.2	79.2
Rectifier OmniOn ep1600	0.32	0.27	0.17	0.12	8.0	6.8	4.2	3.0	3.1
OVP Box	3.79	3.47	2.83	2.50	93.8	85.8	69.9	62.0	32.0
Hoffman Power Panel	1.20	1.05	0.75	0.60	29.7	26.0	18.6	14.8	15.0

Dewberry

Job Number	50189519
Made by:	JCS
Date:	10/22/2025
Checked by:	AMD
Date:	10/22/2025

(Jewett City CT SC 2) - Design Wind Load

Q:\Structural Projects Early Phase\Telecom Projects\Jewett City CT SC 2 SA\Analysis\Ballast Sled Calcs 07-30-25 (ASCE7-16, V2.1).xlsx

Element Definition

Jewett City CT SC 2

Description	Dimensions (in.)			Weight	Length /
	W	D	H	(lb)	# Supports
False Vent Enclosure	24.00	24.00	84.00	94.01	1.00
Sch. 40 2.5" Dia. Mounting Pipe	2.88	2.88	36.00	58.00	1.00

Design Wind Load

Equipment	Dimensions (ft.)			$Area\ (A_a)_n$	$Area\ (A_a)_t$	Aspect Ratio	Aspect Ratio	C_{an}	C_{at}
	Width (Normal)	Depth (Tangent)	Height (or span)	(normal) (sf)	(tangent) (sf)	(normal)	(tangent)	(normal) Table 2-8	(tangent) Table 2-8
False Vent Enclosure	2.00	2.00	7.00	14.00	14.00	3.50	3.50	0.72	0.72
Sch. 40 2.5" Dia. Mounting Pipe	0.24	0.24	3.00	0.72	0.72	12.50	12.50	0.92	0.92

Design Effective Projected Area & Wind Loads

Equipment	EPA_a @ 0.0° (sf)	EPA_a @ 30.0° (sf)	EPA_a @ 60.0° (sf)	EPA_a @ 90.0° (sf)	F_a @ 0.0° (lb)	F_a @ 30.0° (lb)	F_a @ 60.0° (lb)	F_a @ 90.0° (lb)	Gravity Load @ Support (lb)
False Vent Enclosure	10.08	10.08	10.08	10.08	249.3	249.3	249.3	249.3	94.0
Sch. 40 2.5" Dia. Mounting Pipe	0.66	0.66	0.66	0.66	16.4	16.4	16.4	16.4	58.0

Dewberry

Job Number	50189519
Made by:	JCS
Date:	10/22/2025
Checked by:	AMD
Date:	10/22/2025

(Jewett City CT SC 2) - TRPD-HD Ballast Calc.

Q:\Structural Projects Early Phase\Telecom Projects\Jewett City CT SC 2 SA\Analysis\Ballast Sled Calcs 07-30-25 (ASCE7-16, V2.1).xlsx

Dead Load of Mount

Item	Quantity	Weight		Total Weight (lb)
False Vent Enclosure	1	94.01	lb. ea.	94.01
Non-Penetrating Roof Mount	1	205.68	lb. ea.	205.68
Sch. 40 2.5" Dia. Mounting Pipe	1	58.00	lb. ea.	58.00
CommScope NNVVS4-360S-BF2	1	32.20	lb. ea.	32.20
RRH 5G RT-8808-77A	1	59.50	lb. ea.	59.50
RRH 700/850 RF4461d-13A	1	79.20	lb. ea.	79.20
Rectifier	2	3.10	lb. ea.	6.20
OVP Box	1	32.00	lb. ea.	32.00
Power Panel	1	15.00	lb. ea.	15.00

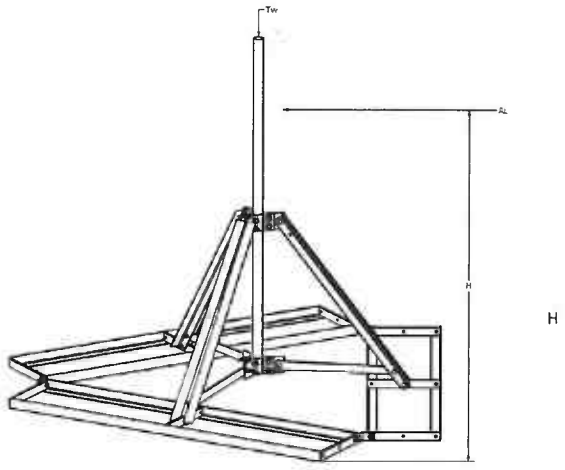
Σ Total Weight (T_W) = 581.79 lb

Wind Load on Mount

- Use max. wind load from previous wind load calc.:

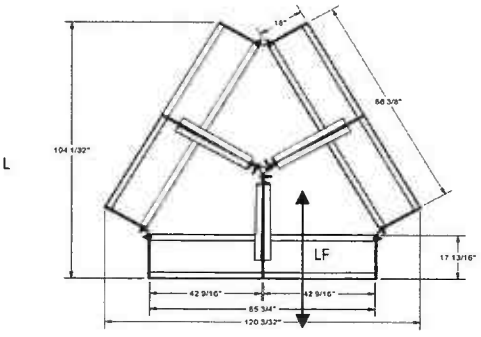
P_W = 425.9 lb

Calculate Required Ballast for Mount



Ballast Equation Input:

W =	?
H =	5.01 ft.
L =	6.10 ft.
A_L =	425.9 lb
T_W =	581.8 lb
L_F =	2.58 ft.



Check sled for overturning with 1.5 safety factor:

$M_R = (T_W*(1/3)(L)+((1/3)*L*P_B)$

$= 1.5$ k-ft $+ 2.89P_B$

$M_O = (A_L*H_1)$

$= 2134$ lb-ft

Dewberry

Job Number	50189519
Made by:	JCS
Date:	10/22/2025
Checked by:	AMD
Date:	10/22/2025

(Jewett City CT SC 2) - TRPD-HD Ballast Calc.

Q:\Structural Projects Early Phase\Telecom Projects\Jewett City CT SC 2 SA\Analysis\Ballast Sled Calcs 07-30-25 (ASCE7-16, V2.1).xlsx

Solve for P

$$1.5 \leq \frac{1.5\text{ k-ft} + 2.89P_B}{2.1\text{ k-ft}} = 0.59\text{ k} = P_B \quad \textit{(Total ballast)}$$

$$\frac{P_B}{3} = 0.20\text{ k} \quad \textit{(Ballast per tray)}$$

Check sled for sliding (steel over rubber roofing mats):

Req'd = $F_R/F_W \geq 1.2$ (F.S.)

$$F_R = \mu * (P_{DL} + P_B)$$
$$= 0.6 * (P_{DL} + P_B)$$

$$F_W = A_L$$
$$= 426\text{ lb}$$

Solve for P_B:

$$1.2 \leq \frac{0.60 * (P_{DL} + P_B)}{425.9\text{ lb}} \rightarrow P_B = 0.090\text{ k}$$ (Total ballast)

Hollow CMU Medium Weight 8"x8"x16" = **32.00 lb**

Total Ballast Weight Required = **588.00 lb**

Total Ballast Weight Applied = **672.00 lb** *(7 blocks per tray, 21 total)*

Rubber Roofing Mat = **94 lb**

Total Dead Load for Exist. Roof Check

Total Dead Load = (P_{DL} + Total Ballast+ Roofing Mats)

= (629.79 lb + (672 lb) + (94 lb) = **1348 lb** or **35.0 psf over a 38.5 sf area**

project	Jewett City CT SC 2	sheet	1	of	1	Dewberry
project no.	50189519	prep by	JCS	date	10/22/25	
subject	Roof Dead Loading	rev by	AMD	date	10/22/25	

Roof - Dead Load (Estimated Based on Bldg Type and Age)

Material	psf	Notes
Roof Membrane	1.5	(Assumed)
4" insulation	1.2	(Assumed)
5/8" densglas	2.5	(Assumed)
1 1/2" mtl roof deck (20 ga)	2.5	(Assumed)
Misc / Other	1.3	(Assumed)
Total	9.0	
Used for Design	10.0	

Roof - Telecom Installation

Material	psf	Notes
Telecom	35.0	
Total	35.0	
Used for Design	35.0	

Roof - Total Dead Load at Telecom Installation

Used for Design	45.0

Tekla Tedds	Project				Job no.	
	Jewett City CT SC 2 SA				50189519	
Dewberry 401 SW Water St. Suite 701 Peoria, IL 61602-1530	Calcs for				Start page no./Revision	
	Roof Snow Load				1	
	Calcs by	Calcs date	Checked by	Checked date	Approved by	Approved date
	JCS	10/22/2025	AMD	10/22/2025		

Calculate the maximum rooftop snow load exerted on the metal roof deck.

For this telecom installation:
SL = 24 psf pressure downwards

SNOW LOADING (ASCE7)

SNOW LOADING

In accordance with ASCE7-16

Tedds calculation version 1.0.12

Building details

Roof type	Monopitch
Width of roof	b = **196.00** ft
Slope of roof 1	α = **1.00** deg

Ground snow load

Ground snow load (Figure 7.2-1)	p_g = **30.00** lb/ft^2
Density of snow	γ = min(0.13 × p_g / 1ft + 14lb/ft^3, 30lb/ft^3) = **17.90** lb/ft^3
Surface roughness category (Sect. 26.7)	C
Exposure condition (Table 7.3-1)	Partially exposed
Exposure factor (Table 7.3-1)	C_e = **1.00**
Thermal condition (Table 7.3-2)	All
Thermal factor (Table 7.3-2)	C_t = **1.00**
Importance category (Table 1.5-1)	III
Importance factor (Table 1.5-2)	I_s = **1.10**
Min snow load for low slope roofs (Sect 7.3.4)	p_{f_min} = I_s × 20 lb/ft^2 = **22.00** lb/ft^2
Flat roof snow load (Sect 7.3)	p_f = 0.7 × C_e × C_t × I_s × p_g = **23.10** lb/ft^2

Warm roof slope factor (C_t <= 1.0)

Roof surface type	Slippery
Ventilation	Non ventilated
Thermal resistance (R-value)	R = **25.00**°F h ft^2 / Btu
Roof slope factor Fig 7.4-1a (solid line)	C_s = **1.00**

Monoslope

Sloped roof snow load (Cl.7.4)	p_s = max(C_s × p_f, p_{f_min}) = **23.10** lb/ft^2

Left parapet

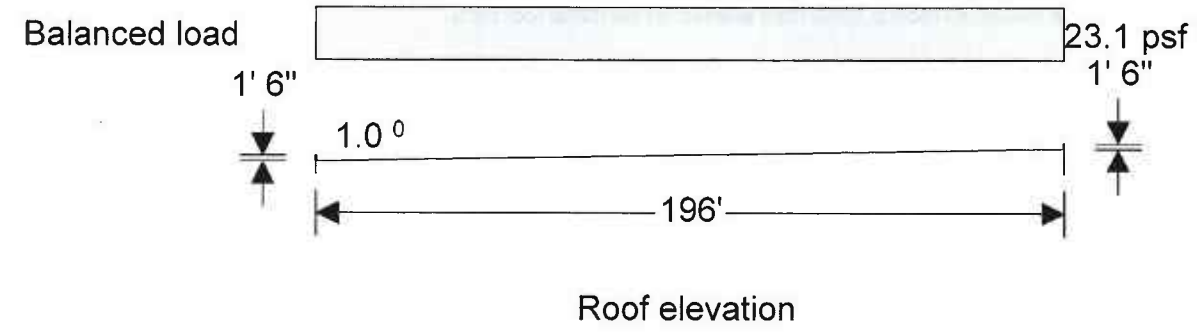
Balanced snow load height	h_b = p_f × C_s / γ = **1.29** ft
Height of left parapet	h_{pptL} = **1.50** ft
Height from balance load to top of left parapet	h_{c_pptL} = h_{pptL} - h_b = **0.21** ft

Ratio of h_{c_pptL}/h_b is less than 0.2 so drifting due to left parapet need not be considered

Right parapet

Height of right parapet	h_{pptR} = **1.50** ft
Height from balance load to top of right parapet	h_{c_pptR} = h_{pptR} - h_b = **0.21** ft

Ratio of h_{c_pptR}/h_b is less than 0.2 so drifting due to left parapet need not be considered



Roof elevation

Calculate the maximum downwards wind pressure exerted on the metal roof deck.

For this telecom installation, use the 'Area 3' corner pressure for a small area for conservancy.
WL = 17.4 psf C&C pressure downwards. Will use 18.2 psf for conservancy.

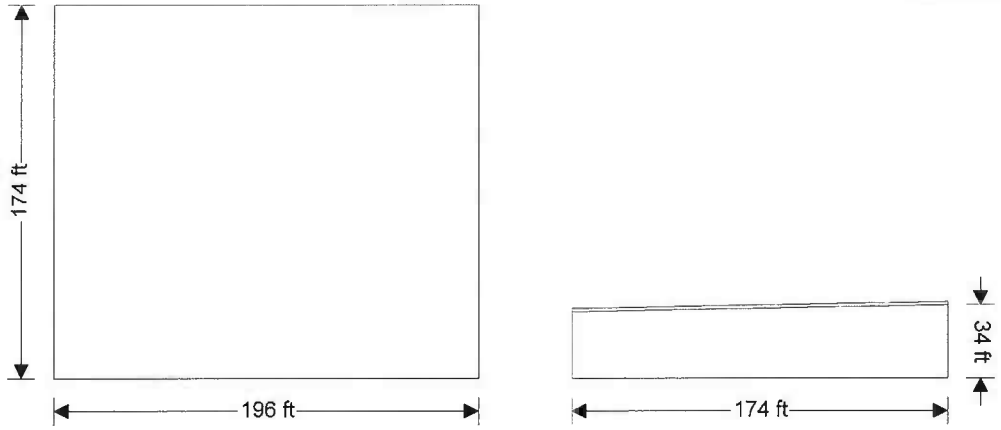
WIND LOADING (ASCE7)

WIND LOADING

In accordance with ASCE7-16

Using the components and cladding design method

Tedds calculation version 2.1.19



Building data

Type of roof	Monoslope
Length of building	b = **196.00** ft
Width of building	d = **174.00** ft
Height to eaves	H = **31.00** ft
Pitch of roof	α_0 = **1.0** deg
Height of parapet	h_p = **1.50** ft
Mean height	h = **31.00** ft
End zone width	a = max(min(0.1×min(b, d), 0.4×h), 0.04×min(b, d), 3ft) = **12.40** ft

General wind load requirements

Basic wind speed	V = **130.0** mph
Risk category	III
Wind directionality factor (Table 26.6-1)	K_d = **0.85**
Ground elevation above sea level	z_{gl} = **0** ft
Ground elevation factor	K_e = exp(-0.0000362 × z_{gl}/1ft) = **1.00**
Exposure category (cl 26.7.3)	C
Enclosure classification (cl.26.12)	Enclosed buildings

Internal pressure coef +ve (Table 26.13-1)	GC_{pi_p} = **0.18**
Internal pressure coef –ve (Table 26.13-1)	GC_{pi_n} = **-0.18**
Parapet enclosure classification	Enclosed
Parapet internal pressure coef +ve (Table 26.13-1)	GC_{pi_pp} = **0.18**
Parapet internal pressure coef –ve (Table 26.13-1)	GC_{pi_np} = **-0.18**
Gust effect factor	G_f = **0.85**

Topography

Topography factor not significant	K_{zt} = 1.0

Velocity pressure

Velocity pressure coefficient (Table 26.10-1)	K_z = **0.99**
Velocity pressure	$q_h = 0.00256 \times K_z \times K_{zt} \times K_d \times K_e \times V^2 \times 1psf/mph^2$ = **36.3** psf

Velocity pressure at parapet

Velocity pressure coefficient (Table 26.10-1)	K_z = **1.00**
Velocity pressure	$q_p = 0.00256 \times K_z \times K_{zt} \times K_d \times K_e \times V^2 \times 1psf/mph^2$ = **36.6** psf

Peak velocity pressure for internal pressure

Peak velocity pressure – internal (as roof press.)	q_i = **36.26** psf

Equations used in tables

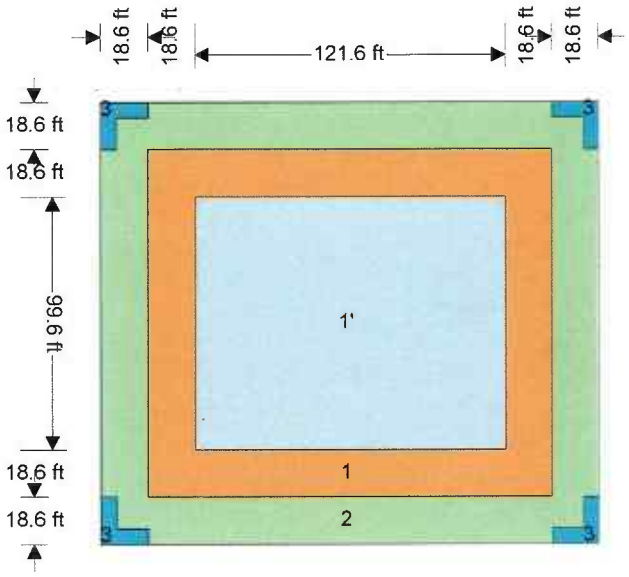
Net pressure	$p = q_h \times (GC_p - GC_{pi})$
Parapet net pressure	$p = q_p \times (GC_p - GC_{pi\_p})$

Components and cladding pressures - Roof (Figure 30.3-2A)

Component	Zone	Length (ft)	Width (ft)	Eff. area (ft^2)	$+GC_p$	$-GC_p$	Pres (+ve) (psf)	Pres (-ve) (psf)
<=10 sf	1	-	-	10.0	0.30	-1.70	17.4	-68.2
100 sf	1	-	-	100.0	0.20	-1.29	13.8 #	-53.2
200 sf	1	-	-	200.0	0.20	-1.16	13.8 #	-48.7
>500 sf	1	-	-	500.1	0.20	-1.00	13.8 #	-42.8
<=10 sf	1'	-	-	10.0	0.30	-0.90	17.4	-39.2
100 sf	1'	-	-	100.0	0.20	-0.90	13.8 #	-39.2
500 sf	1'	-	-	500.0	0.20	-0.55	13.8 #	-26.5
>1000 sf	1'	-	-	1000.1	0.20	-0.40	13.8 #	-21.0
<=10 sf	2	-	-	10.0	0.30	-2.30	17.4	-89.9
100 sf	2	-	-	100.0	0.20	-1.77	13.8 #	-70.7
200 sf	2	-	-	200.0	0.20	-1.61	13.8 #	-64.9
>500 sf	2	-	-	500.1	0.20	-1.40	13.8 #	-57.3
<=10 sf	3	-	-	10.0	0.30	-3.20	17.4	-122.6
100 sf	3	-	-	100.0	0.20	-2.14	13.8 #	-84.1
200 sf	3	-	-	200.0	0.20	-1.82	13.8 #	-72.6
>500 sf	3	-	-	500.1	0.20	-1.40	13.8 #	-57.3

Tekla Tedds	Project				Job no.	
	Jewett City CT SC 2 SA				50189519	
Dewberry 401 SW Water St. Suite 701 Peoria, IL 61602-1530	Calcs for				Start page no./Revision	
	Roof Wind Load				3	
	Calcs by	Calcs date	Checked by	Checked date	Approved by	Approved date
	JCS	10/22/2025	AMD	10/22/2025		

The final net design wind pressure, including all permitted reductions, used in the design shall not be less than 16psf acting in either direction



Plan on roof

Project	Jewett City CT SC 2	Date:	10/07/2025
Project No.	50189519	Prep. By	JCS

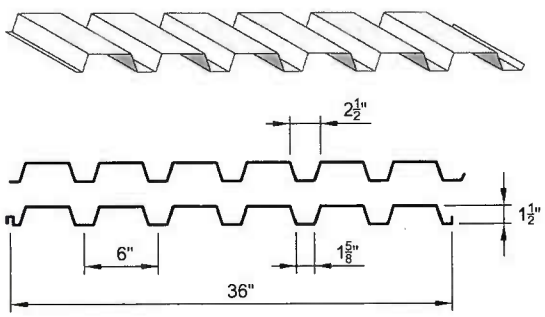
Rooftop **(+)**

	Vertical	Comments
Dead Load, D (psf)	45	
Live Load, L (psf)	-	(Not Applicable)
Roof Live Load, Lr (psf)	20	(Assumed)
Snow Load, S (psf)	24	
Wind Load, W (psf)	18.2	
Seismic Load, E (psf)	-	(Not Applicable)

Load Combinations (Allowable Strength Design)

16-8	D	45	
16-9	D + L	-	
16-10a	D + Lr	65	
16-10b	D + S	69	
16-11a	D + 0.75L+ 0.75*Lr	-	
16-11b	D + 0.75L+ 0.75*S	-	
16-12a	D + 0.6*W	55.9	
16-12b	D + 0.7E	-	
16-13a	D + 0.45W + 0.75L + 0.75Lr	-	
16-13b	D + 0.525E + 0.75L + 0.75Lr	-	
16-13c	D + 0.45W + 0.75L + 0.75S	**71.2**	**Governs**
16-13d	D + 0.525E + 0.75L + 0.75S	-	
16-14	0.6D + 0.6W	37.9	
16-15	0.6D + 0.7E	-	

User Defined Criteria	
Deck Application:	Roof
Design Method:	ASD
Deck Type:	B, BI, BV, BIV
Gage:	Standard
Yield Stress (ksi):	40



Roof Decks - Types B, BI, BV, BIV

- Type B (Wide Rib) provides the best balance of strength and economy of all the 1 1/2" deep roof decks. Where rigid roofing insulation is used with B deck, a minimum 1" thickness is required.
- Available with nested side laps, types B and BV or with interlocking side laps, types BI and BIV.
- Available as a vented deck, types BV and BIV are manufactured with slot vents in the bottom flutes. The openings can be specified from 0.5% up to 1.5% of total surface. Types BV and BIV are to be specified when venting is required for cementitious insulation fill.
- Also available with rolled-in hanger tabs (non-vented types only).

See load tables on page 2

Roof Decks - Types B, BI, BV, BIV

Properties

Gage	Thickness (in)	Coverage (in)	Weight (psf)
22	0.0295	36	1.63
20	0.0358		1.98
18	0.0474		2.62
16	0.0598		3.30

ASD Section Properties Design Strengths

Gage	F_y (ksi)	I_0 1 Span (in^4/ft)	I_0 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_o (in^3/ft)	S_e (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.163	0.175	0.157	0.175	0.176	0.183	4215	4391	2009	654	1181
20	40	0.205	0.213	0.201	0.213	0.224	0.235	5375	5624	2428	932	1696
18	40	0.280	0.281	0.279	0.281	0.304	0.315	7291	7553	3192	1557	2858
16	40	0.355	0.355	0.355	0.355	0.390	0.395	9332	9454	3996	2381	4396

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

Allowable Uniform Loads and Maximum Construction Spans

Span Condition	Gage	Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf) Center to Center Span (ft - in)										Max Constr Span (ctr / ctr)
		5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	8 - 0	9 - 0	10 - 0	11 - 0	12 - 0	
Single	22	112 / 86	93 / 64	78 / 50	67 / 39	57 / 31	- / -	- / -	- / -	- / -	- / -	6 - 10
	20	143 / 107	118 / 81	100 / 62	85 / 49	73 / 39	56 / 26	44 / 18	- / -	- / -	- / -	8 - 7
	18	194 / 147	161 / 110	135 / 85	115 / 67	99 / 54	76 / 36	60 / 25	49 / 18	40 / 14	34 / 11	11 - 3
	16	249 / 186	206 / 140	173 / 108	147 / 85	127 / 68	97 / 45	77 / 32	62 / 23	51 / 17	43 / 13	13 - 11
Double	22	115 / 221	95 / 166	80 / 128	69 / 101	59 / 81	45 / 54	36 / 38	- / -	- / -	- / -	8 - 4
	20	147 / 269	122 / 202	103 / 156	88 / 122	76 / 98	58 / 66	46 / 46	37 / 34	31 / 25	- / -	10 - 6
	18	198 / 356	164 / 267	138 / 206	118 / 162	102 / 130	78 / 87	62 / 61	50 / 44	41 / 33	35 / 26	13 - 9
	16	247 / 448	205 / 337	173 / 260	147 / 204	127 / 163	98 / 109	77 / 77	63 / 56	52 / 42	44 / 32	16 - 11
Triple	22	143 / 173	119 / 130	100 / 100	85 / 79	74 / 63	57 / 42	45 / 30	- / -	- / -	- / -	8 - 6
	20	183 / 211	152 / 158	128 / 122	109 / 96	94 / 77	72 / 51	57 / 36	47 / 26	39 / 20	- / -	10 - 8
	18	245 / 278	203 / 209	172 / 161	147 / 127	127 / 101	97 / 68	77 / 48	63 / 35	52 / 26	43 / 20	13 - 11
	16	307 / 351	255 / 264	215 / 203	183 / 160	159 / 128	122 / 86	96 / 60	78 / 44	65 / 33	54 / 25	17 - 1

Notes:

3. Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
   - ANSI/SDI RD-2017 Standard for Steel Roof Deck
   - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
4. Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria, which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
5. "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
6. See website at www.newmill.com for Factory Mutual approved deck types and maximum FM construction spans.

Maximum Cantilever Spans

Gage	F_y (ksi)	Back-Span Condition		
		Single	Double	Triple
22	40	1 - 8	1 - 8	1 - 8
20	40	2 - 0	1 - 11	1 - 11
18	40	2 - 6	2 - 3	2 - 3
16	40	3 - 1	2 - 7	2 - 7

Notes:

7. Maximum cantilever spans shown are based on the following criteria:
   - ANSI/SDI RD-2017 Standard for Steel Roof Deck
   - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
   - Bearing width at perimeter support assumed to be 3" minimum
   - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

APPENDIX B – BEAM GEOMETRY

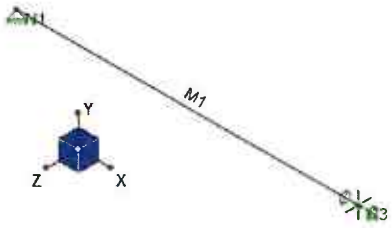


Figure B-1 – Beam Node & Member Numbers

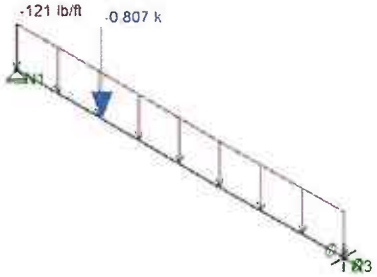


Figure B-2 – Controlling Strength LC (DL+0.75SL+0.45WL)

Figure B-3 – Service Level Reactions

Project Notes

Trib Width = 4'-10"
DL = 25 psf, 121 plf
SL = 24 psf, 116 plf
WL = 18.2 psf, 88 plf
Telecom Install = 1345 lb placed roughly between 2 roof beams.
For conservancy place 60% of weight as a point load 6'-6" from the end of member.
This equates to 0.60*1345 lb = 807 lb each.
Material grade was set to A36 in leiu of A992 for conservancy since the drawing does not explicity state the material grade.

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	0	0	0	
2	N3	25	0	0	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]
1	N1	Reaction	Reaction	Reaction	
2	N3		Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [k/ft^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2

Member Primary Data

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N1	N3	W14X22	Beam	Wide Flange	A36 Gr.36	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1	M1	W14X22	25	2	N/A	N/A	Gravity

Member Distributed Loads (BLC 1 : Dead)

	Member Label	Direction	Start Magnitude [lb/ft, F, ksf, k-ft/ft]	End Magnitude [lb/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M1	Y	-121	-121	0	%100

Member Distributed Loads (BLC 2 : Snow)

	Member Label	Direction	Start Magnitude [lb/ft, F, ksf, k-ft/ft]	End Magnitude [lb/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M1	Y	-116	-116	0	%100

Member Distributed Loads (BLC 3 : Wind)

	Member Label	Direction	Start Magnitude [lb/ft, F, ksf, k-ft/ft]	End Magnitude [lb/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M1	Y	-88	-88	0	%100

Basic Load Cases

	BLC Description	Category	Y Gravity	Point	Distributed
1	Dead	DL	-1	1	1
2	Snow	SL			1
3	Wind	WL			1

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
1	DL	Yes	Y	DL	1				
2	DL+SL	Yes	Y	DL	1	SL	1		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
3	DL+0.6WL	Yes	Y	DL	1			WL	0.6
4	DL+0.75SL+0.45WL	Yes	Y	DL	1	SL	0.75	WL	0.45

Envelope Beam Deflections

	Member Label	Span		Location [ft]	y' [in]	(n) L'/y' Ratio	LC
1	M1	1	max	24.74	-0.009	NC	1
2		1	min	12.24	-0.467	643	4

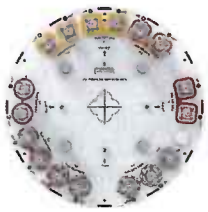
Envelope AISC 15TH (360-16): ASD Member Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
1	M1	W14X22	0.399	11.719	4	0.087	0	y	4	11.691	139.904	7.886	59.641	1	H1-1b

Dewberry

APPENDIX C – SUPPORTING DOCUMENTS

NNVVS4-360S-BF2



16-port small cell antenna, 4x 698-896, 4x 1695–2690 and 8x Beamforming 3300- 4000, 360° Horizontal Beamwidth, fixed tilt.

- Two broadband low band arrays (Bands 12/13/29/14/5) with 4T4R (4X MIMO) capability
- Two broadband mid band arrays (Bands 25/66/30/40/41) with 4T4R (4X MIMO) capability
- 8T8R omni beamforming array with calibration port for 3.5 GHz (Bands 48, 77, 78)

General Specifications

Antenna Type	Small Cell
Band	Multiband
Calibration Connector Interface	4.3-10 Female
Calibration Connector Quantity	1
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	ASA
Radiator Material	Aluminum | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, mid band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	16

Dimensions

Length	610 mm | 24.016 in
Net Weight, antenna only	14.8 kg | 32.628 lb
Outer Diameter	370 mm | 14.567 in

Port Configuration

NNVVS4-360S-BF2

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz | 3300 – 4000 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,200 W @ 50 °C

Electrical Specifications

	R1,R2	R1,R2	Y1-Y2	Y1-Y2	Y1-Y2	Y1-Y2	P1-P4	P1-P4	P1-P4
Frequency Band, MHz	**698–806**	**806–896**	**1695–1920**	**1920–2180**	**2300–2360**	**2360–2690**	**3300–3550**	**3550–3700**	**3700–4000**
RF Port	1-4	1-4	5-8	5-8	5-8	5-8	9-16	9-16	9-16
Gain, dBi	5.3	5.5	7.8	8.3	8.8	8.6	8.3	8.8	8.8
Beamwidth, Horizontal, degrees	360	360	360	360	360	360	360	360	360
Beamwidth, Vertical,	45.9	42	21	18.2	16.4	15.6	9.5	9	8.5

NNVVS4-360S-BF2

degrees									
Beam Tilt, degrees	2	2	2	2	2	2	2	2	2
Coupling level, Amp, Antenna port to Cal port, dB							26	26	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB							±2	±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB							1	1	1
Coupler, max Phase Δ, Antenna port to Cal port, degrees							10	10	10
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25	25
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153	-145	-145	-145
Input Power per Port at 50° C, maximum, watts	100	100	100	100	100	100	75	75	75

Electrical Specifications, Service Beam

Frequency Band, MHz	**3300–3550**	**3550–3700**	**3700–4000**
Steered 0° Gain, dBi	12.1	12.2	12.3
Steered 0° Beamwidth, Horizontal, degrees	63	63	61

Electrical Specifications, Broadcast 360°

Frequency Band, MHz	**3300–3550**	**3550–3700**	**3700–4000**
Gain, dBi	8.5	8.5	8.7
Beamwidth, Horizontal at 3 dB, degrees	360	360	360
Beamwidth, Vertical, degrees	9.6	8.7	8

Mechanical Specifications

Wind Loading @ Velocity, frontal	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)

NNVVS4-360S-BF2

Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	478 mm | 18.819 in
Depth, packed	464 mm | 18.268 in
Length, packed	894 mm | 35.197 in
Weight, gross	19 kg | 41.888 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

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

SAMSUNG

Specifications

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

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

SAMSUNG

Radio Access Network

102 RRU
Product Specification

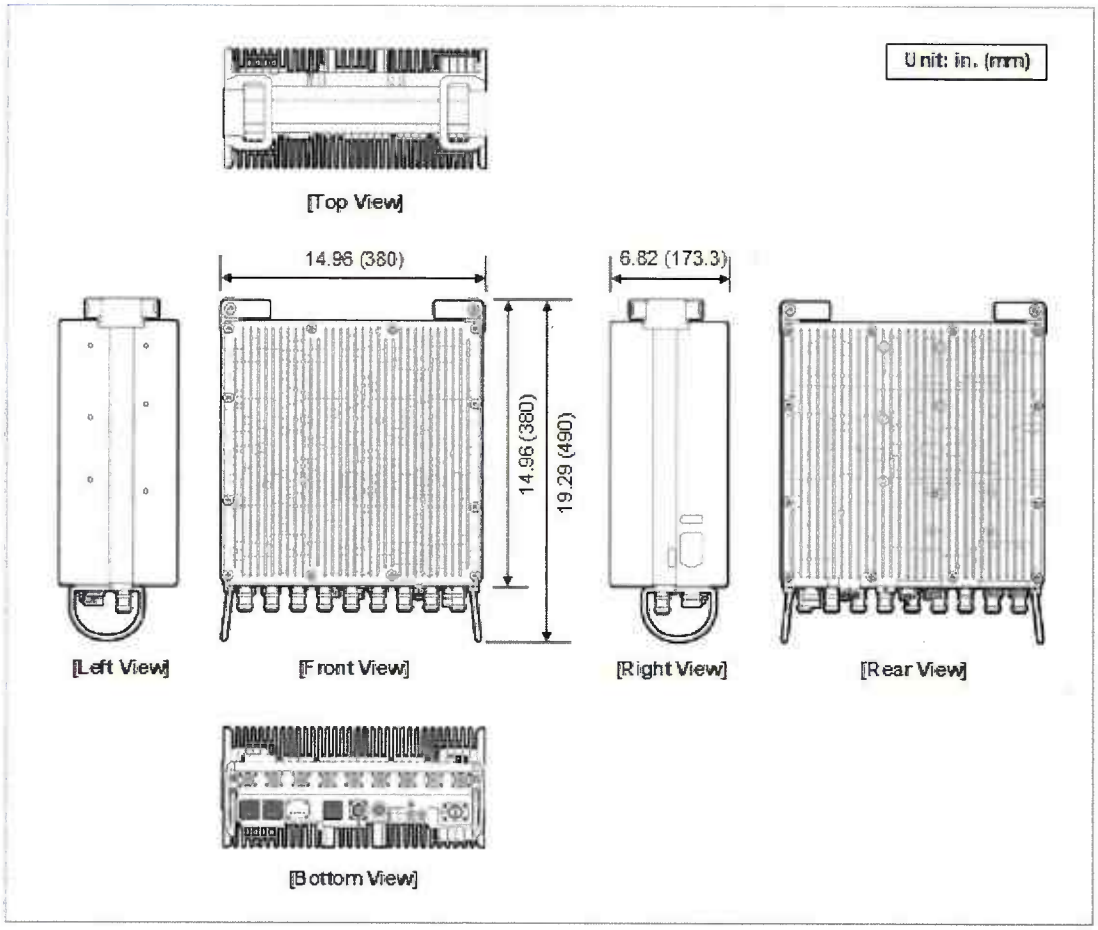
for RT8808-77A

Specifies hardware configuration, functions, specifications, components, ports, and LED information for the radio units.

Document Version 1.0
June 2021

Document Number: 2600-00T7PZGA2

Figure 1. Appearance



The RT8808-77A can be mounted on a wall or pole as displayed in the following installation scenario:

Specifications

The following table outlines the main specifications of RT8808-77A.

Table 2. Specifications (RT8808-77A)

Item	RT8808-77A
Radio Technology	5G NR
Operating Frequency	3700 to 3980 MHz
Channel Bandwidth	20/40/60/80/100 MHz
RF Chain	• 8T8R, 4T4R+4T4R Bi-sector • 2T2R+2T2R+2T2R Tri-sector • 4T8R+4T8R split mode
RF Output Power	Max. 320W (8 x 40W)
Capacity	Total Max 2C
CPRI interface	15km, 2 ports (25Gbps x 2), SFP28, single mode, Bi-di (Option: Duplex)
Input Voltage	-48 V DC (-38 V DC to -57 V DC)
Power Consumption (Max.)	1,192 W (100% load, 25°C) (w/o RET)
Operating Humidity	5% to 100%RH (Condensing, not to exceed 30g/m3 absolute humidity)
Operating Temperature	-40°C to 55°C (without solar load)
Dimension (in./mm)	14.96/380 (W) × 6.82/173.3(D) × 14.96/380 (H)
Weight (kg)	27 or less than
Cooling	Natural convection
Waterproof/Dustproof	IP65
Wind Resistance	Telcordia GR-487-CORE Issue5 • Wind Resistance (Section 3.36)
Earthquake Specification	Telcordia GR-63-CORE, Issue5, □ Earthquake (Section 4.4.1)
Vibration Specification	Telcordia GR-63-CORE, Issue5, • Office Vibration (Section 4.4.4) • Transportation Vibration (Section 4.4.5)
Altitude	Telcordia GR-63-CORE, Issue5, • Altitude (Section 4.1.3)
EMC	FCC Title 47 CFR Part 15
RF	FCC Title 47 CFR Part 27, 24
Safety	UL 62368-1, 2nd Edition
Installation	Pole, Wall, Tower

The power consumption is predicted with a simulation and the measured value is subject to change by ±10%

ATTACHMENT 5

SECOG Parcel Viewer

Representing 22 towns, cities, and boroughs in southeastern Connecticut

Parcel Search List Find /

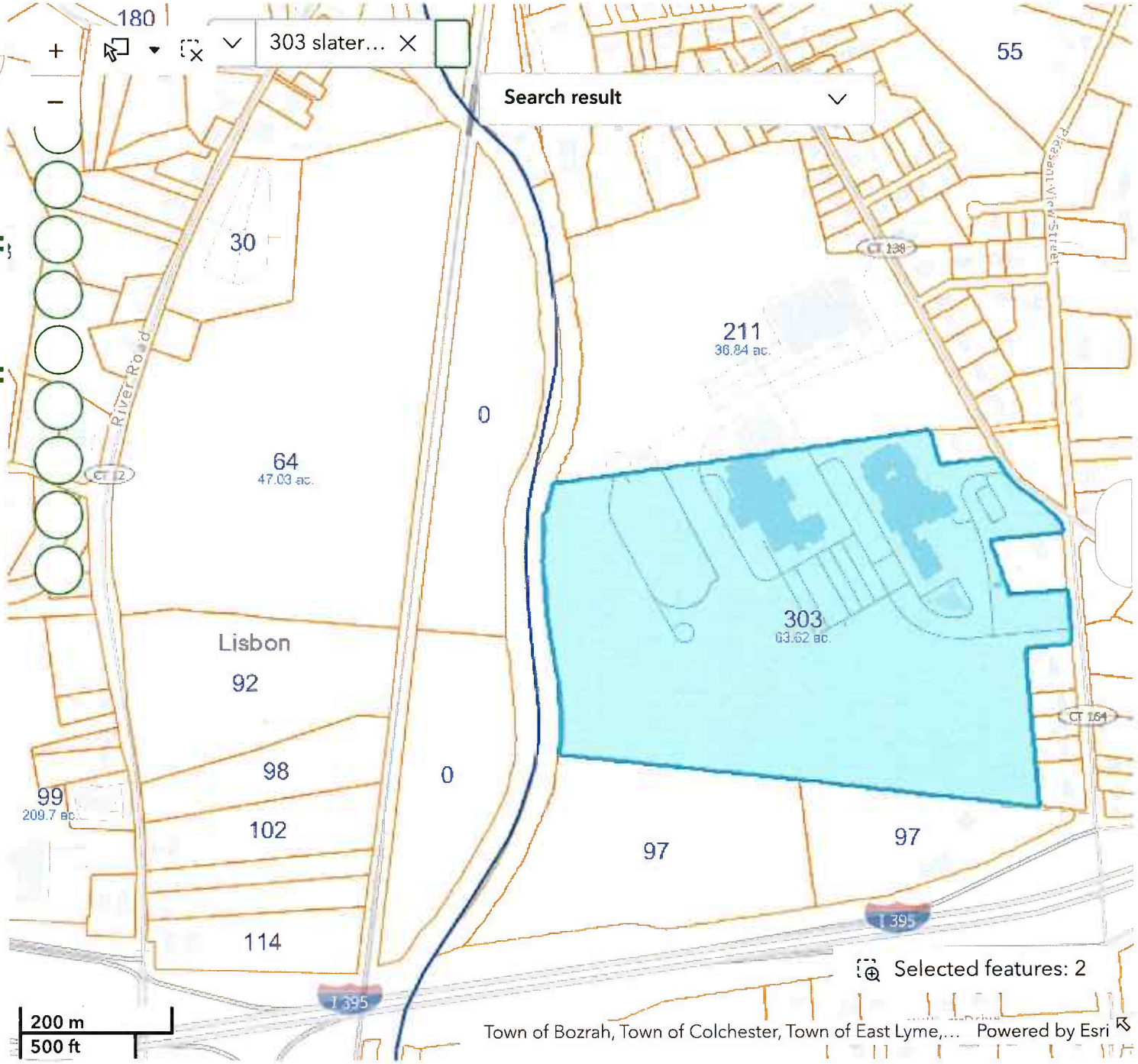
Search Results:

(Will list all parcels when nothing is selected)

303 SLATER AV , Griswold

58-44-87-41

GRISWOLD TOWN OF , *63.74 ac.*



Total: 318 | Selection: 1

303 SLATER AV

Location	303 SLATER AV	**Mblu**	44/ 87/ 41/ /
Acct#	G0469700	**Owner**	GRISWOLD TOWN OF
Assessment	$8,163,680	**Appraisal**	$11,662,400
PID	3246	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2023	$10,855,500	$806,900	$11,662,400

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2023	$7,598,850	$564,830	$8,163,680

Owner of Record

Owner	GRISWOLD TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	28 MAIN STREET JEWETT CITY, CT 06351	**Book & Page**	0043/0265
		Sale Date	09/30/1958
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
GRISWOLD TOWN OF	$0		0043/0265		09/30/1958

Building Information

Building 1 : Section 1

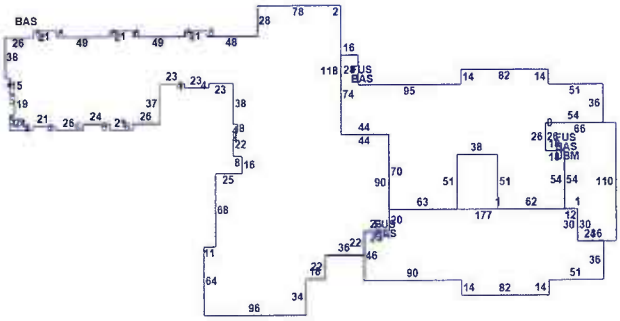
Year Built:	1962
Living Area:	132,690
Replacement Cost:	$16,384,621
Building Percent Good:	65
Replacement Cost Less Depreciation:	$10,650,000

Building Attributes	
Field	**Description**
Style:	Schools/Public
Model	Commercial
Grade	Average
Stories:	1 Story
Occupancy	1.00
Exterior Wall 1	Brick
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	Central
Struct Class	
Bldg Use	MUNICIPAL M94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9030
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	12.00
% Comn Wall	0.00

Building Photo

(https://images.vgsi.com/photos2/GriswoldCTPhotos///0022/100_0135_228

Building Layout



(ParcelSketch.ashx?pid=3246&bid=9000115)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	91,082	91,082
FUS	Upper Story, Finished	41,608	41,608
UBM	Basement, Unfinished	5,388	0
		138,078	132,690

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
MSC86	PLAYSCAPE	1.00 UNIT	$25,000	1
ELEV	ELEVATOR	1.00 STOPS	$13,000	1
CLR1	COOLER	224.00 S.F.	$2,800	1
SPR1	SPRINKLERS-WET	132690.00 S.F.	$107,800	1

Land

Land Use

Use Code	9030
Description	MUNICIPAL M94
Zone	R-20
Neighborhood	C
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	63.74
Frontage	0
Depth	0
Assessed Value	$564,830
Appraised Value	$806,900

lbllndfront

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
LT1	LIGHTS-IN W/PL			28.00 UNITS	$43,500	1
LT2	W/DOUBLE LIGHT			6.00 UNITS	$13,400	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$10,855,500	$806,900	$11,662,400
4000	$8,230,700	$541,400	$8,772,100
2020	$8,230,700	$541,400	$8,772,100

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$7,598,850	$564,830	$8,163,680
4000	$5,761,490	$378,980	$6,140,470
2020	$5,761,490	$378,980	$6,140,470

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

Jewett City SC 2

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP One State Street Hartford, CT 06103	2	2	OLD STATE HOUSE POST OFFICE APR 09 2026 HARTFORD CT 06103 quadient CORRECTION IMI $003.74 04/09/2026 ZIP 06103 043M32206619 US POSTAGE
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Tina Falck, First Selectman Town of Griswold 28 Main Street Griswold, CT 06351				
2.	Mario J. Tristany, Jr., Town Planner Town of Griswold 28 Main Street Griswold, CT 06351				
3.					
4.					
5.					
6.					