Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

November 6, 2024

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**
98 Neptune Avenue, New London, 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 antennas and remote radio heads ("RRHs") attached to an antenna pipe mast concealed within a faux chimney on the roof of the existing building and associated equipment is attached to the exterior of the building. Cellco's existing facility was approved by the Siting Council ("Council") in July of 2017 (Petition No. 1307). A copy of the Council's Petition No. 1307 Decision letter and Staff Report is included in Attachment 1.

Cellco now intends to modify its facility by removing two (2) antennas and two (2) RRHs and installing two (2) new antennas and four (4) new RRHs on the existing pipe masts. All new antennas and RRHs will remain inside the faux chimney. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's new antennas 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 New London's Mayor and Land Use Officer. The City of New London is the owner of the Property and the building.

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

30608290-v1

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

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

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

4. The installation of Cellco's new antennas 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.

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

6. According to the attached Structural Analysis Report ("SA"), the existing faux chimney, mounts 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:
Michael Passero, Mayor
Michelle Johnson-Scovish, Planning and Zoning and Wetlands Official
Aleksey Tyurin

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

July 21, 2017

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

RE: **PETITION NO. 1307** - 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 an existing banquet center building located at Ocean Beach Park, 98 Neptune Avenue, New London, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on July 20, 2017, 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:

1. Approval of any minor project changes be delegated to Council staff;

2. 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;

3. 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 City of New London;

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

5. 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;

6. 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;

7. 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

8. 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 June 7, 2017.

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

Very truly yours,

Robert Stein MAB

Robert Stein
Chairman

RS/MAB/bm

Enclosure: Staff Report dated July 20, 2017

c: The Honorable Michael E. Passero, Mayor, City of New London
Tammy Daugherty, Director of the Office of Development & Planning, City of New London

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. 1307

Cellco - Small Cell Facility
Ocean Beach Park, New London

Staff Report
July 20, 2017

On June 9, 2017, 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 at Ocean Beach Park, 98 Neptune Avenue, New London, Connecticut. The small cell would provide 2100 MHz LTE service to the surrounding area.

Cellco would install a small tower mast to support two small cell antennas on top of the banquet center building in Ocean Beach Park. The tower and mast would extend to a height of 43 feet above ground level (agl) and would be concealed within a faux chimney structure. The upper roof of the banquet center is 30.5 feet agl. The faux brick chimney would extend from a lower roof along the wall that supports the upper portion of the building

Cellco would install an equipment cabinet and a panel box on an exterior lower wall of the building. A four-foot by eight-foot lease area with a gravel surface would be established below the wall mounted equipment for technician access. Utility lines from the wall mounted equipment would extend along exterior walls within a cable tray and along the roofline to the tower mast within the faux chimney. Power and telephone service would extend from existing service within the building.

The subject property is a 50-acre public park located on Long Island Sound. The visibility impact would be minimal given that the installation is within a faux chimney structure, concealing it from public view. The equipment cabinet, panel box and conduit would be painted to match the existing façade.

No wetlands or trees would be impacted by the project. The calculated power density would be 1.0 percent of the applicable limit using a -10 dB off-beam adjustment. Notice is not required to the Federal Aviation Administration.

Notice was provided to the City of New London, the property owner, and abutting property owners on or about June 7, 2017. The Council has not received any comments to date.

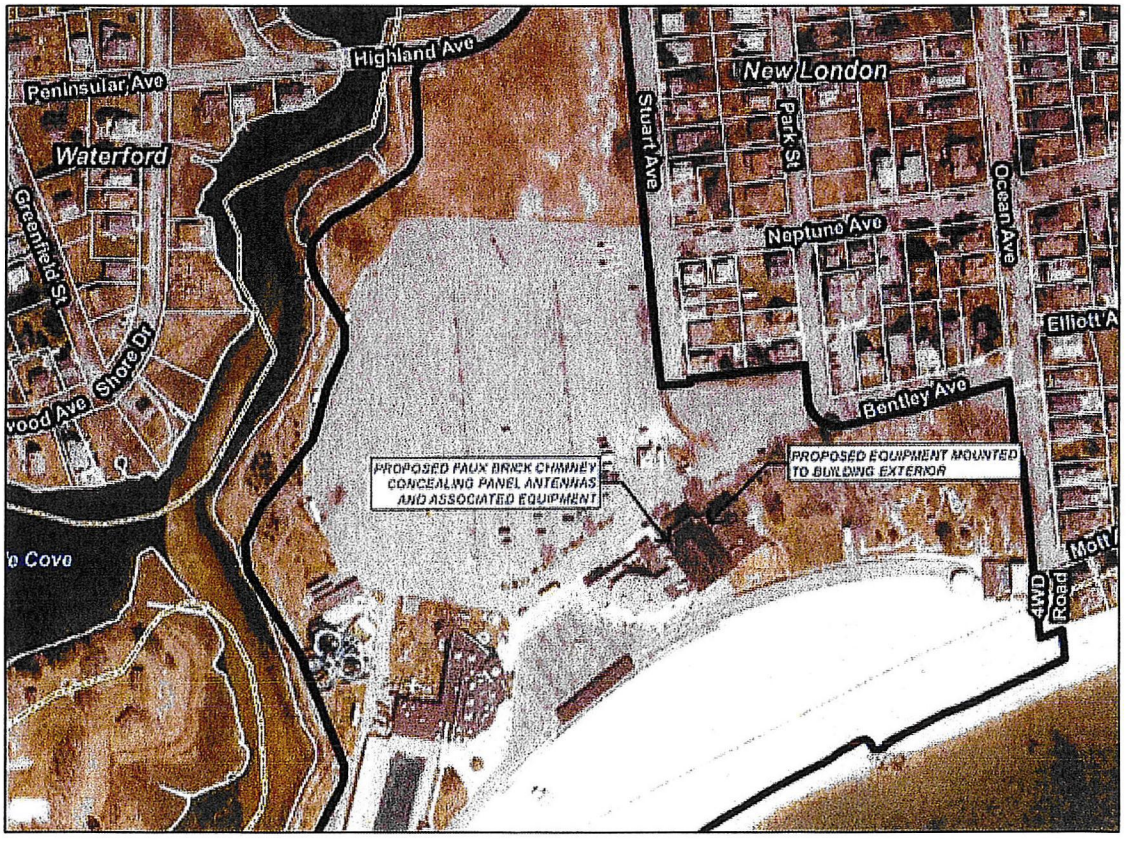
Cellco contends that this proposed project would not have a substantial adverse environmental impact.

Staff recommends the following condition:

1. Approval of any minor project changes be delegated to Council staff.

Photo-simulation of installation from beach at Ocean Beach Park

Site Location

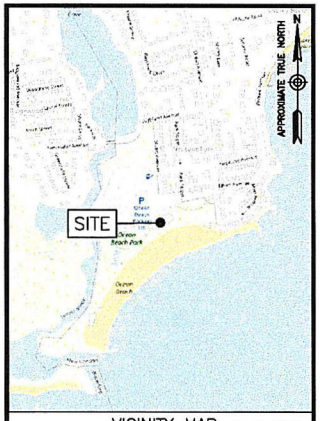


ATTACHMENT 2

OCEAN BEACH CT

98 NEPTUNE AVENUE
NEW LONDON, CT 06320

FUZE PROJECT ID: 16540902
PSLC: 470795



VICINITY MAP N.T.S.

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

PHONE # (617) 531-0800

CONTACT: BENJAMIN REVETTE, PE

CONSTRUCTION
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

TOWER/BUILDING OWNER:
NEW LONDON CITY OF OCE
181 CAPTAINS WALK
NEW LONDON, CT 06320

COORDINATES*:
LATITUDE: 41° 18' 33.6" (41.309335°) N
LONGITUDE: 72° 05' 55.5" (72.098765°) W
*PER FAA-1A

GROUND ELEVATION*:
10.7'±
*PER FAA-1A

PROJECT INFORMATION

VZW LOCATION CODE (PSLC): 470795

FUZE NUMBER: 16540902

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 (2) EXISTING ANTENNAS FROM AN EXISTING MAST PIPE.
- REMOVE (2) NEW RRHS FROM AN EXISTING MAST PIPE.
- INSTALL (2) NEW ANTENNAS TO AN EXISTING MAST PIPE.
- INSTALL (4) NEW RRHS TO AN EXISTING MAST PIPE.
- CONTRACTOR TO RUN ADDITIONAL POWER & FIBER AS NEEDED.
- CONTRACTOR TO REMOVE EXISTING CHIMNEY CAP SHEETS AND INSTALL NEW FRP TUBE CAPS PER SHEET C-3.

NOTE:
1. SCOPE OF WORK BASED ON ANTENNA REC FOR OCEAN BEACH CT DATED 01/09/24. VERIFY SCOPE OF WORK WITH FINAL RFDS PRIOR TO CONSTRUCTION.

SCOPE OF WORK

SHEET INDEX

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

OCEAN BEACH CT

ANTMO DRAWINGS		
2	11/01/24	FOR SUBMITTAL
1	10/24/24	FOR SUBMITTAL
0	04/25/24	FOR SUBMITTAL
A	04/04/24	FOR REVIEW

Dewberry
Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3318

STATE OF CONNECTICUT
BENJAMIN R. REVETTE
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY: 11/01/2024	JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50170407

SITE NUMBER
470795

SITE ADDRESS
98 NEPTUNE AVENUE
NEW LONDON, CT 06320

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, BIAS-T'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 6" 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. "GALVANOX", "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.

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

OCEAN BEACH CT

ANTMO	DRAWINGS	
2	11/01/24	FOR SUBMITTAL
1	10/24/24	FOR SUBMITTAL
0	04/25/24	FOR SUBMITTAL
A	04/04/24	FOR REVIEW

Dewberry

Dewberry Engineers Inc.
55 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.955.3400
FAX: 617.955.3316

STATE OF CONNECTICUT
BENJAMIN B. BRIGGS
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY: 11/01/2024	JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50170407
SITE NUMBER	

470795

SITE ADDRESS

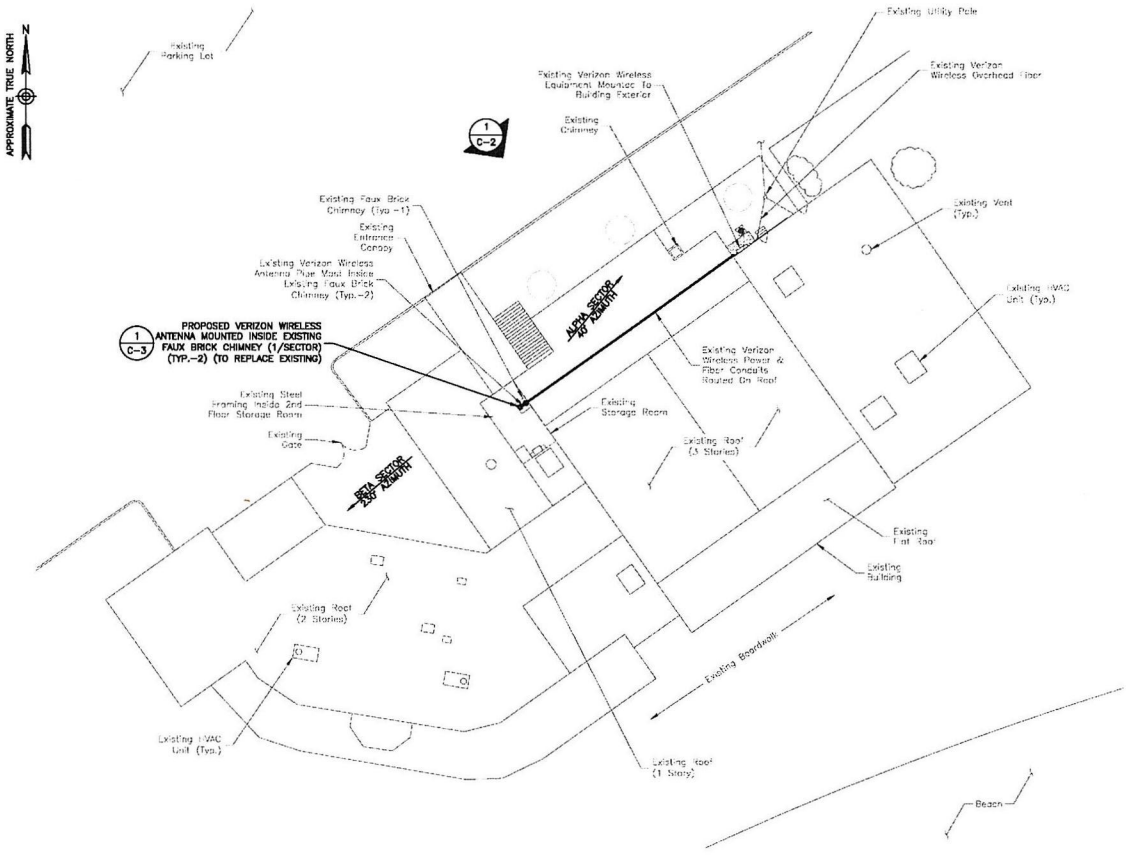
98 NEPTUNE AVENUE
NEW LONDON, CT 06320

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1



SITE PLAN

1

SCALE: 1"=40' FOR 11"x17"
1"=20' FOR 22"x34"

0' 20' 40'

NOTES:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
2. NORTH SHOWN AS APPROXIMATE.
3. PLANS BASED ON CONSTRUCTION DRAWINGS BY DEWBERRY ENGINEERS INC. ON 09/19/17.
4. MOUNT ALL PROPOSED EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 10/28/24.

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

OCEAN BEACH CT

ANTMO DRAWINGS		
2	11/01/24	FOR SUBMITTAL
1	10/24/24	FOR SUBMITTAL
0	04/25/24	FOR SUBMITTAL
A	04/04/24	FOR REVIEW

Dewberry

Dewberry Engineers Inc.
55 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.655.3400
FAX: 617.655.3310

STATE OF CONNECTICUT
BENJAMIN B. RIVERA
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY:	11/01/2024	JG
REVIEWED BY:		CDH
CHECKED BY:		BBR
PROJECT NUMBER:		50121487
JOB NUMBER:		50170407
SITE NUMBER		

470795

SITE ADDRESS

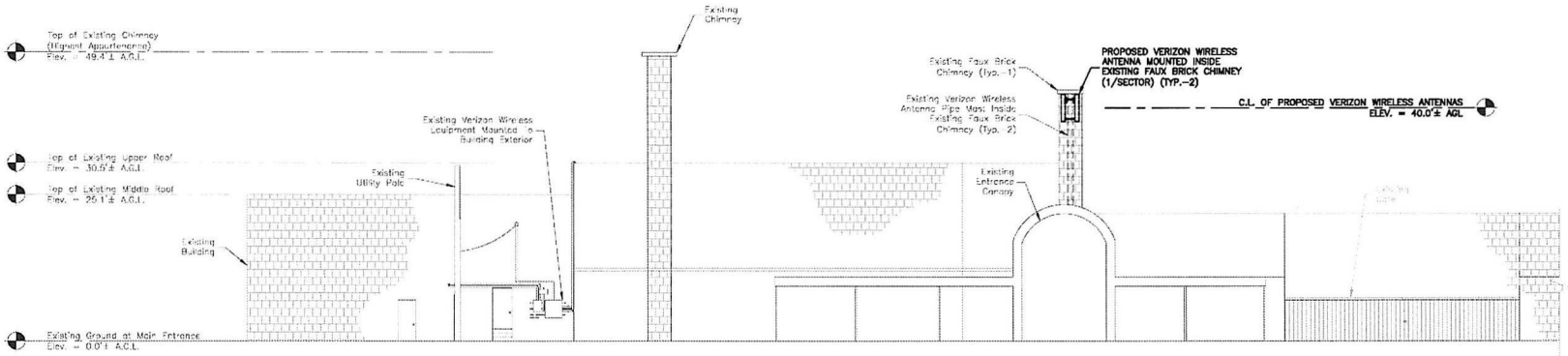
98 NEPTUNE AVENUE
NEW LONDON, CT 06320

SHEET TITLE

SITE PLAN

SHEET NUMBER

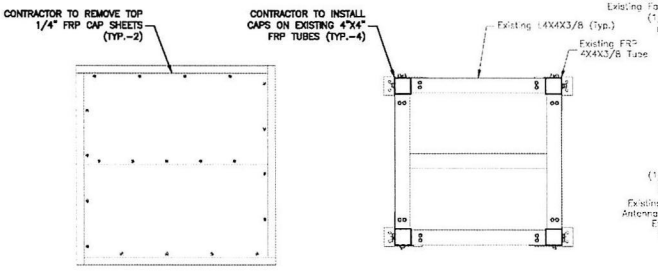
C-1



NORTHWEST ELEVATION (1)

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'



EXISTING PROPOSED

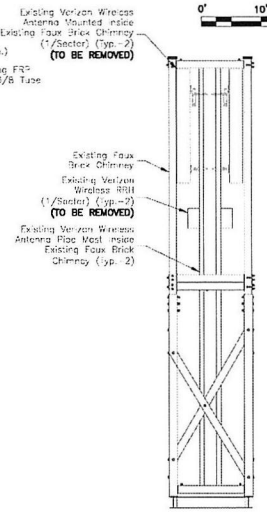
NOTE:

1. ONLY EXISTING FRP MEMBERS SHOWN FOR CLARITY.
2. CONTRACTOR TO INSTALL BRID SCREENING IN PLACE OF EXISTING CAP SHEETS.

CHIMNEY PLAN TOP VIEW (2)

SCALE: 3/8"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"

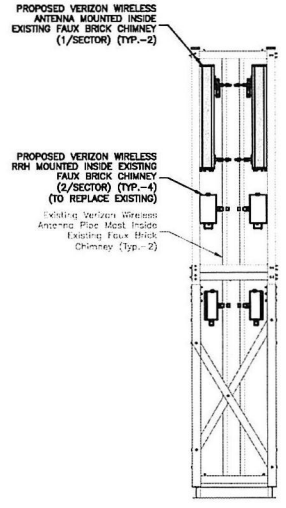
0' 1' 2' 3'



EXISTING CHIMNEY ELEVATION (3)

SCALE: 3/16"=1' FOR 11"x17"
3/8"=1' FOR 22"x34"

0' 2' 4' 6'



Existing Roof Top Elev. = 0.0'± A.R.L.

PROPOSED CHIMNEY ELEVATION (4)

SCALE: 3/16"=1' FOR 11"x17"
3/8"=1' FOR 22"x34"

0' 2' 4' 6'

NOTES:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
2. ELEVATION SHOWN AS APPROXIMATE.
3. PLANS BASED ON CONSTRUCTION DRAWINGS BY DEWBERRY ENGINEERS INC. ON 09/19/17.
4. MOUNT ALL PROPOSED EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 10/28/24.

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

OCEAN BEACH CT

ANTMO DRAWINGS		
2	11/01/24	FOR SUBMITTAL
1	10/24/24	FOR SUBMITTAL
0	04/25/24	FOR SUBMITTAL
A	04/04/24	FOR REVIEW

Dewberry

Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.655.3400
FAX: 617.655.3316

STATE OF CONNECTICUT
DEWBERRY ENGINEERS INC.
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY:	11/01/2024 JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50170407
SITE NUMBER	

470795

SITE ADDRESS

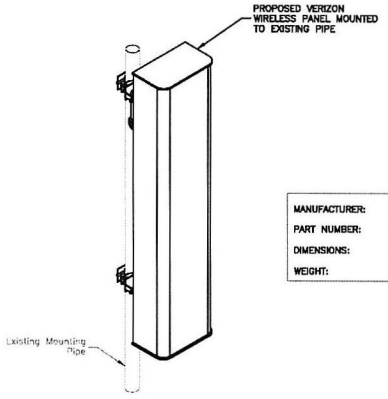
98 NEPTUNE AVENUE
NEW LONDON, CT 06320

SHEET TITLE

NORTHWEST ELEVATION

SHEET NUMBER

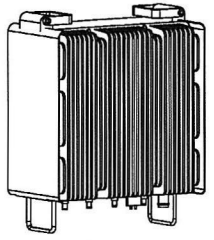
C-3



MANUFACTURER:	COMMSCOPE
PART NUMBER:	NHHS4-65A-R3B
DIMENSIONS:	55.6"H X 13.8"W X 8.2"D
WEIGHT:	50 LBS (W/OUT MOUNTING KIT)

PIPE MOUNTED ANTENNA DETAIL (1)

SCALE: N.T.S.



PROPOSED LTE 700/850	
MANUFACTURER:	SAMSUNG
MODEL:	700/850MHZ MACRO RADIO RF4461d-13A
DIMENSIONS:	15.0"H X 15.0"W X 10.2"D
WEIGHT:	79.1 LBS

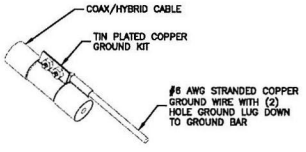
PROPOSED 5G	
MANUFACTURER:	SAMSUNG
MODEL:	5G RRH RT-8808-77A
DIMENSIONS:	15.0"H X 15.0"W X 8.8"D
WEIGHT:	59.5 LBS

NOTE:

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

REMOTE UNIT DETAILS (2)

SCALE: N.T.S.

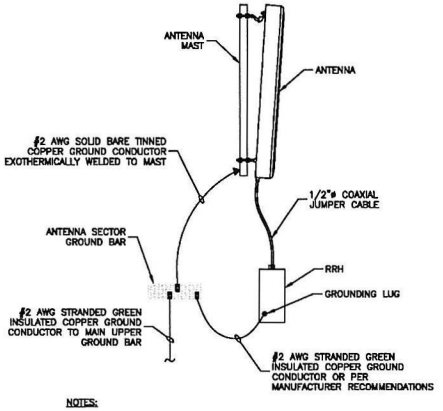


NOTES:

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 GROUNDING DETAIL (3)

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 & MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR TO INSPECT EXISTING GROUNDING FOR ALL VERIZON WIRELESS EQUIPMENT AT GRADE LEVEL. PROVIDE NEW GROUNDING CONNECTIONS AS REQUIRED.

TYPICAL ANTENNA/RRH GROUNDING DETAIL (4)

SCALE: N.T.S

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

OCEAN BEACH CT

ANTMO DRAWINGS		
2	11/01/24	FOR SUBMITTAL
1	10/24/24	FOR SUBMITTAL
0	04/25/24	FOR SUBMITTAL
A	04/04/24	FOR REVIEW

Dewberry
Dewberry Engineers Inc.
55 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
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STATE OF CONNECTICUT
BRENDAN BURKETT
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY:	11/01/2024 JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50170407
SITE NUMBER	470795
SITE ADDRESS	98 NEPTUNE AVENUE NEW LONDON, CT 06320
SHEET TITLE	CONSTRUCTION DETAILS
SHEET NUMBER	C-3

FINAL EQUIPMENT CONFIGURATION

SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (WTY./MODEL)	CENTERLINE	AZIMUTH	OVP	HYBRID CABLE	FEED LINE LENGTH*
ALPHA	A1	LTE 700/850/5G	(P) NHHS4-65A-R3B	COMMSCOPE	(1) (P) RF4461d-13A (1) (P) RT-8808-77A	40'-0"±	40°	N/A	N/A (SEE NOTE BELOW)	165'±
BETA	B1	LTE 700/850/5G	(P) NHHS4-65A-R3B	COMMSCOPE	(1) (P) RF4461d-13A (1) (P) RT-8808-77A	40'-0"±	230°			

*CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE BASE EQUIPMENT OVP SECTOR OVP. CONTRACTOR TO RUN ADDITIONAL POWER & FIBER LINE AS NEEDED IN EXISTING CONDUITS.

(E) = Existing
(P) = PROPOSED

FINAL EQUIPMENT CONFIGURATION (1)
SCALE: N.T.S.

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

OCEAN BEACH CT

ANTMO DRAWINGS		
2	11/01/24	FOR SUBMITTAL
1	10/24/24	FOR SUBMITTAL
0	04/25/24	FOR SUBMITTAL
A	04/04/24	FOR REVIEW

Dewberry
Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.655.3400
FAX: 617.655.3310

STATE OF CONNECTICUT
BENJAMIN B. RIBBE
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY: 11/01/2024	JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50170407

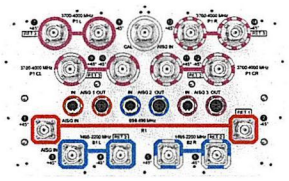
SITE NUMBER
470795

SITE ADDRESS
98 NEPTUNE AVENUE
NEW LONDON, CT 06320

SHEET TITLE
FINAL EQUIPMENT CONFIGURATION

SHEET NUMBER
C-4

NHHS4-65A-R3B



14 Port Sector Antenna, 2x698-896 MHz, 4x1695-2200 MHz 65° HPBW, and 8x3700-4000 MHz Beamformer, 3XRET

General Specifications

Antenna Type	Sector and beamforming
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	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, mid band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	14

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	3 female | 3 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Cal Port | Port 1 | Port 3
Internal RET	High band (1) | Low band (1) | Mid band (1)
Protocol	3GPP/AISG 2.0 (Single RET)

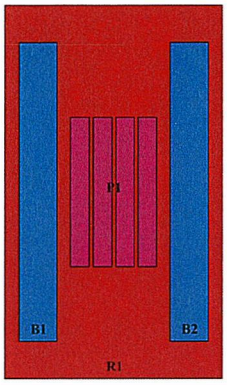
COMMSCOPE®

NHHS4-65A-R3B

Dimensions

Width	350 mm | 13.78 in
Depth	208 mm | 8.189 in
Length	1413 mm | 55.63 in
Net Weight, antenna only	23 kg | 50.706 lb

Array Layout

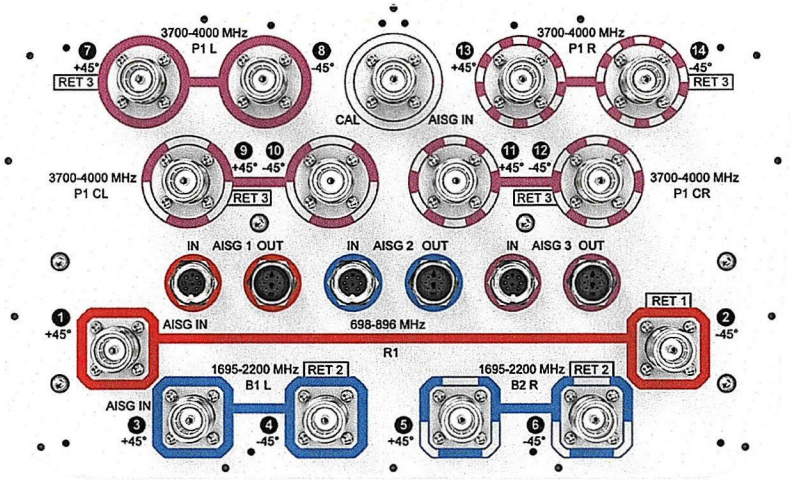


Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG RET UID
R1	698-896	1 - 2	1	CPxxxxxxxxxxxxxxxR1
B1	1695-2200	3 - 4	2	CPxxxxxxxxxxxxxxxB1
B2	1695-2200	5 - 6		
P1	3700-4000	7 - 14	3	CPxxxxxxxxxxxxxxxP1

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

Port Configuration

NHHS4-65A-R3B



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2200 MHz | 3700 – 4000 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,040 W @ 50 °C

Electrical Specifications

	R1	R1	B1,B2	B1,B2	B1,B2	P1
Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**3700–4000**
RF Port	1,2	1,2	3-6	3-6	3-6	7-14
Gain, dBi	13.9	14.2	16.7	17.1	17.1	16.4
Beamwidth, Horizontal, degrees	69	67	67	65	67	80
Beamwidth, Vertical, degrees	16.9	15.1	6.6	6.1	5.8	5.7
Beam Tilt, degrees	0–18	0–18	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	20	20	15	16	17	13
Front-to-Back Ratio at 180°, dB	39	35	32	40	37	30

Coupling level, Amp, Antenna port to Cal port, dB						26
Coupling level, max Amp Δ, Antenna port to Cal port, dB						±2
Coupler, max Amp Δ, Antenna port to Cal port, dB						0.5
Coupler, max Phase Δ, Antenna port to Cal port, degrees						5
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25
Isolation, Co-polarization, dB						19
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-145
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**3700–4000**
Gain, dBi	16.9
Beamwidth, Horizontal, degrees	65
Beamwidth, Vertical, degrees	5.7
Beamwidth, Vertical Tolerance, degrees	±0.3
Front-to-Back Total Power at 180° ± 30°, dB	25
USLS (First Lobe), dB	14

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	**3700–4000**
Gain, dBi	20.7

Electrical Specifications, Service Beam

Frequency Band, MHz	**3700–4000**
Steered 0° Gain, dBi	20.7
Steered 0° Gain Tolerance, dBi	±0.6
Steered 0° Beamwidth, Horizontal, degrees	22

COMMSCOPE®

Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	29
Steered 0° Horizontal Sidelobe, dB	13
Steered 30° Gain, dBi	19.7
Steered 30° Gain Tolerance, dBi	±0.8
Steered 30° Beamwidth, Horizontal, degrees	28
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	27

Electrical Specifications, Soft Split

Frequency Band, MHz	**3700–4000**
Gain, dBi	19.1
Beamwidth, Horizontal, degrees	32
Front-to-Back Total Power at 180° ± 30°, dB	26
Horizontal Sidelobe, dB	16

Mechanical Specifications

Wind Loading @ Velocity, frontal	224.0 N @ 150 km/h (50.4 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	187.0 N @ 150 km/h (42.0 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	474.0 N @ 150 km/h (106.6 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	237.0 N @ 150 km/h (53.3 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	448 mm | 17.638 in
Depth, packed	355 mm | 13.976 in
Length, packed	1557 mm | 61.299 in
Weight, gross	33.4 kg | 73.634 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value

COMMSCOPE®

NHHS4-65A-R3B

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/Exempted

Included Products

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

* Footnotes

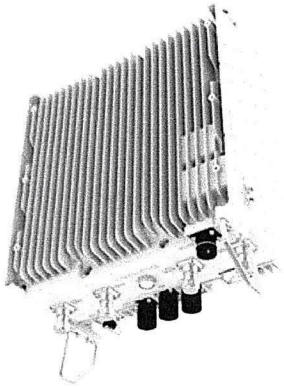
Performance Note	Severe environmental conditions may degrade optimum performance

COMMSCOPE®

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

SAMSUNG

Specifications



Item	Specification	
Air Interface	LTE, NR(HW resource ready)	
Band	Band13 (700MHz)	Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 777~787MHz	DL: 869~894MHz UL: 824~849MHz
IBW	10MHz	25MHz
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5*/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	2C*	3C
Total # of carriers	4C + B13 (SDL) 1C	
RF Chain	4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector	
RF Output Power	Total : 320W	
	4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support	
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)	
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)	
Input Power	-48VDC (-38VDC to -57VDC)	
Power Consumption	1,165 Watt @ 100% RF load, room temperature	
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)	
Volume	37.5 L	
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)	
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)	
Cooling	Natural convection	
Unwanted Emission	3GPP 36.104 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

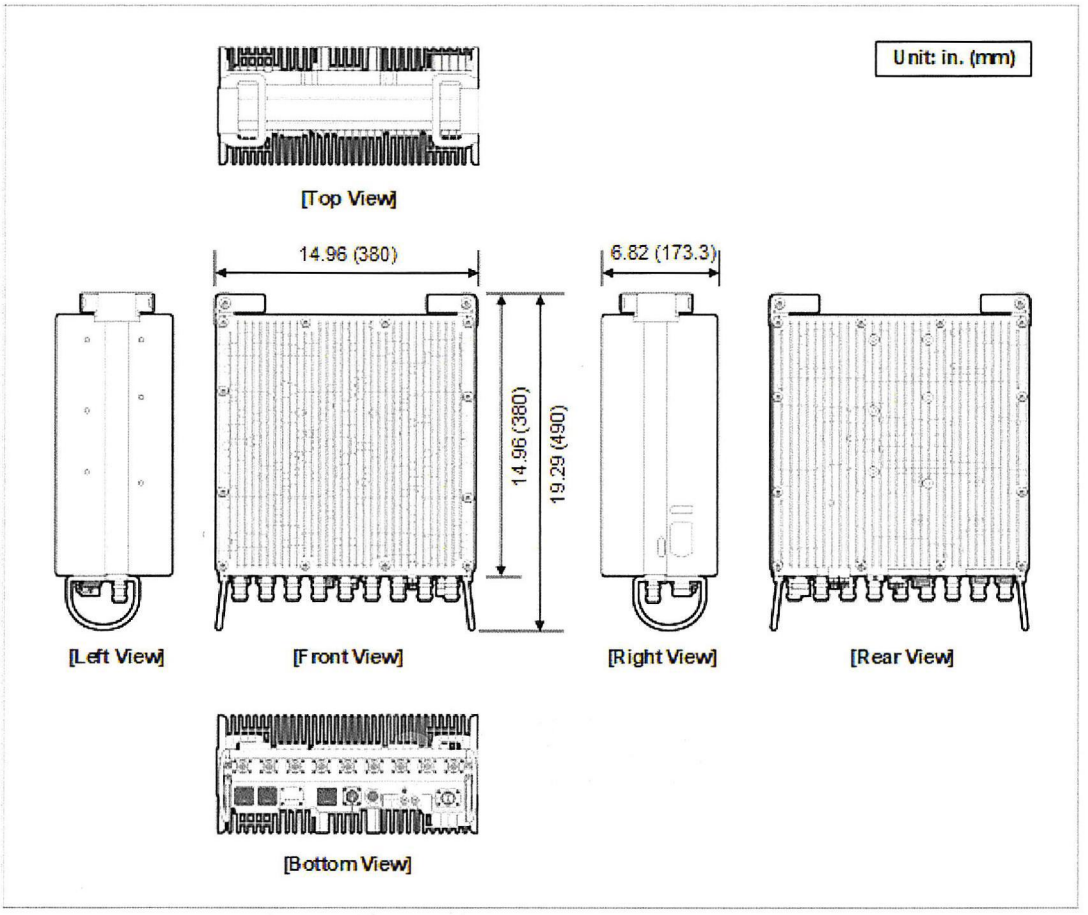
for RT8808-77A

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 3

Location	Ocean Beach CT					
Date	9/24/2024					
Band	C-Band	CBRS	AWS	PCS	850	700
Operating Frequency (MHz)	3,700	3,550	2,145	1,970	880	746
General Population MPE (mW/cm^2)	1	1	1	1	0.58666667	0.49733333
ERP Per Transmitter (Watts)	34,827	0	0	0	653	589
Number of Transmitters	2	0	0	0	4	4
Antenna Centerline (CL) (feet)	40	40	40	40	40	40
Total ERP (Watts)	69,655	0	0	0	2,613	2,355
Total ERP (dBm)	78	#N/A	#N/A	#N/A	64	64
Maximum % of General Population Limit	57.3%					

*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

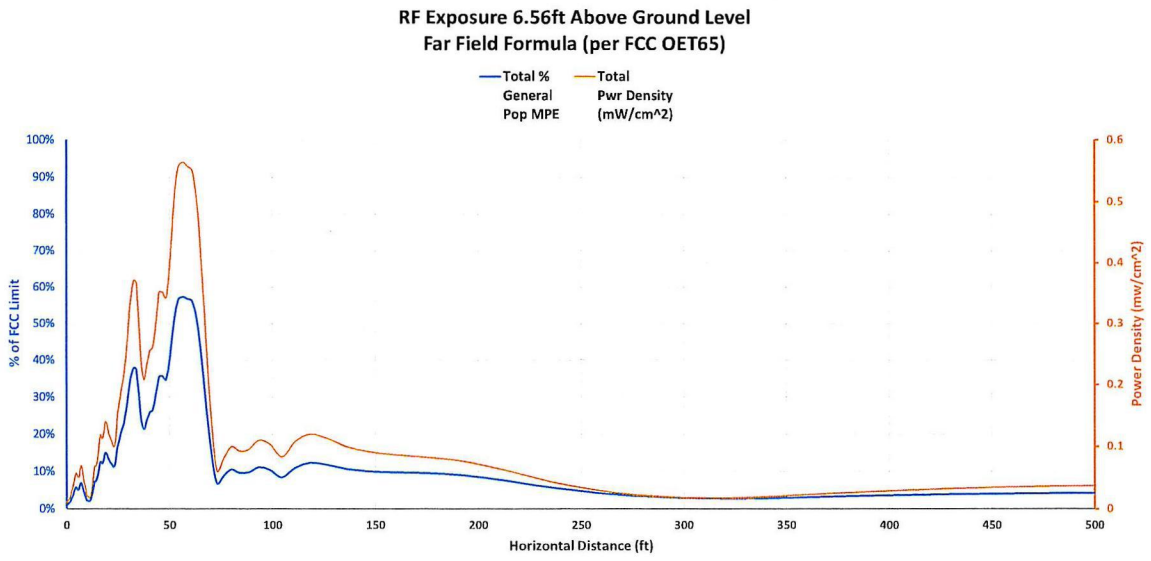
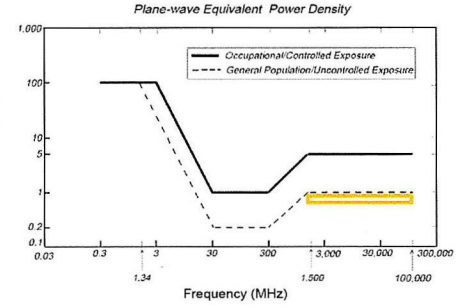
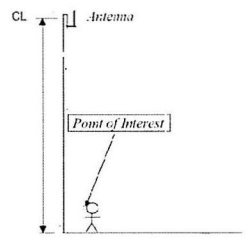


Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*





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	CBRS	AWS	PCS	850-LTE	700 MHz	39GHz	28GHz	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz			
90	0.008714876	0	0	0	2.5964E-05	0.000137838	0.00%	0.00%	0.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0	0.008878678	0.90%
89	0.012886188	0	0	0	3.75175E-05	0.000161894	0.00%	0.00%	1.29%	0.00%	0.00%	0.00%	0.01%	0.00%	0.03%	0.593472208	0.0130856	1.33%
88	0.014781349	0	0	0	5.41781E-05	0.00019003	0.00%	0.00%	1.48%	0.00%	0.00%	0.00%	0.01%	0.00%	0.04%	1.187306163	0.015025557	1.53%
87	0.018156405	0	0	0	7.29692E-05	0.00021784	0.00%	0.00%	1.82%	0.00%	0.00%	0.00%	0.01%	0.00%	0.04%	1.781864496	0.018447214	1.87%
86	0.027420252	0	0	0	8.95738E-05	0.000243881	0.00%	0.00%	2.74%	0.00%	0.00%	0.00%	0.02%	0.00%	0.05%	2.377511606	0.027753707	2.81%
85	0.033638628	0	0	0	0.000107386	0.000272864	0.00%	0.00%	3.36%	0.00%	0.00%	0.00%	0.02%	0.00%	0.05%	2.97461456	0.034018878	3.44%
84	0.043184679	0	0	0	0.000120071	0.000291365	0.00%	0.00%	4.32%	0.00%	0.00%	0.00%	0.02%	0.00%	0.06%	3.573543999	0.043596115	4.40%
83	0.052910864	0	0	0	0.000128131	0.000310923	0.00%	0.00%	5.29%	0.00%	0.00%	0.00%	0.02%	0.00%	0.06%	4.174675071	0.053349918	5.38%
82	0.056426456	0	0	0	0.000133534	0.000331581	0.00%	0.00%	5.64%	0.00%	0.00%	0.00%	0.02%	0.00%	0.07%	4.77838838	0.056891571	5.73%
81	0.050019839	0	0	0	0.00013591	0.000353386	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.07%	5.385070971	0.050509135	5.10%
80	0.05087707	0	0	0	0.000144754	0.00038515	0.00%	0.00%	5.09%	0.00%	0.00%	0.00%	0.02%	0.00%	0.08%	5.995117344	0.051406974	5.19%
79	0.063623959	0	0	0	0.000168939	0.000429268	0.00%	0.00%	6.36%	0.00%	0.00%	0.00%	0.03%	0.00%	0.09%	6.608930511	0.064222166	6.48%
78	0.067676274	0	0	0	0.000206322	0.000489265	0.00%	0.00%	6.77%	0.00%	0.00%	0.00%	0.04%	0.00%	0.10%	7.226923097	0.068371861	6.90%
77	0.055842841	0	0	0	0.000269822	0.000597138	0.00%	0.00%	5.58%	0.00%	0.00%	0.00%	0.05%	0.00%	0.12%	7.849518498	0.056709801	5.75%
76	0.041996382	0	0	0	0.000352632	0.000728315	0.00%	0.00%	4.20%	0.00%	0.00%	0.00%	0.06%	0.00%	0.15%	8.477152097	0.043077329	4.41%
75	0.031562206	0	0	0	0.000439822	0.000908395	0.00%	0.00%	3.16%	0.00%	0.00%	0.00%	0.07%	0.00%	0.18%	9.110272543	0.032910423	3.41%
74	0.019716578	0	0	0	0.000535724	0.001132241	0.00%	0.00%	1.97%	0.00%	0.00%	0.00%	0.09%	0.00%	0.23%	9.749343116	0.021384544	2.29%
73	0.017386088	0	0	0	0.000637253	0.001410293	0.00%	0.00%	1.74%	0.00%	0.00%	0.00%	0.11%	0.00%	0.28%	10.39484317	0.019433633	2.13%
72	0.01463105	0	0	0	0.000723411	0.001755427	0.00%	0.00%	1.46%	0.00%	0.00%	0.00%	0.12%	0.00%	0.35%	11.04726967	0.017109889	1.94%
71	0.017784819	0	0	0	0.000801972	0.002133815	0.00%	0.00%	1.78%	0.00%	0.00%	0.00%	0.14%	0.00%	0.43%	11.70713885	0.020720606	2.34%

70	0.030515498	0	0	0	0.000888444	0.002591957	0.00%	0.00%	3.05%	0.00%	0.00%	0.00%	0.15%	0.00%	0.52%	12.37498797	0.0339959	3.72%
69	0.049967205	0	0	0	0.000983546	0.003074627	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.17%	0.00%	0.62%	13.05137719	0.054025378	5.78%
68	0.063465764	0	0	0	0.001088051	0.003561614	0.00%	0.00%	6.35%	0.00%	0.00%	0.00%	0.19%	0.00%	0.72%	13.73689168	0.068115429	7.25%
67	0.063985245	0	0	0	0.001202789	0.004122752	0.00%	0.00%	6.40%	0.00%	0.00%	0.00%	0.21%	0.00%	0.83%	14.43214375	0.069310787	7.43%
66	0.075735899	0	0	0	0.001359601	0.004660249	0.00%	0.00%	7.57%	0.00%	0.00%	0.00%	0.23%	0.00%	0.94%	15.1377753	0.081755749	8.74%
65	0.098220198	0	0	0	0.001571486	0.005263907	0.00%	0.00%	9.82%	0.00%	0.00%	0.00%	0.27%	0.00%	1.06%	15.85446038	0.10505559	11.15%
64	0.110859281	0	0	0	0.001815021	0.005806032	0.00%	0.00%	11.09%	0.00%	0.00%	0.00%	0.31%	0.00%	1.17%	16.58290801	0.118480334	12.56%
63	0.103994502	0	0	0	0.002094692	0.006399083	0.00%	0.00%	10.40%	0.00%	0.00%	0.00%	0.36%	0.00%	1.29%	17.32386528	0.112488276	12.04%
62	0.111920663	0	0	0	0.002471838	0.006886803	0.00%	0.00%	11.19%	0.00%	0.00%	0.00%	0.42%	0.00%	1.38%	18.07812068	0.121279304	13.00%
61	0.128963227	0	0	0	0.002848233	0.007237245	0.00%	0.00%	12.90%	0.00%	0.00%	0.00%	0.49%	0.00%	1.46%	18.84650775	0.139048705	14.84%
60	0.123501149	0	0	0	0.003279297	0.007776396	0.00%	0.00%	12.35%	0.00%	0.00%	0.00%	0.56%	0.00%	1.56%	19.62990915	0.134556841	14.47%
59	0.11028564	0	0	0	0.003772495	0.007973084	0.00%	0.00%	11.03%	0.00%	0.00%	0.00%	0.64%	0.00%	1.60%	20.42926105	0.122031219	13.27%
58	0.100693803	0	0	0	0.004237527	0.008358149	0.00%	0.00%	10.07%	0.00%	0.00%	0.00%	0.72%	0.00%	1.68%	21.24555796	0.113289479	12.47%
57	0.09399718	0	0	0	0.00475581	0.008360306	0.00%	0.00%	9.40%	0.00%	0.00%	0.00%	0.81%	0.00%	1.68%	22.07985817	0.107113296	11.89%
56	0.085673638	0	0	0	0.00521143	0.008549773	0.00%	0.00%	8.57%	0.00%	0.00%	0.00%	0.89%	0.00%	1.72%	22.93328957	0.099434841	11.17%
55	0.09379753	0	0	0	0.005575722	0.008536872	0.00%	0.00%	9.38%	0.00%	0.00%	0.00%	0.95%	0.00%	1.72%	23.8070563	0.107910124	12.05%
54	0.135250332	0	0	0	0.005960024	0.008322345	0.00%	0.00%	13.53%	0.00%	0.00%	0.00%	1.02%	0.00%	1.67%	24.70244595	0.149532702	16.21%
53	0.154767005	0	0	0	0.006364849	0.008105611	0.00%	0.00%	15.48%	0.00%	0.00%	0.00%	1.08%	0.00%	1.63%	25.6208377	0.169237464	18.19%
52	0.176929898	0	0	0	0.006636069	0.007707412	0.00%	0.00%	17.69%	0.00%	0.00%	0.00%	1.13%	0.00%	1.55%	26.5637113	0.19127338	20.37%
51	0.192972724	0	0	0	0.00691203	0.007154896	0.00%	0.00%	19.30%	0.00%	0.00%	0.00%	1.18%	0.00%	1.44%	27.53265713	0.20703965	21.91%
50	0.220166267	0	0	0	0.007028465	0.006635263	0.00%	0.00%	22.02%	0.00%	0.00%	0.00%	1.20%	0.00%	1.33%	28.52938746	0.233829995	24.55%
49	0.256775326	0	0	0	0.007139421	0.005870305	0.00%	0.00%	25.68%	0.00%	0.00%	0.00%	1.22%	0.00%	1.18%	29.55574909	0.269785052	28.07%
48	0.306118881	0	0	0	0.007244356	0.00518797	0.00%	0.00%	30.61%	0.00%	0.00%	0.00%	1.23%	0.00%	1.04%	30.61373751	0.318551208	32.89%
47	0.340209933	0	0	0	0.007175575	0.004373754	0.00%	0.00%	34.02%	0.00%	0.00%	0.00%	1.22%	0.00%	0.88%	31.70551293	0.351759262	36.12%
46	0.360668851	0	0	0	0.006937745	0.003517353	0.00%	0.00%	36.07%	0.00%	0.00%	0.00%	1.18%	0.00%	0.71%	32.83341834	0.371123949	37.96%
45	0.356417231	0	0	0	0.006699901	0.002760998	0.00%	0.00%	35.64%	0.00%	0.00%	0.00%	1.14%	0.00%	0.56%	34	0.36587813	37.34%
44	0.292603565	0	0	0	0.006315232	0.002020166	0.00%	0.00%	29.26%	0.00%	0.00%	0.00%	1.08%	0.00%	0.41%	35.20803067	0.300938962	30.74%
43	0.223899208	0	0	0	0.005809814	0.001409808	0.00%	0.00%	22.39%	0.00%	0.00%	0.00%	0.99%	0.00%	0.28%	36.46053614	0.23111883	23.66%
42	0.201028334	0	0	0	0.005337857	0.00100546	0.00%	0.00%	20.10%	0.00%	0.00%	0.00%	0.91%	0.00%	0.20%	37.7608255	0.207371651	21.21%
41	0.226919577	0	0	0	0.004677154	0.000822204	0.00%	0.00%	22.69%	0.00%	0.00%	0.00%	0.80%	0.00%	0.17%	39.11252585	0.232418934	23.65%
40	0.249961508	0	0	0	0.003908254	0.000885076	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.67%	0.00%	0.18%	40.51962215	0.254754838	25.84%
39	0.256587457	0	0	0	0.003186729	0.001170423	0.00%	0.00%	25.66%	0.00%	0.00%	0.00%	0.54%	0.00%	0.24%	41.98650332	0.260944609	26.44%
38	0.295074312	0	0	0	0.002535369	0.001655918	0.00%	0.00%	29.51%	0.00%	0.00%	0.00%	0.43%	0.00%	0.33%	43.51801549	0.299265599	30.27%
37	0.34668207	0	0	0	0.001968072	0.002339046	0.00%	0.00%	34.67%	0.00%	0.00%	0.00%	0.34%	0.00%	0.47%	45.11952394	0.350989188	35.47%
36	0.346101221	0	0	0	0.001525151	0.003223373	0.00%	0.00%	34.61%	0.00%	0.00%	0.00%	0.26%	0.00%	0.65%	46.7969853	0.350849744	35.52%
35	0.337063422	0	0	0	0.001293663	0.004138272	0.00%	0.00%	33.71%	0.00%	0.00%	0.00%	0.22%	0.00%	0.83%	48.55703223	0.342495357	34.76%
34	0.393929679	0	0	0	0.001316826	0.005182342	0.00%	0.00%	39.39%	0.00%	0.00%	0.00%	0.22%	0.00%	1.04%	50.40707293	0.400428847	40.66%
33	0.492359929	0	0	0	0.001571782	0.006044913	0.00%	0.00%	49.24%	0.00%	0.00%	0.00%	0.27%	0.00%	1.22%	52.35540877	0.499976625	50.72%
32	0.54734106	0	0	0	0.0020529	0.00671994	0.00%	0.00%	54.73%	0.00%	0.00%	0.00%	0.35%	0.00%	1.35%	54.41137399	0.5561139	56.44%
31	0.553725684	0	0	0	0.002614595	0.007284538	0.00%	0.00%	55.37%	0.00%	0.00%	0.00%	0.45%	0.00%	1.46%	56.5855024	0.563624817	57.28%
30	0.546182263	0	0	0	0.003246738	0.007523934	0.00%	0.00%	54.62%	0.00%	0.00%	0.00%	0.55%	0.00%	1.51%	58.88972746	0.556952935	56.68%
29	0.537435183	0	0	0	0.003930391	0.007575887	0.00%	0.00%	53.74%	0.00%	0.00%	0.00%	0.67%	0.00%	1.52%	61.33762368	0.548941461	55.94%
28	0.470102963	0	0	0	0.004428969	0.007100687	0.00%	0.00%	47.01%	0.00%	0.00%	0.00%	0.75%	0.00%	1.43%	63.94469982	0.48163262	49.19%
27	0.325734436	0	0	0	0.004753061	0.006485912	0.00%	0.00%	32.57%	0.00%	0.00%	0.00%	0.81%	0.00%	1.30%	66.72875719	0.336973409	34.69%
26	0.163025302	0	0	0	0.004856962	0.005641082	0.00%	0.00%	16.30%	0.00%	0.00%	0.00%	0.83%	0.00%	1.13%	69.71033061	0.173523346	18.26%
25	0.052513867	0	0	0	0.004617253	0.004564376	0.00%	0.00%	5.25%	0.00%	0.00%	0.00%	0.79%	0.00%	0.92%	72.9132353	0.061695496	6.96%
24	0.073589549	0	0	0	0.004274899	0.003434974	0.00%	0.00%	7.36%	0.00%	0.00%	0.00%	0.73%	0.00%	0.69%	76.36525031	0.081299422	8.78%
23	0.093705163	0	0	0	0.003596443	0.002295466	0.00%	0.00%	9.37%	0.00%	0.00%	0.00%	0.61%	0.00%	0.46%	80.09898044	0.099597073	10.45%
22	0.088101316	0	0	0	0.002812497	0.001361726	0.00%	0.00%	8.81%	0.00%	0.00%	0.00%	0.48%	0.00%	0.27%	84.15295302	0.092275539	9.56%
21	0.092538033	0	0	0	0.001951776	0.000638892	0.00%	0.00%	9.25%	0.00%	0.00%	0.00%	0.33%	0.00%	0.13%	88.5730282	0.095128701	9.71%
20	0.108543095	0	0	0	0.001147392	0.000192624	0.00%	0.00%	10.85%	0.00%	0.00%	0.00%	0.20%	0.00%	0.04%	93.41423226	0.109883111	11.09%
19	0.10294998	0	0	0	0.000533011	0.000115275	0.00%	0.00%	10.29%	0.00%	0.00%	0.00%	0.09%	0.00%	0.02%	98.74316984	0.103598265	10.41%
18	0.082633785	0	0	0	0.000178348	0.000557526	0.00%	0.00%	8.26%	0.00%	0.00%	0.00%	0.03%	0.00%	0.11%	104.6412403	0.083369658	8.41%
17	0.106886079	0	0	0	0.00019635	0.001312286	0.00%	0.00%	10.69%	0.00%	0.00%	0.00%	0.03%	0.00%	0.26%	111.208989	0.108394715	10.99%
16	0.116839958	0	0	0	0.000577698	0.002326477	0.00%	0.00%	11.68%	0.00%	0.00%	0.00%	0.10%	0.00%	0.47%	118.5720911	0.119744134	12.25%
15	0.107839998	0	0	0	0.001339336	0.003563586	0.00%	0.00%	10.78%	0.00%	0.00%	0.00%	0.23%	0.00%	0.72%	126.8897275	0.11274292	11.73%
14	0.09204866	0	0	0	0.002388511	0.004820864	0.00%	0.00%	9.20%	0.00%	0.00%	0.00%	0.41%	0.00%	0.97%	136.3665517	0.099258034	10.58%
13	0.0814199	0	0	0	0.003587899	0.006163649	0.00%	0.00%	8.14%	0.00%	0.00%	0.00%	0.61%	0.00%	1.24%	147.2701797	0.091171449	9.99%
12	0.07450879	0	0	0	0.004856431	0.007266326	0.00%	0.00%	7.45%	0.00%	0.00%	0.00%	0.83%	0.00%	1.46%	159.9574237	0.086631546	9.74%
11	0.06879399	0	0	0	0.00591099	0.007882389	0.00%	0.00%	6.88%	0.00%	0.00%	0.00%	1.01%	0.00%	1.58%	174.9148365	0.082587368	9.47%
10	0.061038581	0	0	0	0.006756381	0.00840837	0.00%	0.00%	6.10%	0.00%	0.00%	0.00%	1.15%	0.00%	1.69%	192.8235819	0.076203332	8.95%
9	0.0451698	0	0	0	0.007226997	0.00839374	0.00%	0.00%	4.52%	0.00%	0.00%	0.00%	1.23%	0.00%	1.69%	214.6675515	0.060790537	7.44%
8	0.024166928	0	0	0	0.007199977	0.007804208	0.00%	0.00%	2.42%	0.00%	0.00%	0.00%	1.23%	0.00%	1.57%	241.9225706	0.039171113	5.21%
7	0.009074771	0	0	0	0.006636595	0.007029801	0.00%	0.00%	0.91%	0.00%	0.00%	0.00%	1.13%	0.00%	1.41%	276.9077786	0.022741167	3.45%
6	0.006229599	0	0	0	0.005735481	0.005801863	0.00%	0.00%	0.62%	0.00%	0.00%	0.00%	0.98%	0.00%	1.17%	323.4883914	0.017766943	2.77%
5	0.018472928	0	0	0	0.00457768	0.004422248	0.00%	0.00%	1.85%	0.00%	0.00%	0.00%	0.78%	0.00%	0.89%	388.6217783	0.027472856	3.52%
4	0.030414033	0	0	0	0.003289908	0.003105856	0.00%	0.00%	3.04%	0.00%	0.00%	0.00%	0.56%	0.00%	0.62%	486.2226527	0.036809797	4.23%
3	0.03187683	0	0	0	0.001984197	0.001873193	0.00%	0.00%	3.19%	0.00%	0.00%	0.00%	0.34%	0.00%	0.38%	648.7586474	0.03573422	3.90%
2	0.020487621	0	0	0	0.000945369	0.000872166	0.00%	0.00%	2.05%	0.00%	0.00%	0.00%	0.16%	0.00%	0.18%	973.6326116	0.022305156	2.39%
1	0.006303052	0	0	0	0.000241914	0.000223182	0.00%	0.00%	0.63%	0.00%	0.00%	0.00%	0.04%	0.00%	0.04%	1947.858695	0.006768147	0.72%

ATTACHMENT 4

Dewberry Engineers Inc.
99 Summer Street, Suite 700
Boston, MA 02110-1200

617.695.3400
617.695.3310 fax
www.dewberry.com

Dewberry

October 21, 2024

Andrew Leone
Verizon Wireless
51 Alder Street
Medway, MA 02053

Re: Ocean Beach Park (Rev.1)
PLSC: 470795
Fuze #: 16540902
98 Neptune Ave
New London, CT 06320

Dear Mr. Leone:

Verizon Wireless has proposed to replace (2) existing antennas and (2) existing Remote Radio Heads (RRHs) with (2) NHHS4-65A-R3B antennas, (2) Samsung RF4461d-13A RRHs, and (2) Samsung RT-8808-77A RRHs on the rooftop at the above referenced site. The proposed equipment will be mounted inside an existing faux brick chimney.

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design sheets (dated 01/09/24) provided by Verizon Wireless and has determined that the existing faux brick chimney and building have adequate capacity to support the proposed equipment configuration. Dewberry assumes that the new antennas, RRHs, OVPs and associated equipment are installed per the latest Construction Drawings by Dewberry.

This assessment is based on our visual inspection that the existing mounts and building structure are in good condition and were 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 letter for existing structural members not supporting the proposed installation.

If you have any questions, please do not hesitate to call me at 617-531-0744.

Sincerely,
Dewberry Engineers Inc.

STATE OF CONNECTICUT
BRANDON G KELSEY
39967
LICENSED
PROFESSIONAL ENGINEER

Brandon Kelsey, P.E.
Structural Project Engineer

10/23/2024

\\dewberry.dewberryroot.local\Enterprise\DEI\TelecomEV\Projects\VZW\50121487-NE\50170407 - Ocean Beach CT\4 Eng\Struct\Rev.1\Report Docs\SA_Ocean Beach CT_470795_16540902_Rec240109_Rev0_10.16.24.docx

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Dewberry Engineers, Inc.
Structural Analysis Summary Sheet

Job No.:	50121487/50170407	**By:**	AMD	**Date:**	10/10/24
Job Name:	Ocean Beach CT	**Checked:**	BGK	**Date:**	10/11/24

Location: 98 Neptune Avenue, New London, CT 06320
Client: Client Name

Scope of Work:

- Proposed installation of (2) NHHS4-65A-R3B antennas, (2) Samsung RF4461d-13A RRHs, and (2) Samsung RT-8808-77A RRHs on the rooftop at the above referenced site

Codes / Standards / References:

- 2022 Connecticut State Building Code – Amendments to IBC 2021
- IBC 2021
- TIA-222-H
- ASCE 7-16
- AISC 15th Ed.
- RFDS dated 01/09/24
- Previous Structural Analysis by Dewberry Engineers dated 06/26/17
- Site visit by Dewberry Engineers on 02/21/24
- Latest Construction Drawings by Dewberry Engineers

Design & Analysis Assumptions:

- All proposed equipment is to be installed within the existing faux chimney.
- Design and analysis are based on dead and wind loads. The analysis checks for normal bending and shear stresses.

Conclusion / Recommendations:

- The existing structure has sufficient capacity to support the proposed installation.
- The existing faux chimney has sufficient capacity to support the proposed installation.

Site Name: Ocean Beach CT

Wind Load per ASCE 7-10, Chapter 27 (Extension of Building)

Enclosure Dimensions

Width =	4.4 ft	Roof Opening =	19 ft²
Length =	4.4 ft	Wall Opening =	0 ft²
Height =	19.5 ft	Wall w/Opening =	0 ft²

Open, Partially Enclosed or Fully Enclosed

A_o=	0.00 ft²	A_g=	0.00 ft²
A_{oi}=	19.42 ft²	A_{gi}=	277.39 ft²

All walls must be at least 80% open

$A_o \geq 0.8\ A_g$	0.00 ft²	<	0.00 ft²	☒	*Not Open*

All conditions must be satisfied to be considered Partially Enclosed

A_o>(min 4 ft^2 or 1% A_g)	0.00 ft²	<	0.00 ft²	☒	*Screen wall is fully enclosed*
A_o>1.10 A_{oi}	0.00 ft²	<	21.36 ft²	☒	
$A_{oi}/A_{gi} \leq 0.2$	0.07	<	0.20	☑	

** Partially enclosed factors account for balloning within the structure, with no roof this cannot occur*

Design Criteria

Height, h =	48.00 ft	*(CL of Screen Wall / Enclosure)*
Risk Category =	II	*(Table 1.5-1, ASCE 7-10)*
Basic Wind Speed, V =	130 mph	*(780 CMR - MA Amendments to the IBC)*
K_d =	0.85	*(Table 26.6-1, ASCE 7-10)*
Exposure Category =	B	*(Sect. 26.7.3, ASCE 7-10)*
K_{zt} =	1	*(Sect.26.8.2, ASCE 7-10)*
G =	0.85	*(Sect. 26.9.4, ASCE 7-10)*
K_h =	0.80	*(Table 27.3-1, ASCE 7-10)*

Velocity Pressure

$q_h = 0.00256 * K_h * K_{zt} * K_d * V^2$ *(Eqn. 27.3-1, ASCE 7-10)*

$= 29.42$ lb/ft²

Design Wind Force

- Proposed structure considered an extension of the building, conservatively using q_h for all sides

$p_w = q_h GC_p - q_h(GC_{pi})$ *(Eqn. 27.4-1, ASCE 7-10)*

L/B = 4.40625 / 4.40625 = 1

$p_{w(+)\ windward}$ =	14.7 psf	*(+ Internal Pressure)*
$p_{w(+)\ leeward}$ =	-17.8 psf	
$p_{w(+)\ side}$ =	-22.8 psf	
$p_{w(-)\ windward}$ =	25.3 psf	*(- Internal Pressure)*
$p_{w(-)\ leeward}$ =	-7.2 psf	
$p_{w(-)\ side}$ =	-12.2 psf	

where:

(+) GC_{pi} =	0.18	*(Table 26.11-1, ASCE 7-10)*
(-) GC_{pi} =	-0.18	*(Table 26.11-1, ASCE 7-10)*
$C_{p\ windward}$ =	0.80	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ leeward}$ =	-0.50	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ side}$ =	-0.70	*(Fig. 27.4-1, ASCE 7-10)*

L/B = 4.40625 / 4.40625 = 1

$p_{w(+)\ windward}$ =	14.7 psf	*(+ Internal Pressure)*
$p_{w(+)\ leeward}$ =	-17.8 psf	
$p_{w(+)\ side}$ =	-22.8 psf	
$p_{w(-)\ windward}$ =	25.3 psf	*(- Internal Pressure)*
$p_{w(-)\ leeward}$ =	-7.2 psf	
$p_{w(-)\ side}$ =	-12.2 psf	

where:

(+) GC_{pi} =	0.18	*(Table 26.11-1, ASCE 7-10)*
(-) GC_{pi} =	-0.18	*(Table 26.11-1, ASCE 7-10)*
$C_{p\ windward}$ =	0.80	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ leeward}$ =	-0.50	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ side}$ =	-0.70	*(Fig. 27.4-1, ASCE 7-10)*

Site Name: Ocean Beach

Existing Building Information

- Connecticut Building Code

Existing Dead Load

- Estimated roof dead load:

Total Exist. Dead Load =	11.5 psf	*(Per Previous SA by Dewberry dated 06/26/17)*

- Estimated floor dead load:

Floor Beam Loading =	275.0 plf	*(Two Beams)*
Wall Weight Loading =	900.0 plf	*(One Wall Side)*
Floor Slab Loading =	75.0 psf	*(Per Previous SA by Dewberry dated 06/26/17)*

Proposed Live Load

Total Exist. Roof Live Load =	20.0 psf	
Total Warehouse Live Load =	50.0 psf	*(Second Floor)*

Snow Load (ASCE 7-10)

General Design Criteria

Exposure Factor, C_e =	1.0	*(ASCE 7-10, Table 7-2)*
Thermal Factor, C_t =	1.0	*(ASCE 7-10, Table 7-3)*
Importance Factor, I_s =	1.0	*(ASCE 7-10, Table 1.5-2)*
Ground Snow Load, p_g =	30 psf	*(New London, CT)*

Design Snow Load, $p_f = 0.7C_eC_tI_sp_g$ *(ASCE 7-10, Eqn. 7.3-1)*

= 21.0 psf ***(Use 30 psf)***

Load Combinations

1.4D
1.2D + 0.5(Lr or S)
1.2D+1.6(Lr or S)+0.5W
1.2D + 1.0W + 0.5(Lr or S)
0.9D + 1.0W

L = Live Load
S = Snow Load
D = Dead Load
W = Load due to Pressure

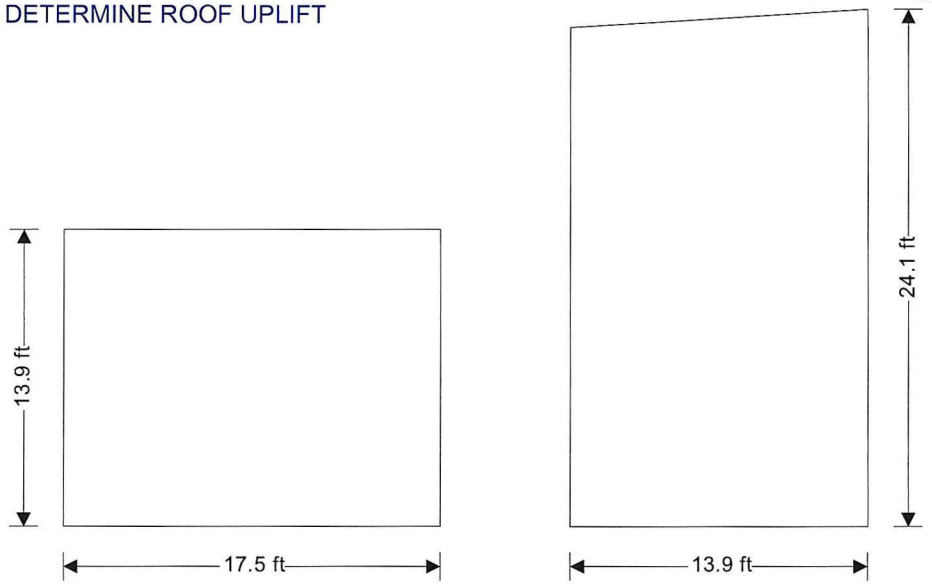
WIND LOADING

In accordance with ASCE7-16

Using the directional design method

USED TO DETERMINE ROOF UPLIFT

Tedds calculation version 2.1.07



Building data

Type of roof	Monoslope
Length of building	b = **17.50** ft
Width of building	d = **13.86** ft
Height to eaves	H = **23.25** ft
Pitch of roof	α_0 = **3.5** deg
Mean height	h = **23.25** ft

General wind load requirements

Basic wind speed	V = **130.0** mph
Risk category	II
Velocity pressure exponent coef (Table 26.6-1)	K_d = **0.85**
Ground elevation above sea level	z_{gl} = **0** ft
Ground elevation factor	$K_e = \exp(-0.0000362 \times z_{gl}/1\text{ft})$ = **1.00**
Exposure category (cl 26.7.3)	B
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**
Gust effect factor	G_f = **0.85**
Minimum design wind loading (cl.27.4.7)	p_{min_r} = **8** lb/ft^2

Topography

Topography factor not significant $K_{zt} = 1.0$

Velocity pressure equation $q = 0.00256 \times K_z \times K_{zt} \times K_d \times V^2 \times 1psf/mph^2$

Velocity pressures table

z (ft)	K_z (Table 26.10-1)	q_z (psf)
15.00	0.57	20.96
15.00	0.57	20.96
23.25	0.65	23.76
24.10	0.65	24.01

Peak velocity pressure for internal pressure

Peak velocity pressure – internal (as roof press.) q_i = **23.76** psf

Pressures and forces

Net pressure $p = q \times G_f \times C_{pe} - q_i \times GC_{pi}$

Net force $F_w = p \times A_{ref}$

Roof load case 1 - Wind 0, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (-ve)	23.25	-1.21	23.76	-28.72	203.82	-5.85
B (-ve)	23.25	-0.70	23.76	-18.41	39.12	-0.72

Total vertical net force $F_{w,v}$ = **-6.56** kips

Total horizontal net force $F_{w,h}$ = **-0.40** kips

Walls load case 1 - Wind 0, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	9.98	262.50	2.62
A_2	15.00	0.80	20.96	9.98	0.00	0.00
A_3	23.25	0.80	23.76	11.88	144.38	1.71
B	23.25	-0.50	23.76	-14.37	421.71	-6.06
C	23.25	-0.70	23.76	-18.41	328.02	-6.04
D	23.25	-0.70	23.76	-18.41	328.02	-6.04

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_0} = b \times H$ = **406.88** ft^2

Projected vertical area of roof $A_{vert\_r\_0} = b \times d \times \tan(\alpha_0)$ = **14.83** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_0} + p_{min\_r} \times A_{vert\_r\_0}$ = **6.63** kips

Leeward net force $F_l = F_{w,wB}$ = **-6.1** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3}$ = **4.3** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min})$ = **10.0** kips

Roof load case 2 - Wind 0, GC_{pi} -0.18, $-0c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (+ve)	23.25	-0.18	23.76	0.64	203.82	0.13
B (+ve)	23.25	-0.18	23.76	0.64	39.12	0.03

Total vertical net force $F_{w,v}$ = **0.16** kips

Total horizontal net force $F_{w,h}$ = **0.01** kips

Walls load case 2 - Wind 0, GC_{pi} -0.18, $-0c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	18.53	262.50	4.86
A_2	15.00	0.80	20.96	18.53	0.00	0.00
A_3	23.25	0.80	23.76	20.43	144.38	2.95
B	23.25	-0.50	23.76	-5.82	421.71	-2.45
C	23.25	-0.70	23.76	-9.86	328.02	-3.23
D	23.25	-0.70	23.76	-9.86	328.02	-3.23

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_0} = b \times H$ = **406.88** ft^2

Projected vertical area of roof $A_{vert\_r\_0} = b \times d \times \tan(\alpha_0)$ = **14.83** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_0} + p_{min\_r} \times A_{vert\_r\_0}$ = **6.63** kips

Leeward net force $F_l = F_{w,wB}$ = **-2.5** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3}$ = **7.8** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min})$ = **10.3** kips

Roof load case 3 - Wind 90, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (-ve)	23.25	-1.25	23.76	-29.46	161.38	-4.75
B (-ve)	23.25	-0.70	23.76	-18.41	81.56	-1.50

Total vertical net force $F_{w,v}$ = **-6.24** kips

Total horizontal net force $F_{w,h}$ = **0.00** kips

Walls load case 3 - Wind 90, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	9.98	207.84	2.07
A_2	15.00	0.80	20.96	9.98	0.00	0.00
A_3	24.10	0.80	24.01	12.05	120.20	1.45
B	23.25	-0.45	23.76	-13.31	328.02	-4.37

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
C	23.25	-0.70	23.76	-18.41	406.88	-7.49
D	23.25	-0.70	23.76	-18.41	421.71	-7.76

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_90} = d \times (H + d \times \tan(\alpha_0) / 2) =$ **328.02** ft^2

Projected vertical area of roof $A_{vert\_r\_90} =$ **0.00** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_90} + p_{min\_r} \times A_{vert\_r\_90} =$ **5.25** kips

Leeward net force $F_l = F_{w,wB} =$ **-4.4** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3} =$ **3.5** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min}) =$ **7.9** kips

Roof load case 4 - Wind 90, GC_{pi} -0.18, $+c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (+ve)	23.25	-0.18	23.76	0.64	161.38	0.10
B (+ve)	23.25	-0.18	23.76	0.64	81.56	0.05

Total vertical net force $F_{w,v} =$ **0.16** kips

Total horizontal net force $F_{w,h} =$ **0.00** kips

Walls load case 4 - Wind 90, GC_{pi} -0.18, $+c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	18.53	207.84	3.85
A_2	15.00	0.80	20.96	18.53	0.00	0.00
A_3	24.10	0.80	24.01	20.60	120.20	2.48
B	23.25	-0.45	23.76	-4.76	328.02	-1.56
C	23.25	-0.70	23.76	-9.86	406.88	-4.01
D	23.25	-0.70	23.76	-9.86	421.71	-4.16

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_90} = d \times (H + d \times \tan(\alpha_0) / 2) =$ **328.02** ft^2

Projected vertical area of roof $A_{vert\_r\_90} =$ **0.00** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_90} + p_{min\_r} \times A_{vert\_r\_90} =$ **5.25** kips

Leeward net force $F_l = F_{w,wB} =$ **-1.6** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3} =$ **6.3** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min}) =$ **7.9** kips

Roof load case 5 - Wind 180, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (-ve)	23.25	-1.21	23.76	-28.72	203.82	-5.85

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
B (-ve)	23.25	-0.70	23.76	-18.41	39.12	-0.72

Total vertical net force $F_{w,v}$ = **-6.56** kips

Total horizontal net force $F_{w,h}$ = **-0.40** kips

Walls load case 5 - Wind 180, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	9.98	262.50	2.62
A_2	15.00	0.80	20.96	9.98	0.00	0.00
A_3	24.10	0.80	24.01	12.05	159.23	1.92
B	23.25	-0.50	23.76	-14.37	406.88	-5.85
C	23.25	-0.70	23.76	-18.41	328.02	-6.04
D	23.25	-0.70	23.76	-18.41	328.02	-6.04

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_180} = b \times (H + d \times \tan(\alpha_0))$ = **421.71** ft^2

Projected vertical area of roof $A_{vert\_r\_180} = b \times d \times \tan(\alpha_0)$ = **14.83** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_180} + p_{min\_r} \times A_{vert\_r\_180}$ = **6.87** kips

Leeward net force $F_l = F_{w,wB}$ = **-5.8** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3}$ = **4.5** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l - F_{w,h}, F_{w,total\_min})$ = **10.8** kips

Roof load case 6 - Wind 180, GC_{pi} -0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (+ve)	23.25	-0.18	23.76	0.64	203.82	0.13
B (+ve)	23.25	-0.18	23.76	0.64	39.12	0.03

Total vertical net force $F_{w,v}$ = **0.16** kips

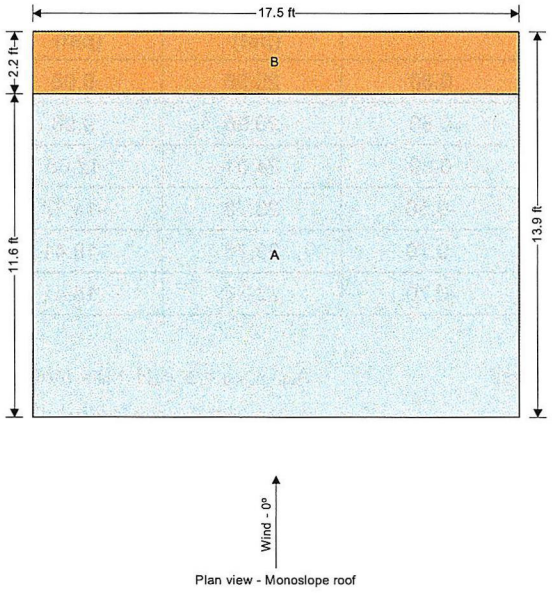
Total horizontal net force $F_{w,h}$ = **0.01** kips

Walls load case 6 - Wind 180, GC_{pi} -0.18, $-c_{pe}$

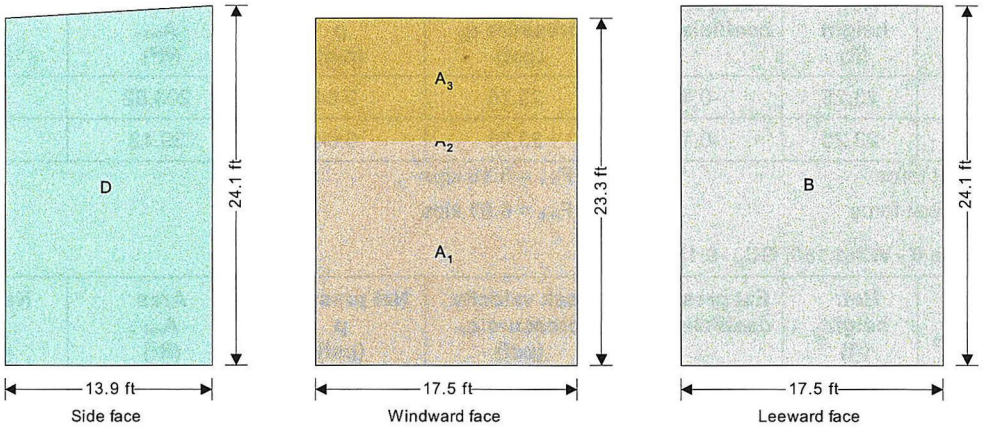
Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	18.53	262.50	4.86
A_2	15.00	0.80	20.96	18.53	0.00	0.00
A_3	24.10	0.80	24.01	20.60	159.23	3.28
B	23.25	-0.50	23.76	-5.82	406.88	-2.37
C	23.25	-0.70	23.76	-9.86	328.02	-3.23
D	23.25	-0.70	23.76	-9.86	328.02	-3.23

Overall loading

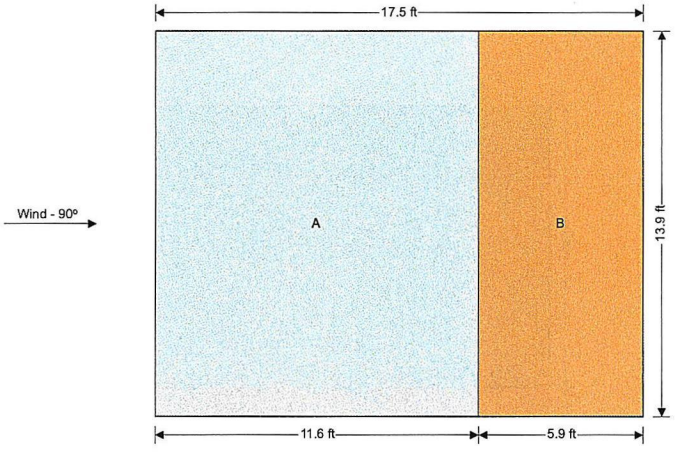
Projected vertical plan area of wall	$A_{vert\_w\_180} = b \times (H + d \times \tan(\alpha_0)) = \mathbf{421.71}\ ft^2$
Projected vertical area of roof	$A_{vert\_r\_180} = b \times d \times \tan(\alpha_0) = \mathbf{14.83}\ ft^2$
Minimum overall horizontal loading	$F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_180} + p_{min\_r} \times A_{vert\_r\_180} = \mathbf{6.87}$ kips
Leeward net force	$F_l = F_{w,wB} = \mathbf{-2.4}$ kips
Windward net force	$F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3} = \mathbf{8.1}$ kips
Overall horizontal loading	$F_{w,total} = \max(F_w - F_l - F_{w,h}, F_{w,total\_min}) = \mathbf{10.5}$ kips



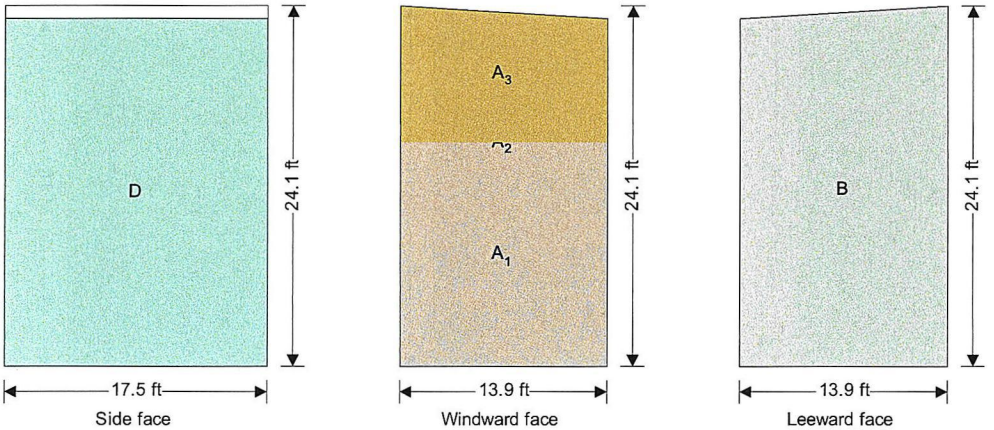
Plan view - Monoslope roof



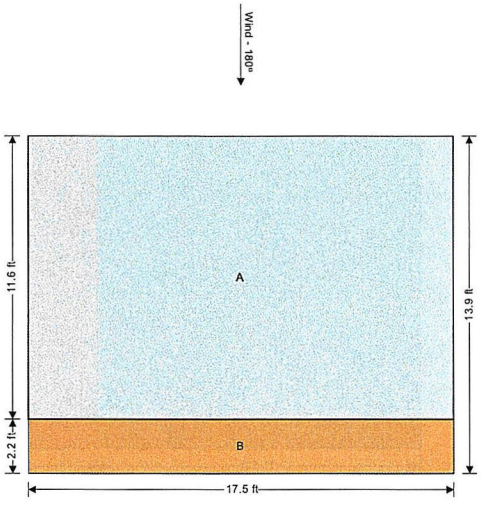
Tekla Tedds Dewberry Engineers, Inc. 800 N Magnolia Ave Suite 1000 Orlando, FL 32803	Project Ocean Beach				Job Ref.	
	Section Roof Load				Sheet no./rev. 7	
	Calc. by AMD	Date 10/9/2024	Chk'd by BGK	Date 10/10/2024	App'd by BGK	Date 10/10/2024



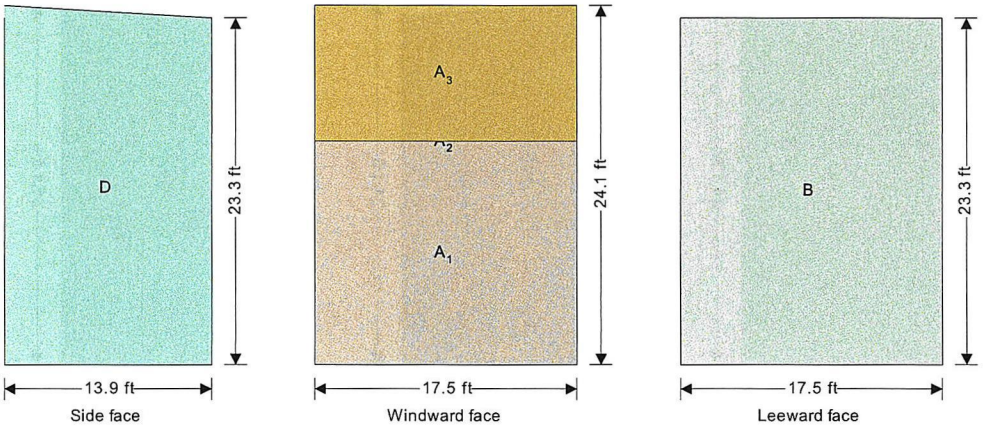
Plan view - Monoslope roof



Tekla Tedds Dewberry Engineers, Inc. 800 N Magnolia Ave Suite 1000 Orlando, FL 32803	Project Ocean Beach				Job Ref.	
	Section Roof Load				Sheet no./rev. 8	
	Calc. by AMD	Date 10/9/2024	Chk'd by BGK	Date 10/10/2024	App'd by BGK	Date 10/10/2024



Plan view - Monoslope roof



Job Information

	Engineer	Checked	Approved
Name:	AMD	BGK	BGK
Date:	10/7/2024	10/8/2024	10/9/2024

Project ID	
Project Name	

Structure Type	SPACE FRAME

Number of Nodes	110	Highest Node	110
Number of Elements	150	Highest Beam	166
Number of Plates	16	Highest Plate	164

Number of Basic Load Cases	8
Number of Combination Load Cases	14

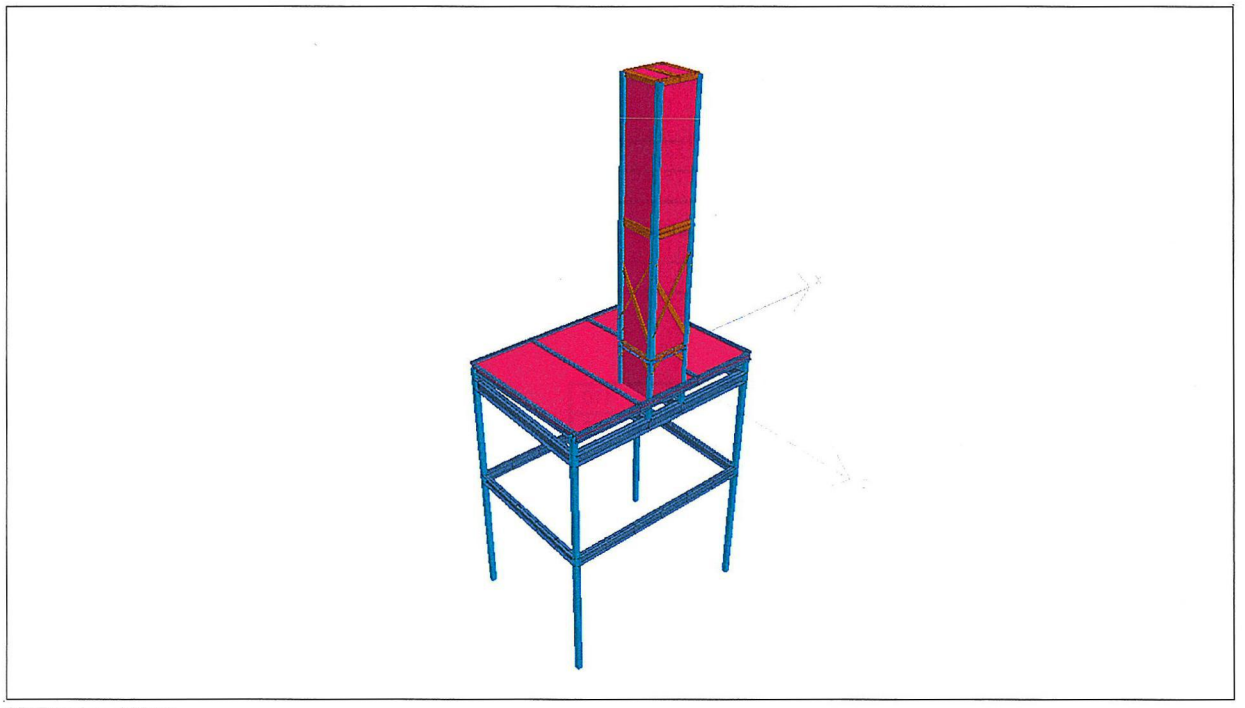
Included in this printout are data for:

All	The Whole Structure

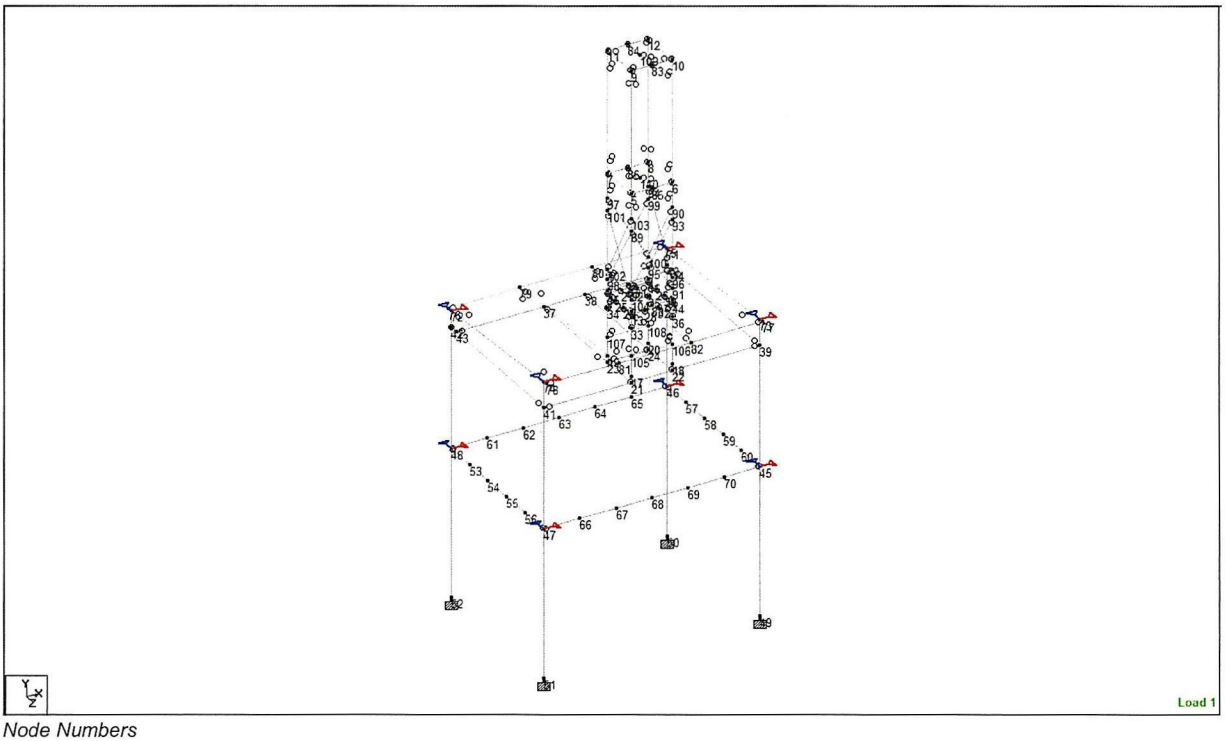
Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	DEAD LOAD
Primary	2	LIVE LOAD
Primary	3	SNOW LOAD
Primary	4	WIND LOAD (X,+IP)
Primary	5	WIND LOAD (X,-IP)
Primary	6	WIND LOAD (Z, +IP)
Primary	7	WIND LOAD (Z,-IP)
Primary	8	ROOF LIVE LOAD
Combination	9	1.4DL
Combination	10	1.2DL + 1.6LL + 0.5SL
Combination	11	1.2DL + 1.6SL + 0.5WL(X,+IP)
Combination	12	1.2DL + 1.6SL + 0.5WL(X,-IP)
Combination	13	1.2DL + 1.6SL + 0.5WL(Z,+IP)
Combination	14	1.2DL + 1.6SL + 0.5WL(Z,-IP)
Combination	15	1.2DL + 1.0WL(X,+IP) + 1.0LL + 0.5SL
Combination	16	1.2DL + 1.0WL(X,-IP) + 1.0LL + 0.5SL
Combination	17	1.2DL + 1.0WL(Z,+IP) + 1.0LL + 0.5SL
Combination	18	1.2DL + 1.0WL(Z,-IP) + 1.0LL + 0.5SL
Combination	19	0.9DL + 1.0WL(X,+IP)
Combination	20	0.9DL + 1.0WL(X,-IP)
Combination	21	0.9DL + 1.0WL(Z,+IP)
Combination	22	0.9DL + 1.0WL(Z,-IP)

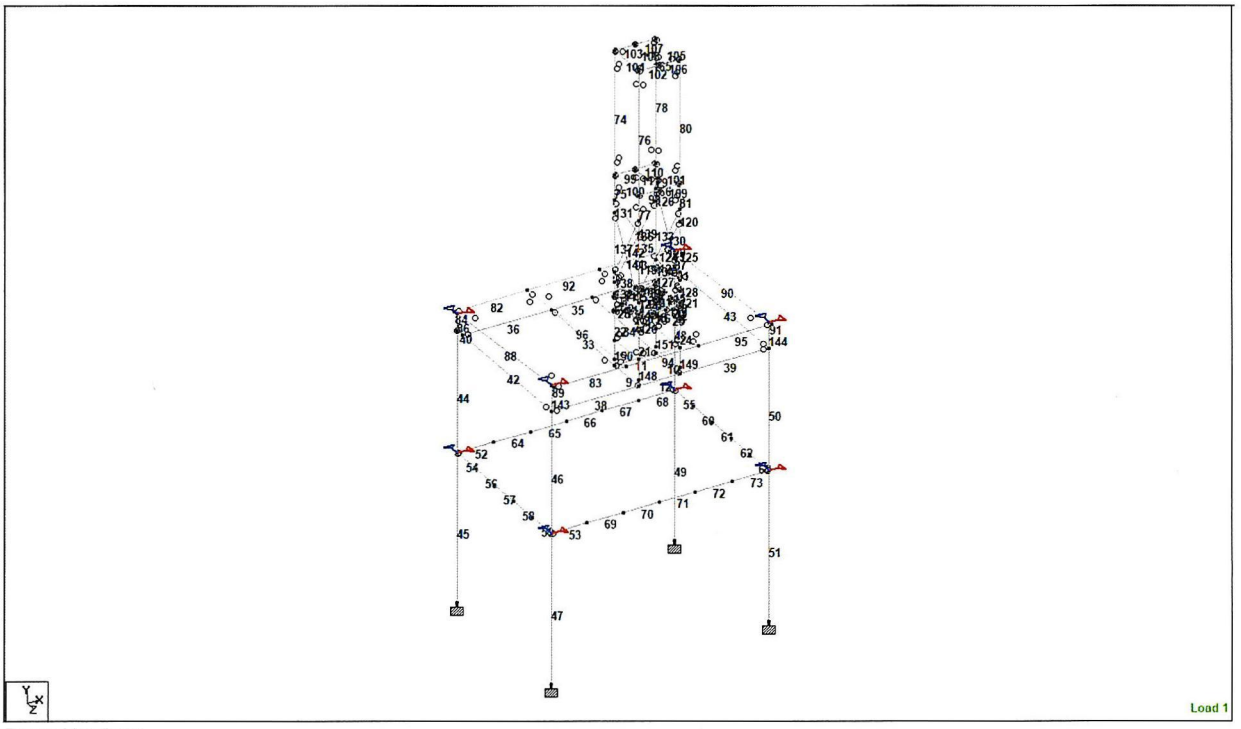
Bentley Software licensed to Dewberry Engineers Inc. CONNECTED User: Ashley Deuschle	Job No 50170407	Sheet No 2	Rev 0
	Part Rev 1		
Job Title Ocean Beach CT	Ref		
	By AMD	Date 10/7/2024	Chd BGK
Client VZW	File Ocean Beach CT.STD	Date/Time 22-Oct-2024 09:26	



3D Rendered View



Node Numbers



Beam Numbers

Plates

Plate	Node A	Node B	Node C	Node D	Property
145	76	78	81	79	2
146	79	81	82	80	2
147	80	82	77	75	2
152	15	107	105	13	1
153	13	105	106	14	1
154	14	106	108	16	1
155	16	108	107	15	1
156	5	1	2	6	1
157	5	1	3	7	1
158	6	2	4	8	1
159	8	4	3	7	1
160	12	8	7	11	1
161	10	6	8	12	1
162	10	12	11	9	1
163	11	7	5	9	1
164	9	5	6	10	1

Section Properties

Prop	Section	Area (in^2)	I_{yy} (in^4)	I_{zz} (in^4)	J (in^4)	Material
3	W12X26	7.650	17.300	204.000	0.300	STEEL_50_KS
4	W8X10	2.960	2.090	30.800	0.043	STEEL_50_KS
5	W10X22	6.490	11.400	118.000	0.239	STEEL_50_KS
6	W6X12	3.550	2.990	22.100	0.090	STEEL_50_KS
7	W12X40	11.700	44.100	307.000	0.906	STEEL_50_KS
9	HSST4.5X4.5X0.188	2.930	9.020	9.020	14.400	STEEL
10	HSST3.5X3.5X0.25	2.910	5.040	5.040	8.350	STEEL
11	HSST4X4X0.375	4.780	10.300	10.300	17.500	FIBERGLASS
12	L30304	1.440	1.982	0.506	0.031	STEEL
13	HSST5X5X0.25	4.300	16.000	16.000	25.800	STEEL_50_KS
14	L40406	2.860	6.943	1.774	0.137	FIBERGLASS
15	L40406	5.720	16.129	8.717	0.268	FIBERGLASS
16	L40404	1.930	4.863	1.216	0.041	STEEL

Plate Thickness

Prop	Node A (in)	Node B (in)	Node C (in)	Node D (in)	Material
1	0.250	0.250	0.250	0.250	FIBERGLASS
2	0.250	0.250	0.250	0.250	STEEL

Materials

Mat	Name	E (kip/in^2)	ν	Density (kip/in^3)	α (/°F)
1	STEEL	29E+3	0.300	0.000	6.5E -6
2	CONCRETE	3.15E+3	0.170	8.68e-05	5.5E -6
3	ALUMINUM	10E+3	0.330	9.8e-05	12.8E -6
4	STAINLESSSTEEL	28E+3	0.300	0.000	9.9E -6
5	STEEL_36_KSI	29E+3	0.300	0.000	6.5E -6
6	STEEL_50_KSI	29E+3	0.300	0.000	6.5E -6
7	STEEL_275_NMM2	29.7E+3	0.300	0.000	6.67E -6
8	STEEL_355_NMM2	29.7E+3	0.300	0.000	6.67E -6
9	FIBERGLASS	2.8E+3	0.350	6e-05	4.4E -6

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip-ft/deg)	rY (kip-ft/deg)	rZ (kip-ft/deg)
45	Fixed	-	Fixed	-	-	-
46	Fixed	-	Fixed	-	-	-
47	Fixed	-	Fixed	-	-	-
48	Fixed	-	Fixed	-	-	-
49	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
50	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
51	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
52	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
71	Fixed	-	Fixed	-	-	-
72	Fixed	-	Fixed	-	-	-
73	Fixed	-	Fixed	-	-	-
74	Fixed	-	Fixed	-	-	-

Releases

Beam ends not shown in this table are fixed in all directions.

Beam	Node	x	y	z	rx	ry	rz
1	15	Fixed	Fixed	Fixed	Fixed	Pin	Pin
2	16	Fixed	Fixed	Fixed	Fixed	Pin	Pin
3	15	Fixed	Fixed	Fixed	Fixed	Pin	Pin
4	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
9	21	Fixed	Fixed	Fixed	Fixed	Pin	Pin
10	22	Fixed	Fixed	Fixed	Fixed	Pin	Pin
11	23	Fixed	Fixed	Fixed	Fixed	Pin	Pin
11	24	Fixed	Fixed	Fixed	Fixed	Pin	Pin
17	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
18	14	Fixed	Fixed	Fixed	Fixed	Pin	Pin
19	16	Fixed	Fixed	Fixed	Fixed	Pin	Pin
20	14	Fixed	Fixed	Fixed	Fixed	Pin	Pin
25	32	Fixed	Fixed	Fixed	Pin	Pin	Pin
25	36	Fixed	Fixed	Fixed	Pin	Pin	Pin
26	28	Fixed	Fixed	Fixed	Pin	Pin	Pin
26	33	Fixed	Fixed	Fixed	Pin	Pin	Pin
27	29	Fixed	Fixed	Fixed	Pin	Pin	Pin
27	33	Fixed	Fixed	Fixed	Pin	Pin	Pin
28	25	Fixed	Fixed	Fixed	Pin	Pin	Pin
28	34	Fixed	Fixed	Fixed	Pin	Pin	Pin
29	27	Fixed	Fixed	Fixed	Pin	Pin	Pin
29	34	Fixed	Fixed	Fixed	Pin	Pin	Pin
30	31	Fixed	Fixed	Fixed	Pin	Pin	Pin
30	35	Fixed	Fixed	Fixed	Pin	Pin	Pin
31	26	Fixed	Fixed	Fixed	Pin	Pin	Pin
31	35	Fixed	Fixed	Fixed	Pin	Pin	Pin

Releases Cont...

Beam	Node	x	y	z	rx	ry	rz
32	36	Fixed	Fixed	Fixed	Pin	Pin	Pin
33	37	Fixed	Fixed	Fixed	Fixed	Pin	Pin
34	38	Fixed	Fixed	Fixed	Fixed	Pin	Pin
36	43	Fixed	Fixed	Fixed	Fixed	Pin	Pin
37	44	Fixed	Fixed	Fixed	Fixed	Pin	Pin
38	41	Fixed	Fixed	Fixed	Fixed	Pin	Pin
39	39	Fixed	Fixed	Fixed	Fixed	Pin	Pin
40	42	Fixed	Fixed	Fixed	Fixed	Pin	Pin
42	41	Fixed	Fixed	Fixed	Fixed	Pin	Pin
43	44	Fixed	Fixed	Fixed	Fixed	Pin	Pin
43	39	Fixed	Fixed	Fixed	Fixed	Pin	Pin
52	48	Fixed	Fixed	Fixed	Fixed	Pin	Pin
53	47	Fixed	Fixed	Fixed	Fixed	Pin	Pin
54	48	Fixed	Fixed	Fixed	Fixed	Pin	Pin
55	46	Fixed	Fixed	Fixed	Fixed	Pin	Pin
59	47	Fixed	Fixed	Fixed	Fixed	Pin	Pin
63	45	Fixed	Fixed	Fixed	Fixed	Pin	Pin
68	46	Fixed	Fixed	Fixed	Fixed	Pin	Pin
73	45	Fixed	Fixed	Fixed	Fixed	Pin	Pin
82	76	Fixed	Fixed	Fixed	Fixed	Pin	Pin
83	78	Fixed	Fixed	Fixed	Fixed	Pin	Pin
93	75	Fixed	Fixed	Fixed	Fixed	Pin	Pin
95	77	Fixed	Fixed	Fixed	Fixed	Pin	Pin
96	79	Fixed	Fixed	Fixed	Fixed	Pin	Pin
96	81	Fixed	Fixed	Fixed	Fixed	Pin	Pin
97	80	Fixed	Fixed	Fixed	Fixed	Pin	Pin
97	82	Fixed	Fixed	Fixed	Fixed	Pin	Pin
98	5	Fixed	Fixed	Fixed	Fixed	Pin	Pin
99	7	Fixed	Fixed	Fixed	Fixed	Pin	Pin
100	7	Fixed	Fixed	Fixed	Fixed	Pin	Pin
100	5	Fixed	Fixed	Fixed	Fixed	Pin	Pin
101	8	Fixed	Fixed	Fixed	Fixed	Pin	Pin
101	6	Fixed	Fixed	Fixed	Fixed	Pin	Pin
102	9	Fixed	Fixed	Fixed	Fixed	Pin	Pin
103	11	Fixed	Fixed	Fixed	Fixed	Pin	Pin
104	11	Fixed	Fixed	Fixed	Fixed	Pin	Pin
104	9	Fixed	Fixed	Fixed	Fixed	Pin	Pin
105	12	Fixed	Fixed	Fixed	Fixed	Pin	Pin
105	10	Fixed	Fixed	Fixed	Fixed	Pin	Pin
106	10	Fixed	Fixed	Fixed	Fixed	Pin	Pin
107	12	Fixed	Fixed	Fixed	Fixed	Pin	Pin
108	84	Fixed	Fixed	Fixed	Fixed	Pin	Pin
109	6	Fixed	Fixed	Fixed	Fixed	Pin	Pin
110	8	Fixed	Fixed	Fixed	Fixed	Pin	Pin
111	86	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Releases Cont...

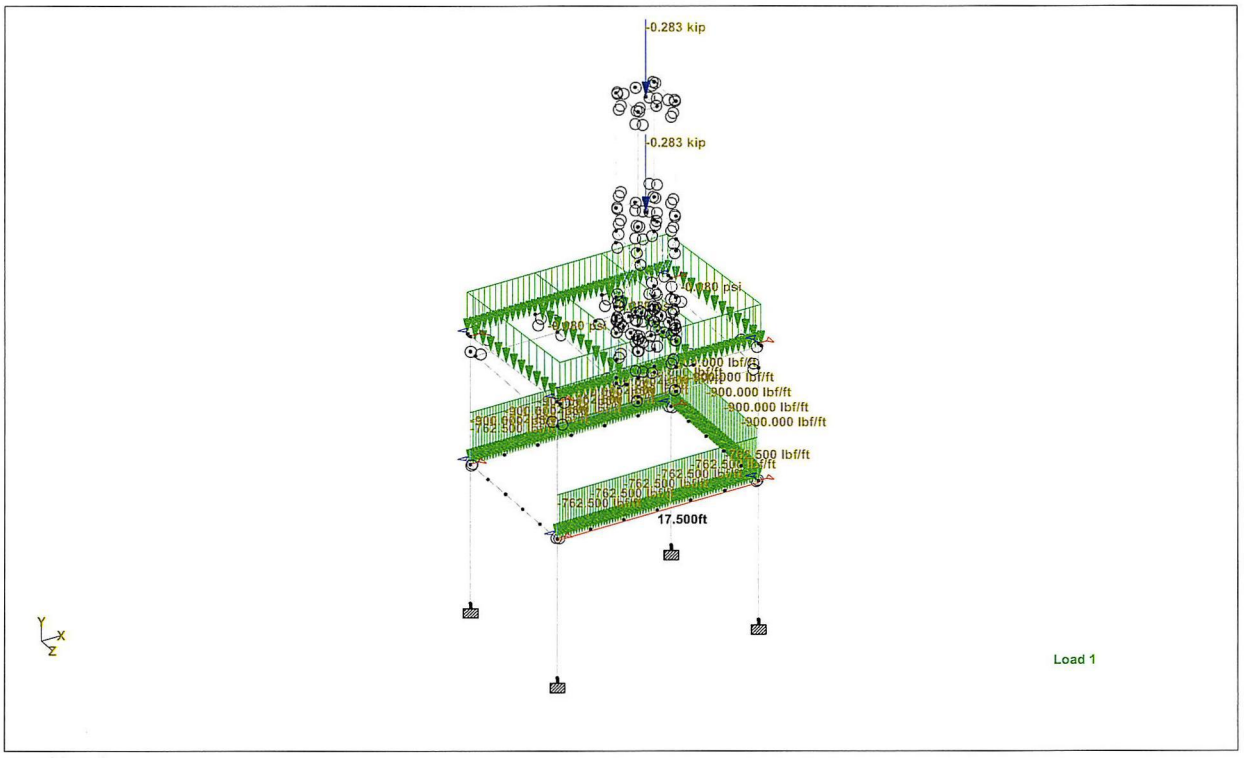
Beam	Node	x	y	z	rx	ry	rz
112	3	Fixed	Fixed	Fixed	Fixed	Pin	Pin
113	1	Fixed	Fixed	Fixed	Fixed	Pin	Pin
114	3	Fixed	Fixed	Fixed	Fixed	Pin	Pin
114	1	Fixed	Fixed	Fixed	Fixed	Pin	Pin
115	4	Fixed	Fixed	Fixed	Fixed	Pin	Pin
115	2	Fixed	Fixed	Fixed	Fixed	Pin	Pin
116	4	Fixed	Fixed	Fixed	Fixed	Pin	Pin
117	2	Fixed	Fixed	Fixed	Fixed	Pin	Pin
118	87	Fixed	Fixed	Fixed	Fixed	Pin	Pin
118	88	Fixed	Fixed	Fixed	Fixed	Pin	Pin
123	89	Fixed	Fixed	Fixed	Pin	Pin	Pin
123	91	Fixed	Fixed	Fixed	Pin	Pin	Pin
124	90	Fixed	Fixed	Fixed	Pin	Pin	Pin
124	92	Fixed	Fixed	Fixed	Pin	Pin	Pin
129	93	Fixed	Fixed	Fixed	Pin	Pin	Pin
129	95	Fixed	Fixed	Fixed	Pin	Pin	Pin
130	94	Fixed	Fixed	Fixed	Pin	Pin	Pin
130	96	Fixed	Fixed	Fixed	Pin	Pin	Pin
135	99	Fixed	Fixed	Fixed	Pin	Pin	Pin
135	98	Fixed	Fixed	Fixed	Pin	Pin	Pin
136	97	Fixed	Fixed	Fixed	Pin	Pin	Pin
136	100	Fixed	Fixed	Fixed	Pin	Pin	Pin
141	101	Fixed	Fixed	Fixed	Pin	Pin	Pin
141	104	Fixed	Fixed	Fixed	Pin	Pin	Pin
142	103	Fixed	Fixed	Fixed	Pin	Pin	Pin
142	102	Fixed	Fixed	Fixed	Pin	Pin	Pin
165	83	Fixed	Fixed	Fixed	Fixed	Pin	Pin
166	85	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Primary Load Cases

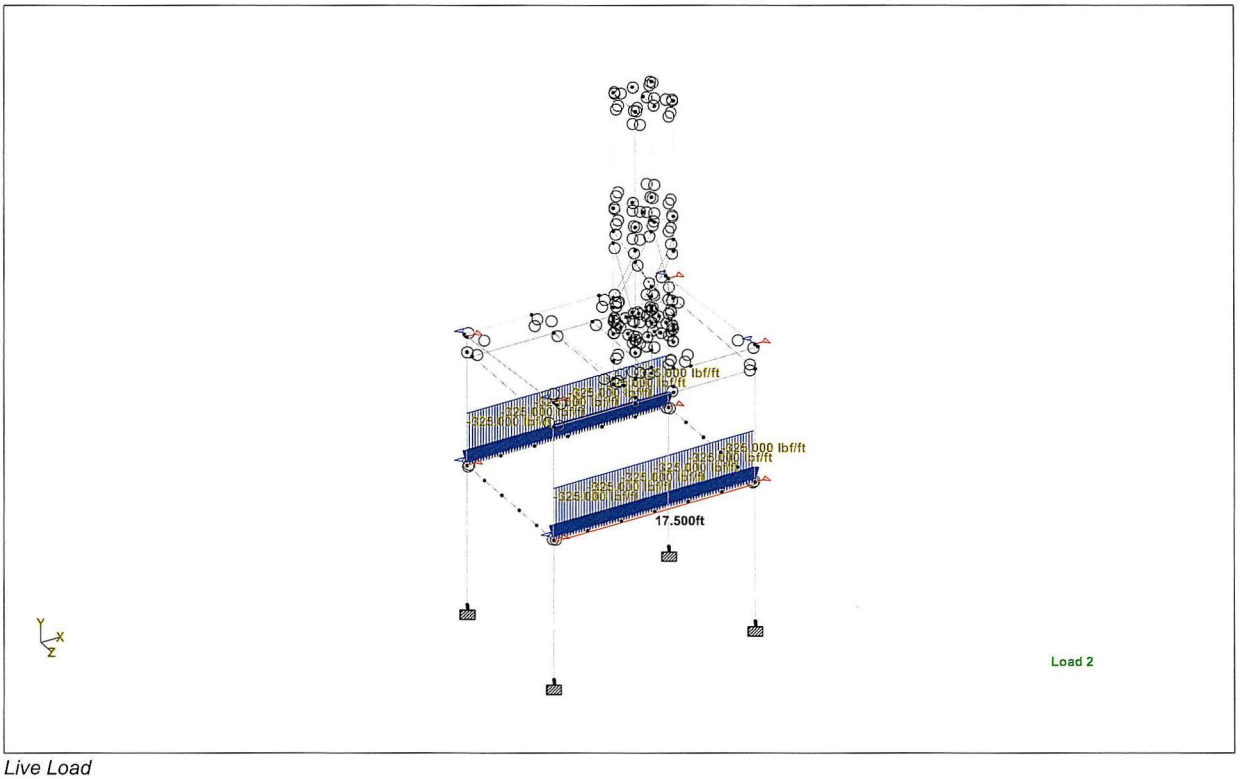
Number	Name	Type
1	DEAD LOAD	Dead
2	LIVE LOAD	Live
3	SNOW LOAD	Snow
4	WIND LOAD (X,+IP)	Wind
5	WIND LOAD (X,-IP)	Wind
6	WIND LOAD (Z, +IP)	Wind
7	WIND LOAD (Z,-IP)	Wind
8	ROOF LIVE LOAD	Roof Live

Combination Load Cases

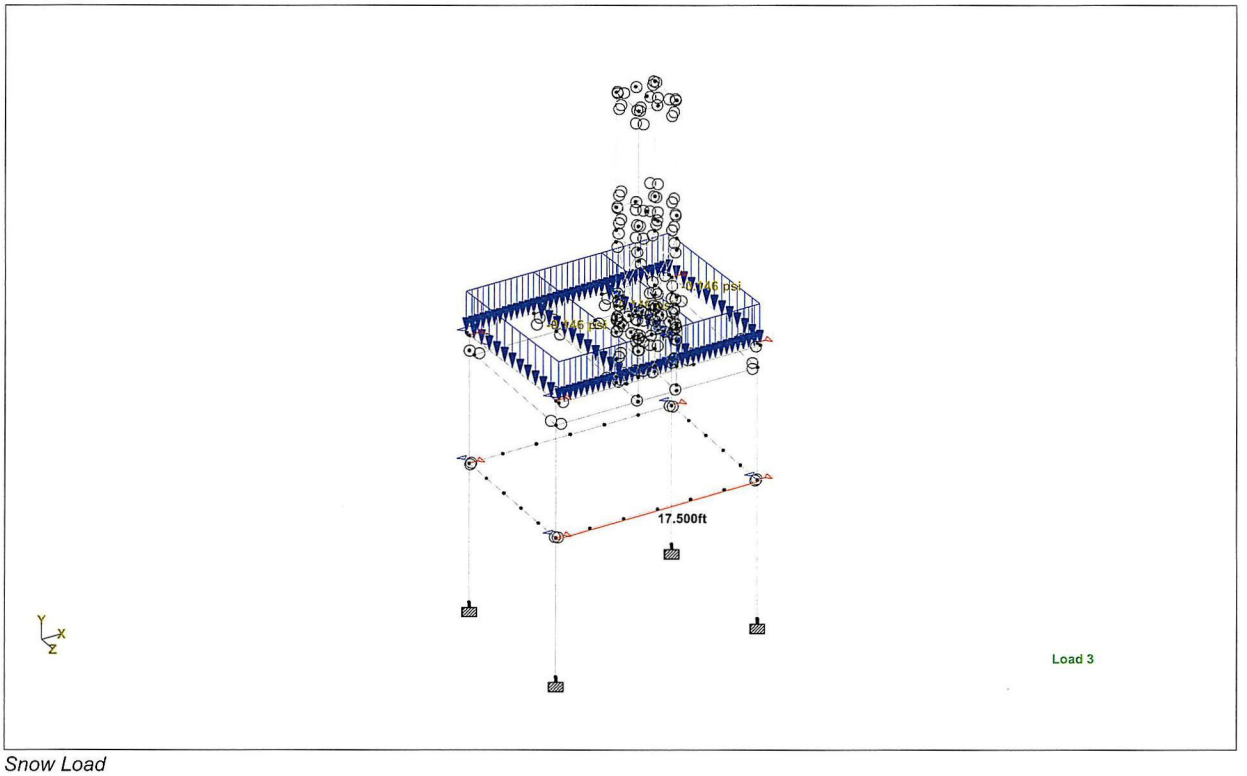
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
9	1.4DL	1	DEAD LOAD	1.40
10	1.2DL + 1.6LL + 0.5SL	1	DEAD LOAD	1.20
		2	LIVE LOAD	1.60
		3	SNOW LOAD	0.50
11	1.2DL + 1.6SL + 0.5WL(X,+IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		4	WIND LOAD (X,+IP)	0.50
12	1.2DL + 1.6SL + 0.5WL(X,-IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		5	WIND LOAD (X,-IP)	0.50
13	1.2DL + 1.6SL + 0.5WL(Z,+IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		6	WIND LOAD (Z, +IP)	0.50
14	1.2DL + 1.6SL + 0.5WL(Z,-IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		7	WIND LOAD (Z,-IP)	0.50
15	1.2DL + 1.0WL(X,+IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		4	WIND LOAD (X,+IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
16	1.2DL + 1.0WL(X,-IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		5	WIND LOAD (X,-IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
17	1.2DL + 1.0WL(Z,+IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		6	WIND LOAD (Z, +IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
18	1.2DL + 1.0WL(Z,-IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		7	WIND LOAD (Z,-IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
19	0.9DL + 1.0WL(X,+IP)	1	DEAD LOAD	0.90
		4	WIND LOAD (X,+IP)	1.00
20	0.9DL + 1.0WL(X,-IP)	1	DEAD LOAD	0.90
		5	WIND LOAD (X,-IP)	1.00
21	0.9DL + 1.0WL(Z,+IP)	1	DEAD LOAD	0.90
		6	WIND LOAD (Z, +IP)	1.00
22	0.9DL + 1.0WL(Z,-IP)	1	DEAD LOAD	0.90
		7	WIND LOAD (Z,-IP)	1.00



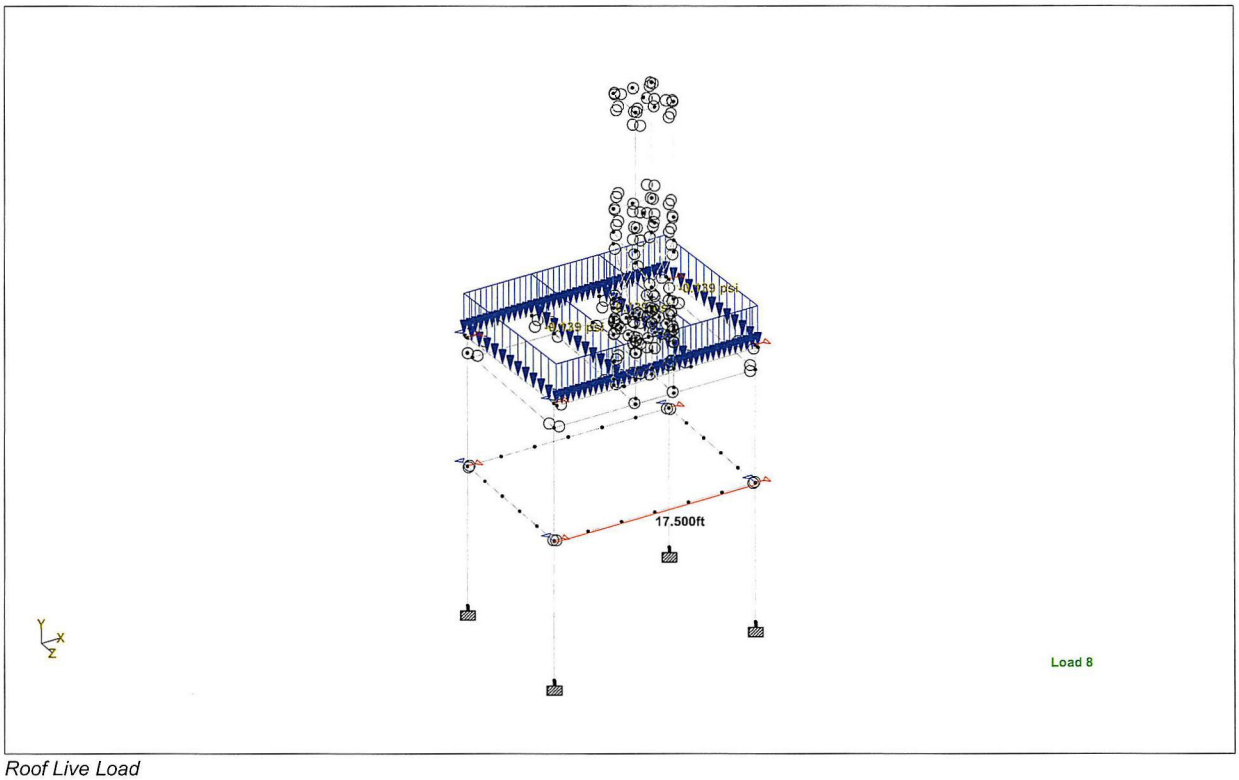
Dead Load


-325.000 lbf/ft
-325.000 lbf/ft
-325.000 lbf/ft
-325.000 lbf/ft
17.500ft
Y
X
Z
Load 2

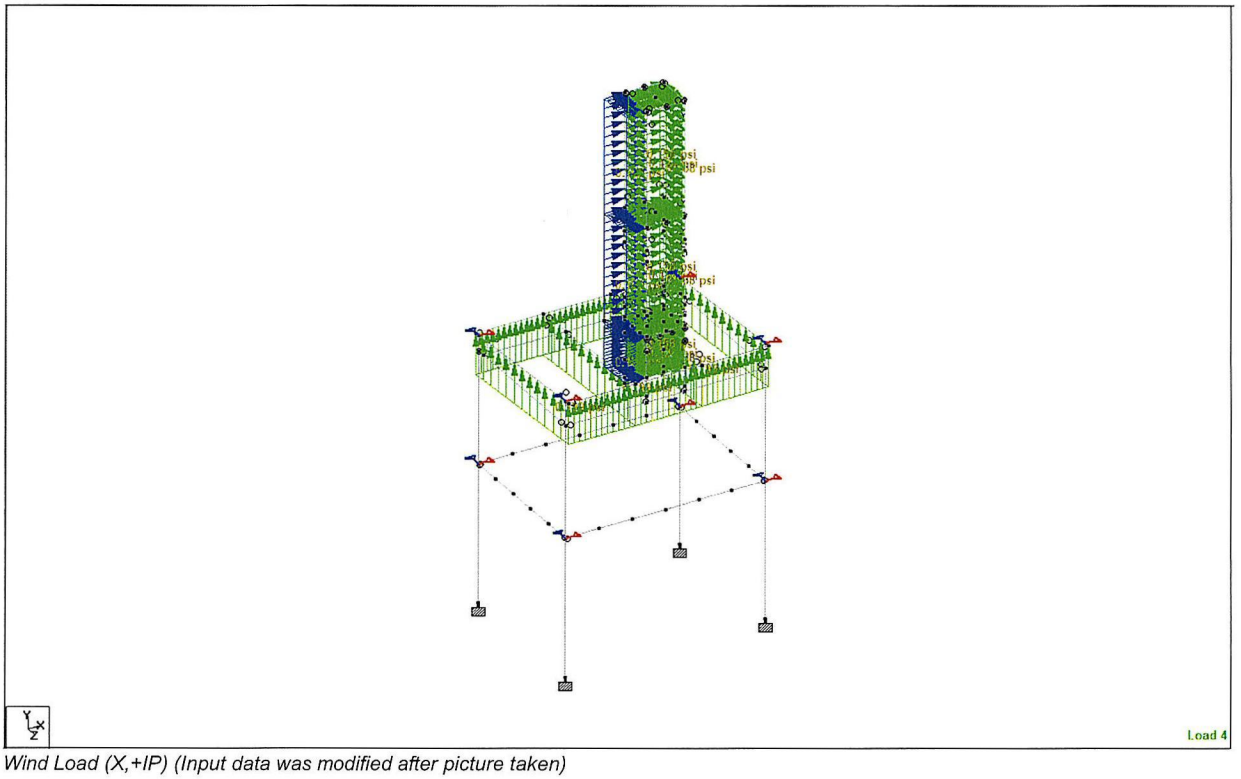
Live Load



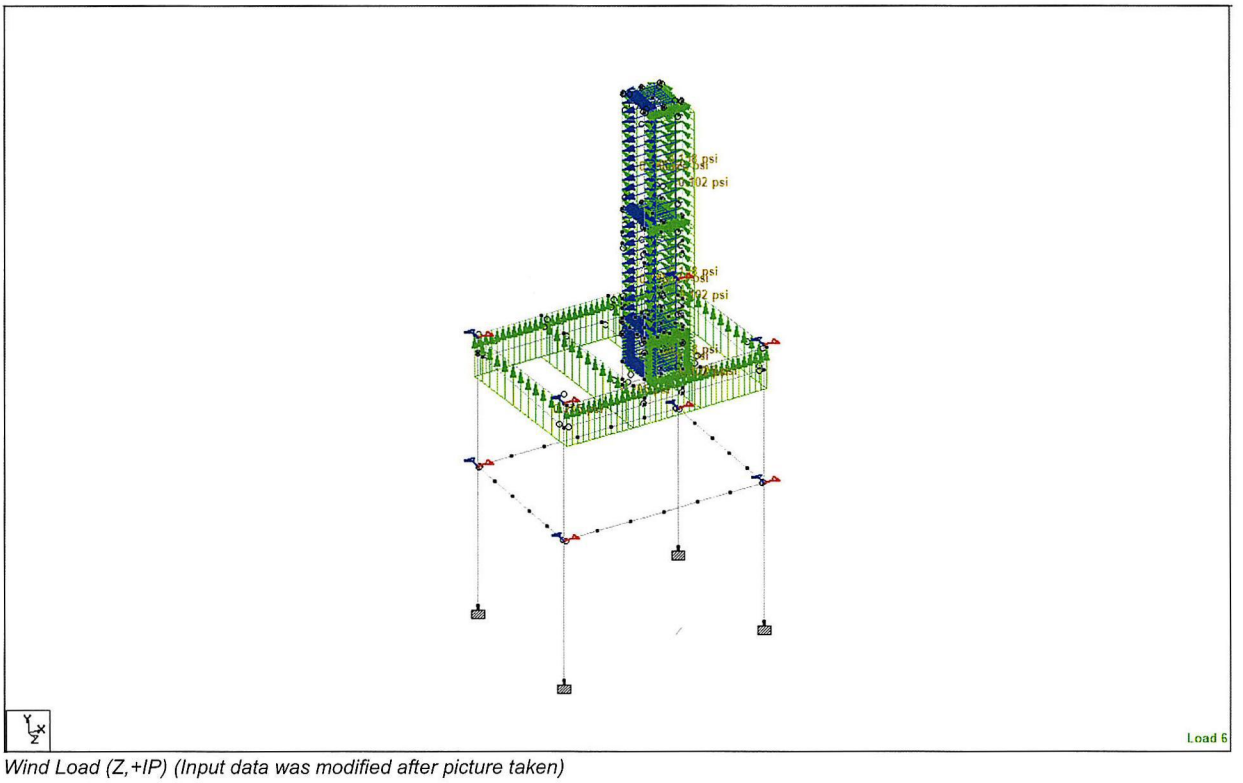
Snow Load



Roof Live Load



Wind Load (X,+IP) (Input data was modified after picture taken)



Wind Load (Z,+IP) (Input data was modified after picture taken)

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
1	W6X12	W6X12	0.007	1.000	0.007	Eq.H1-1b	17	3.550	22.100	2.990	0.090
2	W6X12	W6X12	0.006	1.000	0.006	Eq.H1-1b	17	3.550	22.100	2.990	0.090
3	W6X12	W6X12	0.003	1.000	0.003	Cl.D2	17	3.550	22.100	2.990	0.090
4	W6X12	W6X12	0.010	1.000	0.010	Eq.H1-3a(H1-	16	3.550	22.100	2.990	0.090
5	HSST3.5X	HSST3.5X	0.058	1.000	0.058	Eq.H1-1b	5	2.910	5.040	5.040	8.350
6	HSST3.5X	HSST3.5X	0.039	1.000	0.039	Eq.H1-1b	17	2.910	5.040	5.040	8.350
7	HSST3.5X	HSST3.5X	0.036	1.000	0.036	Eq.H1-1b	17	2.910	5.040	5.040	8.350
8	HSST3.5X	HSST3.5X	0.062	1.000	0.062	Eq.H1-1b	15	2.910	5.040	5.040	8.350
9	W12X26	W12X26	0.092	1.000	0.092	Eq.H1-1b	17	7.650	204.000	17.300	0.300
10	W12X26	W12X26	0.092	1.000	0.092	Eq.H1-1b	18	7.650	204.000	17.300	0.300
11	W12X40	W12X40	0.001	1.000	0.001	Cl.G1	9	11.700	307.000	44.100	0.906
12	W12X40	W12X40	0.117	1.000	0.117	Eq.H1-1b	16	11.700	307.000	44.100	0.906
13	W6X12	W6X12	0.008	1.000	0.008	Cl.G1	18	3.550	22.100	2.990	0.090
14	W6X12	W6X12	0.008	1.000	0.008	Eq.H1-1b	17	3.550	22.100	2.990	0.090
15	W6X12	W6X12	0.003	1.000	0.003	Cl.D2	17	3.550	22.100	2.990	0.090
16	W6X12	W6X12	0.010	1.000	0.010	Cl.G1	15	3.550	22.100	2.990	0.090
17	W6X12	W6X12	0.007	1.000	0.007	Eq.H1-3a(H1-	18	3.550	22.100	2.990	0.090
18	W6X12	W6X12	0.007	1.000	0.007	Eq.H1-3a(H1-	18	3.550	22.100	2.990	0.090

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
19	W6X12	W6X12	0.003	1.000	0.003	Cl.D2	17	3.550	22.100	2.990	0.090
20	W6X12	W6X12	0.009	1.000	0.009	Eq.H1-1b	4	3.550	22.100	2.990	0.090
21	HSST3.5X	HSST3.5X	0.054	1.000	0.054	Eq.H1-1b	4	2.910	5.040	5.040	8.350
22	HSST3.5X	HSST3.5X	0.089	1.000	0.089	Eq.H1-1b	5	2.910	5.040	5.040	8.350
23	HSST3.5X	HSST3.5X	0.094	1.000	0.094	Eq.H1-1b	15	2.910	5.040	5.040	8.350
24	HSST3.5X	HSST3.5X	0.059	1.000	0.059	Cl.E3	15	2.910	5.040	5.040	8.350
25	L30304	L30304	0.054	1.000	0.054	Eq.H2-1	4	1.440	0.493	1.996	0.030
26	L30304	L30304	0.020	1.000	0.020	Eq.H2-1	15	1.440	0.493	1.996	0.030
27	L30304	L30304	0.014	1.000	0.014	Eq.H2-1	18	1.440	0.493	1.996	0.030
28	L30304	L30304	0.044	1.000	0.044	Eq.H2-1	18	1.440	0.493	1.996	0.030
29	L30304	L30304	0.007	1.000	0.007	Eq.H2-1	15	1.440	0.493	1.996	0.030
30	L30304	L30304	0.005	1.000	0.005	Eq.H2-1	18	1.440	0.493	1.996	0.030
31	L30304	L30304	0.041	1.000	0.041	Eq.H2-1	17	1.440	0.493	1.996	0.030
32	L30304	L30304	0.015	1.000	0.015	Eq.H2-1	17	1.440	0.493	1.996	0.030
33	W12X26	W12X26	0.126	1.000	0.126	Cl.F2.2	17	7.650	204.000	17.300	0.300
34	W12X26	W12X26	0.125	1.000	0.125	Cl.F2.2	18	7.650	204.000	17.300	0.300
35	W12X40	W12X40	0.139	1.000	0.139	Eq.H1-1b	17	11.700	307.000	44.100	0.906
36	W12X40	W12X40	0.139	1.000	0.139	Eq.H1-1b	17	11.700	307.000	44.100	0.906
37	W12X40	W12X40	0.139	1.000	0.139	Eq.H1-1b	17	11.700	307.000	44.100	0.906
38	W12X40	W12X40	0.116	1.000	0.116	Eq.H1-1b	6	11.700	307.000	44.100	0.906
39	W12X40	W12X40	0.127	1.000	0.127	Eq.H1-3a(H1-	16	11.700	307.000	44.100	0.906
40	W12X26	W12X26	0.028	1.000	0.028	Cl.G1	17	7.650	204.000	17.300	0.300
41	W12X26	W12X26	0.029	1.000	0.029	Cl.G1	17	7.650	204.000	17.300	0.300
42	W12X26	W12X26	0.017	1.000	0.017	Cl.F2.2	17	7.650	204.000	17.300	0.300
43	W12X26	W12X26	0.007	1.000	0.007	Cl.F2.2	9	7.650	204.000	17.300	0.300
44	HSST5X5	HSST5X5	0.046	1.000	0.046	Cl.E3	14	4.300	16.000	16.000	25.800
45	HSST5X5	HSST5X5	0.225	1.000	0.225	Eq.H1-1a	18	4.300	16.000	16.000	25.800
46	HSST5X5	HSST5X5	0.093	1.000	0.093	Eq.H1-1b	16	4.300	16.000	16.000	25.800
47	HSST5X5	HSST5X5	0.150	1.000	0.150	Cl.E3	10	4.300	16.000	16.000	25.800
48	HSST5X5	HSST5X5	0.059	1.000	0.059	Eq.H1-1b	18	4.300	16.000	16.000	25.800
49	HSST5X5	HSST5X5	0.290	1.000	0.290	Eq.H1-1a	18	4.300	16.000	16.000	25.800
50	HSST5X5	HSST5X5	0.102	1.000	0.102	Eq.H1-1b	16	4.300	16.000	16.000	25.800
51	HSST5X5	HSST5X5	0.241	1.000	0.241	Eq.H1-1a	16	4.300	16.000	16.000	25.800
52	W10X22	N/A						6.490	118.000	11.400	0.239
53	W10X22	N/A						6.490	118.000	11.400	0.239
54	W10X22	N/A						6.490	118.000	11.400	0.239
55	W10X22	N/A						6.490	118.000	11.400	0.239
56	W10X22	N/A						6.490	118.000	11.400	0.239
57	W10X22	N/A						6.490	118.000	11.400	0.239
58	W10X22	N/A						6.490	118.000	11.400	0.239
59	W10X22	N/A						6.490	118.000	11.400	0.239
60	W10X22	N/A						6.490	118.000	11.400	0.239
61	W10X22	N/A						6.490	118.000	11.400	0.239
62	W10X22	N/A						6.490	118.000	11.400	0.239
63	W10X22	N/A						6.490	118.000	11.400	0.239

Utilization Ratio Cont...

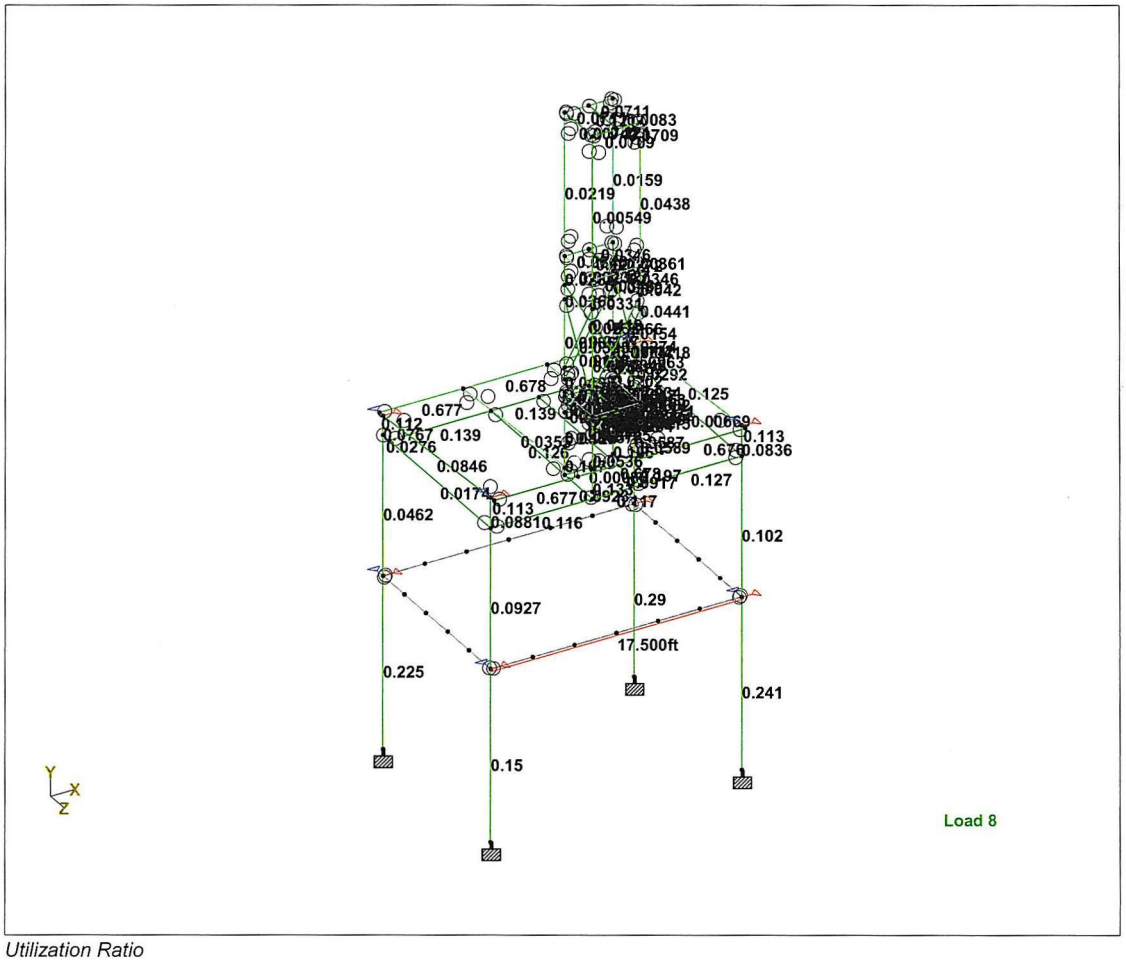
Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
64	W10X22	N/A						6.490	118.000	11.400	0.239
65	W10X22	N/A						6.490	118.000	11.400	0.239
66	W10X22	N/A						6.490	118.000	11.400	0.239
67	W10X22	N/A						6.490	118.000	11.400	0.239
68	W10X22	N/A						6.490	118.000	11.400	0.239
69	W10X22	N/A						6.490	118.000	11.400	0.239
70	W10X22	N/A						6.490	118.000	11.400	0.239
71	W10X22	N/A						6.490	118.000	11.400	0.239
72	W10X22	N/A						6.490	118.000	11.400	0.239
73	W10X22	N/A						6.490	118.000	11.400	0.239
74	HSST4X4	HSST4X4	0.022	1.000	0.022	Cl.E3	15	4.780	10.300	10.300	17.500
75	HSST4.5X	HSST4.5X	0.023	1.000	0.023	Eq.H1-1b	16	2.930	9.020	9.020	14.400
76	HSST4X4	HSST4X4	0.005	1.000	0.005	Cl.E3	9	4.780	10.300	10.300	17.500
77	HSST4.5X	HSST4.5X	0.033	1.000	0.033	Eq.H1-1b	5	2.930	9.020	9.020	14.400
78	HSST4X4	HSST4X4	0.016	1.000	0.016	Cl.E3	17	4.780	10.300	10.300	17.500
79	HSST4.5X	HSST4.5X	0.027	1.000	0.027	Eq.H1-1b	17	2.930	9.020	9.020	14.400
80	HSST4X4	HSST4X4	0.044	1.000	0.044	Cl.E3	15	4.780	10.300	10.300	17.500
81	HSST4.5X	HSST4.5X	0.042	1.000	0.042	Eq.H1-1b	15	2.930	9.020	9.020	14.400
82	W8X10	W8X10	0.677	1.000	0.677	Eq.H1-1b	12	2.960	30.800	2.090	0.043
83	W8X10	W8X10	0.677	1.000	0.677	Eq.H1-1b	12	2.960	30.800	2.090	0.043
84	W8X10	W8X10	0.112	1.000	0.112	Cl.G1	14	2.960	30.800	2.090	0.043
85	W8X10	W8X10	0.112	1.000	0.112	Cl.G1	12	2.960	30.800	2.090	0.043
86	HSST5X5	HSST5X5	0.077	1.000	0.077	Eq.H1-1b	18	4.300	16.000	16.000	25.800
87	HSST5X5	HSST5X5	0.096	1.000	0.096	Eq.H1-1b	18	4.300	16.000	16.000	25.800
88	W8X10	W8X10	0.085	1.000	0.085	Eq.H1-1b	18	2.960	30.800	2.090	0.043
89	W8X10	W8X10	0.113	1.000	0.113	Cl.G1	14	2.960	30.800	2.090	0.043
90	W8X10	W8X10	0.125	1.000	0.125	Eq.H1-1b	18	2.960	30.800	2.090	0.043
91	W8X10	W8X10	0.113	1.000	0.113	Cl.G1	14	2.960	30.800	2.090	0.043
92	W8X10	W8X10	0.678	1.000	0.678	Eq.H1-1b	14	2.960	30.800	2.090	0.043
93	W8X10	W8X10	0.677	1.000	0.677	Eq.H1-1b	14	2.960	30.800	2.090	0.043
94	W8X10	W8X10	0.678	1.000	0.678	Eq.H1-1b	14	2.960	30.800	2.090	0.043
95	W8X10	W8X10	0.676	1.000	0.676	Eq.H1-1b	14	2.960	30.800	2.090	0.043
96	W8X10	W8X10	0.035	1.000	0.035	Eq.H1-1b	9	2.960	30.800	2.090	0.043
97	W8X10	W8X10	0.035	1.000	0.035	Eq.H1-1b	9	2.960	30.800	2.090	0.043
98	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
99	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
100	L40406	L40406 LI	0.002	1.000	0.002	Cl.E4	7	5.720	8.717	16.126	0.268
101	L40406	L40406 LI	0.004	1.000	0.004	Cl.E4	7	5.720	8.717	16.126	0.268
102	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
103	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
104	L40406	L40406	0.007	1.000	0.007	Eq.H2-1	7	2.860	1.736	6.982	0.134
105	L40406	L40406	0.008	1.000	0.008	Eq.H2-1	7	2.860	1.736	6.982	0.134
106	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
107	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
108	L40406	L40406	0.121	1.000	0.121	Eq.H2-1	9	2.860	1.736	6.982	0.134

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
109	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
110	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
111	L40406	L40406	0.127	1.000	0.127	Eq.H2-1	9	2.860	1.736	6.982	0.134
112	L40404	L40404	0.011	1.000	0.011	Eq.H2-1	17	1.930	1.183	4.895	0.040
113	L40404	L40404	0.008	1.000	0.008	Eq.H2-1	5	1.930	1.183	4.895	0.040
114	L40404	L40404	0.006	1.000	0.006	Eq.H2-1	17	1.930	1.183	4.895	0.040
115	L40404	L40404	0.010	1.000	0.010	Eq.H2-1	15	1.930	1.183	4.895	0.040
116	L40404	L40404	0.011	1.000	0.011	Eq.H2-1	17	1.930	1.183	4.895	0.040
117	L40404	L40404	0.008	1.000	0.008	Eq.H2-1	5	1.930	1.183	4.895	0.040
118	L40404	L40404	0.005	1.000	0.005	Eq.H2-1	9	1.930	1.183	4.895	0.040
119	HSST4.5X	HSST4.5X	0.044	1.000	0.044	Eq.H1-1b	5	2.930	9.020	9.020	14.400
120	HSST4.5X	HSST4.5X	0.044	1.000	0.044	Eq.H1-1b	15	2.930	9.020	9.020	14.400
121	HSST4.5X	HSST4.5X	0.038	1.000	0.038	Cl.E3	15	2.930	9.020	9.020	14.400
122	HSST4.5X	HSST4.5X	0.033	1.000	0.033	Cl.D2	5	2.930	9.020	9.020	14.400
123	L40404	L40404	0.035	1.000	0.035	Eq.H2-1	16	1.930	1.183	4.895	0.040
124	L40404	L40404	0.017	1.000	0.017	Eq.H2-1	15	1.930	1.183	4.895	0.040
125	HSST4.5X	HSST4.5X	0.042	1.000	0.042	Eq.H1-1b	15	2.930	9.020	9.020	14.400
126	HSST4.5X	HSST4.5X	0.029	1.000	0.029	Eq.H1-1b	17	2.930	9.020	9.020	14.400
127	HSST4.5X	HSST4.5X	0.020	1.000	0.020	Cl.E3	17	2.930	9.020	9.020	14.400
128	HSST4.5X	HSST4.5X	0.034	1.000	0.034	Cl.E3	15	2.930	9.020	9.020	14.400
129	L40404	L40404	0.027	1.000	0.027	Eq.H2-1	18	1.930	1.183	4.895	0.040
130	L40404	L40404	0.015	1.000	0.015	Eq.H2-1	16	1.930	1.183	4.895	0.040
131	HSST4.5X	HSST4.5X	0.026	1.000	0.026	Eq.H1-1b	17	2.930	9.020	9.020	14.400
132	HSST4.5X	HSST4.5X	0.021	1.000	0.021	Eq.H1-1b	18	2.930	9.020	9.020	14.400
133	HSST4.5X	HSST4.5X	0.027	1.000	0.027	Eq.H1-1b	17	2.930	9.020	9.020	14.400
134	HSST4.5X	HSST4.5X	0.017	1.000	0.017	Cl.E3	17	2.930	9.020	9.020	14.400
135	L40404	L40404	0.012	1.000	0.012	Eq.H2-1	15	1.930	1.183	4.895	0.040
136	L40404	L40404	0.023	1.000	0.023	Eq.H2-1	16	1.930	1.183	4.895	0.040
137	HSST4.5X	HSST4.5X	0.028	1.000	0.028	Eq.H1-1b	17	2.930	9.020	9.020	14.400
138	HSST4.5X	HSST4.5X	0.020	1.000	0.020	Cl.E3	17	2.930	9.020	9.020	14.400
139	HSST4.5X	HSST4.5X	0.042	1.000	0.042	Eq.H1-1b	5	2.930	9.020	9.020	14.400
140	HSST4.5X	HSST4.5X	0.034	1.000	0.034	Cl.D2	5	2.930	9.020	9.020	14.400
141	L40404	L40404	0.014	1.000	0.014	Eq.H2-1	17	1.930	1.183	4.895	0.040
142	L40404	L40404	0.032	1.000	0.032	Eq.H2-1	18	1.930	1.183	4.895	0.040
143	HSST5X5	HSST5X5	0.088	1.000	0.088	Eq.H1-1b	16	4.300	16.000	16.000	25.800
144	HSST5X5	HSST5X5	0.084	1.000	0.084	Eq.H1-1b	16	4.300	16.000	16.000	25.800
148	HSST3.5X	HSST3.5X	0.133	1.000	0.133	Eq.H1-1b	5	2.910	5.040	5.040	8.350
149	HSST3.5X	HSST3.5X	0.197	1.000	0.197	Eq.H1-1b	15	2.910	5.040	5.040	8.350
150	HSST3.5X	HSST3.5X	0.167	1.000	0.167	Eq.H1-1b	17	2.910	5.040	5.040	8.350
151	HSST3.5X	HSST3.5X	0.166	1.000	0.166	Eq.H1-1b	17	2.910	5.040	5.040	8.350
165	L40406	L40406	0.121	1.000	0.121	Eq.H2-1	9	2.860	1.736	6.982	0.134
166	L40406	L40406	0.127	1.000	0.127	Eq.H2-1	9	2.860	1.736	6.982	0.134

Failed Members

There is no data of this type.



Utilization Ratio

NPP RFDS

NORTHEAST > North East > New England > Wallingford-1 > OCEAN BEACH CT - Ocean Beach Park

Stevens, Wesley - wesley.stevens@verizonwireless.com - 20240109_095525

Project Details		Location Information	
Carrier Aggregation	N	Site Id	2500632
Ecip	N	Search Ring#	
Project Name	5G L-SUB6 - CARRIER ADD	E-NodeB ID#	064059
Project Alt Name	OCEAN BEACH CT	PSLC#	470795
Project Id	16540902	Switch Name	Wallingford-1
Designed Sector Carrier 4G	4	Tower Type	
Designed Sector Carrier 5G	4	Site Type	MACRO
Additional Sector Carrier 4G	null	Street Address	98 Neptune Ave
Additional Sector Carrier 5G	null	City	New London
Suffix	Rev1_20240109	State	CT
FP Solution Type & Tech Type	MODIFICATION;4G_850;5G_850;5G_L-Sub6-Prep;4G_Radio Swap	Zip Code	06320
		County	New London
		Latitude	41.30933472/ 41° 18' 33.605"
		Longitude	-72.09876472/ 72° 5' 55.553"

Project Scope

Add 850/C-Band
Change antennas to one NHHS4-65A per sector to fit in stealthing
8T C-Band radio to connect to NHHS4-65A

Rev1_20240109: new radios, new antennas
Rev0_20230201: initial design

Antenna Summary

Added Antenna

700	850	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
LTE	5G,LTE	5G	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40(7),230(8)	PHYSICAL	2

Removed Antenna

700	850	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
LTE			ANDREW	LNX-6513DS-A1M	40	42.3	40(4),230(5)	PHYSICAL	2

Retained Antenna

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

Added: 2	Removed: 2	Retained: 0

Non Antenna Summary

Added Non Antenna

Equipment Type	Location	700	850	L-Sub6	Make	Model	Install Type	Quantity
RRU	Tower	LTE	5G,LTE		Samsung	RF4461d-13A	PHYSICAL	2
RRU	Tower			5G	Samsung	RT-8808-77A	PHYSICAL	2

Removed Non Antenna

Equipment Type	Location	700	850	L-Sub6	Make	Model	Install Type	Quantity
RRU	Tower	LTE			Nokia	CMRO V2 B13 2x5	PHYSICAL	2

Retained Non Antenna

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

Added: 4	Removed: 2	Retained: 0

Services				
700 LTE	**0000 (8448077)**		**0002 (8560222)**	
Sector	04	05	07	08
Azimuth	40	230	40	230
Cell/Enodeb-Id	064059	064059	064579	064579
Antenna Model	LNX-6513DS-A1M	LNX-6513DS-A1M	NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE
Centerline	40	40	40	40
DLEARFCN	5230	5230	5230	5230
Mech Down-tilt	0	0	0	0
Elect Down-tilt	0	0	0	0
Tip Height	42.3	42.3	42.3	42.3
Regulatory Power	10.06 (W/MHz) ERP	10.06 (W/MHz) ERP	65.43 (W/MHz) ERP	65.43 (W/MHz) ERP
Transmitter Max Power	37.0 dBm	37.0 dBm	46.0 dBm	46.0 dBm
TMA Make				
TMA Model				
RRU Make	Nokia	Nokia	Samsung	Samsung
RRU Model	CMRO V2 B13 2x5	CMRO V2 B13 2x5	RF4461d-13A	RF4461d-13A
Number of Tx,Rx	2 , 2	2 , 2	2 , 2	2 , 2
Operational Port Count	0	0	0	0
Position				
Transmitter Id	14809802	14809803	16180061	16180062
Source	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10	10
Ant. Dimensions H x W x D(inch)	54.69 x 11.9 x 7.1	54.69 x 11.9 x 7.1	55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)	31.01	31.01	50.7	50.7

Services			
850 LTE	**0000 (8448077)**	**0002 (8560222)**	
Sector		07	08
Azimuth		40	230
Cell/Enodeb-Id		064579	064579
Antenna Model		NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make		COMMSCOPE	COMMSCOPE
Centerline		40	40
DLEARFCN		2450	2450
Mech Down-tilt		0	0
Elect Down-tilt		0	0
Tip Height		42.3	42.3
Regulatory Power		145.14 (W/MHz) ERPSD	145.14 (W/MHz) ERPSD
Transmitter Max Power		46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make		Samsung	Samsung
RRU Model		RF4461d-13A	RF4461d-13A
Number of Tx,Rx		2 , 2	2 , 2
Operational Port Count		0	0
Position			
Transmitter Id		16180119	16180120
Source		VZNPP	VZNPP
Bandwidth		10	10
Ant. Dimensions H x W x D(inch)		55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)		50.7	50.7

Services			
850 NR	**0000 (8448077)**	**0002 (8560222)**	
Sector		0007	0008
Azimuth		40	230
Cell/Enodeb-Id		0649403	0649403
Antenna Model		NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make		COMMSCOPE	COMMSCOPE
Centerline		40	40
DLEARFCN		2450	2450
Mech Down-tilt		0	0
Elect Down-tilt		0	0
Tip Height		42.3	42.3
Regulatory Power		145.14 (W/MHz) ERPSD	145.14 (W/MHz) ERPSD
Transmitter Max Power		46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make		Samsung	Samsung
RRU Model		RF4461d-13A	RF4461d-13A
Number of Tx,Rx		2 , 2	2 , 2
Operational Port Count		0	0
Position			
Transmitter Id		16180119	16180120
Source		VZNPP	VZNPP
Bandwidth		10	10
Ant. Dimensions H x W x D(inch)		55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)		50.7	50.7

Services			
CBAND NR	**0000 (8448077)**	**0002 (8560222)**	
Sector		0007	0008
Azimuth		40	230
Cell/Enodeb-Id		0649403	0649403
Antenna Model		NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make		COMMSCOPE	COMMSCOPE
Centerline		40	40
DLEARFCN		650006, 655324	650006, 655324
Mech Down-tilt		0	0
Elect Down-tilt		0	0
Tip Height		42.3	42.3
Regulatory Power		601.45 (W/MHz) EIRP, 1002.41 (W/MHz) EIRP	601.45 (W/MHz) EIRP, 1002.41 (W/MHz) EIRP
Transmitter Max Power		55.03 dBm	55.03 dBm
TMA Make			
TMA Model			
RRU Make		Samsung	Samsung
RRU Model		RT-8808-77A	RT-8808-77A
Number of Tx,Rx		2 , 2	2 , 2
Operational Port Count		8	8
Position			
Transmitter Id		16180121	16180122
Source		VZNPP	VZNPP
Bandwidth		100, 60	100, 60
Ant. Dimensions H x W x D(inch)		55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)		55.1	55.1

Callsigns Per Antenna

Sector	Make	Model	Ant CL Height AG	Ant Tip Height	Azimuth	Elect Down-tilt	Mech Down-tilt	Gain	Bandwidth	Regulatory Power	700	850	1900	2100	28 GHz	31 GHz	39 GHz	LSub-6	CBRS
07	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	11.7	68	65.43	WQJQ689								
08	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	11.7	68	65.43	WQJQ689								
0007	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	12.15	67	145.14		KNKA745							
0008	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	12.15	67	145.14		KNKA745							
07	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	12.15	67	145.14		KNKA745							
08	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	12.15	67	145.14		KNKA745							
0007	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	20.39	94	601.45								WRNE581,WRNE582,WRNE583,WRNE584,WRNE585	
0008	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	20.39	94	601.45								WRNE581,WRNE582,WRNE583,WRNE584,WRNE585	
0007	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	20.39	94	1002.41								WRNE585,WRNE586,WRNE587,WRNE58	
0008	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	20.39	94	1002.41								WRNE585,WRNE586,WRNE587,WRNE58	

Callsigns

Callsign	Market	Radio Code	Market #	Block	State	County	License Name	Wholly Owner	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq. mil	Status	Action	Approve for Insvc
WQJQ689	Northeast	WU	REA001	C	CT	9011	Cellco Partnership	Yes	22.000	746.000 - 757.000/.000 - .000	776.000 - 787.000/.000 - .000	746.000 - 757.000/.000 - .000	776.000 - 787.000/.000 - .000	65.43	1000	403.90	proposed	added	1
KNKA745	New London-Norwich, CT	CL	CMA154	A	CT	9011	Cellco Partnership	Yes	25.000	824.000 - 835.000/845.000 - 846.500	869.000 - 880.000/890.000 - 891.500	824.000 - 835.000/845.000 - 846.500	869.000 - 880.000/890.000 - 891.500	145.14	400	403.90	proposed	added	1
WRNE581	New York, NY	PM	PEA001	A1	CT	9011	Cellco Partnership	Yes	20.000	3700.000 3720.000/.000 - .000	.000 - .000/.000 - .000	3700.000 3720.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE582	New York, NY	PM	PEA001	A2	CT	9011	Cellco Partnership	Yes	20.000	3720.000 3740.000/.000 - .000	.000 - .000/.000 - .000	3720.000 3740.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE583	New York, NY	PM	PEA001	A3	CT	9011	Cellco Partnership	Yes	20.000	3740.000 3760.000/.000 - .000	.000 - .000/.000 - .000	3740.000 3760.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE584	New York, NY	PM	PEA001	A4	CT	9011	Cellco Partnership	Yes	20.000	3760.000 3780.000/.000 - .000	.000 - .000/.000 - .000	3760.000 3780.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE585	New York, NY	PM	PEA001	A5	CT	9011	Cellco Partnership	Yes	20.000	3780.000 3800.000/.000 - .000	.000 - .000/.000 - .000	3780.000 3800.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1
WRNE586	New York, NY	PM	PEA001	B1	CT	9011	Cellco Partnership	Yes	20.000	3800.000 3820.000/.000 - .000	.000 - .000/.000 - .000	3800.000 3820.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1
WRNE587	New York, NY	PM	PEA001	B2	CT	9011	Cellco Partnership	Yes	20.000	3820.000 3840.000/.000 - .000	.000 - .000/.000 - .000	3820.000 3840.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1
WRNE588	New York, NY	PM	PEA001	B3	CT	9011	Cellco Partnership	Yes	20.000	3840.000 3860.000/.000 - .000	.000 - .000/.000 - .000	3840.000 3860.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1

Dewberry Engineers Inc.
99 Summer Street, Suite 700
Boston, MA 02110-1200

617.695.3400
617.695.3310 fax
www.dewberry.com

October 28, 2024

Andrew Leone
Verizon Wireless
51 Alder Street
Medway, MA 02053

Re: Ocean Beach Park (Rev.2)
PLSC: 470795
Fuze #: 16540902
98 Neptune Ave
New London, CT 06320

Dear Mr. Leone:

Verizon Wireless has proposed to replace (2) existing antennas and (2) existing Remote Radio Heads (RRHs) with (2) NHHS4-65A-R3B antennas, (2) Samsung RF4461d-13A RRHs, and (2) Samsung RT-8808-77A RRHs on the rooftop at the above referenced site. The proposed equipment will be mounted on existing mounts inside an existing faux brick chimney.

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design sheets (dated 01/09/24) provided by Verizon Wireless and has determined that the existing mounts, existing faux brick chimney and building have adequate capacity to support the proposed equipment configuration. Dewberry assumes that the new antennas, RRHs, OVPs and associated equipment are installed per the latest Construction Drawings by Dewberry.

This assessment is based on our visual inspection that the existing mounts, faux brick chimney, and building structure are in good condition and were 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 letter for existing structural members not supporting the proposed installation.

If you have any questions, please do not hesitate to call me at 617-531-0744.

Sincerely,
Dewberry Engineers Inc.

STATE OF CONNECTICUT
BRANDON G KELSEY
36967
LICENSED
PROFESSIONAL ENGINEER

Brandon Kelsey, P.E.
Structural Project Engineer

10/29/2024

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Dewberry Engineers, Inc.
Structural Analysis Summary Sheet

Job No.:	50121487/50170407	**By:**	AMD	**Date:**	10/10/24
Job Name:	Ocean Beach CT	**Checked:**	BGK	**Date:**	10/11/24

Location: 98 Neptune Avenue, New London, CT 06320
Client: Client Name

Scope of Work:

- Proposed installation of (2) NHHS4-65A-R3B antennas, (2) Samsung RF4461d-13A RRHs, and (2) Samsung RT-8808-77A RRHs on the rooftop at the above referenced site

Codes / Standards / References:

- 2022 Connecticut State Building Code – Amendments to IBC 2021
- IBC 2021
- TIA-222-H
- ASCE 7-16
- AISC 15th Ed.
- RFDS dated 01/09/24
- Previous Structural Analysis by Dewberry Engineers dated 06/26/17
- Site visit by Dewberry Engineers on 02/21/24
- Latest Construction Drawings by Dewberry Engineers

Design & Analysis Assumptions:

- All proposed equipment is to be installed within the existing faux chimney.
- Design and analysis are based on dead and wind loads. The analysis checks for normal bending and shear stresses.

Conclusion / Recommendations:

- The existing structure has sufficient capacity to support the proposed installation.
- The existing faux chimney has sufficient capacity to support the proposed installation.

Dewberry

Job Number	50170407
Made by:	AMD
Date:	10/9/2024
Checked by:	BGK
Date:	10/10/2024

(Ocean Beach CT) - Design Wind Load on Screen Wall Enclosure

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Site Name: Ocean Beach CT

Wind Load per ASCE 7-10, Chapter 27 (Extension of Building)

Enclosure Dimensions

Width =	4.4 ft	Roof Opening =	19 ft²
Length =	4.4 ft	Wall Opening =	0 ft²
Height =	19.5 ft	Wall w/Opening =	0 ft²

Open, Partially Enclosed or Fully Enclosed

A_o=	0.00 ft²	A_g=	0.00 ft²
A_{oi}=	19.42 ft²	A_{gi}=	277.39 ft²

All walls must be at least 80% open

$A_o \geq 0.8\ A_g$	0.00 ft²	<	0.00 ft²	☒	*Not Open*

All conditions must be satisfied to be considered Partially Enclosed

A_o>(min 4 ft^2 or 1% A_g)	0.00 ft²	<	0.00 ft²	☒	*Screen wall is fully enclosed*
A_o>1.10 A_{oi}	0.00 ft²	<	21.36 ft²	☒	
$A_{oi}/A_{gi} \leq 0.2$	0.07	<	0.20	☑	

** Partially enclosed factors account for balloning within the structure, with no roof this cannot occur*

Design Criteria

Height, h =	48.00 ft	*(CL of Screen Wall / Enclosure)*
Risk Category =	II	*(Table 1.5-1, ASCE 7-10)*
Basic Wind Speed, V =	130 mph	*(780 CMR - MA Amendments to the IBC)*
K_d =	0.85	*(Table 26.6-1, ASCE 7-10)*
Exposure Category =	B	*(Sect. 26.7.3, ASCE 7-10)*
K_{zt} =	1	*(Sect.26.8.2, ASCE 7-10)*
G =	0.85	*(Sect. 26.9.4, ASCE 7-10)*
K_h =	0.80	*(Table 27.3-1, ASCE 7-10)*

Velocity Pressure

$$q_h = 0.00256 * K_h * K_{zt} * K_d * V^2 \qquad \textit{(Eqn. 27.3-1, ASCE 7-10)}$$

$$= 29.42\ \text{lb/ft}^2$$

Design Wind Force

- Proposed structure considered an extension of the building, conservatively using q_h for all sides

$$p_w = q_h G C_p - q_h (G C_{pi}) \qquad \textit{(Eqn. 27.4-1, ASCE 7-10)}$$

L/B = 4.40625 / 4.40625 = 1

$p_{w(+)\ windward}$ =	14.7 psf	*(+ Internal Pressure)*
$p_{w(+)\ leeward}$ =	-17.8 psf	
$p_{w(+)\ side}$ =	-22.8 psf	
$p_{w(-)\ windward}$ =	25.3 psf	*(- Internal Pressure)*
$p_{w(-)\ leeward}$ =	-7.2 psf	
$p_{w(-)\ side}$ =	-12.2 psf	

where:

(+) GC_{pi} =	0.18	*(Table 26.11-1, ASCE 7-10)*
(-) GC_{pi} =	-0.18	*(Table 26.11-1, ASCE 7-10)*
$C_{p\ windward}$ =	0.80	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ leeward}$ =	-0.50	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ side}$ =	-0.70	*(Fig. 27.4-1, ASCE 7-10)*

L/B = 4.40625 / 4.40625 = 1

$p_{w(+)\ windward}$ =	14.7 psf	*(+ Internal Pressure)*
$p_{w(+)\ leeward}$ =	-17.8 psf	
$p_{w(+)\ side}$ =	-22.8 psf	
$p_{w(-)\ windward}$ =	25.3 psf	*(- Internal Pressure)*
$p_{w(-)\ leeward}$ =	-7.2 psf	
$p_{w(-)\ side}$ =	-12.2 psf	

where:

(+) GC_{pi} =	0.18	*(Table 26.11-1, ASCE 7-10)*
(-) GC_{pi} =	-0.18	*(Table 26.11-1, ASCE 7-10)*
$C_{p\ windward}$ =	0.80	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ leeward}$ =	-0.50	*(Fig. 27.4-1, ASCE 7-10)*
$C_{p\ side}$ =	-0.70	*(Fig. 27.4-1, ASCE 7-10)*

Site Name: Ocean Beach

Existing Building Information

- Connecticut Building Code

Existing Dead Load

- Estimated roof dead load:

Total Exist. Dead Load =	11.5 psf	*(Per Previous SA by Dewberry dated 06/26/17)*

- Estimated floor dead load:

Floor Beam Loading =	275.0 plf	*(Two Beams)*
Wall Weight Loading =	900.0 plf	*(One Wall Side)*
Floor Slab Loading =	75.0 psf	*(Per Previous SA by Dewberry dated 06/26/17)*

Proposed Live Load

Total Exist. Roof Live Load =	20.0 psf	
Total Warehouse Live Load =	50.0 psf	*(Second Floor)*

Snow Load (ASCE 7-10)

General Design Criteria

Exposure Factor, C_e =	1.0	*(ASCE 7-10, Table 7-2)*
Thermal Factor, C_t =	1.0	*(ASCE 7-10, Table 7-3)*
Importance Factor, I_s =	1.0	*(ASCE 7-10, Table 1.5-2)*
Ground Snow Load, p_g =	30 psf	*(New London, CT)*

Design Snow Load, $p_f = 0.7C_eC_tI_sp_g$ *(ASCE 7-10, Eqn. 7.3-1)*

= 21.0 psf ***(Use 30 psf)***

Load Combinations

1.4D
1.2D + 0.5(Lr or S)
1.2D+1.6(Lr or S)+0.5W
1.2D + 1.0W + 0.5(Lr or S)
0.9D + 1.0W

L = Live Load
S = Snow Load
D = Dead Load
W = Load due to Pressure

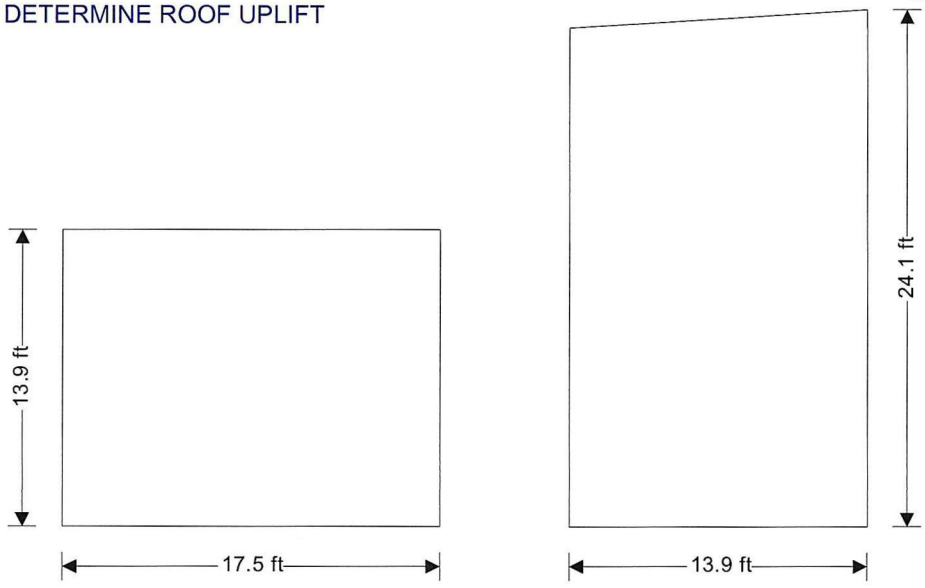
WIND LOADING

In accordance with ASCE7-16

Using the directional design method

USED TO DETERMINE ROOF UPLIFT

Tedds calculation version 2.1.07



Plan Elevation

Building data

Type of roof	Monoslope
Length of building	b = **17.50** ft
Width of building	d = **13.86** ft
Height to eaves	H = **23.25** ft
Pitch of roof	α_0 = **3.5** deg
Mean height	h = **23.25** ft

General wind load requirements

Basic wind speed	V = **130.0** mph
Risk category	II
Velocity pressure exponent coef (Table 26.6-1)	K_d = **0.85**
Ground elevation above sea level	z_{gl} = **0** ft
Ground elevation factor	$K_e = \exp(-0.0000362 \times z_{gl}/1\text{ft})$ = **1.00**
Exposure category (cl 26.7.3)	B
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**
Gust effect factor	G_f = **0.85**
Minimum design wind loading (cl.27.4.7)	p_{min_r} = **8** lb/ft^2

Topography

Topography factor not significant $K_{zt} = 1.0$

Velocity pressure equation $q = 0.00256 \times K_z \times K_{zt} \times K_d \times V^2 \times 1psf/mph^2$

Velocity pressures table

z (ft)	K_z (Table 26.10-1)	q_z (psf)
15.00	0.57	20.96
15.00	0.57	20.96
23.25	0.65	23.76
24.10	0.65	24.01

Peak velocity pressure for internal pressure

Peak velocity pressure – internal (as roof press.) q_i = **23.76** psf

Pressures and forces

Net pressure $p = q \times G_f \times C_{pe} - q_i \times GC_{pi}$

Net force $F_w = p \times A_{ref}$

Roof load case 1 - Wind 0, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (-ve)	23.25	-1.21	23.76	-28.72	203.82	-5.85
B (-ve)	23.25	-0.70	23.76	-18.41	39.12	-0.72

Total vertical net force $F_{w,v}$ = **-6.56** kips

Total horizontal net force $F_{w,h}$ = **-0.40** kips

Walls load case 1 - Wind 0, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	9.98	262.50	2.62
A_2	15.00	0.80	20.96	9.98	0.00	0.00
A_3	23.25	0.80	23.76	11.88	144.38	1.71
B	23.25	-0.50	23.76	-14.37	421.71	-6.06
C	23.25	-0.70	23.76	-18.41	328.02	-6.04
D	23.25	-0.70	23.76	-18.41	328.02	-6.04

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_0} = b \times H$ = **406.88** ft^2

Projected vertical area of roof $A_{vert\_r\_0} = b \times d \times \tan(\alpha_0)$ = **14.83** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_0} + p_{min\_r} \times A_{vert\_r\_0}$ = **6.63** kips

Leeward net force $F_l = F_{w,wB}$ = **-6.1** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3}$ = **4.3** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min})$ = **10.0** kips

Roof load case 2 - Wind 0, GC_{pi} -0.18, -0c_{pe}

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (+ve)	23.25	-0.18	23.76	0.64	203.82	0.13
B (+ve)	23.25	-0.18	23.76	0.64	39.12	0.03

Total vertical net force $F_{w,v}$ = **0.16** kips

Total horizontal net force $F_{w,h}$ = **0.01** kips

Walls load case 2 - Wind 0, GC_{pi} -0.18, -0c_{pe}

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	18.53	262.50	4.86
A_2	15.00	0.80	20.96	18.53	0.00	0.00
A_3	23.25	0.80	23.76	20.43	144.38	2.95
B	23.25	-0.50	23.76	-5.82	421.71	-2.45
C	23.25	-0.70	23.76	-9.86	328.02	-3.23
D	23.25	-0.70	23.76	-9.86	328.02	-3.23

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_0} = b \times H$ = **406.88** ft^2

Projected vertical area of roof $A_{vert\_r\_0} = b \times d \times \tan(\alpha_0)$ = **14.83** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_0} + p_{min\_r} \times A_{vert\_r\_0}$ = **6.63** kips

Leeward net force $F_l = F_{w,wB}$ = **-2.5** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3}$ = **7.8** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min})$ = **10.3** kips

Roof load case 3 - Wind 90, GC_{pi} 0.18, -c_{pe}

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (-ve)	23.25	-1.25	23.76	-29.46	161.38	-4.75
B (-ve)	23.25	-0.70	23.76	-18.41	81.56	-1.50

Total vertical net force $F_{w,v}$ = **-6.24** kips

Total horizontal net force $F_{w,h}$ = **0.00** kips

Walls load case 3 - Wind 90, GC_{pi} 0.18, -c_{pe}

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	9.98	207.84	2.07
A_2	15.00	0.80	20.96	9.98	0.00	0.00
A_3	24.10	0.80	24.01	12.05	120.20	1.45
B	23.25	-0.45	23.76	-13.31	328.02	-4.37

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
C	23.25	-0.70	23.76	-18.41	406.88	-7.49
D	23.25	-0.70	23.76	-18.41	421.71	-7.76

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_90} = d \times (H + d \times \tan(\alpha_0) / 2) = \mathbf{328.02}$ ft^2

Projected vertical area of roof $A_{vert\_r\_90} = \mathbf{0.00}$ ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_90} + p_{min\_r} \times A_{vert\_r\_90} = \mathbf{5.25}$ kips

Leeward net force $F_l = F_{w,wB} = \mathbf{-4.4}$ kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3} = \mathbf{3.5}$ kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min}) = \mathbf{7.9}$ kips

Roof load case 4 - Wind 90, GC_{pi} -0.18, $+c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (+ve)	23.25	-0.18	23.76	0.64	161.38	0.10
B (+ve)	23.25	-0.18	23.76	0.64	81.56	0.05

Total vertical net force $F_{w,v} = \mathbf{0.16}$ kips

Total horizontal net force $F_{w,h} = \mathbf{0.00}$ kips

Walls load case 4 - Wind 90, GC_{pi} -0.18, $+c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	18.53	207.84	3.85
A_2	15.00	0.80	20.96	18.53	0.00	0.00
A_3	24.10	0.80	24.01	20.60	120.20	2.48
B	23.25	-0.45	23.76	-4.76	328.02	-1.56
C	23.25	-0.70	23.76	-9.86	406.88	-4.01
D	23.25	-0.70	23.76	-9.86	421.71	-4.16

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_90} = d \times (H + d \times \tan(\alpha_0) / 2) = \mathbf{328.02}$ ft^2

Projected vertical area of roof $A_{vert\_r\_90} = \mathbf{0.00}$ ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_90} + p_{min\_r} \times A_{vert\_r\_90} = \mathbf{5.25}$ kips

Leeward net force $F_l = F_{w,wB} = \mathbf{-1.6}$ kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3} = \mathbf{6.3}$ kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l + F_{w,h}, F_{w,total\_min}) = \mathbf{7.9}$ kips

Roof load case 5 - Wind 180, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (-ve)	23.25	-1.21	23.76	-28.72	203.82	-5.85

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
B (-ve)	23.25	-0.70	23.76	-18.41	39.12	-0.72

Total vertical net force $F_{w,v}$ = **-6.56** kips

Total horizontal net force $F_{w,h}$ = **-0.40** kips

Walls load case 5 - Wind 180, GC_{pi} 0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	9.98	262.50	2.62
A_2	15.00	0.80	20.96	9.98	0.00	0.00
A_3	24.10	0.80	24.01	12.05	159.23	1.92
B	23.25	-0.50	23.76	-14.37	406.88	-5.85
C	23.25	-0.70	23.76	-18.41	328.02	-6.04
D	23.25	-0.70	23.76	-18.41	328.02	-6.04

Overall loading

Projected vertical plan area of wall $A_{vert\_w\_180} = b \times (H + d \times \tan(\alpha_0))$ = **421.71** ft^2

Projected vertical area of roof $A_{vert\_r\_180} = b \times d \times \tan(\alpha_0)$ = **14.83** ft^2

Minimum overall horizontal loading $F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_180} + p_{min\_r} \times A_{vert\_r\_180}$ = **6.87** kips

Leeward net force $F_l = F_{w,wB}$ = **-5.8** kips

Windward net force $F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3}$ = **4.5** kips

Overall horizontal loading $F_{w,total} = \max(F_w - F_l - F_{w,h}, F_{w,total\_min})$ = **10.8** kips

Roof load case 6 - Wind 180, GC_{pi} -0.18, $-c_{pe}$

Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A (+ve)	23.25	-0.18	23.76	0.64	203.82	0.13
B (+ve)	23.25	-0.18	23.76	0.64	39.12	0.03

Total vertical net force $F_{w,v}$ = **0.16** kips

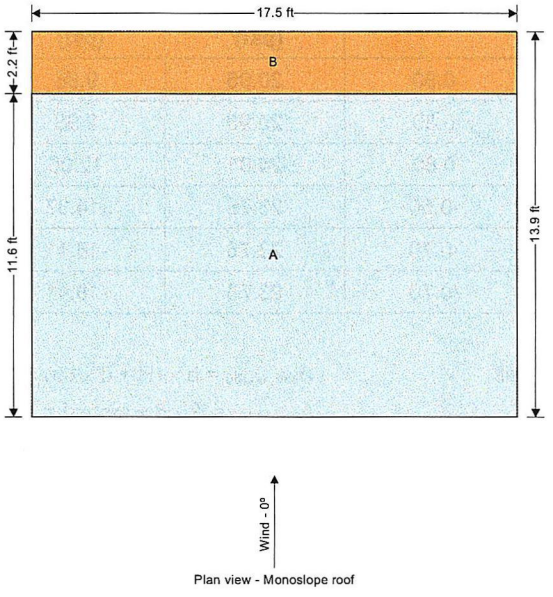
Total horizontal net force $F_{w,h}$ = **0.01** kips

Walls load case 6 - Wind 180, GC_{pi} -0.18, $-c_{pe}$

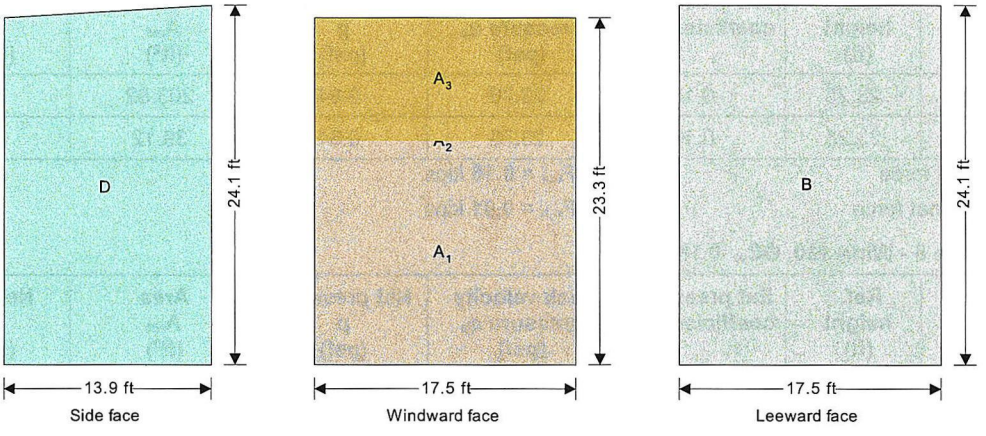
Zone	Ref. height (ft)	Ext pressure coefficient c_{pe}	Peak velocity pressure q_p (psf)	Net pressure p (psf)	Area A_{ref} (ft^2)	Net force F_w (kips)
A_1	15.00	0.80	20.96	18.53	262.50	4.86
A_2	15.00	0.80	20.96	18.53	0.00	0.00
A_3	24.10	0.80	24.01	20.60	159.23	3.28
B	23.25	-0.50	23.76	-5.82	406.88	-2.37
C	23.25	-0.70	23.76	-9.86	328.02	-3.23
D	23.25	-0.70	23.76	-9.86	328.02	-3.23

Overall loading

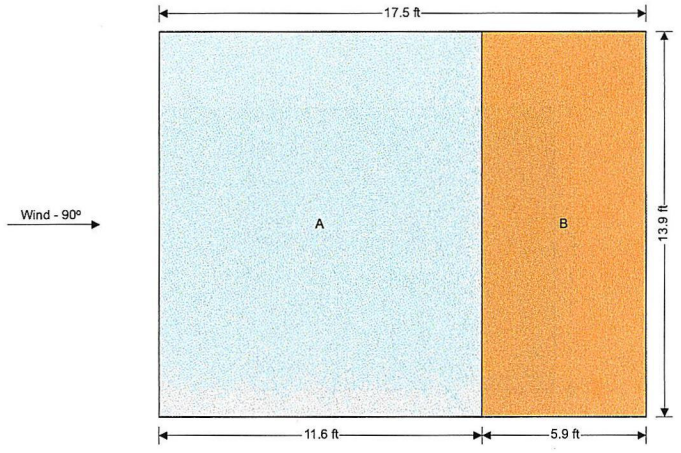
Projected vertical plan area of wall	$A_{vert\_w\_180} = b \times (H + d \times \tan(\alpha_0)) = \mathbf{421.71}\ ft^2$
Projected vertical area of roof	$A_{vert\_r\_180} = b \times d \times \tan(\alpha_0) = \mathbf{14.83}\ ft^2$
Minimum overall horizontal loading	$F_{w,total\_min} = p_{min\_w} \times A_{vert\_w\_180} + p_{min\_r} \times A_{vert\_r\_180} = \mathbf{6.87}$ kips
Leeward net force	$F_l = F_{w,wB} = \mathbf{-2.4}$ kips
Windward net force	$F_w = F_{w,wA\_1} + F_{w,wA\_2} + F_{w,wA\_3} = \mathbf{8.1}$ kips
Overall horizontal loading	$F_{w,total} = \max(F_w - F_l - F_{w,h}, F_{w,total\_min}) = \mathbf{10.5}$ kips



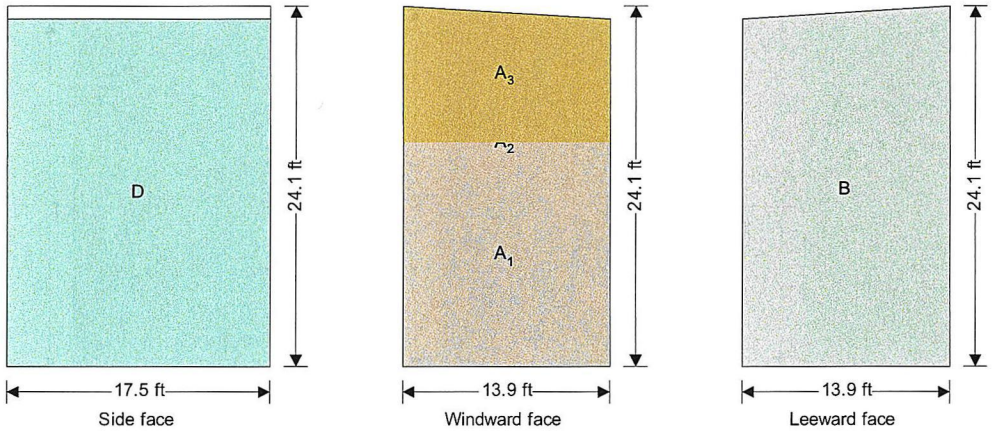
Plan view - Monoslope roof



Tekla Tedds Dewberry Engineers, Inc. 800 N Magnolia Ave Suite 1000 Orlando, FL 32803	Project Ocean Beach				Job Ref.	
	Section Roof Load				Sheet no./rev. 7	
	Calc. by AMD	Date 10/9/2024	Chk'd by BGK	Date 10/10/2024	App'd by BGK	Date 10/10/2024



Plan view - Monoslope roof



Tekla Tedds Dewberry Engineers, Inc. 800 N Magnolia Ave Suite 1000 Orlando, FL 32803	Project Ocean Beach				Job Ref.	
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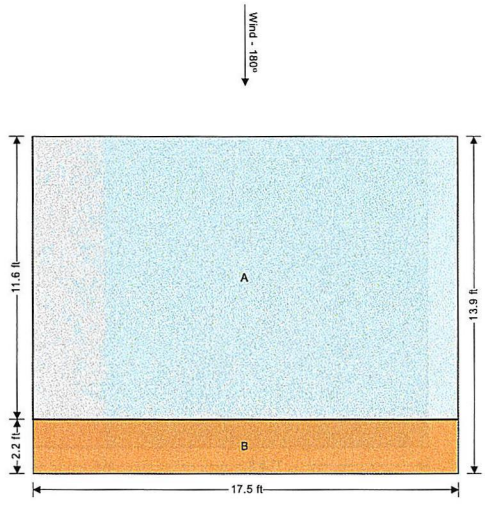
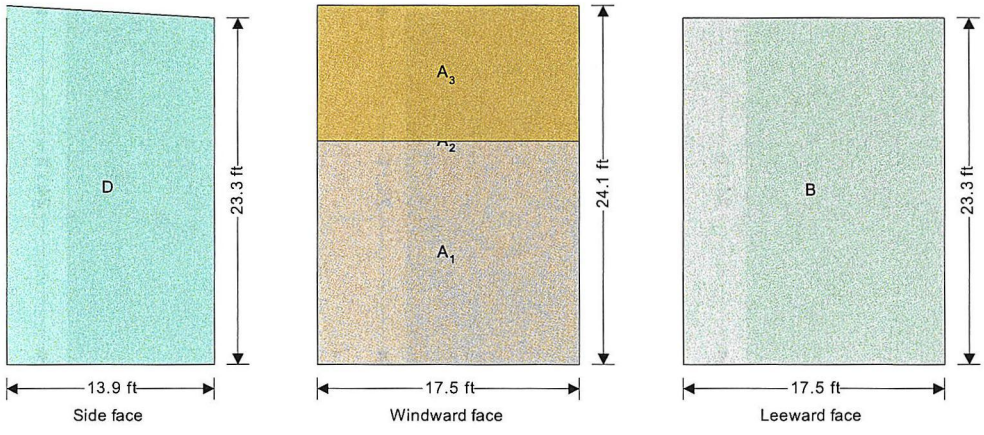


Plan view - Monoslope roof



Job Information

	Engineer	Checked	Approved
Name:	AMD	BGK	BGK
Date:	10/7/2024	10/8/2024	10/9/2024

Project ID	
Project Name	

Structure Type	SPACE FRAME

Number of Nodes	110	Highest Node	110
Number of Elements	150	Highest Beam	166
Number of Plates	16	Highest Plate	164

Number of Basic Load Cases	8
Number of Combination Load Cases	14

Included in this printout are data for:

All	The Whole Structure

Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	DEAD LOAD
Primary	2	LIVE LOAD
Primary	3	SNOW LOAD
Primary	4	WIND LOAD (X,+IP)
Primary	5	WIND LOAD (X,-IP)
Primary	6	WIND LOAD (Z, +IP)
Primary	7	WIND LOAD (Z,-IP)
Primary	8	ROOF LIVE LOAD
Combination	9	1.4DL
Combination	10	1.2DL + 1.6LL + 0.5SL
Combination	11	1.2DL + 1.6SL + 0.5WL(X,+IP)
Combination	12	1.2DL + 1.6SL + 0.5WL(X,-IP)
Combination	13	1.2DL + 1.6SL + 0.5WL(Z,+IP)
Combination	14	1.2DL + 1.6SL + 0.5WL(Z,-IP)
Combination	15	1.2DL + 1.0WL(X,+IP) + 1.0LL + 0.5SL
Combination	16	1.2DL + 1.0WL(X,-IP) + 1.0LL + 0.5SL
Combination	17	1.2DL + 1.0WL(Z,+IP) + 1.0LL + 0.5SL
Combination	18	1.2DL + 1.0WL(Z,-IP) + 1.0LL + 0.5SL
Combination	19	0.9DL + 1.0WL(X,+IP)
Combination	20	0.9DL + 1.0WL(X,-IP)
Combination	21	0.9DL + 1.0WL(Z,+IP)
Combination	22	0.9DL + 1.0WL(Z,-IP)

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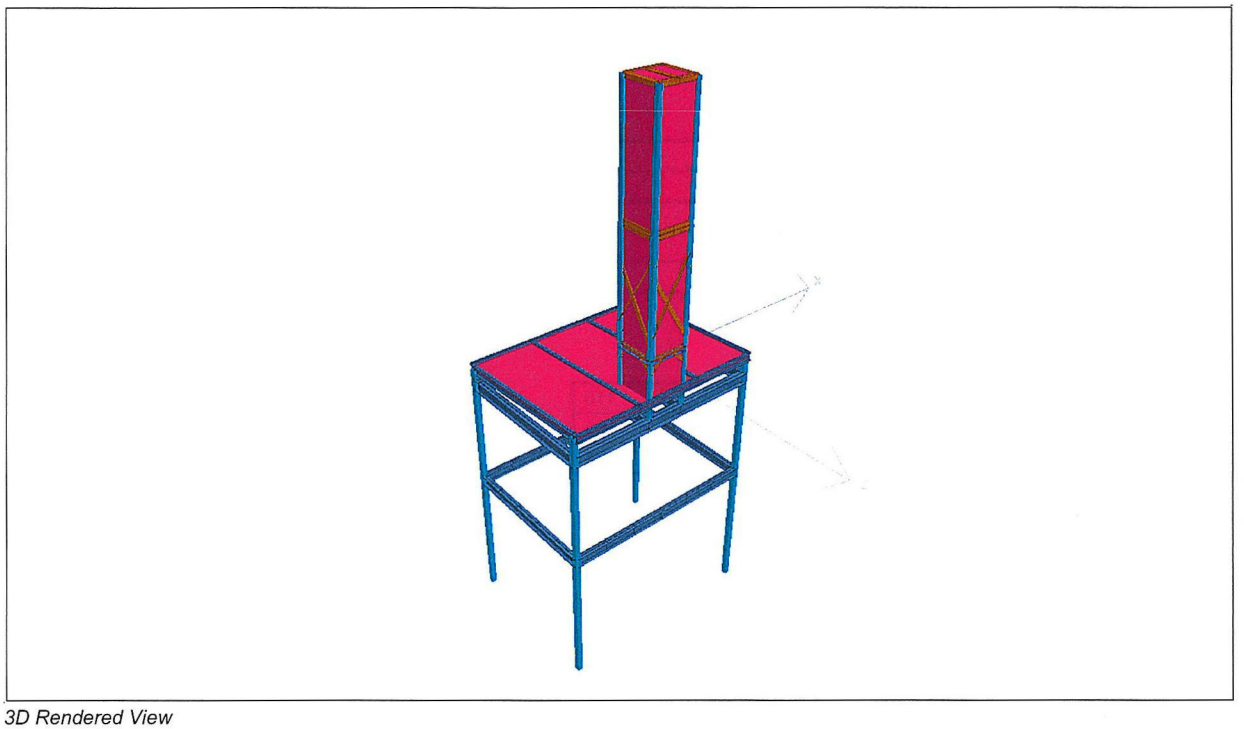
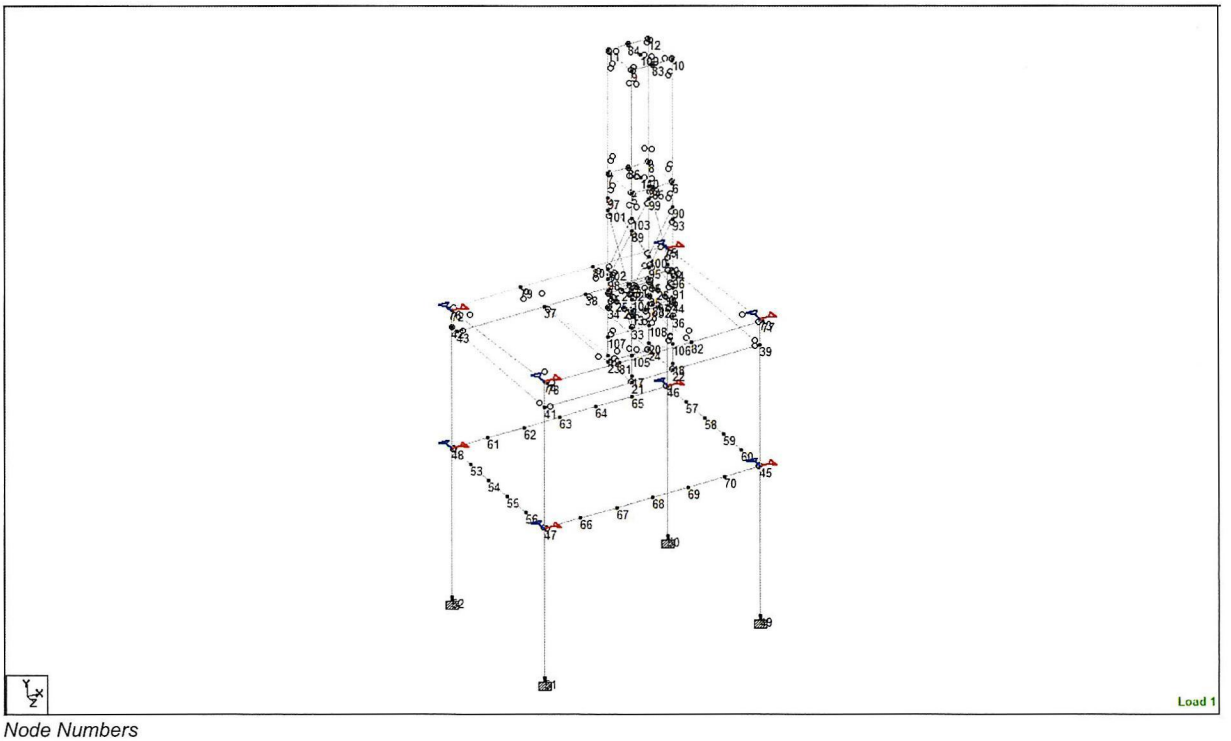
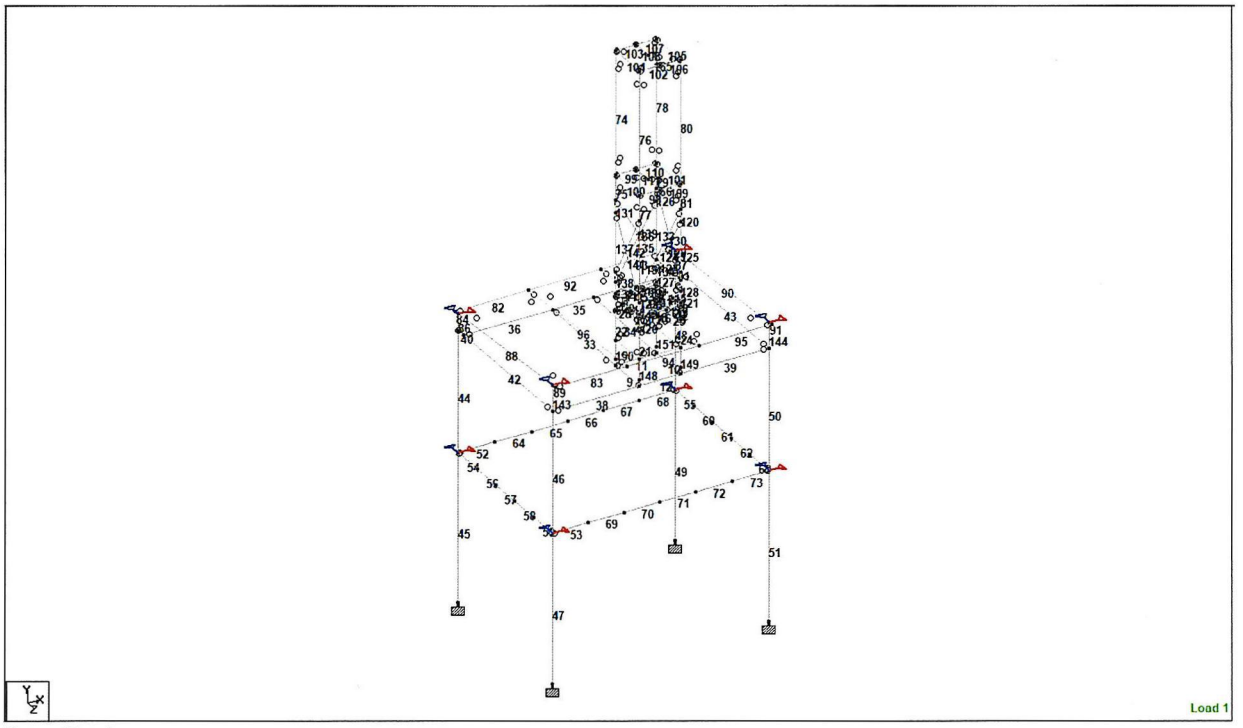
	Part Rev 1		
Job Title Ocean Beach CT	Ref		
	By AMD	Date 10/7/2024	Chd BGK
Client VZW	File Ocean Beach CT.STD	Date/Time 22-Oct-2024 09:26	



3D Rendered View



Node Numbers



Beam Numbers

Plates

Plate	Node A	Node B	Node C	Node D	Property
145	76	78	81	79	2
146	79	81	82	80	2
147	80	82	77	75	2
152	15	107	105	13	1
153	13	105	106	14	1
154	14	106	108	16	1
155	16	108	107	15	1
156	5	1	2	6	1
157	5	1	3	7	1
158	6	2	4	8	1
159	8	4	3	7	1
160	12	8	7	11	1
161	10	6	8	12	1
162	10	12	11	9	1
163	11	7	5	9	1
164	9	5	6	10	1

Section Properties

Prop	Section	Area (in^2)	I_{yy} (in^4)	I_{zz} (in^4)	J (in^4)	Material
3	W12X26	7.650	17.300	204.000	0.300	STEEL_50_KS
4	W8X10	2.960	2.090	30.800	0.043	STEEL_50_KS
5	W10X22	6.490	11.400	118.000	0.239	STEEL_50_KS
6	W6X12	3.550	2.990	22.100	0.090	STEEL_50_KS
7	W12X40	11.700	44.100	307.000	0.906	STEEL_50_KS
9	HSST4.5X4.5X0.188	2.930	9.020	9.020	14.400	STEEL
10	HSST3.5X3.5X0.25	2.910	5.040	5.040	8.350	STEEL
11	HSST4X4X0.375	4.780	10.300	10.300	17.500	FIBERGLASS
12	L30304	1.440	1.982	0.506	0.031	STEEL
13	HSST5X5X0.25	4.300	16.000	16.000	25.800	STEEL_50_KS
14	L40406	2.860	6.943	1.774	0.137	FIBERGLASS
15	L40406	5.720	16.129	8.717	0.268	FIBERGLASS
16	L40404	1.930	4.863	1.216	0.041	STEEL

Plate Thickness

Prop	Node A (in)	Node B (in)	Node C (in)	Node D (in)	Material
1	0.250	0.250	0.250	0.250	FIBERGLASS
2	0.250	0.250	0.250	0.250	STEEL

Materials

Mat	Name	E (kip/in^2)	ν	Density (kip/in^3)	α (/°F)
1	STEEL	29E+3	0.300	0.000	6.5E -6
2	CONCRETE	3.15E+3	0.170	8.68e-05	5.5E -6
3	ALUMINUM	10E+3	0.330	9.8e-05	12.8E -6
4	STAINLESSSTEEL	28E+3	0.300	0.000	9.9E -6
5	STEEL_36_KSI	29E+3	0.300	0.000	6.5E -6
6	STEEL_50_KSI	29E+3	0.300	0.000	6.5E -6
7	STEEL_275_NMM2	29.7E+3	0.300	0.000	6.67E -6
8	STEEL_355_NMM2	29.7E+3	0.300	0.000	6.67E -6
9	FIBERGLASS	2.8E+3	0.350	6e-05	4.4E -6

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip-ft/deg)	rY (kip-ft/deg)	rZ (kip-ft/deg)
45	Fixed	-	Fixed	-	-	-
46	Fixed	-	Fixed	-	-	-
47	Fixed	-	Fixed	-	-	-
48	Fixed	-	Fixed	-	-	-
49	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
50	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
51	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
52	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
71	Fixed	-	Fixed	-	-	-
72	Fixed	-	Fixed	-	-	-
73	Fixed	-	Fixed	-	-	-
74	Fixed	-	Fixed	-	-	-

Releases

Beam ends not shown in this table are fixed in all directions.

Beam	Node	x	y	z	rx	ry	rz
1	15	Fixed	Fixed	Fixed	Fixed	Pin	Pin
2	16	Fixed	Fixed	Fixed	Fixed	Pin	Pin
3	15	Fixed	Fixed	Fixed	Fixed	Pin	Pin
4	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
9	21	Fixed	Fixed	Fixed	Fixed	Pin	Pin
10	22	Fixed	Fixed	Fixed	Fixed	Pin	Pin
11	23	Fixed	Fixed	Fixed	Fixed	Pin	Pin
11	24	Fixed	Fixed	Fixed	Fixed	Pin	Pin
17	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
18	14	Fixed	Fixed	Fixed	Fixed	Pin	Pin
19	16	Fixed	Fixed	Fixed	Fixed	Pin	Pin
20	14	Fixed	Fixed	Fixed	Fixed	Pin	Pin
25	32	Fixed	Fixed	Fixed	Pin	Pin	Pin
25	36	Fixed	Fixed	Fixed	Pin	Pin	Pin
26	28	Fixed	Fixed	Fixed	Pin	Pin	Pin
26	33	Fixed	Fixed	Fixed	Pin	Pin	Pin
27	29	Fixed	Fixed	Fixed	Pin	Pin	Pin
27	33	Fixed	Fixed	Fixed	Pin	Pin	Pin
28	25	Fixed	Fixed	Fixed	Pin	Pin	Pin
28	34	Fixed	Fixed	Fixed	Pin	Pin	Pin
29	27	Fixed	Fixed	Fixed	Pin	Pin	Pin
29	34	Fixed	Fixed	Fixed	Pin	Pin	Pin
30	31	Fixed	Fixed	Fixed	Pin	Pin	Pin
30	35	Fixed	Fixed	Fixed	Pin	Pin	Pin
31	26	Fixed	Fixed	Fixed	Pin	Pin	Pin
31	35	Fixed	Fixed	Fixed	Pin	Pin	Pin

Releases Cont...

Beam	Node	x	y	z	rx	ry	rz
32	36	Fixed	Fixed	Fixed	Pin	Pin	Pin
33	37	Fixed	Fixed	Fixed	Fixed	Pin	Pin
34	38	Fixed	Fixed	Fixed	Fixed	Pin	Pin
36	43	Fixed	Fixed	Fixed	Fixed	Pin	Pin
37	44	Fixed	Fixed	Fixed	Fixed	Pin	Pin
38	41	Fixed	Fixed	Fixed	Fixed	Pin	Pin
39	39	Fixed	Fixed	Fixed	Fixed	Pin	Pin
40	42	Fixed	Fixed	Fixed	Fixed	Pin	Pin
42	41	Fixed	Fixed	Fixed	Fixed	Pin	Pin
43	44	Fixed	Fixed	Fixed	Fixed	Pin	Pin
43	39	Fixed	Fixed	Fixed	Fixed	Pin	Pin
52	48	Fixed	Fixed	Fixed	Fixed	Pin	Pin
53	47	Fixed	Fixed	Fixed	Fixed	Pin	Pin
54	48	Fixed	Fixed	Fixed	Fixed	Pin	Pin
55	46	Fixed	Fixed	Fixed	Fixed	Pin	Pin
59	47	Fixed	Fixed	Fixed	Fixed	Pin	Pin
63	45	Fixed	Fixed	Fixed	Fixed	Pin	Pin
68	46	Fixed	Fixed	Fixed	Fixed	Pin	Pin
73	45	Fixed	Fixed	Fixed	Fixed	Pin	Pin
82	76	Fixed	Fixed	Fixed	Fixed	Pin	Pin
83	78	Fixed	Fixed	Fixed	Fixed	Pin	Pin
93	75	Fixed	Fixed	Fixed	Fixed	Pin	Pin
95	77	Fixed	Fixed	Fixed	Fixed	Pin	Pin
96	79	Fixed	Fixed	Fixed	Fixed	Pin	Pin
96	81	Fixed	Fixed	Fixed	Fixed	Pin	Pin
97	80	Fixed	Fixed	Fixed	Fixed	Pin	Pin
97	82	Fixed	Fixed	Fixed	Fixed	Pin	Pin
98	5	Fixed	Fixed	Fixed	Fixed	Pin	Pin
99	7	Fixed	Fixed	Fixed	Fixed	Pin	Pin
100	7	Fixed	Fixed	Fixed	Fixed	Pin	Pin
100	5	Fixed	Fixed	Fixed	Fixed	Pin	Pin
101	8	Fixed	Fixed	Fixed	Fixed	Pin	Pin
101	6	Fixed	Fixed	Fixed	Fixed	Pin	Pin
102	9	Fixed	Fixed	Fixed	Fixed	Pin	Pin
103	11	Fixed	Fixed	Fixed	Fixed	Pin	Pin
104	11	Fixed	Fixed	Fixed	Fixed	Pin	Pin
104	9	Fixed	Fixed	Fixed	Fixed	Pin	Pin
105	12	Fixed	Fixed	Fixed	Fixed	Pin	Pin
105	10	Fixed	Fixed	Fixed	Fixed	Pin	Pin
106	10	Fixed	Fixed	Fixed	Fixed	Pin	Pin
107	12	Fixed	Fixed	Fixed	Fixed	Pin	Pin
108	84	Fixed	Fixed	Fixed	Fixed	Pin	Pin
109	6	Fixed	Fixed	Fixed	Fixed	Pin	Pin
110	8	Fixed	Fixed	Fixed	Fixed	Pin	Pin
111	86	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Releases Cont...

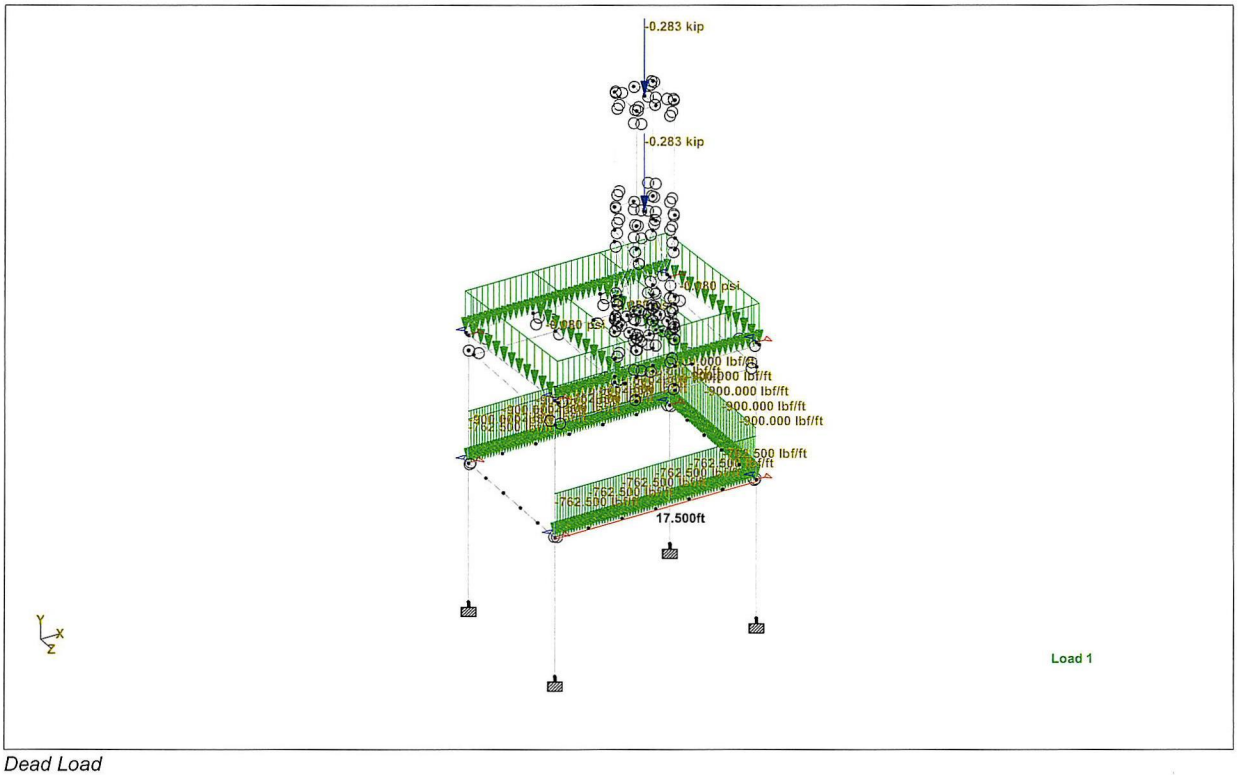
Beam	Node	x	y	z	rx	ry	rz
112	3	Fixed	Fixed	Fixed	Fixed	Pin	Pin
113	1	Fixed	Fixed	Fixed	Fixed	Pin	Pin
114	3	Fixed	Fixed	Fixed	Fixed	Pin	Pin
114	1	Fixed	Fixed	Fixed	Fixed	Pin	Pin
115	4	Fixed	Fixed	Fixed	Fixed	Pin	Pin
115	2	Fixed	Fixed	Fixed	Fixed	Pin	Pin
116	4	Fixed	Fixed	Fixed	Fixed	Pin	Pin
117	2	Fixed	Fixed	Fixed	Fixed	Pin	Pin
118	87	Fixed	Fixed	Fixed	Fixed	Pin	Pin
118	88	Fixed	Fixed	Fixed	Fixed	Pin	Pin
123	89	Fixed	Fixed	Fixed	Pin	Pin	Pin
123	91	Fixed	Fixed	Fixed	Pin	Pin	Pin
124	90	Fixed	Fixed	Fixed	Pin	Pin	Pin
124	92	Fixed	Fixed	Fixed	Pin	Pin	Pin
129	93	Fixed	Fixed	Fixed	Pin	Pin	Pin
129	95	Fixed	Fixed	Fixed	Pin	Pin	Pin
130	94	Fixed	Fixed	Fixed	Pin	Pin	Pin
130	96	Fixed	Fixed	Fixed	Pin	Pin	Pin
135	99	Fixed	Fixed	Fixed	Pin	Pin	Pin
135	98	Fixed	Fixed	Fixed	Pin	Pin	Pin
136	97	Fixed	Fixed	Fixed	Pin	Pin	Pin
136	100	Fixed	Fixed	Fixed	Pin	Pin	Pin
141	101	Fixed	Fixed	Fixed	Pin	Pin	Pin
141	104	Fixed	Fixed	Fixed	Pin	Pin	Pin
142	103	Fixed	Fixed	Fixed	Pin	Pin	Pin
142	102	Fixed	Fixed	Fixed	Pin	Pin	Pin
165	83	Fixed	Fixed	Fixed	Fixed	Pin	Pin
166	85	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Primary Load Cases

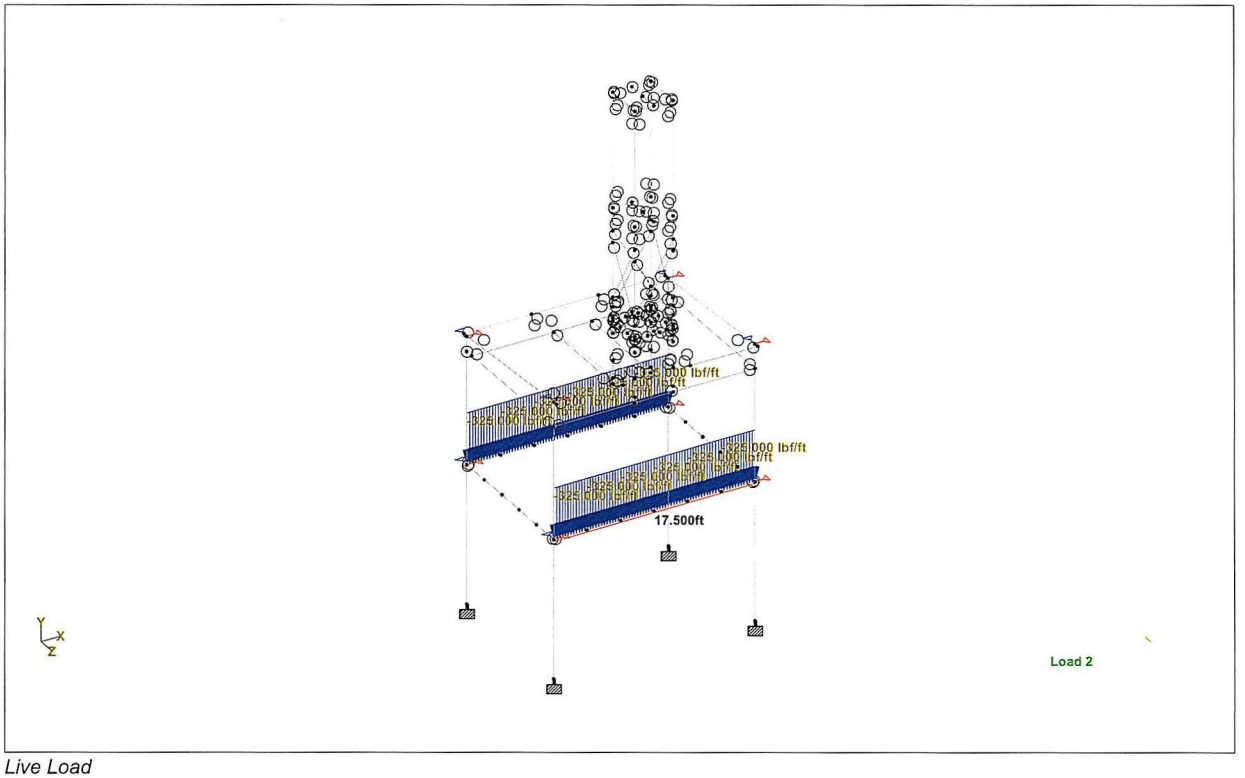
Number	Name	Type
1	DEAD LOAD	Dead
2	LIVE LOAD	Live
3	SNOW LOAD	Snow
4	WIND LOAD (X,+IP)	Wind
5	WIND LOAD (X,-IP)	Wind
6	WIND LOAD (Z, +IP)	Wind
7	WIND LOAD (Z,-IP)	Wind
8	ROOF LIVE LOAD	Roof Live

Combination Load Cases

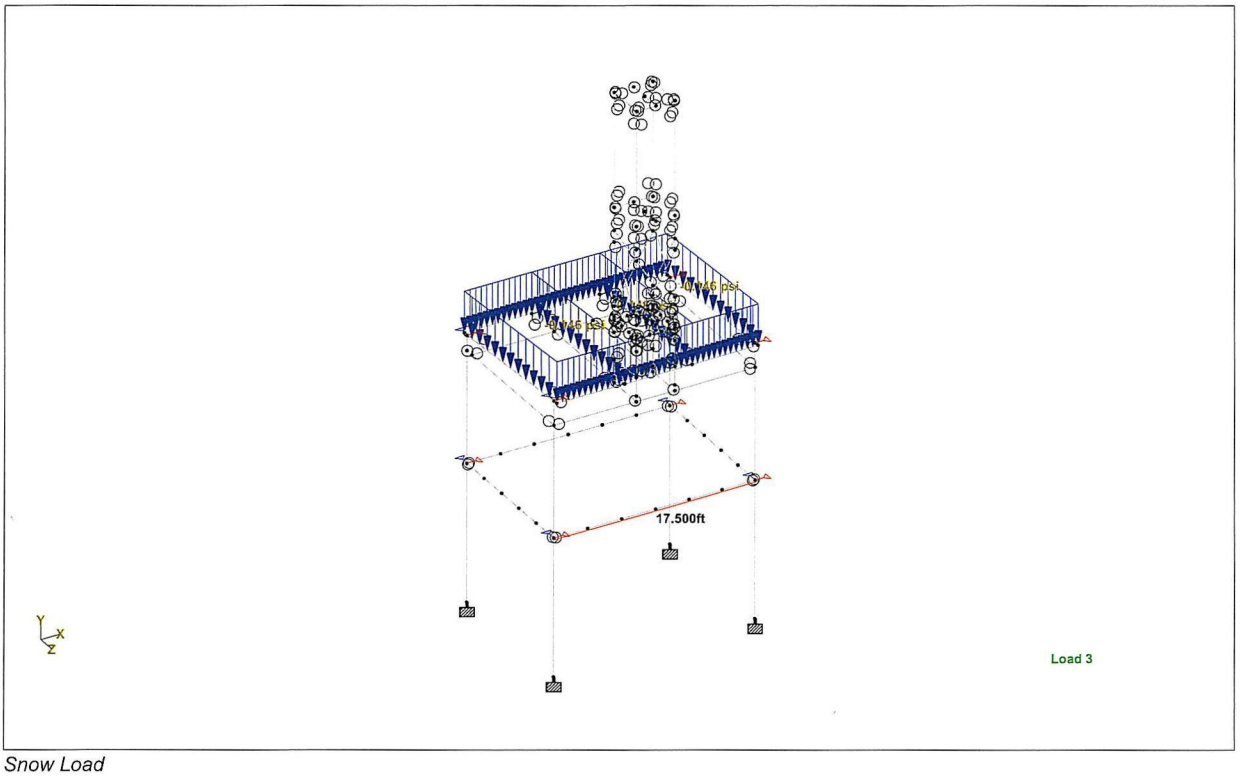
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
9	1.4DL	1	DEAD LOAD	1.40
10	1.2DL + 1.6LL + 0.5SL	1	DEAD LOAD	1.20
		2	LIVE LOAD	1.60
		3	SNOW LOAD	0.50
11	1.2DL + 1.6SL + 0.5WL(X,+IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		4	WIND LOAD (X,+IP)	0.50
12	1.2DL + 1.6SL + 0.5WL(X,-IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		5	WIND LOAD (X,-IP)	0.50
13	1.2DL + 1.6SL + 0.5WL(Z,+IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		6	WIND LOAD (Z, +IP)	0.50
14	1.2DL + 1.6SL + 0.5WL(Z,-IP)	1	DEAD LOAD	1.20
		3	SNOW LOAD	1.60
		7	WIND LOAD (Z,-IP)	0.50
15	1.2DL + 1.0WL(X,+IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		4	WIND LOAD (X,+IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
16	1.2DL + 1.0WL(X,-IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		5	WIND LOAD (X,-IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
17	1.2DL + 1.0WL(Z,+IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		6	WIND LOAD (Z, +IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
18	1.2DL + 1.0WL(Z,-IP) + 1.0LL + 0.5SL	1	DEAD LOAD	1.20
		7	WIND LOAD (Z,-IP)	1.00
		2	LIVE LOAD	1.00
		3	SNOW LOAD	0.50
19	0.9DL + 1.0WL(X,+IP)	1	DEAD LOAD	0.90
		4	WIND LOAD (X,+IP)	1.00
20	0.9DL + 1.0WL(X,-IP)	1	DEAD LOAD	0.90
		5	WIND LOAD (X,-IP)	1.00
21	0.9DL + 1.0WL(Z,+IP)	1	DEAD LOAD	0.90
		6	WIND LOAD (Z, +IP)	1.00
22	0.9DL + 1.0WL(Z,-IP)	1	DEAD LOAD	0.90
		7	WIND LOAD (Z,-IP)	1.00



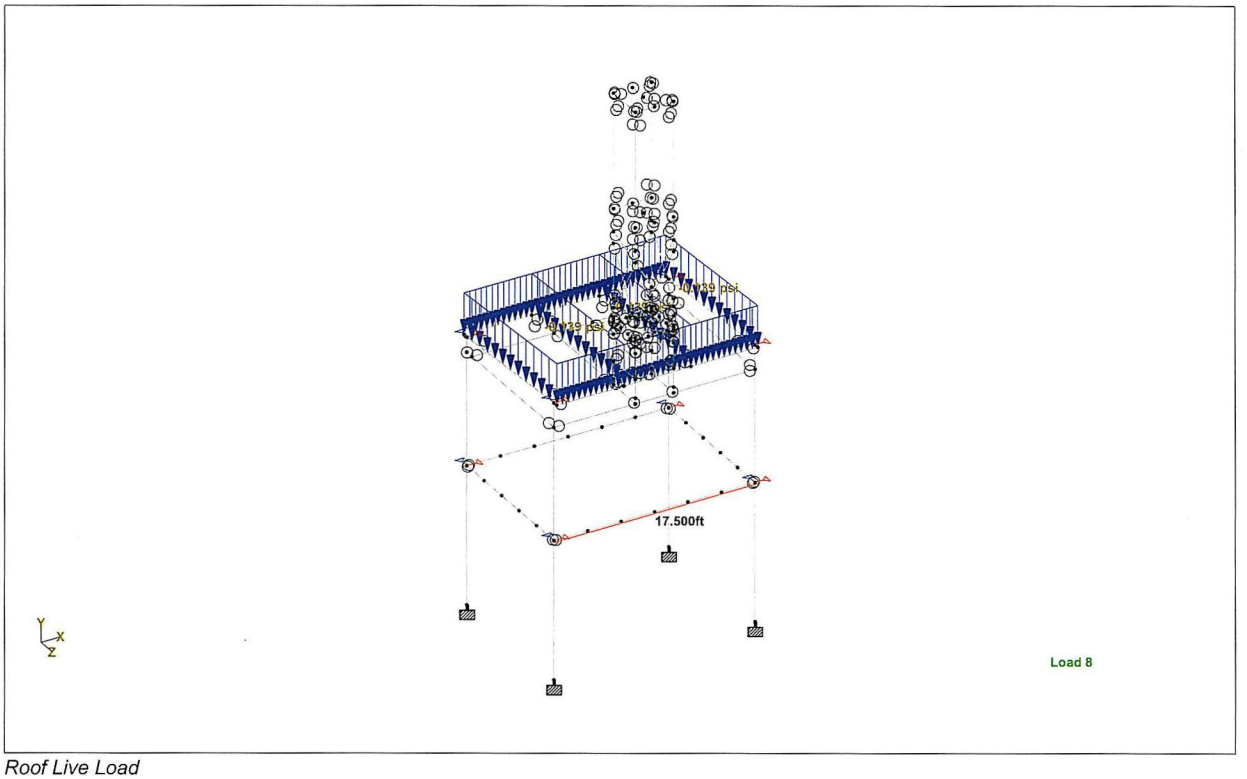
Dead Load



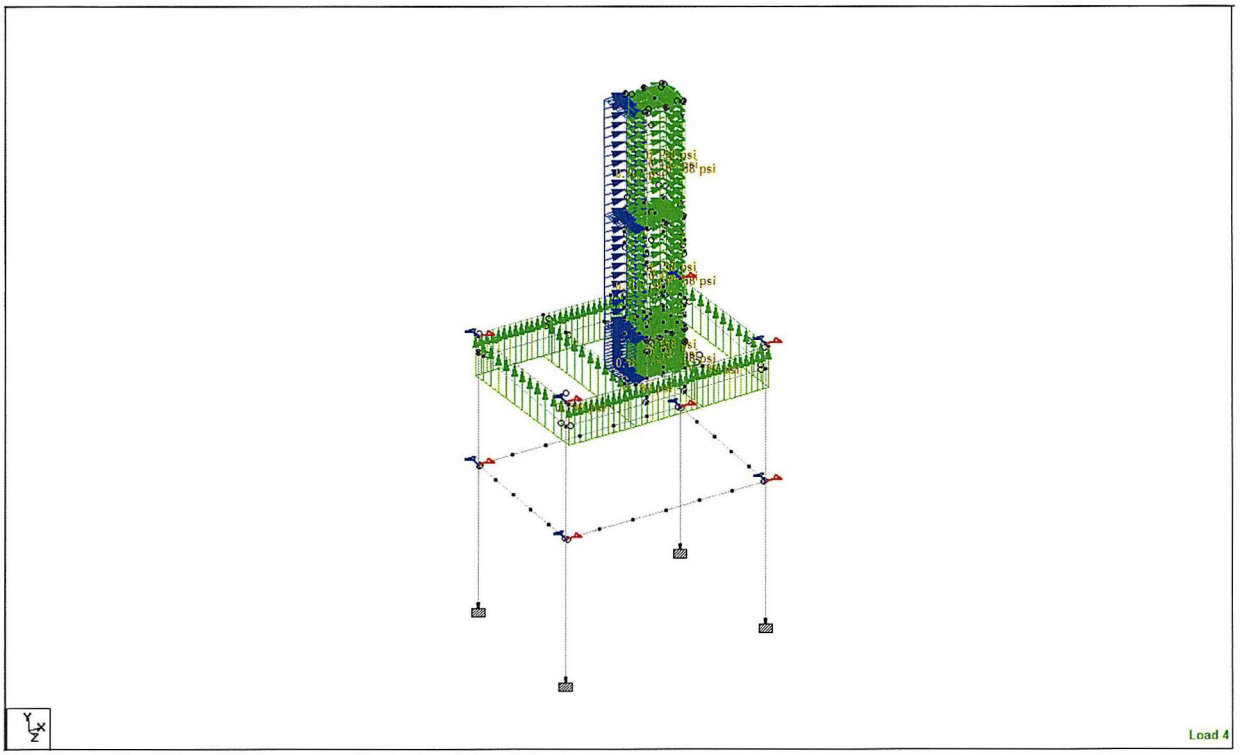
Live Load



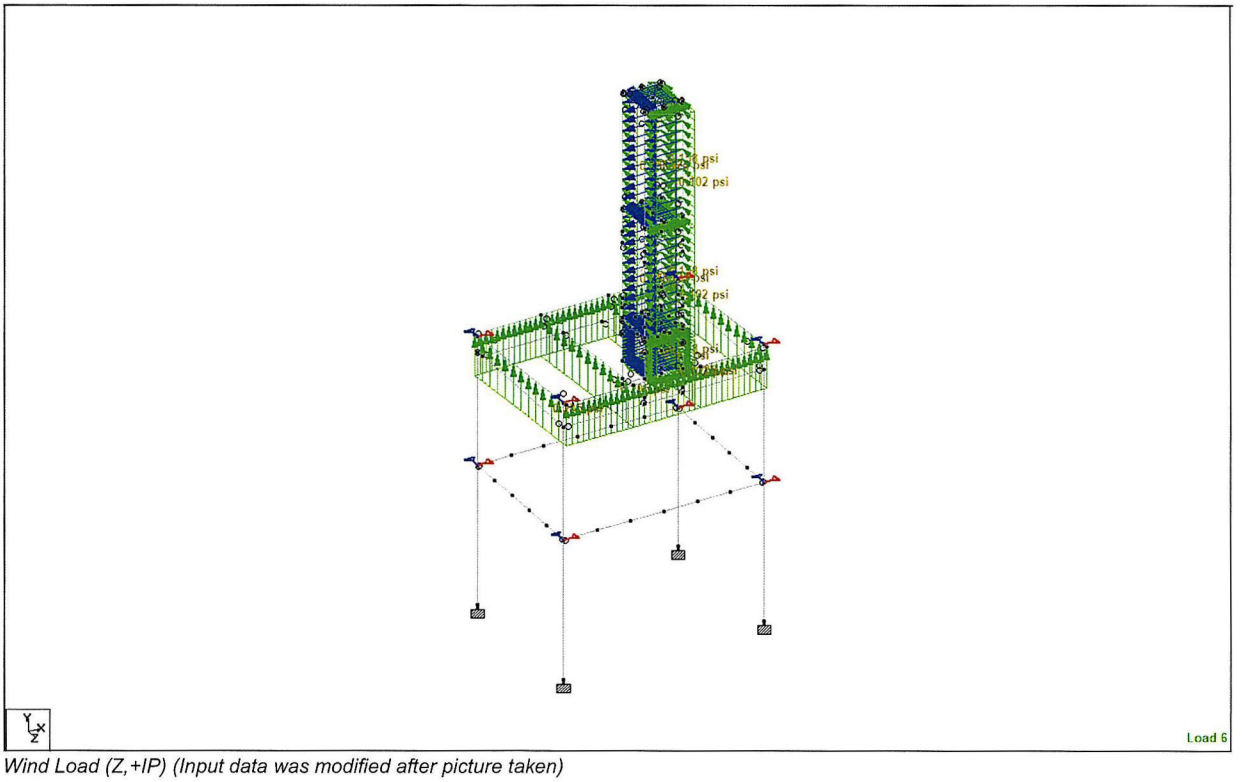
Snow Load



Roof Live Load



Wind Load (X,+IP) (Input data was modified after picture taken)



Wind Load (Z,+IP) (Input data was modified after picture taken)

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
1	W6X12	W6X12	0.007	1.000	0.007	Eq.H1-1b	17	3.550	22.100	2.990	0.090
2	W6X12	W6X12	0.006	1.000	0.006	Eq.H1-1b	17	3.550	22.100	2.990	0.090
3	W6X12	W6X12	0.003	1.000	0.003	Cl.D2	17	3.550	22.100	2.990	0.090
4	W6X12	W6X12	0.010	1.000	0.010	Eq.H1-3a(H1-	16	3.550	22.100	2.990	0.090
5	HSST3.5X	HSST3.5X	0.058	1.000	0.058	Eq.H1-1b	5	2.910	5.040	5.040	8.350
6	HSST3.5X	HSST3.5X	0.039	1.000	0.039	Eq.H1-1b	17	2.910	5.040	5.040	8.350
7	HSST3.5X	HSST3.5X	0.036	1.000	0.036	Eq.H1-1b	17	2.910	5.040	5.040	8.350
8	HSST3.5X	HSST3.5X	0.062	1.000	0.062	Eq.H1-1b	15	2.910	5.040	5.040	8.350
9	W12X26	W12X26	0.092	1.000	0.092	Eq.H1-1b	17	7.650	204.000	17.300	0.300
10	W12X26	W12X26	0.092	1.000	0.092	Eq.H1-1b	18	7.650	204.000	17.300	0.300
11	W12X40	W12X40	0.001	1.000	0.001	Cl.G1	9	11.700	307.000	44.100	0.906
12	W12X40	W12X40	0.117	1.000	0.117	Eq.H1-1b	16	11.700	307.000	44.100	0.906
13	W6X12	W6X12	0.008	1.000	0.008	Cl.G1	18	3.550	22.100	2.990	0.090
14	W6X12	W6X12	0.008	1.000	0.008	Eq.H1-1b	17	3.550	22.100	2.990	0.090
15	W6X12	W6X12	0.003	1.000	0.003	Cl.D2	17	3.550	22.100	2.990	0.090
16	W6X12	W6X12	0.010	1.000	0.010	Cl.G1	15	3.550	22.100	2.990	0.090
17	W6X12	W6X12	0.007	1.000	0.007	Eq.H1-3a(H1-	18	3.550	22.100	2.990	0.090
18	W6X12	W6X12	0.007	1.000	0.007	Eq.H1-3a(H1-	18	3.550	22.100	2.990	0.090

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
19	W6X12	W6X12	0.003	1.000	0.003	Cl.D2	17	3.550	22.100	2.990	0.090
20	W6X12	W6X12	0.009	1.000	0.009	Eq.H1-1b	4	3.550	22.100	2.990	0.090
21	HSST3.5X	HSST3.5X	0.054	1.000	0.054	Eq.H1-1b	4	2.910	5.040	5.040	8.350
22	HSST3.5X	HSST3.5X	0.089	1.000	0.089	Eq.H1-1b	5	2.910	5.040	5.040	8.350
23	HSST3.5X	HSST3.5X	0.094	1.000	0.094	Eq.H1-1b	15	2.910	5.040	5.040	8.350
24	HSST3.5X	HSST3.5X	0.059	1.000	0.059	Cl.E3	15	2.910	5.040	5.040	8.350
25	L30304	L30304	0.054	1.000	0.054	Eq.H2-1	4	1.440	0.493	1.996	0.030
26	L30304	L30304	0.020	1.000	0.020	Eq.H2-1	15	1.440	0.493	1.996	0.030
27	L30304	L30304	0.014	1.000	0.014	Eq.H2-1	18	1.440	0.493	1.996	0.030
28	L30304	L30304	0.044	1.000	0.044	Eq.H2-1	18	1.440	0.493	1.996	0.030
29	L30304	L30304	0.007	1.000	0.007	Eq.H2-1	15	1.440	0.493	1.996	0.030
30	L30304	L30304	0.005	1.000	0.005	Eq.H2-1	18	1.440	0.493	1.996	0.030
31	L30304	L30304	0.041	1.000	0.041	Eq.H2-1	17	1.440	0.493	1.996	0.030
32	L30304	L30304	0.015	1.000	0.015	Eq.H2-1	17	1.440	0.493	1.996	0.030
33	W12X26	W12X26	0.126	1.000	0.126	Cl.F2.2	17	7.650	204.000	17.300	0.300
34	W12X26	W12X26	0.125	1.000	0.125	Cl.F2.2	18	7.650	204.000	17.300	0.300
35	W12X40	W12X40	0.139	1.000	0.139	Eq.H1-1b	17	11.700	307.000	44.100	0.906
36	W12X40	W12X40	0.139	1.000	0.139	Eq.H1-1b	17	11.700	307.000	44.100	0.906
37	W12X40	W12X40	0.139	1.000	0.139	Eq.H1-1b	17	11.700	307.000	44.100	0.906
38	W12X40	W12X40	0.116	1.000	0.116	Eq.H1-1b	6	11.700	307.000	44.100	0.906
39	W12X40	W12X40	0.127	1.000	0.127	Eq.H1-3a(H1-	16	11.700	307.000	44.100	0.906
40	W12X26	W12X26	0.028	1.000	0.028	Cl.G1	17	7.650	204.000	17.300	0.300
41	W12X26	W12X26	0.029	1.000	0.029	Cl.G1	17	7.650	204.000	17.300	0.300
42	W12X26	W12X26	0.017	1.000	0.017	Cl.F2.2	17	7.650	204.000	17.300	0.300
43	W12X26	W12X26	0.007	1.000	0.007	Cl.F2.2	9	7.650	204.000	17.300	0.300
44	HSST5X5	HSST5X5	0.046	1.000	0.046	Cl.E3	14	4.300	16.000	16.000	25.800
45	HSST5X5	HSST5X5	0.225	1.000	0.225	Eq.H1-1a	18	4.300	16.000	16.000	25.800
46	HSST5X5	HSST5X5	0.093	1.000	0.093	Eq.H1-1b	16	4.300	16.000	16.000	25.800
47	HSST5X5	HSST5X5	0.150	1.000	0.150	Cl.E3	10	4.300	16.000	16.000	25.800
48	HSST5X5	HSST5X5	0.059	1.000	0.059	Eq.H1-1b	18	4.300	16.000	16.000	25.800
49	HSST5X5	HSST5X5	0.290	1.000	0.290	Eq.H1-1a	18	4.300	16.000	16.000	25.800
50	HSST5X5	HSST5X5	0.102	1.000	0.102	Eq.H1-1b	16	4.300	16.000	16.000	25.800
51	HSST5X5	HSST5X5	0.241	1.000	0.241	Eq.H1-1a	16	4.300	16.000	16.000	25.800
52	W10X22	N/A						6.490	118.000	11.400	0.239
53	W10X22	N/A						6.490	118.000	11.400	0.239
54	W10X22	N/A						6.490	118.000	11.400	0.239
55	W10X22	N/A						6.490	118.000	11.400	0.239
56	W10X22	N/A						6.490	118.000	11.400	0.239
57	W10X22	N/A						6.490	118.000	11.400	0.239
58	W10X22	N/A						6.490	118.000	11.400	0.239
59	W10X22	N/A						6.490	118.000	11.400	0.239
60	W10X22	N/A						6.490	118.000	11.400	0.239
61	W10X22	N/A						6.490	118.000	11.400	0.239
62	W10X22	N/A						6.490	118.000	11.400	0.239
63	W10X22	N/A						6.490	118.000	11.400	0.239

Utilization Ratio Cont...

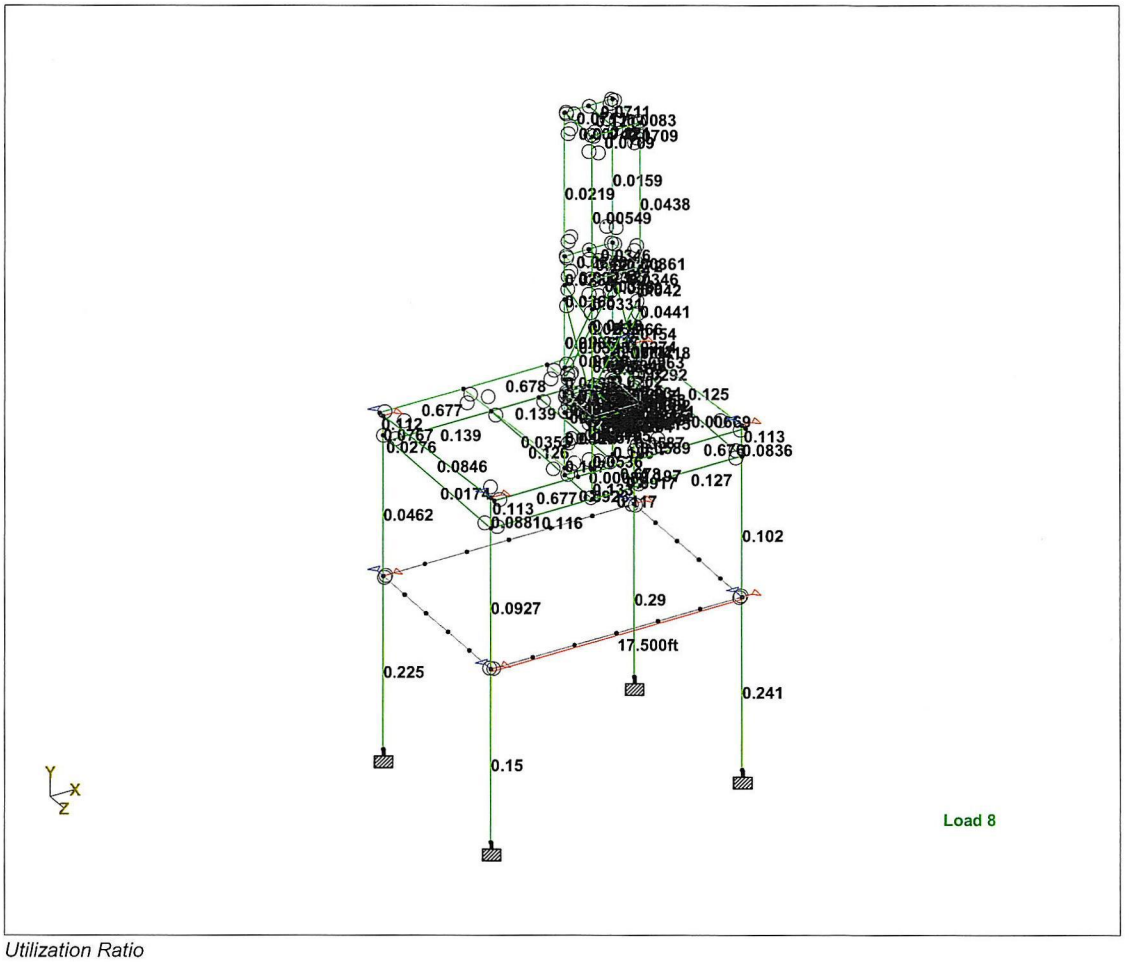
Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
64	W10X22	N/A						6.490	118.000	11.400	0.239
65	W10X22	N/A						6.490	118.000	11.400	0.239
66	W10X22	N/A						6.490	118.000	11.400	0.239
67	W10X22	N/A						6.490	118.000	11.400	0.239
68	W10X22	N/A						6.490	118.000	11.400	0.239
69	W10X22	N/A						6.490	118.000	11.400	0.239
70	W10X22	N/A						6.490	118.000	11.400	0.239
71	W10X22	N/A						6.490	118.000	11.400	0.239
72	W10X22	N/A						6.490	118.000	11.400	0.239
73	W10X22	N/A						6.490	118.000	11.400	0.239
74	HSST4X4	HSST4X4	0.022	1.000	0.022	Cl.E3	15	4.780	10.300	10.300	17.500
75	HSST4.5X	HSST4.5X	0.023	1.000	0.023	Eq.H1-1b	16	2.930	9.020	9.020	14.400
76	HSST4X4	HSST4X4	0.005	1.000	0.005	Cl.E3	9	4.780	10.300	10.300	17.500
77	HSST4.5X	HSST4.5X	0.033	1.000	0.033	Eq.H1-1b	5	2.930	9.020	9.020	14.400
78	HSST4X4	HSST4X4	0.016	1.000	0.016	Cl.E3	17	4.780	10.300	10.300	17.500
79	HSST4.5X	HSST4.5X	0.027	1.000	0.027	Eq.H1-1b	17	2.930	9.020	9.020	14.400
80	HSST4X4	HSST4X4	0.044	1.000	0.044	Cl.E3	15	4.780	10.300	10.300	17.500
81	HSST4.5X	HSST4.5X	0.042	1.000	0.042	Eq.H1-1b	15	2.930	9.020	9.020	14.400
82	W8X10	W8X10	0.677	1.000	0.677	Eq.H1-1b	12	2.960	30.800	2.090	0.043
83	W8X10	W8X10	0.677	1.000	0.677	Eq.H1-1b	12	2.960	30.800	2.090	0.043
84	W8X10	W8X10	0.112	1.000	0.112	Cl.G1	14	2.960	30.800	2.090	0.043
85	W8X10	W8X10	0.112	1.000	0.112	Cl.G1	12	2.960	30.800	2.090	0.043
86	HSST5X5	HSST5X5	0.077	1.000	0.077	Eq.H1-1b	18	4.300	16.000	16.000	25.800
87	HSST5X5	HSST5X5	0.096	1.000	0.096	Eq.H1-1b	18	4.300	16.000	16.000	25.800
88	W8X10	W8X10	0.085	1.000	0.085	Eq.H1-1b	18	2.960	30.800	2.090	0.043
89	W8X10	W8X10	0.113	1.000	0.113	Cl.G1	14	2.960	30.800	2.090	0.043
90	W8X10	W8X10	0.125	1.000	0.125	Eq.H1-1b	18	2.960	30.800	2.090	0.043
91	W8X10	W8X10	0.113	1.000	0.113	Cl.G1	14	2.960	30.800	2.090	0.043
92	W8X10	W8X10	0.678	1.000	0.678	Eq.H1-1b	14	2.960	30.800	2.090	0.043
93	W8X10	W8X10	0.677	1.000	0.677	Eq.H1-1b	14	2.960	30.800	2.090	0.043
94	W8X10	W8X10	0.678	1.000	0.678	Eq.H1-1b	14	2.960	30.800	2.090	0.043
95	W8X10	W8X10	0.676	1.000	0.676	Eq.H1-1b	14	2.960	30.800	2.090	0.043
96	W8X10	W8X10	0.035	1.000	0.035	Eq.H1-1b	9	2.960	30.800	2.090	0.043
97	W8X10	W8X10	0.035	1.000	0.035	Eq.H1-1b	9	2.960	30.800	2.090	0.043
98	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
99	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
100	L40406	L40406 LI	0.002	1.000	0.002	Cl.E4	7	5.720	8.717	16.126	0.268
101	L40406	L40406 LI	0.004	1.000	0.004	Cl.E4	7	5.720	8.717	16.126	0.268
102	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
103	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
104	L40406	L40406	0.007	1.000	0.007	Eq.H2-1	7	2.860	1.736	6.982	0.134
105	L40406	L40406	0.008	1.000	0.008	Eq.H2-1	7	2.860	1.736	6.982	0.134
106	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
107	L40406	L40406	0.071	1.000	0.071	Eq.H2-1	9	2.860	1.736	6.982	0.134
108	L40406	L40406	0.121	1.000	0.121	Eq.H2-1	9	2.860	1.736	6.982	0.134

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
109	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
110	L40406	L40406 LI	0.035	1.000	0.035	Eq.H1-1b	9	5.720	8.717	16.126	0.268
111	L40406	L40406	0.127	1.000	0.127	Eq.H2-1	9	2.860	1.736	6.982	0.134
112	L40404	L40404	0.011	1.000	0.011	Eq.H2-1	17	1.930	1.183	4.895	0.040
113	L40404	L40404	0.008	1.000	0.008	Eq.H2-1	5	1.930	1.183	4.895	0.040
114	L40404	L40404	0.006	1.000	0.006	Eq.H2-1	17	1.930	1.183	4.895	0.040
115	L40404	L40404	0.010	1.000	0.010	Eq.H2-1	15	1.930	1.183	4.895	0.040
116	L40404	L40404	0.011	1.000	0.011	Eq.H2-1	17	1.930	1.183	4.895	0.040
117	L40404	L40404	0.008	1.000	0.008	Eq.H2-1	5	1.930	1.183	4.895	0.040
118	L40404	L40404	0.005	1.000	0.005	Eq.H2-1	9	1.930	1.183	4.895	0.040
119	HSST4.5X	HSST4.5X	0.044	1.000	0.044	Eq.H1-1b	5	2.930	9.020	9.020	14.400
120	HSST4.5X	HSST4.5X	0.044	1.000	0.044	Eq.H1-1b	15	2.930	9.020	9.020	14.400
121	HSST4.5X	HSST4.5X	0.038	1.000	0.038	Cl.E3	15	2.930	9.020	9.020	14.400
122	HSST4.5X	HSST4.5X	0.033	1.000	0.033	Cl.D2	5	2.930	9.020	9.020	14.400
123	L40404	L40404	0.035	1.000	0.035	Eq.H2-1	16	1.930	1.183	4.895	0.040
124	L40404	L40404	0.017	1.000	0.017	Eq.H2-1	15	1.930	1.183	4.895	0.040
125	HSST4.5X	HSST4.5X	0.042	1.000	0.042	Eq.H1-1b	15	2.930	9.020	9.020	14.400
126	HSST4.5X	HSST4.5X	0.029	1.000	0.029	Eq.H1-1b	17	2.930	9.020	9.020	14.400
127	HSST4.5X	HSST4.5X	0.020	1.000	0.020	Cl.E3	17	2.930	9.020	9.020	14.400
128	HSST4.5X	HSST4.5X	0.034	1.000	0.034	Cl.E3	15	2.930	9.020	9.020	14.400
129	L40404	L40404	0.027	1.000	0.027	Eq.H2-1	18	1.930	1.183	4.895	0.040
130	L40404	L40404	0.015	1.000	0.015	Eq.H2-1	16	1.930	1.183	4.895	0.040
131	HSST4.5X	HSST4.5X	0.026	1.000	0.026	Eq.H1-1b	17	2.930	9.020	9.020	14.400
132	HSST4.5X	HSST4.5X	0.021	1.000	0.021	Eq.H1-1b	18	2.930	9.020	9.020	14.400
133	HSST4.5X	HSST4.5X	0.027	1.000	0.027	Eq.H1-1b	17	2.930	9.020	9.020	14.400
134	HSST4.5X	HSST4.5X	0.017	1.000	0.017	Cl.E3	17	2.930	9.020	9.020	14.400
135	L40404	L40404	0.012	1.000	0.012	Eq.H2-1	15	1.930	1.183	4.895	0.040
136	L40404	L40404	0.023	1.000	0.023	Eq.H2-1	16	1.930	1.183	4.895	0.040
137	HSST4.5X	HSST4.5X	0.028	1.000	0.028	Eq.H1-1b	17	2.930	9.020	9.020	14.400
138	HSST4.5X	HSST4.5X	0.020	1.000	0.020	Cl.E3	17	2.930	9.020	9.020	14.400
139	HSST4.5X	HSST4.5X	0.042	1.000	0.042	Eq.H1-1b	5	2.930	9.020	9.020	14.400
140	HSST4.5X	HSST4.5X	0.034	1.000	0.034	Cl.D2	5	2.930	9.020	9.020	14.400
141	L40404	L40404	0.014	1.000	0.014	Eq.H2-1	17	1.930	1.183	4.895	0.040
142	L40404	L40404	0.032	1.000	0.032	Eq.H2-1	18	1.930	1.183	4.895	0.040
143	HSST5X5	HSST5X5	0.088	1.000	0.088	Eq.H1-1b	16	4.300	16.000	16.000	25.800
144	HSST5X5	HSST5X5	0.084	1.000	0.084	Eq.H1-1b	16	4.300	16.000	16.000	25.800
148	HSST3.5X	HSST3.5X	0.133	1.000	0.133	Eq.H1-1b	5	2.910	5.040	5.040	8.350
149	HSST3.5X	HSST3.5X	0.197	1.000	0.197	Eq.H1-1b	15	2.910	5.040	5.040	8.350
150	HSST3.5X	HSST3.5X	0.167	1.000	0.167	Eq.H1-1b	17	2.910	5.040	5.040	8.350
151	HSST3.5X	HSST3.5X	0.166	1.000	0.166	Eq.H1-1b	17	2.910	5.040	5.040	8.350
165	L40406	L40406	0.121	1.000	0.121	Eq.H2-1	9	2.860	1.736	6.982	0.134
166	L40406	L40406	0.127	1.000	0.127	Eq.H2-1	9	2.860	1.736	6.982	0.134

Failed Members

There is no data of this type.



Utilization Ratio

NPP RFDS

NORTHEAST > North East > New England > Wallingford-1 > OCEAN BEACH CT - Ocean Beach Park

Stevens, Wesley - wesley.stevens@verizonwireless.com - 20240109_095525

Project Details		Location Information	
Carrier Aggregation	N	Site Id	2500632
Ecip	N	Search Ring#	
Project Name	5G L-SUB6 - CARRIER ADD	E-NodeB ID#	064059
Project Alt Name	OCEAN BEACH CT	PSLC#	470795
Project Id	16540902	Switch Name	Wallingford-1
Designed Sector Carrier 4G	4	Tower Type	
Designed Sector Carrier 5G	4	Site Type	MACRO
Additional Sector Carrier 4G	null	Street Address	98 Neptune Ave
Additional Sector Carrier 5G	null	City	New London
Suffix	Rev1_20240109	State	CT
FP Solution Type & Tech Type	MODIFICATION;4G_850;5G_850;5G_L-Sub6-Prep;4G_Radio Swap	Zip Code	06320
		County	New London
		Latitude	41.30933472/ 41° 18' 33.605"
		Longitude	-72.09876472/ 72° 5' 55.553"

Project Scope

Add 850/C-Band
Change antennas to one NHHS4-65A per sector to fit in stealthing
8T C-Band radio to connect to NHHS4-65A

Rev1_20240109: new radios, new antennas
Rev0_20230201: initial design

Antenna Summary

Added Antenna

700	850	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
LTE	5G,LTE	5G	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40(7),230(8)	PHYSICAL	2

Removed Antenna

700	850	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
LTE			ANDREW	LNX-6513DS-A1M	40	42.3	40(4),230(5)	PHYSICAL	2

Retained Antenna

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

Added: 2	Removed: 2	Retained: 0

Non Antenna Summary

Added Non Antenna

Equipment Type	Location	700	850	L-Sub6	Make	Model	Install Type	Quantity
RRU	Tower	LTE	5G,LTE		Samsung	RF4461d-13A	PHYSICAL	2
RRU	Tower			5G	Samsung	RT-8808-77A	PHYSICAL	2

Removed Non Antenna

Equipment Type	Location	700	850	L-Sub6	Make	Model	Install Type	Quantity
RRU	Tower	LTE			Nokia	CMRO V2 B13 2x5	PHYSICAL	2

Retained Non Antenna

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

Added: 4	Removed: 2	Retained: 0

Services				
700 LTE	**0000 (8448077)**		**0002 (8560222)**	
Sector	04	05	07	08
Azimuth	40	230	40	230
Cell/Enodeb-Id	064059	064059	064579	064579
Antenna Model	LNX-6513DS-A1M	LNX-6513DS-A1M	NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE
Centerline	40	40	40	40
DLEARFCN	5230	5230	5230	5230
Mech Down-tilt	0	0	0	0
Elect Down-tilt	0	0	0	0
Tip Height	42.3	42.3	42.3	42.3
Regulatory Power	10.06 (W/MHz) ERP	10.06 (W/MHz) ERP	65.43 (W/MHz) ERP	65.43 (W/MHz) ERP
Transmitter Max Power	37.0 dBm	37.0 dBm	46.0 dBm	46.0 dBm
TMA Make				
TMA Model				
RRU Make	Nokia	Nokia	Samsung	Samsung
RRU Model	CMRO V2 B13 2x5	CMRO V2 B13 2x5	RF4461d-13A	RF4461d-13A
Number of Tx,Rx	2 , 2	2 , 2	2 , 2	2 , 2
Operational Port Count	0	0	0	0
Position				
Transmitter Id	14809802	14809803	16180061	16180062
Source	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10	10
Ant. Dimensions H x W x D(inch)	54.69 x 11.9 x 7.1	54.69 x 11.9 x 7.1	55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)	31.01	31.01	50.7	50.7

Services			
850 LTE	**0000 (8448077)**	**0002 (8560222)**	
Sector		07	08
Azimuth		40	230
Cell/Enodeb-Id		064579	064579
Antenna Model		NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make		COMMSCOPE	COMMSCOPE
Centerline		40	40
DLEARFCN		2450	2450
Mech Down-tilt		0	0
Elect Down-tilt		0	0
Tip Height		42.3	42.3
Regulatory Power		145.14 (W/MHz) ERPSD	145.14 (W/MHz) ERPSD
Transmitter Max Power		46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make		Samsung	Samsung
RRU Model		RF4461d-13A	RF4461d-13A
Number of Tx,Rx		2 , 2	2 , 2
Operational Port Count		0	0
Position			
Transmitter Id		16180119	16180120
Source		VZNPP	VZNPP
Bandwidth		10	10
Ant. Dimensions H x W x D(inch)		55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)		50.7	50.7

Services			
850 NR	**0000 (8448077)**	**0002 (8560222)**	
Sector		0007	0008
Azimuth		40	230
Cell/Enodeb-Id		0649403	0649403
Antenna Model		NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make		COMMSCOPE	COMMSCOPE
Centerline		40	40
DLEARFCN		2450	2450
Mech Down-tilt		0	0
Elect Down-tilt		0	0
Tip Height		42.3	42.3
Regulatory Power		145.14 (W/MHz) ERPSD	145.14 (W/MHz) ERPSD
Transmitter Max Power		46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make		Samsung	Samsung
RRU Model		RF4461d-13A	RF4461d-13A
Number of Tx,Rx		2 , 2	2 , 2
Operational Port Count		0	0
Position			
Transmitter Id		16180119	16180120
Source		VZNPP	VZNPP
Bandwidth		10	10
Ant. Dimensions H x W x D(inch)		55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)		50.7	50.7

Services			
CBAND NR	**0000 (8448077)**	**0002 (8560222)**	
Sector		0007	0008
Azimuth		40	230
Cell/Enodeb-Id		0649403	0649403
Antenna Model		NHHS4-65A-R3B	NHHS4-65A-R3B
Antenna Make		COMMSCOPE	COMMSCOPE
Centerline		40	40
DLEARFCN		650006, 655324	650006, 655324
Mech Down-tilt		0	0
Elect Down-tilt		0	0
Tip Height		42.3	42.3
Regulatory Power		601.45 (W/MHz) EIRP, 1002.41 (W/MHz) EIRP	601.45 (W/MHz) EIRP, 1002.41 (W/MHz) EIRP
Transmitter Max Power		55.03 dBm	55.03 dBm
TMA Make			
TMA Model			
RRU Make		Samsung	Samsung
RRU Model		RT-8808-77A	RT-8808-77A
Number of Tx,Rx		2 , 2	2 , 2
Operational Port Count		8	8
Position			
Transmitter Id		16180121	16180122
Source		VZNPP	VZNPP
Bandwidth		100, 60	100, 60
Ant. Dimensions H x W x D(inch)		55.6 x 13.8 x 8.2	55.6 x 13.8 x 8.2
Weight(lb)		55.1	55.1

Callsigns Per Antenna

Sector	Make	Model	Ant CL Height AG	Ant Tip Height	Azimuth	Elect Down-tilt	Mech Down-tilt	Gain	Bandwidth	Regulatory Power	700	850	1900	2100	28 GHz	31 GHz	39 GHz	LSub-6	CBRS
07	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	11.7	68	65.43	WQJQ689								
08	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	11.7	68	65.43	WQJQ689								
0007	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	12.15	67	145.14		KNKA745							
0008	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	12.15	67	145.14		KNKA745							
07	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	12.15	67	145.14		KNKA745							
08	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	12.15	67	145.14		KNKA745							
0007	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	20.39	94	601.45								WRNE581,WRNE582,WRNE583,WRNE584,WRNE585	
0008	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	20.39	94	601.45								WRNE581,WRNE582,WRNE583,WRNE584,WRNE585	
0007	COMMSCOPE	NHHS4-65A-R3B	40	42.3	40	0	0	20.39	94	1002.41								WRNE585,WRNE586,WRNE587,WRNE58	
0008	COMMSCOPE	NHHS4-65A-R3B	40	42.3	230	0	0	20.39	94	1002.41								WRNE585,WRNE586,WRNE587,WRNE58	

Callsigns

Callsign	Market	Radio Code	Market #	Block	State	County	License Name	Wholly Owner	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq. mil	Status	Action	Approve for Insvc
WQJQ689	Northeast	WU	REA001	C	CT	9011	Cellco Partnership	Yes	22.000	746.000 - 757.000/.000 - .000	776.000 - 787.000/.000 - .000	746.000 - 757.000/.000 - .000	776.000 - 787.000/.000 - .000	65.43	1000	403.90	proposed	added	1
KNKA745	New London-Norwich, CT	CL	CMA154	A	CT	9011	Cellco Partnership	Yes	25.000	824.000 - 835.000/845.000 - 846.500	869.000 - 880.000/890.000 - 891.500	824.000 - 835.000/845.000 - 846.500	869.000 - 880.000/890.000 - 891.500	145.14	400	403.90	proposed	added	1
WRNE581	New York, NY	PM	PEA001	A1	CT	9011	Cellco Partnership	Yes	20.000	3700.000 3720.000/.000 - .000	.000 - .000/.000 - .000	3700.000 3720.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE582	New York, NY	PM	PEA001	A2	CT	9011	Cellco Partnership	Yes	20.000	3720.000 3740.000/.000 - .000	.000 - .000/.000 - .000	3720.000 3740.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE583	New York, NY	PM	PEA001	A3	CT	9011	Cellco Partnership	Yes	20.000	3740.000 3760.000/.000 - .000	.000 - .000/.000 - .000	3740.000 3760.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE584	New York, NY	PM	PEA001	A4	CT	9011	Cellco Partnership	Yes	20.000	3760.000 3780.000/.000 - .000	.000 - .000/.000 - .000	3760.000 3780.000/.000 - .000	.000 - .000/.000 - .000	601.45	1640	403.90	proposed	added	1
WRNE585	New York, NY	PM	PEA001	A5	CT	9011	Cellco Partnership	Yes	20.000	3780.000 3800.000/.000 - .000	.000 - .000/.000 - .000	3780.000 3800.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1
WRNE586	New York, NY	PM	PEA001	B1	CT	9011	Cellco Partnership	Yes	20.000	3800.000 3820.000/.000 - .000	.000 - .000/.000 - .000	3800.000 3820.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1
WRNE587	New York, NY	PM	PEA001	B2	CT	9011	Cellco Partnership	Yes	20.000	3820.000 3840.000/.000 - .000	.000 - .000/.000 - .000	3820.000 3840.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1
WRNE588	New York, NY	PM	PEA001	B3	CT	9011	Cellco Partnership	Yes	20.000	3840.000 3860.000/.000 - .000	.000 - .000/.000 - .000	3840.000 3860.000/.000 - .000	.000 - .000/.000 - .000	1002.41	1640	403.90	proposed	added	1

ATTACHMENT 5


Ridgewood Ave
Woodbine St
Laurel St
Shore Dr
Birch St
Forest St
Peninsular Ave
Greenfield St
Ridgewood Ave
Highland Ave
Stuart Ave
Park St
Ocean Ave
Ocean Ave
Pequot Ave
Neptune Ave
Elliott Ave
Mott Ave
Long Rock
Shore Rock

98 NEPTUNE AVE

Location	98 NEPTUNE AVE	**City, State, Zip**	,
Mblu	F28/ 1/ 1/ /	**Acct#**	1
Owner	NEW LONDON CITY OF-OCE	**Assessment**	$42,685,600
Appraisal	$60,979,500	**PID**	1
Building Count	8		

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2023	$7,337,900	$53,641,600	$60,979,500
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2023	$5,136,500	$37,549,100	$42,685,600

Owner of Record

Owner	NEW LONDON CITY OF-OCE	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	181 CAPTAINS WALK NEW LONDON,, CT 06320	**Book & Page**	0000/0000
		Sale Date	01/01/1900
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
NEW LONDON CITY OF-OCE	$0		0000/0000		01/01/1900

Building Information

Building 1 : Section 1

Year Built:	1939
Living Area:	56,375
Replacement Cost:	$5,909,217

ATTACHMENT 6

Verizon/Ocean Beach

UNITED STATES POSTAL SERVICE®

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	quadient CORRECTION IMI $003.44 11/06/2024 ZIP 06103 043M32206618 US POSTAGE
	Postmaster, per *(name of receiving employee)*	OLD STATE HOUSE STATION 06103 NOV - 6 2024 USPS	

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Michael Passero, Mayor City of New London 181 State Street New London, CT 06320				
2.	Michelle Johnson-Scovish, Planning and Zoning and Wetlands Official City of New London 181 State Street New London, CT 06320				
3.					
4.					
5.					
6.					