Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
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Also admitted in Massachusetts
and New York

July 9, 2021

Via Electronic 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**
10 (a/k/a 6) Main Street, Essex, 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 attached to an existing water tower and related equipment on the ground. Cellco's use of the water tower was approved the Town of Essex in 1996. More recently, the Siting Council ("Council") has approved facility modifications for AT&T and T-Mobile/Sprint at the Property and determined that the Council maintains jurisdiction of the water tower. A copy of the Town's approval of Cellco's original approval and the more recent AT&T and Sprint approvals are included in Attachment 1.

Cellco now intends to modify its facility by removing six (6) existing antennas and installing three (3) Samsung MT6407-77A antennas and six (6) JAHH-65B-R3B on the existing cat walk railing. Cellco also intends to remove six (6) remote radio heads ("RRHs") and install six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and new antennas and RRHs specifications 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 Essex's Chief Elected Official and Land Use Officer.

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

1. The proposed modifications will not result in an increase in the height of the existing water tower. Cellco's replacement antennas and RRHs will be installed at the same height on the existing cat walk railing.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the 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. A cumulative General Power Density table for the modified facility is included in Attachment 3. 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 Letter ("SA") and Mount Analysis ("MA"), the existing water tower and antenna mounts can support Cellco's proposed modifications. Copies of the SA and MA are 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:
Norman Needleman, Essex First Selectman
Carey Duques, Land Use Official
Macbeth Ventures LLC, Property Owner
Aleksey Tyurin

ATTACHMENT 1

BUILDING DEPARTMENT

ESSEX, CONNECTICUT

CERTIFICATE OF OCCUPANCY

Map 33 Lot 28 No. 95-351CO

Zone COMMERCIAL Dated JANUARY 26, 1996 19

This is to certify that building and or land at E.E.DICKINSON CO. PROPERTY

as MODULAR BLDGS under Permit No. 95-351 conforms substantially to the requirements of the Connecticut Building Code, Connecticut Fire Code (if applicable), and the Zoning Ordinances of the Town of Essex and is hereby APPROVED FOR OCCUPANCY OR USE as indicated and limited below.

APPROVED FOR OCCUPANCY OR USE:

MOBILE TELEPHONE ACTIVITIES

1-26-96

Building Official

1-26-96

Fire Marshal

1-26-96

Zoning Enforcement Agent

Any change or extension of the use herein approved requires a new certificate of occupancy.

Copies of this certificate may be obtained from the Building Department at a charge of Five ($5.) dollars each.

MEMORANDUM OF DECISION

APPLICATION FOR SPECIAL EXCEPTION

This is to certify that at a regular meeting held on Monday, October 16, 1995, following a public hearing of the same date, the Essex Zoning Commission voted to grant the following Special Exception:

OWNER: Merz & Dickinson, Incorporated
d/b/a E.E. Dickinson Company
2 Enterprise Drive
Shelton, CT 06484

APPLICANTS: Cellco Partnership by Bell Atlantic
Nynex Mobile, Inc., its managing general partner
20 Alexander Drive
Wallingford, CT 06492

and

Springwich Cellular Ltd. Partnership
227 Church Street
New Haven, CT 06510

SUBJECT PROPERTY: Property located on Railroad Avenue, Centerbrook, Connecticut, and further bounded and described in "Exhibit A" attached hereto and made a part hereof.

Tax Map Number: 30.
Tax Lot Number: 28.

ZONING DISTRICT: Commercial District.

USE AUTHORIZED: Pursuant to Section 80A.2(W) of the Essex Zoning Regulations, a special exception is hereby granted for construction of a cellular telecommunications facility on the existing water tank located on Railroad Avenue. The facility shall consist of 24 panel-type antennae placed on the railing of the water tank and two radio equipment buildings near the base of the tank, each 12′ x 25′, all as shown on the plans accompanying the application (Site Plan dated July 10, 1995).

CONDITION: Said special exception is granted subject to the following condition:

No fencing shall be permitted around the subject facility unless approved through an amendment to this special exception.

REASON FOR APPROVAL: The proposed use, as conditioned, complies with each and every section of the Essex Zoning Regulations.

VOTE: In favor - Mr. Ellis, Mr. Marzi, Mr. Greenleaf, Mr. Melvin and Ms. LePore.

Opposed - None.

This Special Exception shall become effective upon the recording of this Memorandum of Decision on the Essex Land Records by the Applicant.

ESSEX ZONING COMMISSION

By: _____
Greg Ellis,
Its Chairman

EXHIBIT A

Middlesex Turnpike

Beginning at a point marked by an iron pipe in the south line of Middlesex Turnpike (Connecticut Route 80 & 9-A) which point is the northeast corner of land now or formerly of Helen Strong and which point is in the north line of the parcel herein described; thence bearing S 70° 38' 22" E bound northerly by said Middlesex Turnpike 89.21' to a point; thence bearing southerly bound easterly by land of the State of Connecticut, formerly Penn Central Railroad Company the following courses and distances:

1. S 21° 04' 25" E 89.60' to a point;
2. S 17° 41' 51" E 36.40' to a point;
3. S 07° 59' 46" W 363.85' to a stone bound;

thence bearing westerly bound southerly by land now or formerly of: C. P. Burdick and Son, Inc.; Rudolph J. and Rita L. Urban; and Herbert T. Clark III, in part by each, the following courses and distances:

1. S 83° 51' 27" W 335.17' to a point;
2. S 83° 52' 32" W 41.50' to a concrete bound;
3. N 89° 32' 53" W 265.60' to a concrete bound;

thence bearing southerly, westerly and northerly bound easterly, southerly and westerly by land now or formerly of Herbert T. Clark III the following courses and distances:

1. S 05° 06' 54" E 104.31' to a concrete bound;
2. S 89° 05' 12" W 364.46' to a concrete bound;
3. N 12° 28' 31" W 156.68' to a concrete bound;
4. N 13° 07' 37" W 178.68' to an iron rod;

thence bearing easterly, northeasterly, northerly, easterly, northwesterly, and northeasterly; and bound by land now or formerly of: Anna Morgan; Joseph A. & Jennette W. King; and Helen Strong in part by each the following courses and distances:

1. S 88° 48' 31" E 284.76' to an iron pipe;
2. S 88° 18' 59" E 97.07' to an iron rod;
3. S 88° 37' 50" E 144.93' to a concrete bound;
4. N 55° 55' 09" E 154.64' to a point;
5. N 01° 55' 22" E 22.00' to a point;
6. S 88° 04' 38" E 92.00' to an iron pipe;
7. N 42° 10' 29" W 18.26' to an iron pipe;
8. N 70° 42' 26" W 15.97' to a concrete bound;
9. N 51° 03' 03" E 349.17' to the iron pipe at the point of beginning.

Said parcel containing 8.35 AC. is more particularly described on a map entitled "LAND TO BE CONVEYED TO EED PARTNERS A CONNECTICUT LIMITED PARTNERSHIP MIDDLESEX TURNPIKE VILLAGE OF CENTERBROOK ESSEX, CONN." Sheet 1 of 3, Scale 1"=40', Date 7/15/83, Radcliffe Engineering Co. Consulting Civil Engineers & Surveyors, Essex Industrial Park, Centerbrook, Conn., and certified in accordance with the standards of a Class A-2 survey by Frederick A. Radcliffe, Conn. P.E. & L.S. Lic. No. 3931, which map is or is to be filed in the office of the Town Clerk of the Town of Essex.

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

VIA ELECTRONIC MAIL

February 25, 2021

Kristina Cottone
Real Estate Specialist
Smartlink, LLC
85 Rangeway Road
Building 3, Suite 102
North Billerica, MA 01862

RE: **EM-AT&T-050-210104** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 6 Main Street, Essex, Connecticut.

Dear Ms. Cottone:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

1. Prior to AT&T's antenna installation, the antenna mount modifications shall be installed in accordance with the Mount Analysis prepared by Fullerton Engineering, dated September 11, 2020 and stamped and signed by Barbara T. Kotecki;

2. Within 45 days following completion of equipment installation, AT&T shall provide documentation certified by a Professional Engineer that its installation complied with the recommendations of the Mount Analysis;

3. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;

4. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;

5. The Council shall be notified in writing at least two weeks prior to the commencement of site construction activities;

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

7. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by AT&T shall be removed within 60 days of the date the antenna ceased to function;

8. The validity of this action shall expire one year from the date of this letter; and

9. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice received January 4, 2021, and additional information received February 5, 2021. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below state and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Sincerely,

s/ Melanie A. Bachman

Melanie A. Bachman
Executive Director

MAB/IN/emr

c: The Honorable Norman Needleman, First Selectman, Town of Essex (nneedleman@essexct.gov)

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

February 21, 2014

Matt Burke
TRM, Inc.
16 Chestnut Street
Foxborough, MA 02035

RE: **EM-AT&T-050-140203** - American Telephone & Telegraph (AT&T) notice of intent to modify an existing telecommunications facility located at 10 Main Street, Essex (Centerbrook), Connecticut.

Dear Mr. Burke:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated February 3, 2014. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Melanie A. Bachman
Acting Executive Director

MAB/CDM/cm

c: The Honorable Norman Needleman, First Selectman, Town of Essex
Joseph Budrow, Zoning Enforcement Officer, Town of Essex
MacBeth Ventures

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

May 29, 2018

Arthur Perkowski
Airosmith Development, Inc.
32 Clinton Street
Saratoga Springs, NY 12866

RE: **EM-SPRINT-050-180503** - Sprint notice of intent to modify an existing telecommunications facility located at 6 Main Street, Centerbrook (Essex), Connecticut.

Dear Mr. Perkowski:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

1. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;

2. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;

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

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

5. The validity of this action shall expire one year from the date of this letter; and

6. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated May 2, 2018. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below state and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent

with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/FOC/jmb

c: The Honorable Norman Needleman, First Selectman, Town of Essex
Joseph Budrow, Zoning Enforcement Officer, Town of Essex
Macbeth Ventures LLC, Tower/Property Owner

ATTACHMENT 2

verizon WIRELESS

ESSEX CT

10 MAIN STREET
ESSEX, CT 06426

FUZE PROJECT ID: 16271934
PSLC: 467615

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
118 FLANDERS ROAD
WESTBOROUGH, MA 01581-3956

COORDINATES*:

LATITUDE: 41° 21' 04.3" N
LONGITUDE: 72° 24' 22.3" W
*PER RFDS

GROUND ELEVATION*:

39'±
*PER GOOGLE EARTH

PROJECT INFORMATION

PMI ACCESSED AT:	N/A
SMART TOOL VENDOR PROJECT NUMBER:	N/A
VZW LOCATION CODE (PSLC):	467615
FUZE NUMBER:	16271934
MOUNT MODIFICATION REQUIRED?	NO

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 (6) EXISTING PIPE MOUNTED ANTENNAS.
- INSTALL (6) NEW PANEL ANTENNAS ON (3) NEW SIDE BY SIDE MOUNTS ON EXISTING ANTENNA PIPES.
- INSTALL (3) NEW MT6407-77A ANTENNAS WITH INTEGRATED RRHS ON EXISTING ANTENNA PIPES.
- REMOVE (6) EXISTING RRHS MOUNTED FROM EXISTING PIPE MASTS.
- INSTALL (6) NEW SAMSUNG RRHS MOUNTED ON EXISTING PIPE MASTS.
- INSTALL (3) NEW DIPLEXERS ON EXISTING MAST PIPES.
- REMOVE (3) EXISTING HYBRID CABLE ROUTED FROM THE EQUIPMENT SHELTER TO THE TOWER OVP.
- INSTALL (3) NEW 6X12 LOW INDUCTANCE HYBRID CABLES ROUTED FROM THE EQUIPMENT SHELTER TO THE TOWER OVPS.
- INSTALL NEW JUMPER CABLES AS REQUIRED BY RFDS.

NOTE:

1. SCOPE OF WORK BASED ON ANTENNA REC FOR "ESSEX_CT" DATED 01/12/21. VERIFY SCOPE OF WORK WITH FINAL RFDS PRIOR TO CONSTRUCTION.

SCOPE OF WORK

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
C-1	SITE PLAN & SOUTH ELEVATION
C-2	EXISTING & PROPOSED ANTENNA PLANS
C-3	CONSTRUCTION DETAILS
C-4	FINAL EQUIPMENT CONFIGURATION

SHEET INDEX

verizon WIRELESS

VERIZON WIRELESS
118 FLANDERS ROAD
WESTBOROUGH, MA 01581-3956

ESSEX CT

CONSTRUCTION DRAWINGS		
0	06/07/21	FOR SUBMITTAL

Dewberry

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

DRAWN BY:	JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121918
SITE NUMBER:	

467615

SITE ADDRESS

10 MAIN STREET
ESSEX, CT 06426

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:

   2018 CONNECTICUT STATE BUILDING CODE WITH THE FOLLOWING APPLICABLE CODES:
   2015 INTERNATIONAL RESIDENTIAL CODE (IRC)
   2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
   2017 INTERNATIONAL BUILDING CODE (IBC)
   2015 INTERNATIONAL MECHANICAL CODE (IMC)
   2017 NATIONAL ELECTRICAL CODE (NEC) (NFPA 70)
   2015 INTERNATIONAL PLUMBING CODE (IPC)
   2015 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 WIRELESS

VERIZON WIRELESS
118 FLANDERS ROAD
WESTBOROUGH, MA 01581-3956

ESSEX CT

CONSTRUCTION DRAWINGS		
0	06/07/21	FOR SUBMITTAL

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

DRAWN BY:	JC
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121918
SITE NUMBER:	

467615

SITE ADDRESS

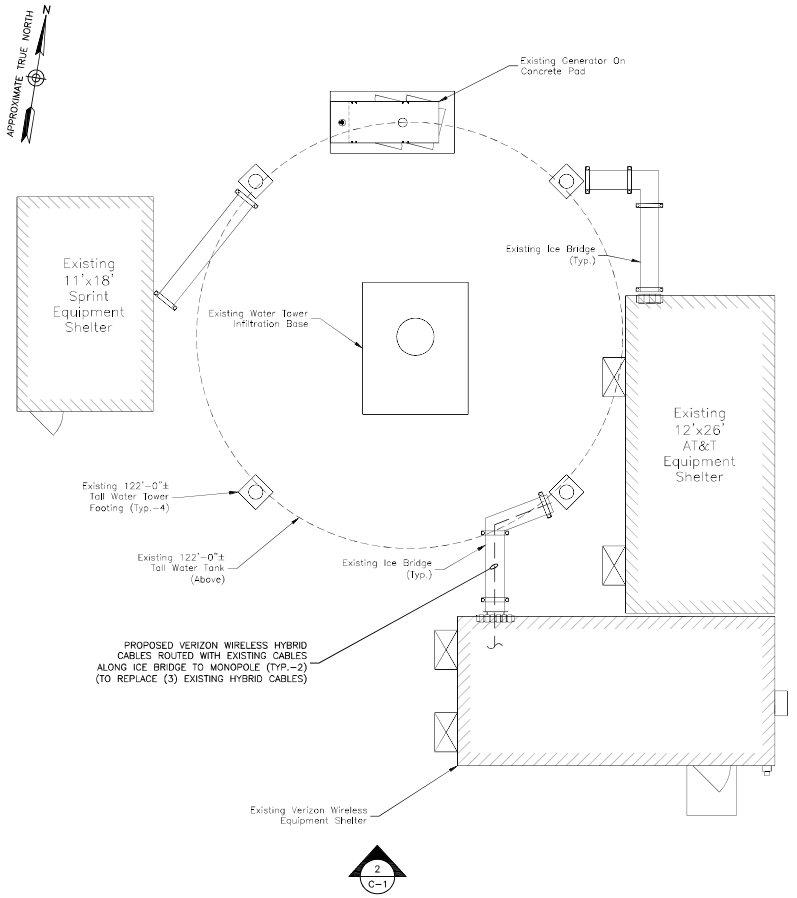
10 MAIN STREET
ESSEX, CT 06426

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

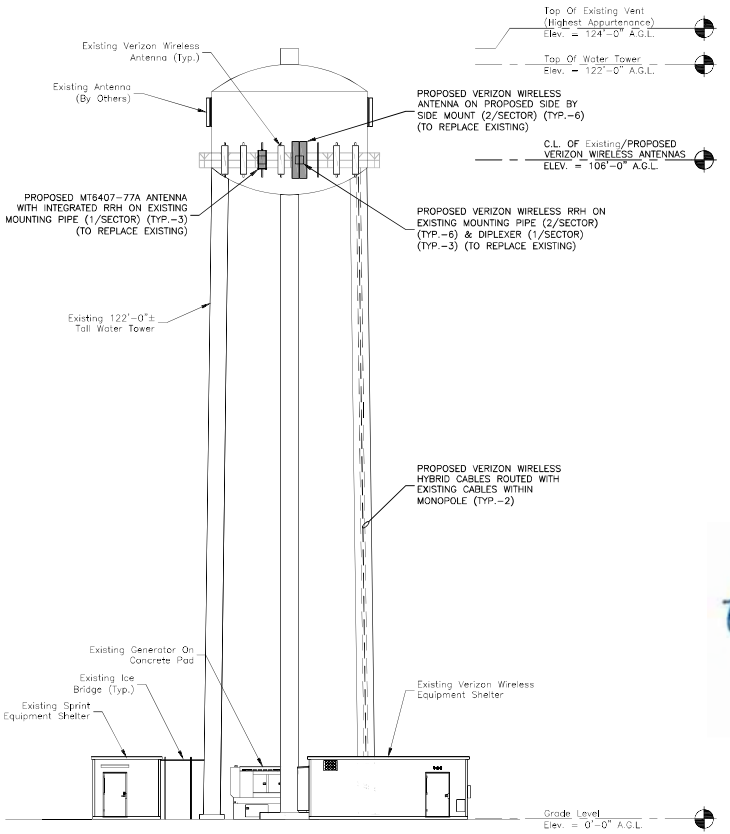


2
C-1

SITE PLAN
1

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"

0' 5' 10'



SOUTH ELEVATION
2

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"

0' 5' 10'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. SITE PLAN & ELEVATION ARE APPROXIMATE & ARE BASED ON A SITE VISIT BY DEWBERRY ENGINEERS INC. ON 01/21/21.
4. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
5. MOUNT ALL ANTENNAS, COAX, RRH'S, OVP BOXES, ETC. IN ACCORDANCE WITH MOUNT ANALYSIS COMPLETED BY DEWBERRY ENGINEERS DATED 06/03/21, STRUCTURAL ASSESSMENT BY DEWBERRY ENGINEERS, INC. DATED 05/27/21.
6. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY AND REPLACE AS NEEDED PER STRUCTURAL ANALYSIS.

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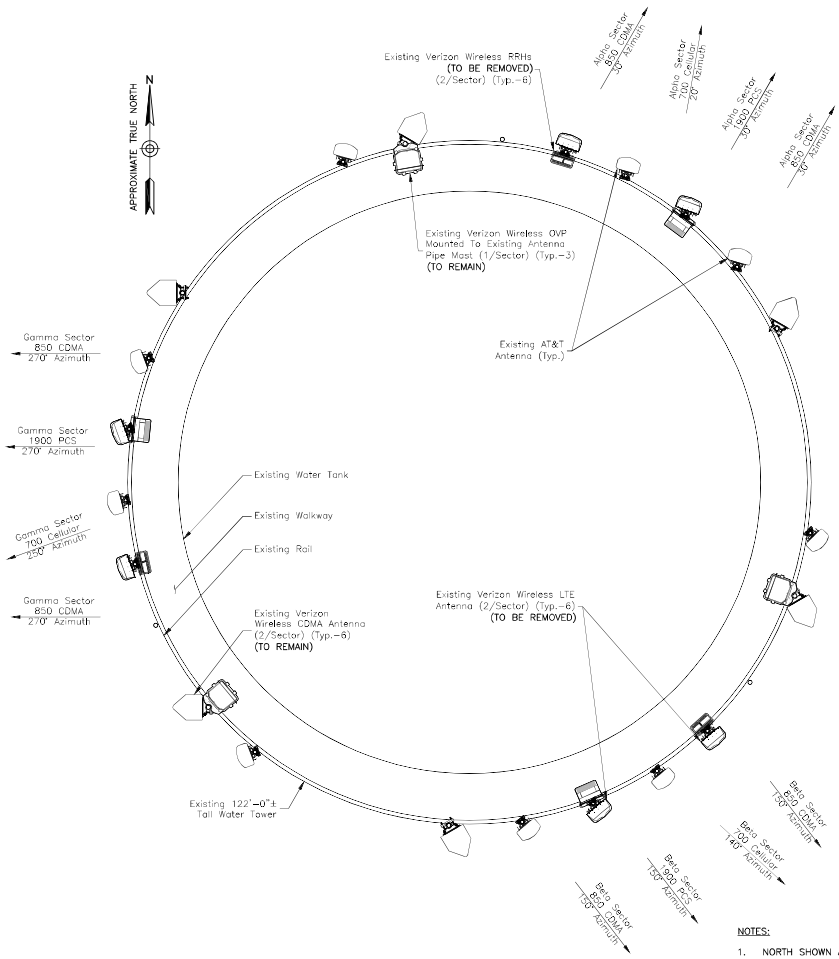
SHEET TITLE

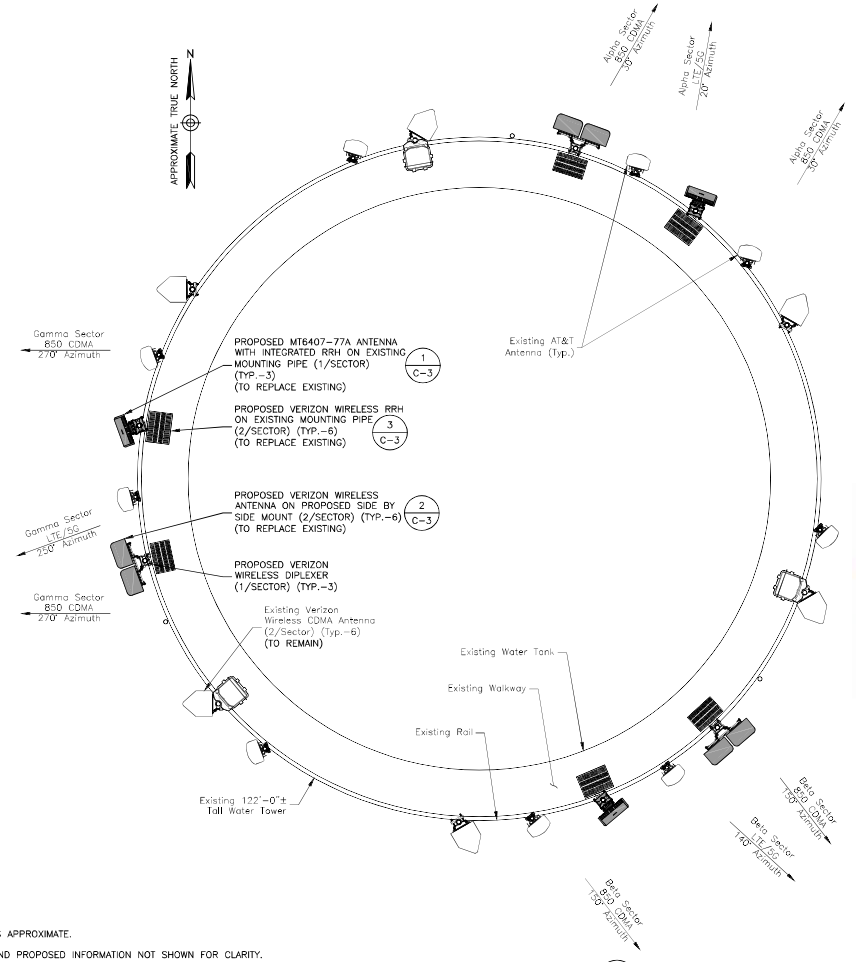
SITE PLAN &
SOUTH ELEVATION

SHEET NUMBER

C-1



EXISTING ANTENNA PLAN (1)
SCALE: N.T.S.



PROPOSED ANTENNA PLAN (2)
SCALE: N.T.S.

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. SITE PLAN & ELEVATION ARE APPROXIMATE & ARE BASED ON A SITE VISIT BY DEWBERRY ENGINEERS INC. ON 01/21/21.
4. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
5. MOUNT ALL ANTENNAS, COAX, RRH'S, OVP BOXES, ETC. IN ACCORDANCE WITH MOUNT ANALYSIS COMPLETED BY DEWBERRY ENGINEERS DATED 06/03/21, STRUCTURAL ASSESSMENT BY DEWBERRY ENGINEERS, INC. DATED 05/27/21.
6. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY AND REPLACE AS NEEDED PER STRUCTURAL ANALYSIS.

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DRAWN BY:	JG
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PROJECT NUMBER:	50121487
JOB NUMBER:	50121918
SITE NUMBER:	

467615

SITE ADDRESS

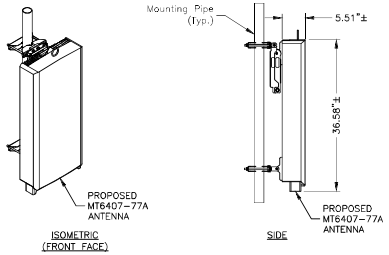
10 MAIN STREET
ESSEX, CT 06426

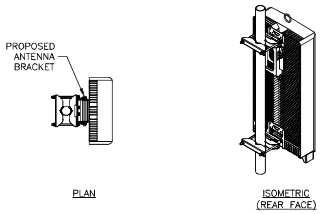
SHEET TITLE

EXISTING & PROPOSED ANTENNA PLANS

SHEET NUMBER

C-2





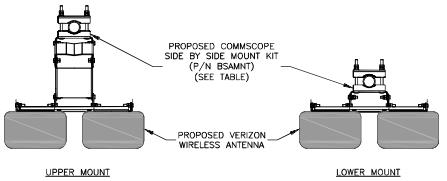
MODEL:	MT6407-77A
DIMENSIONS:	35.1"H X 16.1"W X 5.5"D (NOT TO EXCEED)
WEIGHT:	87.1 LBS (NOT TO EXCEED)

NOTES:

1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. USE APPROPRIATE MOUNTING HARDWARE FOR CONSTRUCTION TYPE.

PIPE MOUNTED ANTENNA DETAIL 1

SCALE: N.T.S.



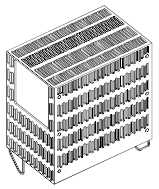
COMMSCOPE P/N: BSAMNT MOUNT TABLE				
COMMSCOPE P/N	SUPPORTED ANTENNAS	QUANTITY REQUIRED PER (2) ANTENNAS	NUMBER OF MOUNTING POINTS	GAP BETWEEN ANTENNAS
BSAMNT-SBS-1-2	SBNHH-1D65A/B/C NHH-65A/B/C-R2B	1	2	3-3/8"
BSAMNT-SBS-2-2	JAHH-65A/B/C-R3B JAHH-45A-R3B NHH-45A-R2B SBNHH-1D45A/B	1	2	2"
BSAMNT-SBS-2-3	NHH-45B/C-R2B JAHH-45B/C-R3B SBNHH-1D45C	1	3	2"
TABLE BASED ON POWER POINT PRESENTATION BY COMMSCOPE TITLED SIDE BY SIDE MOUNTS. CONTRACTOR TO VERIFY PART NUMBERS WITH MANUFACTURER PRIOR TO ORDERING. INSTALL PER MANUFACTURER RECOMMENDATIONS & SPECIFICATIONS.				

NOTES:

1. SPACING OF PROPOSED EQUIPMENT SHALL BE CONFIRMED AND PROPOSED MOUNTS SHALL NOT IMPEDE EQUIPMENT CLEARANCES. ACCESS TO EQUIPMENT SHALL BE MAINTAINED.
2. PROPOSED ANTENNA MOUNT SHALL BE INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS.

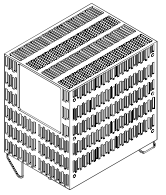
SIDE BY SIDE ANTENNA MOUNT 2

SCALE: N.T.S.



LTE 700/850 PROPOSED

MANUFACTURER:	SAMSUNG
MODEL:	700/850 RRH
DIMENSIONS:	15.0"H X 15.0"W X 8.1"D
WEIGHT:	82.0 LBS



LTE PCS/AWS PROPOSED

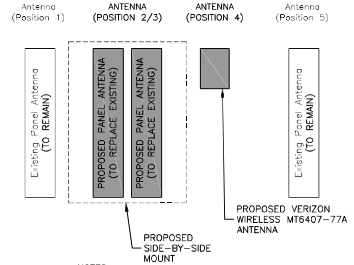
MANUFACTURER:	SAMSUNG
MODEL:	LTE PCS/AWS RRH
DIMENSIONS:	15.0"H X 15.9"W X 10.0"D
WEIGHT:	97.5 LBS

NOTE:

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

REMOTE UNIT DETAILS 3

SCALE: N.T.S.

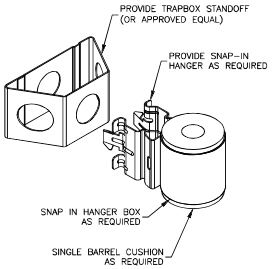


NOTES:

1. AS VIEWED BEHIND THE ANTENNAS.
2. TYPICAL FOR ALL (3) SECTORS.

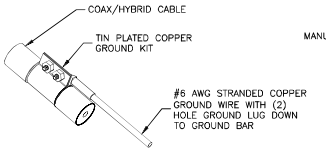
ANTENNA CONFIGURATION 3

SCALE: N.T.S.



JUMPER MOUNT 5

SCALE: N.T.S.

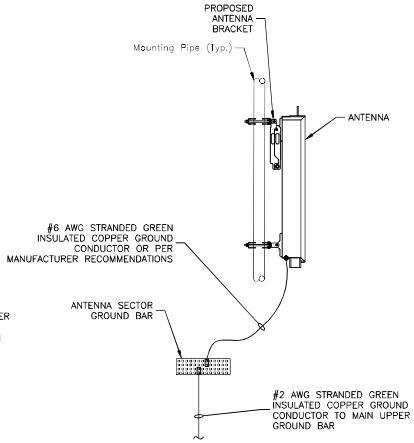


NOTES:

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

COAX/HYBRID GROUNDING DETAIL 6

SCALE: N.T.S.



NOTES:

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

TYPICAL ANTENNA GROUNDING DETAIL 7

SCALE: N.T.S

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118 FLANDERS ROAD
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CONSTRUCTION DRAWINGS		
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99 SUMMER ST.
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BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

DRAWN BY:	JC
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121918
SITE NUMBER:	

467615

SITE ADDRESS

10 MAIN STREET
ESSEX, CT 06426

SHEET TITLE

CONSTRUCTION DETAILS

SHEET NUMBER

C-3

FINAL EQUIPMENT CONFIGURATION

SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (QTY./MODEL)	CENTERLINE	AZIMUTH	OVP	HYBRID CABLE TYPE	FEED LINE LENGTH*
ALPHA	A1	CDMA 850	(E) LPA-80080/6CF	ANTEL	–	106'-0"±	30°	(1) (E) 6-OVP BOX TO REMAIN	(1) (P) 6X12 LI HYBRID CABLE TO REPLACE EXISTING	225'±
	A2	5G	(P) MT6407-77A	SAMSUNG	(1) (P) MT6407-77A	106'-0"±	20°			
	A3	LTE 700/850	(P) JAHH-65B-R3B	ANDREW	(1) (P) B5/B13 RFV01U-D2A	106'-0"±	20°			
	A4	LTE 1900/AWS	(P) JAHH-65B-R3B	ANDREW	(1) (P) B5/B66 RFV01U-D1A	106'-0"±	20°			
	A5	CDMA 850	(E) LPA-80080/6CF	ANTEL	–	106'-0"±	30°			
BETA	B1	CDMA 850	(E) LPA-80063/6CF	ANTEL	–	106'-0"±	150°	(1) (E) 6-OVP BOX TO REMAIN	(1) (P) 6X12 LI HYBRID CABLE TO REPLACE EXISTING	165'±
	B2	5G	(P) MT6407-77A	SAMSUNG	(1) (P) MT6407-77A	106'-0"±	140°			
	B3	LTE 700/850	(P) JAHH-65B-R3B	ANDREW	(1) (P) B5/B13 RFV01U-D2A	106'-0"±	140°			
	B4	LTE 1900/AWS	(P) JAHH-65B-R3B	ANDREW	(1) (P) B5/B66 RFV01U-D1A	106'-0"±	140°			
	B5	CDMA 850	(E) LPA-80063/6CF	ANTEL	–	106'-0"±	150°			
GAMMA	G1	CDMA 850	(E) LPA-80063/6CF	ANTEL	–	106'-0"±	270°	(1) (E) 6-OVP BOX TO REMAIN	(1) (P) 6X12 LI HYBRID CABLE TO REPLACE EXISTING	195'±
	G2	5G	(P) MT6407-77A	SAMSUNG	(1) (P) MT6407-77A	106'-0"±	250°			
	G3	LTE 700/850	(P) JAHH-65B-R3B	ANDREW	(1) (P) B5/B13 RFV01U-D2A	106'-0"±	250°			
	G4	LTE 1900/AWS	(P) JAHH-65B-R3B	ANDREW	(1) (P) B5/B66 RFV01U-D1A	106'-0"±	250°			
	G5	CDMA 850	(E) LPA-80063/6CF	ANTEL	–	106'-0"±	270°			

*CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE BASE EQUIPMENT OVP TO SECTOR OVP. NO HYBRID CABLES ARE PROPOSED UNDER CURRENT SCOPE OF WORK.

(E) = Existing
(P) = PROPOSED

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

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118 FLANDERS ROAD
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CONSTRUCTION DRAWINGS		
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28971 LICENSED PROFESSIONAL ENGINEER

DRAWN BY:	JG
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121918
SITE NUMBER:	

467615

SITE ADDRESS

10 MAIN STREET
ESSEX, CT 06426

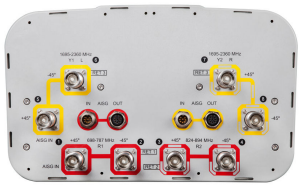
SHEET TITLE

FINAL EQUIPMENT CONFIGURATION

SHEET NUMBER

C-4

JAHH-65B-R3B



8-port sector antenna, 2x 698–787, 2x 824-894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.28 m^2 | 3.014 ft^2
Effective Projective Area (EPA), lateral	0.24 m^2 | 2.583 ft^2
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Aluminum | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male

Dimensions

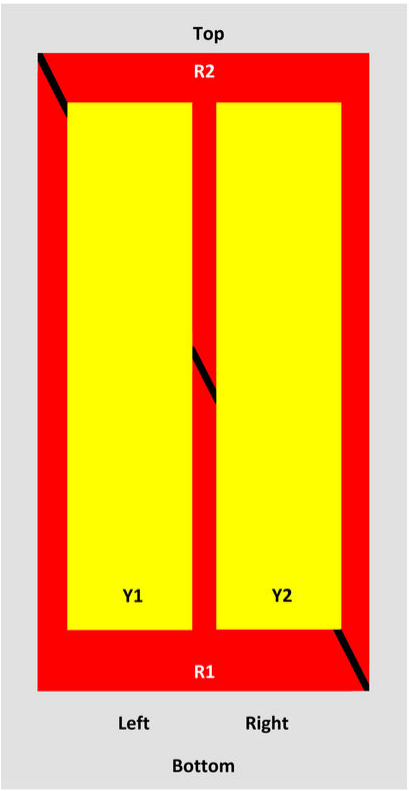
Width	350 mm | 13.78 in

JAHH-65B-R3B

Length	1828 mm | 71.969 in
Depth	208 mm | 8.189 in

Array Layout

JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R3B



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANxxxxxxxxxxxxxxx1
R2	824-894	3-4	2	ANxxxxxxxxxxxxxxx2
Y1	1695-2360	5-6	3	ANxxxxxxxxxxxxxxx3
Y2	1695-2360	7-8		

View from the front of the antenna

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

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz
Polarization	±45°

Remote Electrical Tilt (RET) Information, Electrical

Protocol	3GPP/AISG 2.0 (Single RET)
Power Consumption, idle state, maximum	2 W

JAHH-65B-R3B

Power Consumption, normal conditions, maximum	13 W
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 5
Internal RET	High band (1) | Low band (2)

Electrical Specifications

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain, dBi	14.5	15.8	18	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	200	200	300	300	300	250

Electrical Specifications, BASTA

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
Gain by Beam Tilt, average, dBi	2 ° | 14.3 8 ° | 14.3 14 ° | 14.3	2 ° | 15.0 8 ° | 14.9 14 ° | 15.4	0 ° | 17.2 5 ° | 17.6 10 ° | 17.6	0 ° | 17.6 5 ° | 18.2 10 ° | 18.2	0 ° | 17.7 5 ° | 18.3 10 ° | 18.3	0 ° | 17.9 5 ° | 18.7 10 ° | 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24

CPR at Sector, dB	11	12	11	11	11	8

Mechanical Specifications

Wind Loading at Velocity, frontal	301.0 N @ 150 km/h | 67.7 lbf @ 150 km/h
Wind Loading at Velocity, lateral	254.0 N @ 150 km/h | 57.1 lbf @ 150 km/h
Wind Loading at Velocity, maximum	143.4 lbf @ 150 km/h | 638.0 N @ 150 km/h
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	456 mm | 17.953 in
Depth, packed	357 mm | 14.055 in
Length, packed	1975 mm | 77.756 in
Net Weight, without mounting kit	29.2 kg | 64.375 lb
Weight, gross	42.5 kg | 93.696 lb

Regulatory Compliance/Certifications

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

Included Products

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

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

SAMSUNG

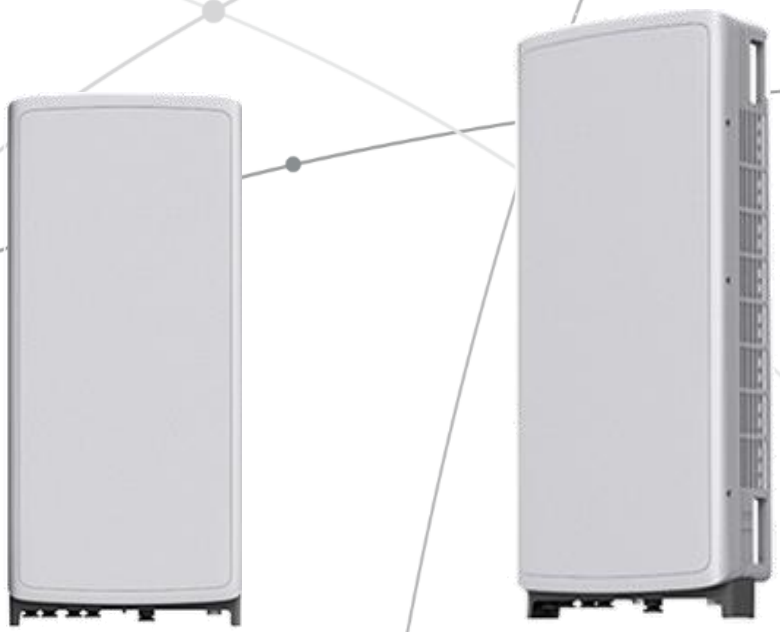
SAMSUNG

C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

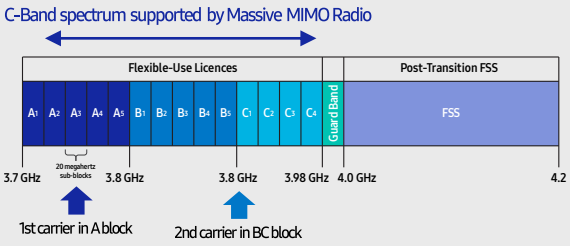


Points of Differentiation

Wide Bandwidth

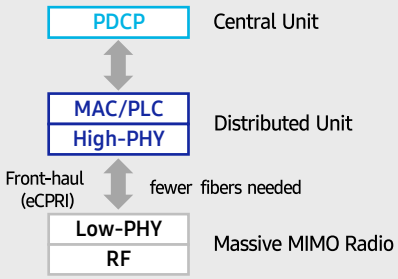
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

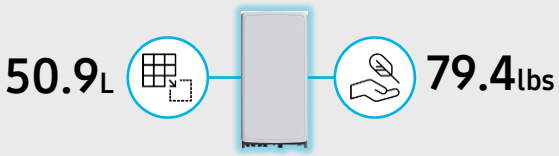
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

SAMSUNG

Dual-Band Radio Unit
AWS/PCS (B66/B2)
RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
    B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)
    B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)
Instantaneous Bandwidth:
    70MHz(B66) + 60MHz(B2)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 255mm (36.8L)
Weight: 38.3kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

SAMSUNG

Dual-Band Radio Unit
700/850MHz (B13/B5)
RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
B13: DL(746-756MHz)/UL(777-787MHz)
B5: DL(869-894MHz)/UL(824-849MHz)
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 207mm (29.9L)
Weight: 31.9kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

ATTACHMENT 3

	General	Power	Density					
Site Name: Essex								
Tower Height: Verizon @ 106ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T	1	566	108	850	0.0196	0.5667	0.35%	
*AT&T	1	7330	108	2100	0.2534	1.0000	2.53%	
*AT&T	1	4775	108	2300	0.1651	1.0000	1.65%	
*AT&T	1	2692	108	737	0.0931	0.4913	1.89%	
*AT&T	1	1442	108	850	0.0498	0.5667	0.88%	
*AT&T	1	4170	108	1900	0.1441	1.0000	1.44%	
*AT&T	1	1442	108	850	0.0498	0.5667	0.88%	
*Sprint-CDMA	1	433	118	850	0.0124	0.5667	0.22%	
*Sprint-LTE	2	433	118	850	0.0248	0.5667	0.44%	
*Sprint-PCS-CDMA	5	536	118	1900	0.0768	1.0000	0.77%	
*Sprint-PCS-LTE	2	1340	118	1900	0.0768	1.0000	0.77%	
*Sprint-BRS-LTE	8	640	118	2500	0.1468	1.0000	1.47%	
VZW 700	**4**	**628**	**106**	**0.0080**	**751**	**0.5007**	**1.61%**	
VZW CDMA	**2**	**494**	**106**	**0.0032**	**874.8**	**0.5832**	**0.54%**	
VZW Cellular	**4**	**725**	**106**	**0.0093**	**874**	**0.5827**	**1.59%**	
VZW PCS	**4**	**1525**	**106**	**0.0195**	**1975**	**1.0000**	**1.95%**	
VZW AWS	**4**	**1493**	**106**	**0.0191**	**2120**	**1.0000**	**1.91%**	
VZW CBAND	**4**	**6531**	**106**	**0.0836**	**3730.08**	**1.0000**	**8.36%**	
								29.25%
* Source: Siting Council								

ATTACHMENT 4

Dewberry Engineers Inc.
99 Summer Street, Suite 700
Boston, MA 02110-1200
617.695.3400
617.695.3310 fax
www.dewberry.com

June 23, 2021

Andrew Leone
Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

Re: Essex CT
Site ID: 467615
Fuze #: 16271934
10 Main Street
Essex, CT 06426

Dear Mr. Leone:

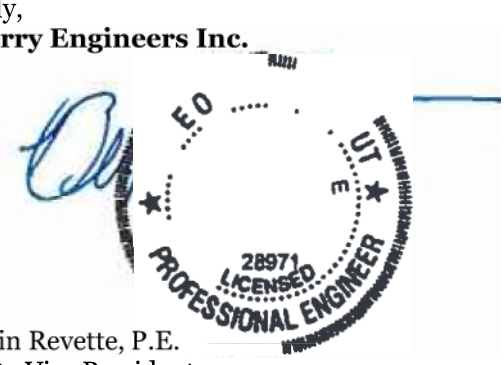
Verizon Wireless has proposed to replace six (6) antennas and six (6) RRHs with three (3) new MT6407-77A antennas with integrated RRHs, six (6) new JAHH-65B-R3B antennas on three (3) BSAMNT-SBS-2-2 mounts, three (3) new B2/B66A RRHs, three (3) new B5/B13 RHHs, and three (3) new CommScope CBC78T-DS-43-2X diplexers on the water tank at the above referenced site. Verizon also has four (4) LPA-80063/6CF antennas, two (2) LPA-80080/6CF antennas, and three (3) OVPs that are to remain. The proposed equipment will be mounted on the existing antenna pipes on the catwalk handrail.

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design sheets (dated 01/12/21) provided by Verizon Wireless and has determined that the existing water tank structure has 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. Please refer to the mount structural analysis report by Dewberry dated 05/27/21 for the analysis on the existing water tank catwalk and on the antenna mounting system.

Please note, our assessment is limited to the existing water tank. Our assessment is based on the assumption that the existing water tank is in good condition and was constructed in conformance with all applicable state and local building codes. If, during construction, any damage, deterioration, and/or discrepancies are noticed, Dewberry is to be notified to assess any deviation from the assumed condition. Any alteration in equipment loading described above and on the associated plans will void any conclusions expressed herein and will require further analysis and design. No structural qualification is made or implied by this structural 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.



Benjamin Revette, P.E.
Associate Vice President

Dewberry

Prepared for:
Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

Dewberry Engineers Inc.
99 Summer St. Suite 700
Boston, MA 02110
Project Number: 50121918

Prepared by:

Mount Analysis Report and Design Calculations for a Wireless Telecommunications Upgrade

June 3, 2021
(Rev.0)

Carrier Information:	**Site Name**	Essex CT
	Site ID	467615
	Fuze ID	16271934
Analysis Criteria:	**Codes**	TIA-222-G, ASCE 7-10 & 2018 CT Building Code
	Parameters	135-mph (Ultimate 3-second gust) Risk Category: II, Exposure Cat: C, Topo Cat: 1.0 Topographic Method: 1
Site Data:	**Address**	10 Main Street, Essex, CT 06426
	Mount Type	Catwalk Pipe Mounts
	Tower Type	122-ft. tall Water Tank

Dewberry Engineers Inc (Dewberry) is pleased to submit this *"Mount Analysis Report"* to determine the structural capacity of the existing antenna catwalk mounts**.** The objective of this report is to assess the proposed installation of new equipment as detailed in the analysis report.

Analysis Results:

Maximum Utilization: **91.3%** **Sufficient**

Prepared by:

Deep A. Patel, E.I.T.
Staff Engineer

Reviewed by:

Sahnoune Abed
Structural Project Engineer

Approved by:

Benjamin Revette P.E.
Associate Vice President

TABLE OF CONTENTS

1.0 PROJECT SUMMARY & RESULTS

The objective of this report is to summarize the results of the antenna mount analysis performed for Verizon Wireless with an approximate antenna centerline elevation of 106-ft.

For mount analysis parameters, refer to the table below:

Table 1: ANALYSIS PARAMETERS

Ultimate Wind Speed (mph)	Maintenance Wind Speed (mph)	Exp. Cat.	Risk Cat.	Topo. Cat.	Crest Height (ft)	Seismic Design Category
135	**30**	**C**	**II**	**1**	**N/A**	**N/A**

For the final loading configuration, refer to the table below:

Table 2: FINAL APPURTENANCE LOADING

Mount CL	Antenna CL	Status	Appurtenance Description	Location
106'	**106'**	**P**	**(6) – JAHH-65B-R3B (SBS)**	**Position 2**
106'	**106'**	**P**	**(3) – MT6407-77A w/integrated RRHs**	**Position 3**
106'	**106'**	**P**	**(3) – BSAMNT-SBS-2-2 Mounts**	**Position 2**
106'	106'	E	(4) – LPA-80063/6CF	Position 1 & 4*(Beta/Gamma)*
106'	106'	E	(2) – LPA-80080/6CF	Position 1 & 4 *(Alpha)*
106'	**106'**	**P**	**(3) – B2/B66A RRH**	**Position 2**
106'	**106'**	**P**	**(3) – B5/B13 RRH**	**Position 3**
106'	106'	**P**	**(3) – CBC78T-DS-43-2X Diplexer**	**Position 2**
106'	106'	E	(3) – Surge Protector OVP	Position 1
106'	106'	R	(3) – B13 RRH 4x30	-
106'	106'	R	(3) – B66A RRH 4x45	-
106'	106'	R	(6) – SBNHH-1D65B	-

Notes:

E = Existing equipment to remain

P = Proposed equipment to be installed

R = Existing equipment to be removed

For the final loading configuration, refer to the table below:

Table 3: MEMBER UTILIZATION

Member Type	Member Size	Utilization Ratio	Pass/Fail
Antenna Mounting Pipe	2-3/8" OD Pipe	**91.3%**	**Pass**
Catwalk Top Rail	L2x2x0.25"	83.0%	Pass
Catwalk Cross Bracing	PL1.5x0.25"	72.3%	Pass
Catwalk Vertical Members	L2x1.5x0.1875	6.5%	Pass
Mount Kickers	L3x3x0.25"	2.7%	Pass

2.0 RECOMMENDATIONS & CONCLUSION

The analysis concludes that the existing catwalk pipe mounts, as described in the referenced material, does have sufficient structural capacity to support the proposed installation. Under the proposed conditions, the maximum utilization of a single structural member is **91.3%.**

3.0 CODES, STANDARDS, AND REFERENCES

The structure was analyzed per the provisions of the following codes and standards:

2018 Connecticut State Building Code – Amendments to IBC 2015
International Building Code (IBC) 2015, International Code Council
ASCE 7-10 Minimum design Loads for Buildings and Other Structures, American Society of Civil Engineers
TIA-222-G-4, Structural Standard for Antenna Supporting Structures and Antennas
Steel Construction Manual 14th Ed, American Institute of Steel Construction

The following documents and references were used for this analysis:

Radio Frequency Design Sheet by Verizon Wireless, date last modified 01/12/2021
Site visit photos by Dewberry Engineers, Inc. on 01/21/2021
Mount mapping report by Northeast Union dated 09/01/2017

4.0 ANALYSIS ASSUMPTIONS

All member dimensions and geometry are correct as stated in previous structural analysis report.
Material grades were selected per the data supplied and/or as stated in the reference codes stated in the previous section.
Any corroded or rusting members, bolts, etc. shall be removed and replaced with new hardware.

5.0 REQUIRED FIELD VERIFICATIONS

Contractor to verify assumed pipe sizes, connection plates, bolt sizes, and dimensions.

6.0 ANALYSIS DISCLAIMERS

If the actual field conditions vary from what was assumed in this analysis, the results and conclusions expressed in this report are invalid and further evaluation is recommended for any proposed installation to continue. Please note that this analysis is limited to the antenna mount only.

Dewberry reserves the right to add to or modify this report if more information becomes available. The conclusions reached by Dewberry in this report are only applicable to the previously mentioned existing structural elements supporting the proposed wireless telecommunications installation. The results of this report are based on the assumption that existing structural elements have been installed per the original design documents, have been well maintained, and are uncompromised. This report does not imply that a thorough inspection of the existing structure has been performed. Any deviation of the support condition, loading, location, placement, equipment configuration, etc., will require Dewberry to generate an additional structural analysis. Further, no structural qualification is made or implied by this report of any existing structural elements.

APPENDIX A

Dewberry®

V 1.2

Job Number	50121918
Made by:	DAP
Date:	5/25/21
Checked by:	SA
Date:	5/26/21

(Essex CT) - Design Wind Load

\\bos-fs\Boston\Projects\50121487\50121918 - Essex CT\Engineering\Structural\Mount Analysis\Rev 0\Calcs\Essex CT_3 sided Co-Lo Platform Mount Loac

Wind Load Design Criteria

Site Name: Essex CT

General Information & Design Input from TIA-222-G

Item	Value	Description	Reference
V =	135.00	Design Wind Speed	*2018 CT Building Code*
V_{max} =	104.57	($\sqrt{0.6}$) * V	*Except. #5, Sect. 1609.3.1, Eqn. 16-33, IBC 15*
V_i =	50.00	Design Ice Wind Speed (mph)	*ASCE 7-10, Hazard Tool*
K_d =	0.95	Wind Direction Probability Factor	*Table 2-2, TIA*
Class	II	Structure Classification	*Table 2-1, TIA*
I =	1.00	Importance Factor (Without Ice)	*Table 2-3, TIA*
I_{ice}=	1.00	Importance Factor (Ice Thickness)	*Table 2-3, TIA*
z = h =	106.00	ft. (A.G.L.)	*Max. Center of Appurtenance*
Exp. Cat.	C	Exposure Category	*Sect. 2.6.5.1, TIA*
z_g =	900.00	Exposure Category Coeff.	*Table 2-4, TIA*
α'=	9.50	Exposure Category Coeff.	*Table 2-4, TIA*
$K_{z\,(min)}$ =	0.85	Exposure Category Coeff.	*Table 2-4, TIA*
K_e =	1.00	Exposure Category Coeff.	*Table 2-4, TIA*
K_t =	N/A	Topographic Constant	*Table 2-5, TIA ("N/A" if Topo. Cat. = 1)*
K_z =	1.28	$= 2.01(z/z_g)^{(2/\alpha')}$	*Sect. 2.6.5.2, TIA*
Topo. Cat.	1	Topographic Category (1-5)	*Sect. 2.6.6.2, TIA*
e =	2.72	Natural Logarithmic base	
f =	N/A	Height Attenuation Factor	*Table 2-5, TIA ("N/A" if Topo. Cat. = 1)*
H =	N/A	ft. Height of crest above surrounding terrain	
K_h =	N/A	$e^{((f*z)/H)}$	*Sect. 2.6.6.4, TIA*
K_{zt} =	1.00	$= [1+((K_e*K_t)/K_h)]^2$	*Sect. 2.6.6.4, TIA*
K_{iz} =	1.12	$= (z/33)^{0.10} \leq 1.4$ (Height escalation factor)	*Sect. 2.6.8, TIA*
G_h =	1.00	Gust Effect Factor	*Sect. 2.6.9, TIA*
t_i =	0.75	Design Ice Thickness	*ASCE 7-10, Hazard Tool*
t_{iz} =	1.68	$= 2\,t_i(I)K_{iz}(K_{zt})^{0.35}$	*Sect. 2.6.8, TIA*
$q_{z\,design}$ =	34.1 psf	$= 0.00256(K_z)(K_{zt})(K_s)(K_e)(K_d)(V^2)(I)$	*Sect. 2.6.9.6, TIA*
$q_{z\,ice}$ =	7.8 psf	$= 0.00256(K_z)(K_{zt})(K_s)(K_e)(K_d)(V_i^2)$	*Sect. 2.6.9.6, TIA*

Design Wind Forces:

Section 2.6.9.2

$F_A = q_{z\,design}G_h(EPA)_A$ *(where $(EPA)_A$ = effective projected area of the appurtenance = C_aA_a)*

$F_{Ai} = q_{z\,ice}G_h(EPA)_{Ai}$

(see calculation tables on following pages)

Design Ice Weight:

Section 2.6.8

$F_i = [\pi(t_{iz})(D_c + t_{iz})]$*56 lb/ft³ *(where D_c = largest out to out dimension of member)*

(see calculation tables on following pages)

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V 1.2

Job Number	50121918
Made by:	DAP
Date:	5/25/21
Checked by:	SA
Date:	5/26/21

(Essex CT) - Design Wind Load

\\bos-fs\Boston\Projects\50121487\50121918 - Essex CT\Engineering\Structural\Mount Analysis\Rev 0\Calcs\Essex CT_3 sided Co-Lo Platform Mount Loading STAAD 05.25.21.x

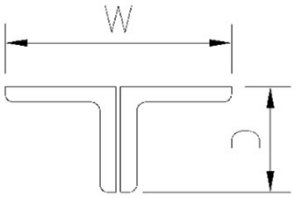
Element Definition

Description	Dimensions (in.)			Weight	Length /	
	W	D	H	(lb)	# Supports	
LPA-80063/6CF	15.00	13.10	70.90	27.00	2.00	
JAHH-65B-R3B (SBS)	27.56	8.19	71.97	196.21	2.00	
General Large Antenna	12.00	7.10	96.00	50.00	2.00	
General Medium Antenna	12.00	7.10	72.00	50.00	2.00	
LPA-80080/6CF	5.50	13.20	70.90	21.00	2.00	
B5/B13 RRH-BR04C	15.00	8.10	15.00	82.00	1.00	
B2/B66A RRH-BR049	15.00	10.00	15.00	97.50	1.00	
MT6407-77A	16.10	5.50	35.10	87.10	2.00	
Non-Verizon RRH	12.00	9.00	25.00	60.00	1.00	
OVP	15.70	10.30	19.20	32.00	1.00	
STRUCTURAL MEMBERS						
2-3/8" OD Pipe	2.38	2.38	90.00	STAAD	*Pipe*	
2-3/8" OD Pipe	2.38	2.38	90.00	STAAD	*Pipe*	
PL8x0.25	8.00	0.25	30.00	STAAD	*Plate*	
PL1.5	1.50	0.25	50.88	STAAD	*Plate*	
L2x2	2.00	2.00	36.00	STAAD	*Angle*	
L3x3	3.00	3.00	36.00	STAAD	*Angle*	

(Mounting Pipe) *(See Note 2)*

Note:

1) *For Double Angles assume the following:*



2) *For mounting pipes that **do not** support equipment or portions which are not shielded by equipment, create an additional entry below.*

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(Essex CT) - Design Wind Load

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Design Wind Load

Members	Dimensions (ft.)			Area $(A_a)_n$	Area $(A_a)_t$	Aspect Ratio	Aspect Ratio	C_{an}	C_{at}
	Width (Normal)	Depth (Tangent)	Height (or span)	(normal) (sf)	(tangent) (sf)	(normal)	(tangent)	(normal) Table 2-8	(tangent) Table 2-8
LPA-80063/6CF	1.25	1.09	5.91	7.39	6.44	4.73	5.42	1.30	1.33
JAHH-65B-R3B (SBS)	2.30	0.68	6.00	13.80	4.08	2.61	8.82	1.20	1.46
General Large Antenna	1.00	0.59	8.00	8.00	4.72	8.00	13.56	1.43	1.62
General Medium Antenna	1.00	0.59	6.00	6.00	3.54	6.00	10.17	1.36	1.51
LPA-80080/6CF	0.46	1.10	5.91	2.72	6.50	12.85	5.37	1.59	1.33
B5/B13 RRH-BR04C	1.25	0.68	1.25	1.56	0.85	1.00	1.84	1.20	1.20
B2/B66A RRH-BR049	1.25	0.83	1.25	1.56	1.04	1.00	1.51	1.20	1.20
MT6407-77A	1.34	0.46	2.93	3.93	1.35	2.19	6.37	1.20	1.37
Non-Verizon RRH	1.00	0.75	2.08	2.08	1.56	2.08	2.77	1.20	1.21
OVP	1.31	0.86	1.60	2.10	1.38	1.22	1.86	1.20	1.20
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.20	0.20	7.50	0.20	0.20	37.50	37.50	1.20	1.20
2-3/8" OD Pipe	0.20	0.20	7.50	0.20	0.20	37.50	37.50	1.20	1.20
PL8x0.25	0.67	0.02	2.50	0.67	0.02	3.73	125.00	1.25	2.00
PL1.5	0.13	0.02	4.24	0.13	0.02	32.62	212.00	2.00	2.00
L2x2	0.17	0.17	3.00	0.17	0.17	17.65	17.65	1.75	1.75
L3x3	0.25	0.25	3.00	0.25	0.25	12.00	12.00	1.57	1.57

Design Effective Projected Area & Wind Loads

Members	EPA_a @ 0.0° (sf)	EPA_a @ 30.0° (sf)	EPA_a @ 60.0° (sf)	EPA_a @ 90.0° (sf)	F_a @ 0.0° (lb)	F_a @ 30.0° (lb)	F_a @ 60.0° (lb)	F_a @ 90.0° (lb)	Gravity Load @ Support (lb)
LPA-80063/6CF	9.61	9.35	8.83	8.57	163.8	159.4	150.5	146.0	13.5
JAHH-65B-R3B (SBS)	16.56	13.91	8.61	5.96	282.3	237.2	146.8	101.6	98.1
General Large Antenna	11.44	10.49	8.59	7.65	195.1	178.9	146.5	130.4	25.0
General Medium Antenna	8.16	7.46	6.05	5.35	139.1	127.1	103.1	91.1	25.0
LPA-80080/6CF	4.32	5.40	7.56	8.65	73.7	92.2	129.0	147.4	10.5
B5/B13 RRH-BR04C	1.87	1.66	1.23	1.02	63.8	56.6	42.0	34.8	82.0
B2/B66A RRH-BR049	1.87	1.72	1.40	1.25	63.8	58.5	47.9	42.6	97.5
MT6407-77A	4.72	4.00	2.57	1.85	80.4	68.2	43.8	31.5	43.6
Non-Verizon RRH	2.50	2.34	2.04	1.89	85.1	79.9	69.6	64.4	60.0
OVP	2.52	2.30	1.87	1.66	85.9	78.6	63.8	56.5	32.0
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.24	-	-	-	8.2	-	-	-	-
2-3/8" OD Pipe	0.24	-	-	-	8.2	-	-	-	-
PL8x0.25	0.84	-	-	-	28.6	-	-	-	-
PL1.5	0.26	-	-	-	8.9	-	-	-	-
L2x2	0.30	-	-	-	10.1	-	-	-	-
L3x3	0.39	-	-	-	13.4	-	-	-	-

Dewberry®

V 1.2

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(Essex CT) - Design Wind Load

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Design Ice Wind Load

- Design ice thickness included in tabulated dimensions below.

Members	Dimensions (ft.)			Area $(A_a)_{ni}$	Area $(A_a)_{ti}$	Aspect Ratio	Aspect Ratio	C_{ani}	C_{ati}
	Width (Normal)	Depth (Tangent)	Height (or span)	(normal) (sf)	(tangent) (sf)	(normal)	(tangent)	(normal) Table 2-8	(tangent) Table 2-8
LPA-80063/6CF	1.53	1.37	6.19	9.47	8.48	4.05	4.52	1.27	1.29
JAHH-65B-R3B (SBS)	2.58	0.96	6.28	16.20	6.03	2.43	6.54	1.20	1.38
General Large Antenna	1.28	0.87	8.28	10.60	7.20	6.47	9.52	1.38	1.48
General Medium Antenna	1.28	0.87	6.28	8.04	5.46	4.91	7.22	1.31	1.41
LPA-80080/6CF	0.74	1.38	6.19	4.58	8.54	8.36	4.49	1.45	1.29
B5/B13 RRH-BR04C	1.53	0.96	1.53	2.34	1.47	1.00	1.59	1.20	1.20
B2/B66A RRH-BR049	1.53	1.11	1.53	2.34	1.70	1.00	1.38	1.20	1.20
MT6407-77A	1.62	0.74	3.21	5.20	2.38	1.98	4.34	1.20	1.28
Non-Verizon RRH	1.28	1.03	2.36	3.02	2.43	1.84	2.29	1.20	1.20
OVP	1.59	1.14	1.88	2.99	2.14	1.18	1.65	1.20	1.20
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.48	0.48	7.50	0.48	0.48	15.63	15.63	0.99	0.99
2-3/8" OD Pipe	0.48	0.48	7.50	0.48	0.48	15.63	15.63	0.99	0.99
PL8x0.25	0.95	0.30	2.50	0.95	0.30	2.63	8.33	1.21	1.44
PL1.5	0.41	0.30	4.24	0.41	0.30	10.34	14.13	1.51	1.64
L2x2	0.45	0.45	3.00	0.45	0.45	6.67	6.67	1.39	1.39
L3x3	0.53	0.53	3.00	0.53	0.53	5.66	5.66	1.34	1.34

Design Effective Projected Area & Wind Loads with Ice

Members	EPA_{ai} @ 0.0° (sf)	EPA_{ai} @ 30.0° (sf)	EPA_{ai} @ 60.0° (sf)	EPA_{ai} @ 90.0° (sf)	F_{ai} @ 0.0° (lb)	F_{ai} @ 30.0° (lb)	F_{ai} @ 60.0° (lb)	F_{ai} @ 90.0° (lb)	Ice Load F_i@ Support (lb)
LPA-80063/6CF	12.03	11.75	11.21	10.94	46.9	45.8	43.7	42.7	130.9
JAHH-65B-R3B (SBS)	19.44	16.66	11.10	8.32	75.8	65.0	43.3	32.5	187.3
General Large Antenna	14.63	13.64	11.65	10.66	57.0	53.2	45.4	41.6	128.3
General Medium Antenna	10.53	9.82	8.41	7.70	41.1	38.3	32.8	30.0	96.2
LPA-80080/6CF	6.64	7.73	9.92	11.02	25.9	30.2	38.7	43.0	96.9
B5/B13 RRH-BR04C	2.81	2.55	2.03	1.76	21.9	19.9	15.8	13.8	48.0
B2/B66A RRH-BR049	2.81	2.62	2.23	2.04	21.9	20.4	17.4	15.9	50.6
MT6407-77A	6.24	5.44	3.84	3.05	24.3	21.2	15.0	11.9	56.1
Non-Verizon RRH	3.62	3.45	3.09	2.92	28.3	26.9	24.1	22.7	71.3
OVP	3.59	3.33	2.82	2.57	28.0	26.0	22.0	20.0	67.2
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.48	-	-	-	3.7	-	-	-	8.3
2-3/8" OD Pipe	0.48	-	-	-	3.7	-	-	-	8.3
PL8x0.25	1.15	-	-	-	9.0	-	-	-	19.9
PL1.5	0.62	-	-	-	4.8	-	-	-	6.6
L2x2	0.63	-	-	-	4.9	-	-	-	9.3
L3x3	0.71	-	-	-	5.5	-	-	-	12.2

Dewberry®

V 1.2

Job Number	50121918
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(Essex CT) - Serviceability Wind Load

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Serviceability Wind Load Design Criteria

General Information & Design Input from TIA-222-G

Item	Value	Description	Reference
V_s =	60.00	Service Wind Speed (mph)	*Sect. 2.8.3, TIA*
K_d =	0.85	Service Wind Direction Probability Factor	*Sect. 2.8.3, TIA*
Class	II	Structure Classification	*Table 2-1, TIA*
z = h =	106.00	ft. (A.G.L.)	*Max. Center of Appurtenance*
Exp. Cat.	C	Exposure Category	*Sect. 2.6.5.1, TIA*
z_g=	900.00	Exposure Category Coeff.	*Table 2-4, TIA*
α' =	9.50	Exposure Category Coeff.	*Table 2-4, TIA*
$K_{z\,(min)}$=	0.85	Exposure Category Coeff.	*Table 2-4, TIA*
K_e=	1.00	Exposure Category Coeff.	*Table 2-4, TIA*
K_t=	N/A	Topographic Constant	*Table 2-5, TIA ("N/A" if Topo. Cat. = 1)*
K_z=	1.28	$= 2.01(z/z_g)^{(2/\alpha')}$	*Sect. 2.6.5.2, TIA*
Topo. Cat.	1	Topographic Category (1-5)	*Sect. 2.6.6.2, TIA*
e =	2.72	Natural Logarithmic base	
f =	N/A	Height Attenuation Factor	*Table 2-5, TIA ("N/A" if Topo. Cat. = 1)*
H =	N/A	ft. Height of crest above surrounding terrain	
K_h =	N/A	$e^{((f*z)/H)}$	*Sect. 2.6.6.4, TIA*
K_{zt} =	1.00	$= [1+((K_e*K_t)/K_h)]^2$	*Sect. 2.6.6.4, TIA*
G_h =	1.00	Gust Effect Factor	*Sect. 2.6.9, TIA*
$q_{z\ service}$ =	10.1 psf	$= 0.00256(K_z)(K_{zt})(K_d)(V_s^2)$	*Sect. 2.6.9.6, TIA*
$q_{z\ maint}$ =	2.9 psf	$= 0.00256(K_z)(K_{zt})(K_d)(V_m^2)$	

Design Serviceability & Maintenance Wind Forces:

Section 2.6.9.2

$F_{As} = q_{z\ service} G_h (EPA)_A$

$F_{Am} = q_{z\ maint} G_h (EPA)_A$

(where $(EPA)_A$ = effective projected area of the appurtenance = $C_a A_a$)

(see calculation tables on following pages)

Dewberry®

V 1.2

Job Number	50121918
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(Essex CT) - Serviceability Wind Load

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Element Definition:

	Description	Dimensions (in.) W	D	H	Weight (lb)	Length / # Supports
	LPA-80063/6CF	15.00	13.10	70.90	27.00	2.00
	JAHH-65B-R3B (SBS)	27.56	8.19	71.97	196.21	2.00
	General Large Antenna	12.00	7.10	96.00	50.00	2.00
	General Medium Antenna	12.00	7.10	72.00	50.00	2.00
	LPA-80080/6CF	5.50	13.20	70.90	21.00	2.00
	B5/B13 RRH-BR04C	15.00	8.10	15.00	82.00	1.00
	B2/B66A RRH-BR049	15.00	10.00	15.00	97.50	1.00
	MT6407-77A	16.10	5.50	35.10	87.10	2.00
	Non-Verizon RRH	12.00	9.00	25.00	60.00	1.00
	OVP	15.70	10.30	19.20	32.00	1.00
	STRUCTURAL MEMBERS					
(Mounting Pipe)	2-3/8" OD Pipe	2.38	2.38	90.00	STAAD	Pipe
	2-3/8" OD Pipe	2.38	2.38	90.00	STAAD	Pipe
	PL8x0.25	8.00	0.25	30.00	STAAD	Plate
	PL1.5	1.50	0.25	50.88	STAAD	Plate
	L2x2	2.00	2.00	36.00	STAAD	Angle
	L3x3	3.00	3.00	36.00	STAAD	Angle
				0.00		
				0.00		
				0.00		

Service Wind Load

Members	Dimensions (ft.) Width (Normal)	Depth (Tangent)	Height (or span)	Area $(A_a)_n$ (normal) (sf)	Area $(A_a)_t$ (tangent) (sf)	Aspect Ratio (normal)	Aspect Ratio (tangent)	C_{an} (normal) Table 2-8	C_{at} (tangent) Table 2-8
LPA-80063/6CF	1.25	1.09	5.91	7.39	6.44	4.73	5.42	1.30	1.33
JAHH-65B-R3B (SBS)	2.30	0.68	6.00	13.80	4.08	2.61	8.82	1.20	1.46
General Large Antenna	1.00	0.59	8.00	8.00	4.72	8.00	13.56	1.43	1.62
General Medium Antenna	1.00	0.59	6.00	6.00	3.54	6.00	10.17	1.36	1.51
LPA-80080/6CF	0.46	1.10	5.91	2.72	6.50	12.85	5.37	1.59	1.33
B5/B13 RRH-BR04C	1.25	0.68	1.25	1.56	0.85	1.00	1.84	1.20	1.20
B2/B66A RRH-BR049	1.25	0.83	1.25	1.56	1.04	1.00	1.51	1.20	1.20
MT6407-77A	1.34	0.46	2.93	3.93	1.35	2.19	6.37	1.20	1.37
Non-Verizon RRH	1.00	0.75	2.08	2.08	1.56	2.08	2.77	1.20	1.21
OVP	1.31	0.86	1.60	2.10	1.38	1.22	1.86	1.20	1.20
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.20	0.20	7.50	0.20	0.20	37.50	37.50	1.20	1.20
2-3/8" OD Pipe	0.20	0.20	7.50	0.20	0.20	37.50	37.50	1.20	1.20
PL8x0.25	0.67	0.02	2.50	0.67	0.02	3.73	125.00	1.25	2.00
PL1.5	0.13	0.02	4.24	0.13	0.02	32.62	212.00	2.00	2.00
L2x2	0.17	0.17	3.00	0.17	0.17	17.65	17.65	1.75	1.75
L3x3	0.25	0.25	3.00	0.25	0.25	12.00	12.00	1.57	1.57

Dewberry®

V 1.2

Job Number	50121918
Made by:	DAP
Date:	5/25/21
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Date:	5/26/21

(Essex CT) - Serviceability Wind Load

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Service Effective Projected Area & Wind Loads

Members	EPA_{as} @ 0.0° (sf)	EPA_{as} @ 30.0° (sf)	EPA_{as} @ 60.0° (sf)	EPA_{as} @ 90.0° (sf)	F_{as} @ 0.0° (lb)	F_{as} @ 30.0° (lb)	F_{as} @ 60.0° (lb)	F_{as} @ 90.0° (lb)
LPA-80063/6CF	9.61	9.35	8.83	8.57	48.5	47.2	44.6	43.3
JAHH-65B-R3B (SBS)	16.56	13.91	8.61	5.96	83.6	70.2	43.5	30.1
General Large Antenna	11.44	10.49	8.59	7.65	57.8	53.0	43.4	38.6
General Medium Antenna	8.16	7.46	6.05	5.35	41.2	37.7	30.5	27.0
LPA-80080/6CF	4.32	5.40	7.56	8.65	21.8	27.3	38.2	43.7
B5/B13 RRH-BR04C	1.87	1.66	1.23	1.02	18.9	16.8	12.5	10.3
B2/B66A RRH-BR049	1.87	1.72	1.40	1.25	18.9	17.3	14.2	12.6
MT6407-77A	4.72	4.00	2.57	1.85	23.8	20.2	13.0	9.3
Non-Verizon RRH	2.50	2.34	2.04	1.89	25.2	23.7	20.6	19.1
OVP	2.52	2.30	1.87	1.66	25.5	23.3	18.9	16.7
STRUCTURAL MEMBERS								
2-3/8" OD Pipe	0.24	-	-	-	2.4	-	-	-
2-3/8" OD Pipe	0.24	-	-	-	2.4	-	-	-
PL8x0.25	0.84	-	-	-	8.5	-	-	-
PL1.5	0.26	-	-	-	2.6	-	-	-
L2x2	0.30	-	-	-	3.0	-	-	-
L3x3	0.39	-	-	-	4.0	-	-	-

Dewberry

V 1.2

Job Number	50121918
Made by:	DAP
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Checked by:	SA
Date:	5/26/21

(Essex CT) - Load Input for STAAD Model

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STAAD Gravity Load Input

Equipment	Dead Load *(lb per support)*	Ice Load *(lb per support)*
LPA-80063/6CF	13.5	130.9
JAHH-65B-R3B (SBS)	98.1	187.3
General Large Antenna	25.0	128.3
General Medium Antenna	25.0	96.2
LPA-80080/6CF	10.5	96.9
B5/B13 RRH-BR04C	82.0	48
B2/B66A RRH-BR049	97.5	50.6
MT6407-77A	43.6	56.1
Non-Verizon RRH	60.0	71.3
OVP	32.0	67.2

STAAD Wind Load Calculation

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°	Case #5 120°	Case #6 150°	Case #7 180°	Case #8 210°	Case #9 240°	Case #10 270°	Case #11 300°	Case #12 330°
Not Shielded (1 - 4)	z	$-F_0$	Same as Case #4	Same as Case #1	-	Same as Case #1	Same as Case #2	Same as Case #3	Same as Case #4	Same as Case #1	Same as Case #2	Same as Case #3	Same as Case #4
	x	-			F_{90}								
Shielded (1 - 4)	z	N/A			-								
	x	-			F_{90}								
Not Shielded (5 - 12)	z	$-F_{60}$			-								
	x	-			F_{30}								
Shielded (5 - 12)	z	$-F_{60}$			-								
	x	-			N/A								

Dewberry

V 1.2

Job Number	50121918
Made by:	DAP
Date:	5/25/21
Checked by:	SA
Date:	5/26/21

(Essex CT) - Load Input for STAAD Model

\\bos-fs\Boston\Projects\50121487\50121918 - Essex CT\Engineering\Structural\Mount Analysis\Rev 0\Calcs\Essex CT_3 sided Co-Lo Platform Mount Loading STAAD 05.25.21.xlsx

STAAD Load Input (Design Wind Load)

Positions 1 - 4

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°
LPA-80063/6CF	z	-163.8	Same as Case #4	Same as Case #1	-
(Not Shielded)	x	-			146.0
JAHH-65B-R3B (SBS)	z	-282.3			-
(Not Shielded)	x	-			101.6
General Large Antenna	z	-195.1			-
(Not Shielded)	x	-			130.4
General Medium Antenna	z	-139.1			-
(Not Shielded)	x	-			91.1
B5/B13 RRH-BR04C	z	-63.8			-
(Not Shielded)	x	-			34.8
B2/B66A RRH-BR049	z	-63.8			-
(Not Shielded)	x	-			42.6
MT6407-77A	z	-80.4			-
(Not Shielded)	x	-			31.5
Non-Verizon RRH	z	-85.1			-
(Not Shielded)	x	-			64.4
OVP	z	-85.9			-
(Not Shielded)	x	-			56.5

Positions 5 - 12

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°
LPA-80063/6CF	z	-150.5	Same as Case #4	Same as Case #1	-
(Not Shielded)	x	-			159.4
JAHH-65B-R3B (SBS)	z	-146.8			-
(Not Shielded)	x	-			237.2
General Large Antenna	z	-146.5			-
(Not Shielded)	x	-			178.9
General Medium Antenna	z	-103.1			-
(Not Shielded)	x	-			127.1
LPA-80080/6CF	z	-129.0			-
(Not Shielded)	x	-			92.2
B5/B13 RRH-BR04C	z	-42.0			-
(Not Shielded)	x	-			56.6
B2/B66A RRH-BR049	z	-47.9			-
(Not Shielded)	x	-			58.5
MT6407-77A	z	-43.8			-
(Not Shielded)	x	-			68.2
Non-Verizon RRH	z	-69.6			-
(Not Shielded)	x	-			79.9
OVP	z	-63.8			-
(Not Shielded)	x	-			78.6

Dewberry

V 1.2

Job Number	50121918
Made by:	DAP
Date:	5/25/21
Checked by:	SA
Date:	5/26/21

(Essex CT) - Load Input for STAAD Model

\\bos-fs\Boston\Projects\50121487\50121918 - Essex CT\Engineering\Structural\Mount Analysis\Rev 0\Calcs\Essex CT_3 sided Co-Lo Platform Mount Loading STAAD 05.25.21.xlsx

STAAD Load Input (Design Wind on Ice Load)

Positions 1 - 4

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°
LPA-80063/6CF	z	-46.9	Same as Case #4	Same as Case #1	-
(Not Shielded)	x	-			42.7
JAHH-65B-R3B (SBS)	z	-75.8			-
(Not Shielded)	x	-			32.5
General Large Antenna	z	-57.0			-
(Not Shielded)	x	-			41.6
General Medium Antenna	z	-41.1			-
(Not Shielded)	x	-			30.0
B5/B13 RRH-BR04C	z	-21.9			-
(Not Shielded)	x	-			13.8
B2/B66A RRH-BR049	z	-21.9			-
(Not Shielded)	x	-			15.9
MT6407-77A	z	-24.3			-
(Not Shielded)	x	-			11.9
Non-Verizon RRH	z	-28.3			-
(Not Shielded)	x	-			22.7
OVP	z	-28.0			-
(Not Shielded)	x	-			20.0

Positions 5 - 12

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°
LPA-80063/6CF	z	-43.7	Same as Case #4	Same as Case #1	-
(Not Shielded)	x	-			45.8
JAHH-65B-R3B (SBS)	z	-43.3			-
(Not Shielded)	x	-			65.0
General Large Antenna	z	-45.4			-
(Not Shielded)	x	-			53.2
General Medium Antenna	z	-32.8			-
(Not Shielded)	x	-			38.3
LPA-80080/6CF	z	-38.7			-
(Not Shielded)	x	-			30.2
B5/B13 RRH-BR04C	z	-15.8			-
(Not Shielded)	x	-			19.9
B2/B66A RRH-BR049	z	-17.4			-
(Not Shielded)	x	-			20.4
MT6407-77A	z	-15.0			-
(Not Shielded)	x	-			21.2
Non-Verizon RRH	z	-24.1			-
(Not Shielded)	x	-			26.9
OVP	z	-22.0			-
(Not Shielded)	x	-			26.0

Dewberry

V 1.2

Job Number	50121918
Made by:	DAP
Date:	5/25/21
Checked by:	SA
Date:	5/26/21

(Essex CT) - Load Input for STAAD Model

\\bos-fs\Boston\Projects\50121487\50121918 - Essex CT\Engineering\Structural\Mount Analysis\Rev 0\Calcs\Essex CT_3 sided Co-Lo Platform Mount Loading STAAD 05.25.21.xlsx

STAAD Load Input (Service Wind Load)

Positions 1 - 4

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°
LPA-80063/6CF	z	-48.5	Same as Case #4	Same as Case #1	-
(Not Shielded)	x	-			43.3
JAHH-65B-R3B (SBS)	z	-83.6			-
(Not Shielded)	x	-			30.1
General Large Antenna	z	-57.8			-
(Not Shielded)	x	-			38.6
General Medium Antenna	z	-41.2			-
(Not Shielded)	x	-			27.0
B5/B13 RRH-BR04C	z	-18.9			-
(Not Shielded)	x	-			10.3
B2/B66A RRH-BR049	z	-18.9			-
(Not Shielded)	x	-			12.6
MT6407-77A	z	-23.8			-
(Not Shielded)	x	-			9.3
Non-Verizon RRH	z	-25.2			-
(Not Shielded)	x	-			19.1
OVP	z	-25.5			-
(Not Shielded)	x	-			16.7

Positions 5 - 12

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°
LPA-80063/6CF	z	-44.6	Same as Case #4	Same as Case #1	-
(Not Shielded)	x	-			47.2
JAHH-65B-R3B (SBS)	z	-43.5			-
(Not Shielded)	x	-			70.2
General Large Antenna	z	-43.4			-
(Not Shielded)	x	-			53.0
General Medium Antenna	z	-30.5			-
(Not Shielded)	x	-			37.7
LPA-80080/6CF	z	-38.2			-
(Not Shielded)	x	-			27.3
B5/B13 RRH-BR04C	z	-12.5			-
(Not Shielded)	x	-			16.8
B2/B66A RRH-BR049	z	-14.2			-
(Not Shielded)	x	-			17.3
MT6407-77A	z	-13.0			-
(Not Shielded)	x	-			20.2
Non-Verizon RRH	z	-20.6			-
(Not Shielded)	x	-			23.7
OVP	z	-18.9			-
(Not Shielded)	x	-			23.3

Job Information

	Engineer	Checked	Approved
Name:	DAP	SA	
Date:	5/24/2021	5/26/2021	

Project ID	
Project Name	

Structure Type	SPACE FRAME

Number of Nodes	281	Highest Node	395
Number of Elements	321	Highest Beam	379
Number of Plates	32	Highest Plate	194

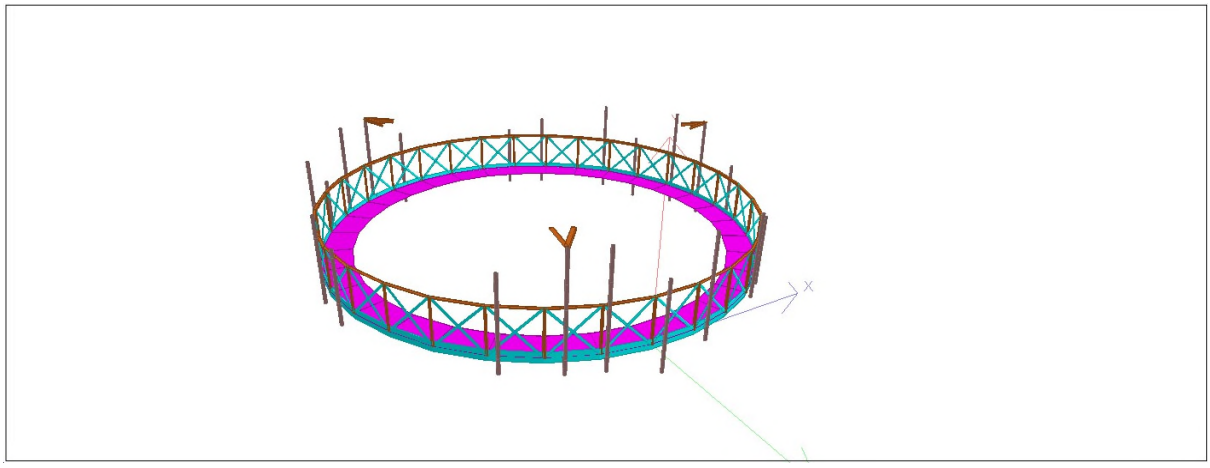
Number of Basic Load Cases	5
Number of Combination Load Cases	3

Included in this printout are data for:

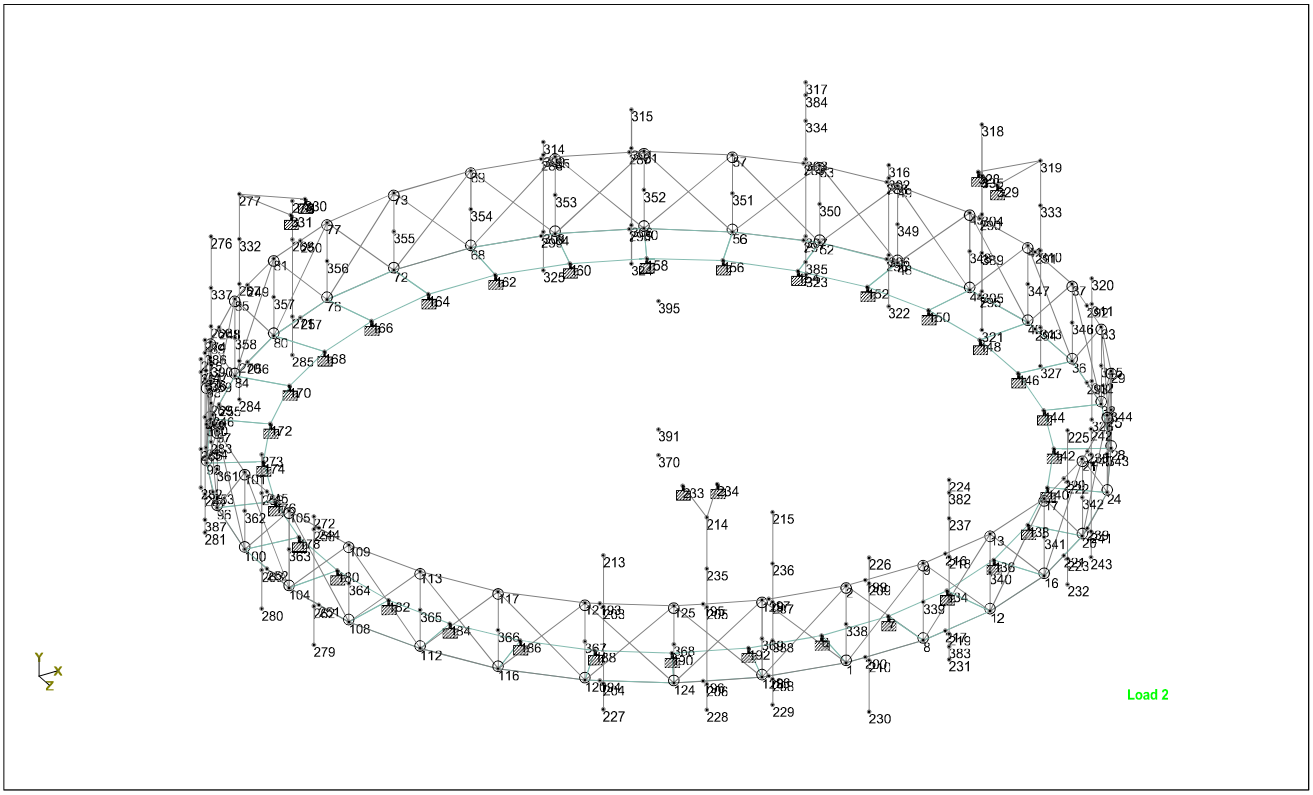
All	The Whole Structure

Included in this printout are results for load cases:

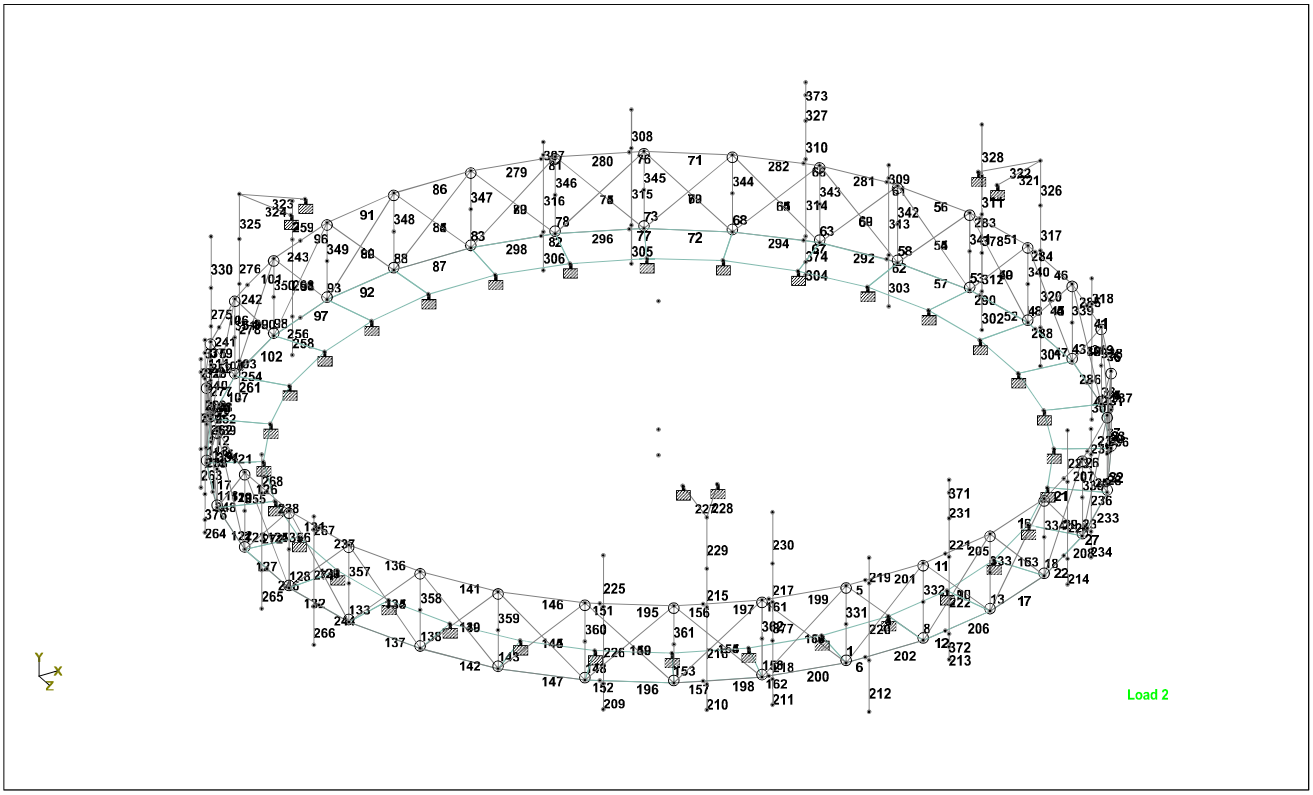
Type	L/C	Name
Primary	1	DEAD
Primary	2	WL#1
Primary	4	DI
Primary	5	WLI#1
Primary	7	WLS#1
Combination	13	1.2D+1.6WL#1
Combination	17	1.2D+1.0DI+1.0WI#1
Combination	21	1.0D+1.0WLS#1



3D Rendered View



Node Layout



Beam Layout

Section Properties

Prop	Section	Area (in^2)	I_{yy} (in^4)	I_{zz} (in^4)	J (in^4)	Material
2	L20204	0.944	0.550	0.146	0.020	STEEL
3	Rect 7.99x0.41	3.261	0.045	17.356	0.175	STEEL
4	Rect 1.50x0.25	0.374	0.002	0.0702	0.007	STEEL
5	PIPS20	1.020	0.627	0.627	1.254	STEEL
6	L30304	1.440	1.982	0.506	0.030599	STEEL
7	L2X1.5X0.1875	0.621	0.303	0.064384	0.007	STEEL

Plate Thickness

Prop	Node A (in)	Node B (in)	Node C (in)	Node D (in)	Material
1	0.187	0.187	0.187	0.187	-

Materials

Mat	Name	E (kip/in^2)	ν	Density (kip/in^3)	α (/°F)
1	CONCRETE	3.15 E+3	0.170	8.68e-05	5.5 E -6
2	ALUMINUM	10 E+3	0.330	9.8e-05	12.8 E -6
3	STEEL_50_KSI	29 E+3	0.300	0.000283	6.5 E -6
4	STAINLESSSTEEL	28 E+3	0.300	0.000283	9.9 E -6
5	STEEL_36_KSI	29 E+3	0.300	0.000283	6.5 E -6
6	STEEL_275_NMM2	29.7 E+3	0.300	0.000	6.67 E -6
7	STEEL	29 E+3	0.300	0.000283	6 E -6
8	FIBERGLASS	2.8 E+3	0.350	6e-05	4.4 E -6
9	STEEL_355_NMM2	29.7 E+3	0.300	0.000	6.67 E -6

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip-ft/deg)	rY (kip-ft/deg)	rZ (kip-ft/deg)
6	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
7	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
134	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
136	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
138	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
140	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
142	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
144	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
146	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
148	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
150	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
152	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
154	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
156	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
158	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
160	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
162	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
164	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
166	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
168	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
170	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
172	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
174	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
176	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
178	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
180	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
182	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
184	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
186	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
188	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Supports Cont...

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip-ft/deg)	rY (kip-ft/deg)	rZ (kip-ft/deg)
190	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
192	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
233	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
234	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
328	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
329	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
330	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
331	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Releases

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

Beam	Node	x	y	z	rx	ry	rz
1	1	Fixed	Fixed	Fixed	Fixed	Pin	Pin
8	8	Fixed	Fixed	Fixed	Fixed	Pin	Pin
13	12	Fixed	Fixed	Fixed	Fixed	Pin	Pin
18	16	Fixed	Fixed	Fixed	Fixed	Pin	Pin
23	20	Fixed	Fixed	Fixed	Fixed	Pin	Pin
28	24	Fixed	Fixed	Fixed	Fixed	Pin	Pin
33	28	Fixed	Fixed	Fixed	Fixed	Pin	Pin
38	32	Fixed	Fixed	Fixed	Fixed	Pin	Pin
43	36	Fixed	Fixed	Fixed	Fixed	Pin	Pin
48	40	Fixed	Fixed	Fixed	Fixed	Pin	Pin
53	44	Fixed	Fixed	Fixed	Fixed	Pin	Pin
58	48	Fixed	Fixed	Fixed	Fixed	Pin	Pin
63	52	Fixed	Fixed	Fixed	Fixed	Pin	Pin
68	56	Fixed	Fixed	Fixed	Fixed	Pin	Pin
73	60	Fixed	Fixed	Fixed	Fixed	Pin	Pin
78	64	Fixed	Fixed	Fixed	Fixed	Pin	Pin
83	68	Fixed	Fixed	Fixed	Fixed	Pin	Pin
88	72	Fixed	Fixed	Fixed	Fixed	Pin	Pin
93	76	Fixed	Fixed	Fixed	Fixed	Pin	Pin
98	80	Fixed	Fixed	Fixed	Fixed	Pin	Pin
103	84	Fixed	Fixed	Fixed	Fixed	Pin	Pin
108	88	Fixed	Fixed	Fixed	Fixed	Pin	Pin
113	92	Fixed	Fixed	Fixed	Fixed	Pin	Pin
118	96	Fixed	Fixed	Fixed	Fixed	Pin	Pin
123	100	Fixed	Fixed	Fixed	Fixed	Pin	Pin
128	104	Fixed	Fixed	Fixed	Fixed	Pin	Pin
133	108	Fixed	Fixed	Fixed	Fixed	Pin	Pin
138	112	Fixed	Fixed	Fixed	Fixed	Pin	Pin
143	116	Fixed	Fixed	Fixed	Fixed	Pin	Pin
148	120	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Releases Cont...

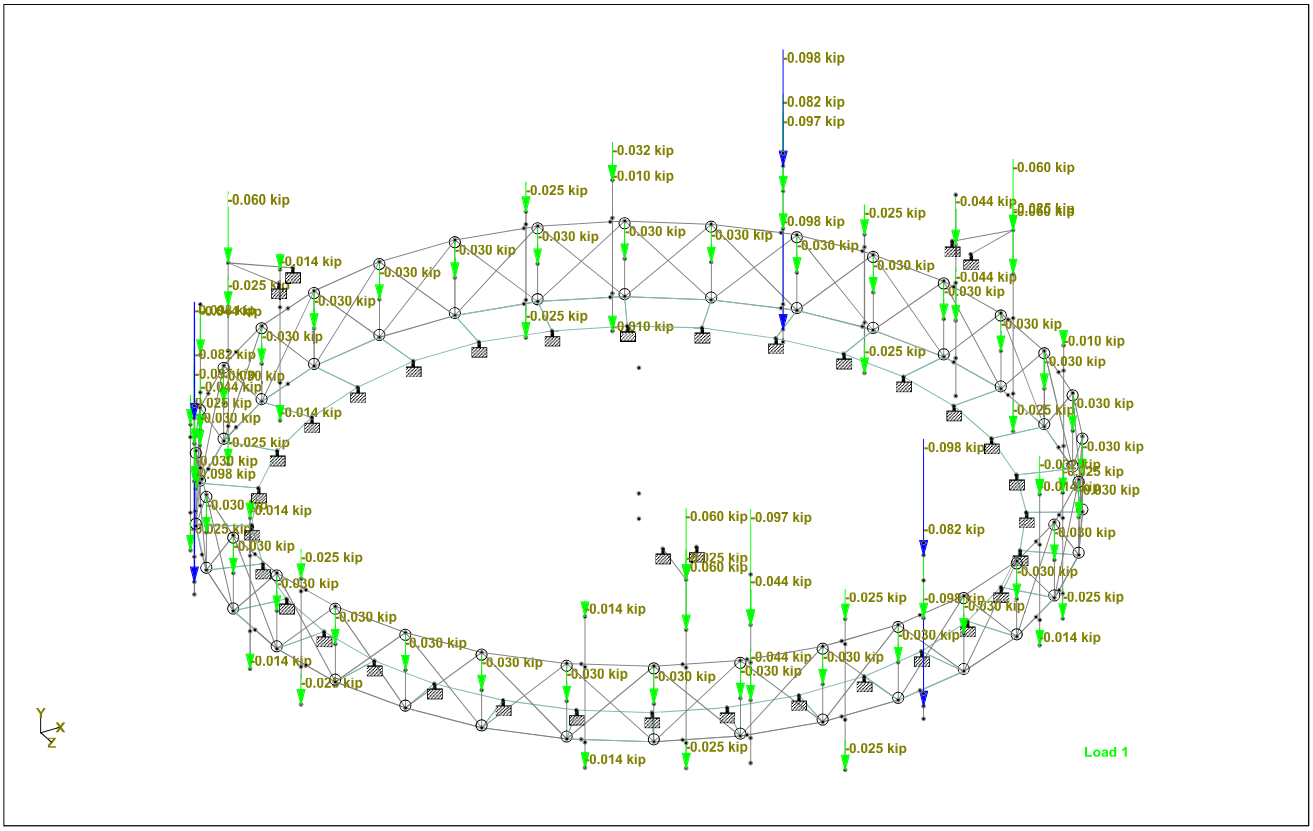
Beam	Node	x	y	z	rx	ry	rz
153	124	Fixed	Fixed	Fixed	Fixed	Pin	Pin
158	128	Fixed	Fixed	Fixed	Fixed	Pin	Pin
331	2	Fixed	Fixed	Fixed	Fixed	Pin	Pin
332	9	Fixed	Fixed	Fixed	Fixed	Pin	Pin
333	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
334	17	Fixed	Fixed	Fixed	Fixed	Pin	Pin
335	21	Fixed	Fixed	Fixed	Fixed	Pin	Pin
336	25	Fixed	Fixed	Fixed	Fixed	Pin	Pin
337	29	Fixed	Fixed	Fixed	Fixed	Pin	Pin
338	33	Fixed	Fixed	Fixed	Fixed	Pin	Pin
339	37	Fixed	Fixed	Fixed	Fixed	Pin	Pin
340	41	Fixed	Fixed	Fixed	Fixed	Pin	Pin
341	45	Fixed	Fixed	Fixed	Fixed	Pin	Pin
342	49	Fixed	Fixed	Fixed	Fixed	Pin	Pin
343	53	Fixed	Fixed	Fixed	Fixed	Pin	Pin
344	57	Fixed	Fixed	Fixed	Fixed	Pin	Pin
345	61	Fixed	Fixed	Fixed	Fixed	Pin	Pin
346	65	Fixed	Fixed	Fixed	Fixed	Pin	Pin
347	69	Fixed	Fixed	Fixed	Fixed	Pin	Pin
348	73	Fixed	Fixed	Fixed	Fixed	Pin	Pin
349	77	Fixed	Fixed	Fixed	Fixed	Pin	Pin
350	81	Fixed	Fixed	Fixed	Fixed	Pin	Pin
351	85	Fixed	Fixed	Fixed	Fixed	Pin	Pin
352	89	Fixed	Fixed	Fixed	Fixed	Pin	Pin
353	93	Fixed	Fixed	Fixed	Fixed	Pin	Pin
354	97	Fixed	Fixed	Fixed	Fixed	Pin	Pin
355	101	Fixed	Fixed	Fixed	Fixed	Pin	Pin
356	105	Fixed	Fixed	Fixed	Fixed	Pin	Pin
357	109	Fixed	Fixed	Fixed	Fixed	Pin	Pin
358	113	Fixed	Fixed	Fixed	Fixed	Pin	Pin
359	117	Fixed	Fixed	Fixed	Fixed	Pin	Pin
360	121	Fixed	Fixed	Fixed	Fixed	Pin	Pin
361	125	Fixed	Fixed	Fixed	Fixed	Pin	Pin
362	129	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Primary Load Cases

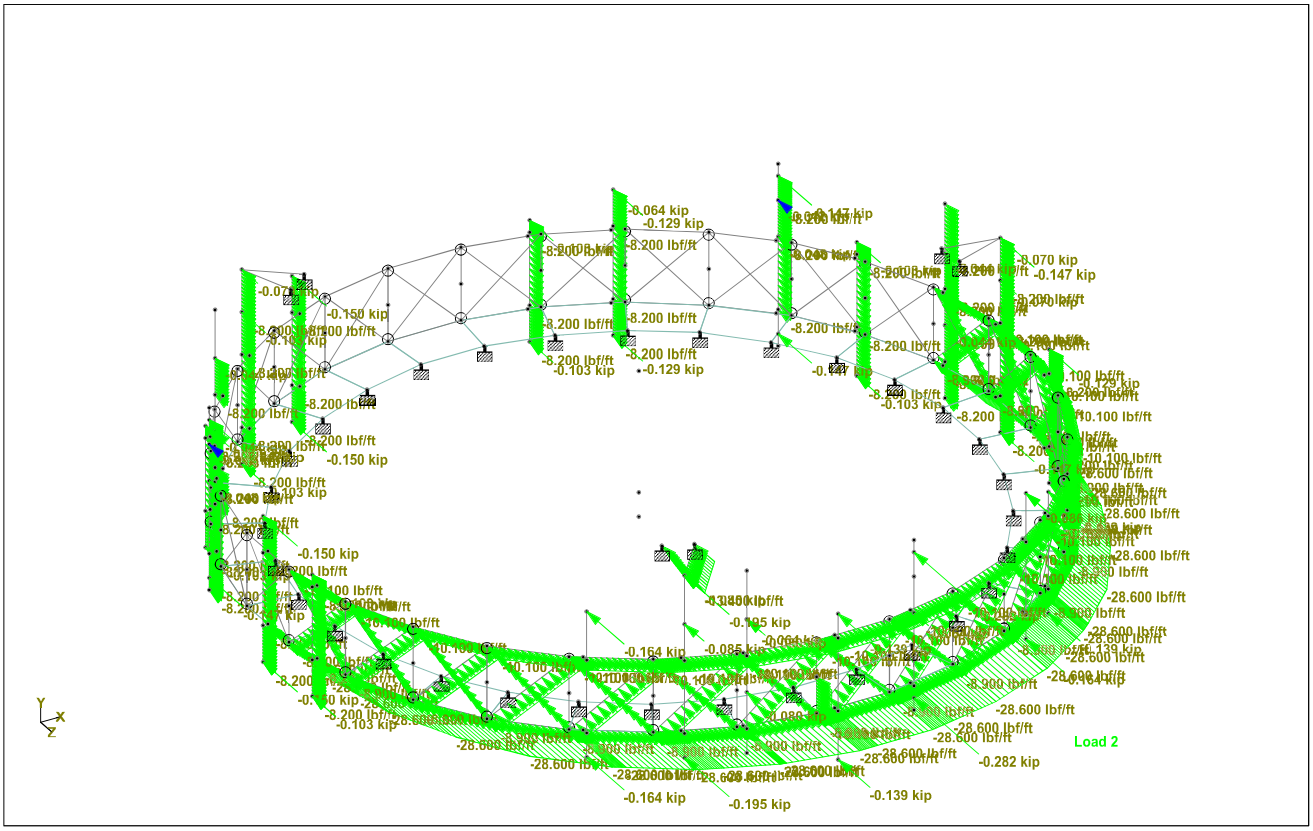
Number	Name	Type
1	DEAD	Dead
2	WL#1	Wind
4	DI	Ice
5	WLI#1	Wind on Ice
7	WLS#1	Wind

Combination Load Cases

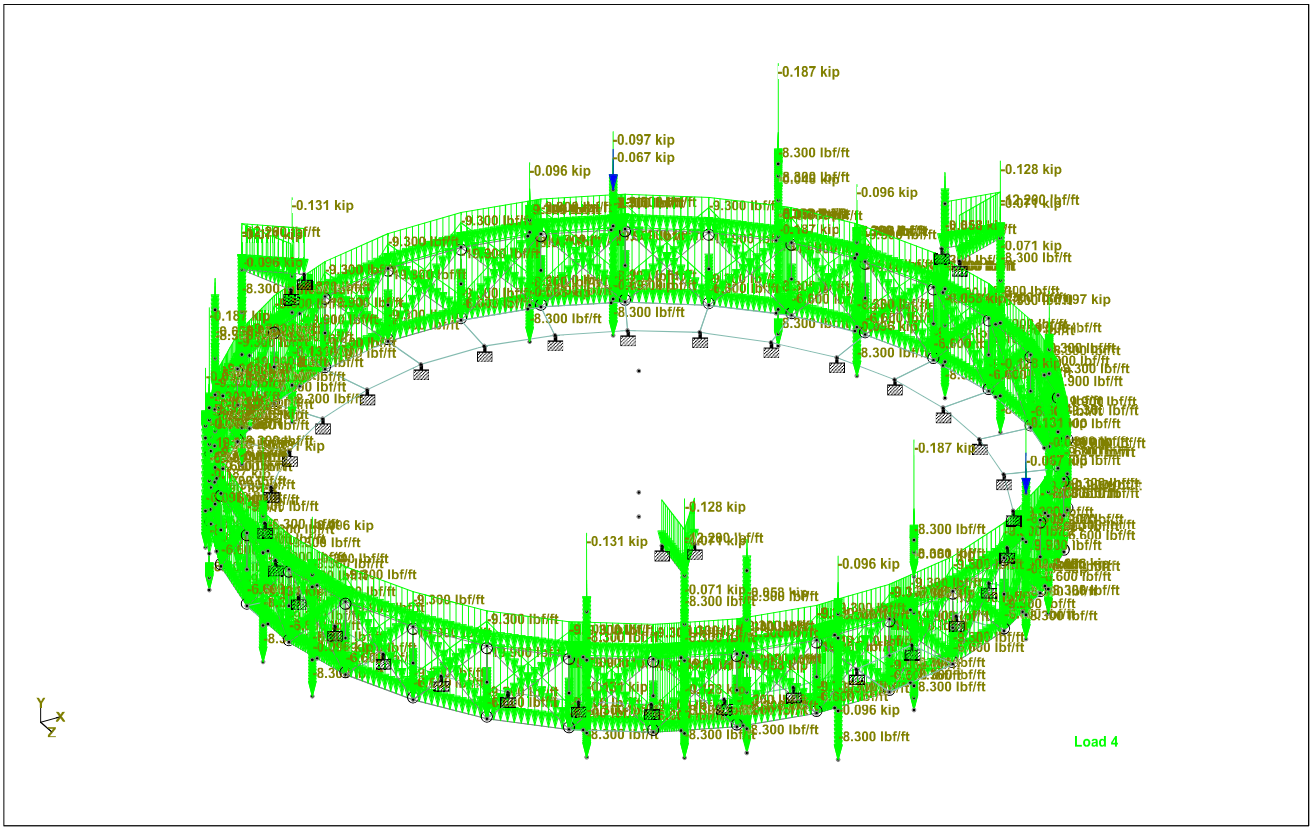
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
13	1.2D+1.6WL#1	1	DEAD	1.20
		2	WL#1	1.60
17	1.2D+1.0DI+1.0WI#1	1	DEAD	1.20
		5	WLI#1	1.00
		4	DI	1.00
21	1.0D+1.0WLS#1	1	DEAD	1.00
		7	WLS#1	1.00



Dead Load



Wind Load (Z-Direction)



Dead Ice Load

Plate Center Principal Stress Summary

			Principal		Von Mis		Tresca	
	Plate	L/C	Top (psi)	Bottom (psi)	Top (psi)	Bottom (psi)	Top (psi)	Bottom (psi)
Max (t)	194	2:WL#1	**1.88E+3**	-446.967	1.69E+3	1.75E+3	1.88E+3	1.93E+3
Max (b)	173	17:1.2D+1.0DI·	-1.62E+3	**6.81E+3**	6.14E+3	6.13E+3	6.78E+3	6.81E+3
Max VM (t)	173	17:1.2D+1.0DI·	-1.62E+3	6.81E+3	**6.14E+3**	6.13E+3	6.78E+3	6.81E+3
Max VM (b)	173	17:1.2D+1.0DI·	-1.62E+3	6.81E+3	6.14E+3	**6.13E+3**	6.78E+3	6.81E+3
Tresca (t)	173	17:1.2D+1.0DI·	-1.62E+3	6.81E+3	6.14E+3	6.13E+3	**6.78E+3**	6.81E+3
Tresca (b)	173	17:1.2D+1.0DI·	-1.62E+3	6.81E+3	6.14E+3	6.13E+3	6.78E+3	**6.81E+3**

Allowable Plate Stress: 0.75*36 ksi = 27 ksi

6.81 ksi < 27 ksi --> OK

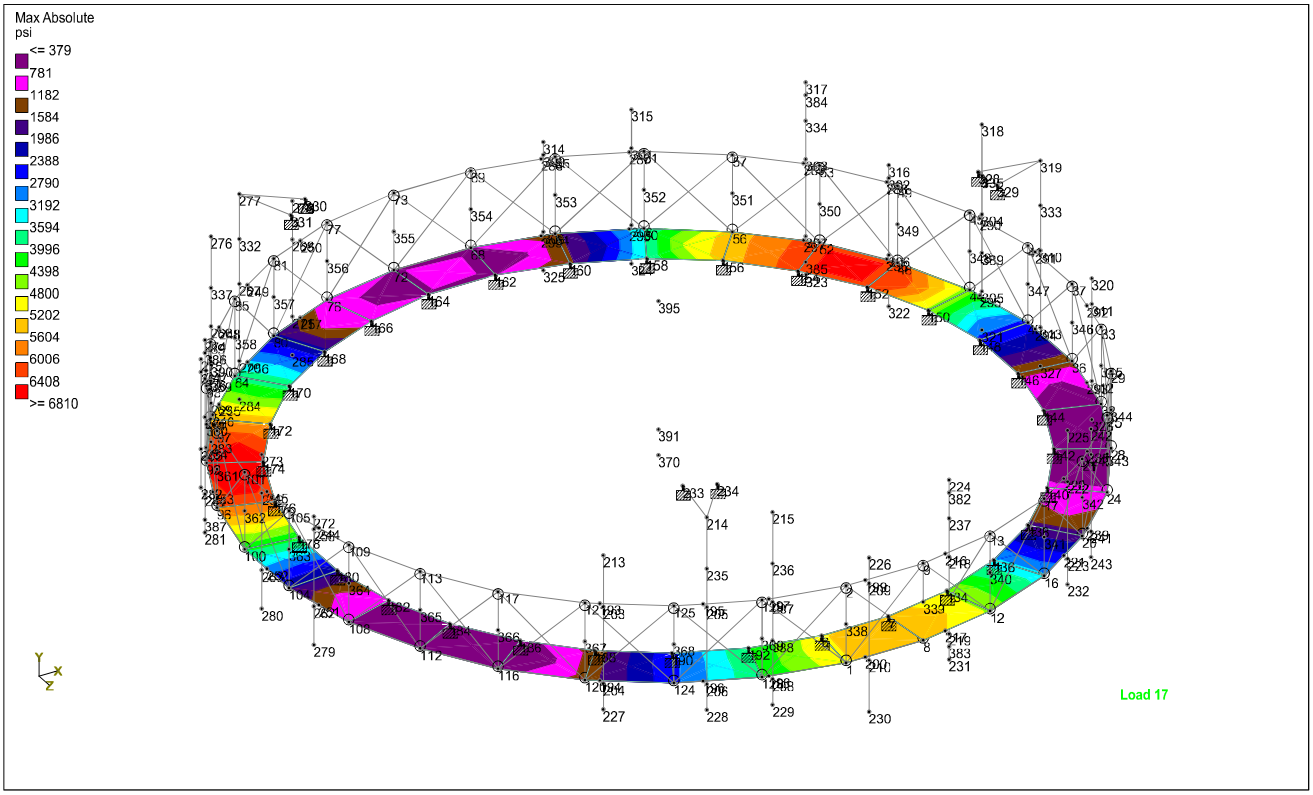


Plate Stress

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	L2X1.5X0.1E	L2X1.5X0.1E	0.021	1.000	0.021	Eq. H3-8	13	0.621	0.064384	0.303	0.007
3	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
4	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
5	L20204	L20204	0.367	1.000	0.367	Eq. H2-1	13	0.944	0.141	0.554	0.020
6	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
8	L2X1.5X0.1E	L2X1.5X0.1E	0.020	1.000	0.020	Eq. H3-8	13	0.621	0.064384	0.303	0.007
9	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
10	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
11	L20204	L20204	0.765	1.000	0.765	Sec. F1	13	0.944	0.141	0.554	0.020
12	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
13	L2X1.5X0.1E	L2X1.5X0.1E	0.028	1.000	0.028	Eq. H3-8	17	0.621	0.064384	0.303	0.007
15	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
16	L20204	L20204	0.232	1.000	0.232	Eq. H2-1	13	0.944	0.141	0.554	0.020
17	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
18	L2X1.5X0.1E	L2X1.5X0.1E	0.036	1.000	0.036	Eq. H3-8	17	0.621	0.064384	0.303	0.007
19	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
20	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
21	L20204	L20204	0.431	1.000	0.431	Eq. H2-1	13	0.944	0.141	0.554	0.020

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)
22	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
23	L2X1.5X0.18	L2X1.5X0.18	0.038	1.000	0.038	Eq. H2-1	13	0.621	0.064384	0.303	0.007
24	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
25	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
26	L20204	L20204	0.234	1.000	0.234	Eq. H2-1	13	0.944	0.141	0.554	0.020
27	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
28	L2X1.5X0.18	L2X1.5X0.18	0.026	1.000	0.026	Eq. H3-8	17	0.621	0.064384	0.303	0.007
29	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
30	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
31	L20204	L20204	0.299	1.000	0.299	Eq. H2-1	13	0.944	0.141	0.554	0.020
32	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
33	L2X1.5X0.18	L2X1.5X0.18	0.009	1.000	0.009	Eq. H3-8	13	0.621	0.064384	0.303	0.007
34	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
35	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
36	L20204	L20204	0.229	1.000	0.229	Eq. H2-1	17	0.944	0.141	0.554	0.020
37	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
38	L2X1.5X0.18	L2X1.5X0.18	0.023	1.000	0.023	Eq. H3-8	17	0.621	0.064384	0.303	0.007
39	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
40	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
41	L20204	L20204	0.170	1.000	0.170	Eq. H2-1	17	0.944	0.141	0.554	0.020
42	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
43	L2X1.5X0.18	L2X1.5X0.18	0.036	1.000	0.036	Eq. H3-8	17	0.621	0.064384	0.303	0.007
44	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
45	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
46	L20204	L20204	0.349	1.000	0.349	Eq. H2-1	17	0.944	0.141	0.554	0.020
47	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
48	L2X1.5X0.18	L2X1.5X0.18	0.030	1.000	0.030	Eq. H3-8	17	0.621	0.064384	0.303	0.007
49	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
50	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
51	L20204	L20204	0.201	1.000	0.201	Eq. H2-1	17	0.944	0.141	0.554	0.020
52	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
53	L2X1.5X0.18	L2X1.5X0.18	0.023	1.000	0.023	Eq. H3-8	17	0.621	0.064384	0.303	0.007
54	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
55	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
56	L20204	L20204	0.234	1.000	0.234	Eq. H2-1	13	0.944	0.141	0.554	0.020
57	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
58	L2X1.5X0.18	L2X1.5X0.18	0.056	1.000	0.056	Eq. H2-1	17	0.621	0.064384	0.303	0.007
59	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
60	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
61	L20204	L20204	0.317	1.000	0.317	Eq. H2-1	17	0.944	0.141	0.554	0.020
62	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
63	L2X1.5X0.18	L2X1.5X0.18	0.023	1.000	0.023	Eq. H2-1	13	0.621	0.064384	0.303	0.007
64	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
65	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
66	L20204	L20204	0.579	1.000	0.579	Sec. F1	13	0.944	0.141	0.554	0.020

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)
67	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
68	L2X1.5X0.18	L2X1.5X0.18	0.034	1.000	0.034	Eq. H3-8	17	0.621	0.064384	0.303	0.007
69	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
70	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
71	L20204	L20204	0.212	1.000	0.212	Eq. H2-1	13	0.944	0.141	0.554	0.020
72	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
73	L2X1.5X0.18	L2X1.5X0.18	0.037	1.000	0.037	Eq. H3-8	17	0.621	0.064384	0.303	0.007
74	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
75	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
76	L20204	L20204	0.555	1.000	0.555	Sec. F1	13	0.944	0.141	0.554	0.020
77	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
78	L2X1.5X0.18	L2X1.5X0.18	0.043	1.000	0.043	Eq. H3-8	13	0.621	0.064384	0.303	0.007
79	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
80	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
81	L20204	L20204	0.264	1.000	0.264	Eq. H2-1	13	0.944	0.141	0.554	0.020
82	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
83	L2X1.5X0.18	L2X1.5X0.18	0.034	1.000	0.034	Eq. H3-8	13	0.621	0.064384	0.303	0.007
84	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
85	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
86	L20204	L20204	0.396	1.000	0.396	Eq. H2-1	13	0.944	0.141	0.554	0.020
87	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
88	L2X1.5X0.18	L2X1.5X0.18	0.012	1.000	0.012	Eq. H3-8	17	0.621	0.064384	0.303	0.007
89	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
90	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
91	L20204	L20204	0.395	1.000	0.395	Eq. H2-1	13	0.944	0.141	0.554	0.020
92	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
93	L2X1.5X0.18	L2X1.5X0.18	0.036	1.000	0.036	Eq. H3-8	13	0.621	0.064384	0.303	0.007
94	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
95	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
96	L20204	L20204	0.358	1.000	0.358	Sec. F1	13	0.944	0.141	0.554	0.020
97	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
98	L2X1.5X0.18	L2X1.5X0.18	0.034	1.000	0.034	Eq. H3-8	17	0.621	0.064384	0.303	0.007
99	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
100	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
101	L20204	L20204	0.545	1.000	0.545	Eq. H2-1	17	0.944	0.141	0.554	0.020
102	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
103	L2X1.5X0.18	L2X1.5X0.18	37308	1.000	0.037308	Eq. H3-8	17	0.621	0.064384	0.303	0.007
104	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
105	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
106	L20204	L20204	0.282	1.000	0.282	Eq. H2-1	17	0.944	0.141	0.554	0.020
107	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
108	L2X1.5X0.18	L2X1.5X0.18	0.027	1.000	0.027	Eq. H3-8	17	0.621	0.064384	0.303	0.007
109	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
110	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
111	L20204	L20204	0.256	1.000	0.256	Sec. F1	17	0.944	0.141	0.554	0.020

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)
112	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
113	L2X1.5X0.18	L2X1.5X0.18	0.010	1.000	0.010	Eq. H3-8	17	0.621	0.064384	0.303	0.007
114	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
115	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
116	L20204	L20204	0.351	1.000	0.351	Sec. F1	17	0.944	0.141	0.554	0.020
117	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
118	L2X1.5X0.18	L2X1.5X0.18	0.030	1.000	0.030	Eq. H3-8	13	0.621	0.064384	0.303	0.007
119	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
120	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
121	L20204	L20204	0.363	1.000	0.363	Sec. F1	17	0.944	0.141	0.554	0.020
122	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
123	L2X1.5X0.18	L2X1.5X0.18	0.047	1.000	0.047	Eq. H3-8	17	0.621	0.064384	0.303	0.007
124	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
125	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
126	L20204	L20204	0.331	1.000	0.331	Sec. F1	13	0.944	0.141	0.554	0.020
127	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
128	L2X1.5X0.18	L2X1.5X0.18	0.041	1.000	0.041	Eq. H3-8	17	0.621	0.064384	0.303	0.007
129	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
130	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
131	L20204	L20204	0.253	1.000	0.253	Sec. F1	13	0.944	0.141	0.554	0.020
132	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
133	L2X1.5X0.18	L2X1.5X0.18	0.027	1.000	0.027	Eq. H3-8	17	0.621	0.064384	0.303	0.007
134	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
135	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
136	L20204	L20204	0.264	1.000	0.264	Eq. H2-1	17	0.944	0.141	0.554	0.020
137	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
138	L2X1.5X0.18	L2X1.5X0.18	0.023	1.000	0.023	Eq. H3-8	13	0.621	0.064384	0.303	0.007
139	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
140	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
141	L20204	L20204	0.258	1.000	0.258	Eq. H2-1	17	0.944	0.141	0.554	0.020
142	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
143	L2X1.5X0.18	L2X1.5X0.18	0.027	1.000	0.027	Eq. H3-8	17	0.621	0.064384	0.303	0.007
144	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
145	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
146	L20204	L20204	0.247	1.000	0.247	Eq. H2-1	13	0.944	0.141	0.554	0.020
147	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
148	L2X1.5X0.18	L2X1.5X0.18	0.041	1.000	0.041	Eq. H2-1	13	0.621	0.064384	0.303	0.007
149	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
150	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
151	L20204	L20204	0.466	1.000	0.466	Eq. H2-1	13	0.944	0.141	0.554	0.020
152	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
153	L2X1.5X0.18	L2X1.5X0.18	0.028	1.000	0.028	Eq. H3-8	17	0.621	0.064384	0.303	0.007
154	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
155	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
156	L20204	L20204	0.830	1.000	0.830	Eq. H2-1	17	0.944	0.141	0.554	0.020

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)
157	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
158	L2X1.5X0.18	L2X1.5X0.18	0.065	1.000	0.065	Eq. H2-1	17	0.621	0.064384	0.303	0.007
159	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
160	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
161	L20204	L20204	0.264	1.000	0.264	Eq. H2-1	17	0.944	0.141	0.554	0.020
162	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
163	Rect 1.50x0.	N/A						0.374	0.0702	0.002	0.007
195	L20204	L20204	0.199	1.000	0.199	Eq. H2-1	13	0.944	0.141	0.554	0.020
196	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
197	L20204	L20204	0.348	1.000	0.348	Eq. H2-1	13	0.944	0.141	0.554	0.020
198	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
199	L20204	L20204	0.391	1.000	0.391	Eq. H2-1	13	0.944	0.141	0.554	0.020
200	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
201	L20204	L20204	0.326	1.000	0.326	Eq. H2-1	13	0.944	0.141	0.554	0.020
202	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
205	L20204	L20204	0.775	1.000	0.775	Sec. F1	13	0.944	0.141	0.554	0.020
206	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
207	L20204	L20204	0.559	1.000	0.559	Sec. F1	13	0.944	0.141	0.554	0.020
208	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
209	PIPS20	PIPS20	0.140	1.000	0.140	Eq. H1-1b	13	1.020	0.627	0.627	1.254
210	PIPS20	PIPS20	0.167	1.000	0.167	Eq. H1-1b	13	1.020	0.627	0.627	1.254
211	PIPS20	PIPS20	0.000	1.000	0.000	Eq. Sec. D2	17	1.020	0.627	0.627	1.254
212	PIPS20	PIPS20	0.238	1.000	0.238	Eq. H1-1b	13	1.020	0.627	0.627	1.254
213	PIPS20	PIPS20	0.000	1.000	0.000	Eq. Sec. D2	17	1.020	0.627	0.627	1.254
214	PIPS20	PIPS20	0.140	1.000	0.140	Eq. H1-1b	13	1.020	0.627	0.627	1.254
215	PIPS20	PIPS20	0.913	1.000	0.913	Eq. H1-1b	17	1.020	0.627	0.627	1.254
216	PIPS20	PIPS20	0.375	1.000	0.375	Eq. H1-1b	17	1.020	0.627	0.627	1.254
217	PIPS20	PIPS20	0.188	1.000	0.188	Eq. H1-1b	13	1.020	0.627	0.627	1.254
218	PIPS20	PIPS20	0.187	1.000	0.187	Eq. H1-1b	17	1.020	0.627	0.627	1.254
219	PIPS20	PIPS20	0.119	1.000	0.119	Eq. H1-1b	13	1.020	0.627	0.627	1.254
220	PIPS20	PIPS20	0.190	1.000	0.190	Eq. H1-1b	17	1.020	0.627	0.627	1.254
221	PIPS20	PIPS20	0.605	1.000	0.605	Eq. H1-1b	13	1.020	0.627	0.627	1.254
222	PIPS20	PIPS20	0.511	1.000	0.511	Eq. H1-1b	13	1.020	0.627	0.627	1.254
223	PIPS20	PIPS20	0.428	1.000	0.428	Eq. H1-1b	13	1.020	0.627	0.627	1.254
224	PIPS20	PIPS20	0.402	1.000	0.402	Eq. H1-1b	13	1.020	0.627	0.627	1.254
225	PIPS20	PIPS20	0.280	1.000	0.280	Eq. H1-1b	13	1.020	0.627	0.627	1.254
226	PIPS20	PIPS20	0.233	1.000	0.233	Eq. H1-1b	13	1.020	0.627	0.627	1.254
227	L30304	L30304	0.027	1.000	0.027	Eq. H2-1	13	1.440	0.493	1.996	0.03
228	L30304	L30304	0.016	1.000	0.016	Sec. E1	17	1.440	0.493	1.996	0.03
229	PIPS20	PIPS20	0.510	1.000	0.510	Eq. H1-1b	17	1.020	0.627	0.627	1.254
230	PIPS20	PIPS20	0.001	1.000	0.001	Sec. E1	17	1.020	0.627	0.627	1.254
231	PIPS20	PIPS20	0.243	1.000	0.243	Eq. H1-1b	13	1.020	0.627	0.627	1.254
232	L20204	L20204	0.328	1.000	0.328	Eq. H2-1	13	0.944	0.141	0.554	0.020
233	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
234	PIPS20	PIPS20	0.119	1.000	0.119	Eq. H1-1b	13	1.020	0.627	0.627	1.254

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)
235	PIPS20	PIPS20	0.119	1.000	0.119	Eq. H1-1b	13	1.020	0.627	0.627	1.254
236	PIPS20	PIPS20	0.184	1.000	0.184	Eq. H1-1b	17	1.020	0.627	0.627	1.254
237	L20204	L20204	0.220	1.000	0.220	Eq. H2-1	13	0.944	0.141	0.554	0.020
238	L20204	L20204	0.240	1.000	0.240	Eq. H2-1	13	0.944	0.141	0.554	0.020
239	L20204	L20204	0.658	1.000	0.658	Sec. F1	13	0.944	0.141	0.554	0.020
240	L20204	L20204	0.213	1.000	0.213	Sec. F1	17	0.944	0.141	0.554	0.020
241	L20204	L20204	0.132	1.000	0.132	Sec. F1	13	0.944	0.141	0.554	0.020
242	L20204	L20204	0.452	1.000	0.452	Eq. H2-1	13	0.944	0.141	0.554	0.020
243	L20204	L20204	0.353	1.000	0.353	Sec. F1	13	0.944	0.141	0.554	0.020
244	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
246	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
248	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
250	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
252	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
254	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
256	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
258	PIPS20	PIPS20	0.201	1.000	0.201	Eq. H1-1b	13	1.020	0.627	0.627	1.254
259	PIPS20	PIPS20	0.201	1.000	0.201	Eq. H1-1b	13	1.020	0.627	0.627	1.254
260	PIPS20	PIPS20	0.185	1.000	0.185	Eq. H1-1b	13	1.020	0.627	0.627	1.254
261	PIPS20	PIPS20	0.141	1.000	0.141	Eq. H1-1b	13	1.020	0.627	0.627	1.254
262	PIPS20	PIPS20	0.008	1.000	0.008	Eq. H1-1b	13	1.020	0.627	0.627	1.254
263	PIPS20	PIPS20	0.141	1.000	0.141	Eq. H1-1b	13	1.020	0.627	0.627	1.254
264	PIPS20	PIPS20	0.001	1.000	0.001	Eq. H1-1b	13	1.020	0.627	0.627	1.254
265	PIPS20	PIPS20	0.209	1.000	0.209	Eq. H1-1b	13	1.020	0.627	0.627	1.254
266	PIPS20	PIPS20	0.149	1.000	0.149	Eq. H1-1b	13	1.020	0.627	0.627	1.254
267	PIPS20	PIPS20	0.046	1.000	0.046	Eq. H1-1b	13	1.020	0.627	0.627	1.254
268	PIPS20	PIPS20	0.209	1.000	0.209	Eq. H1-1b	13	1.020	0.627	0.627	1.254
269	PIPS20	PIPS20	0.401	1.000	0.401	Eq. H1-1b	13	1.020	0.627	0.627	1.254
270	PIPS20	PIPS20	0.045	1.000	0.045	Eq. H1-1b	13	1.020	0.627	0.627	1.254
271	PIPS20	PIPS20	0.128	1.000	0.128	Eq. H1-1b	17	1.020	0.627	0.627	1.254
272	PIPS20	PIPS20	0.172	1.000	0.172	Eq. H1-1b	17	1.020	0.627	0.627	1.254
273	PIPS20	PIPS20	0.314	1.000	0.314	Eq. H1-1b	17	1.020	0.627	0.627	1.254
274	PIPS20	PIPS20	0.095	1.000	0.095	Eq. H1-1b	17	1.020	0.627	0.627	1.254
275	PIPS20	PIPS20	0.065	1.000	0.065	Eq. H1-1b	13	1.020	0.627	0.627	1.254
276	PIPS20	PIPS20	0.819	1.000	0.819	Eq. H1-1b	17	1.020	0.627	0.627	1.254
277	PIPS20	PIPS20	0.234	1.000	0.234	Eq. H1-1b	17	1.020	0.627	0.627	1.254
278	PIPS20	PIPS20	0.331	1.000	0.331	Eq. H1-1b	17	1.020	0.627	0.627	1.254
279	L20204	L20204	0.341	1.000	0.341	Eq. H2-1	13	0.944	0.141	0.554	0.020
280	L20204	L20204	0.435	1.000	0.435	Eq. H2-1	13	0.944	0.141	0.554	0.020
281	L20204	L20204	0.333	1.000	0.333	Eq. H2-1	13	0.944	0.141	0.554	0.020
282	L20204	L20204	0.379	1.000	0.379	Eq. H2-1	17	0.944	0.141	0.554	0.020
283	L20204	L20204	0.216	1.000	0.216	Eq. H2-1	13	0.944	0.141	0.554	0.020
284	L20204	L20204	0.618	1.000	0.618	Eq. H2-1	17	0.944	0.141	0.554	0.020
285	L20204	L20204	0.190	1.000	0.190	Eq. H2-1	17	0.944	0.141	0.554	0.020
286	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175

Utilization Ratio Cont...

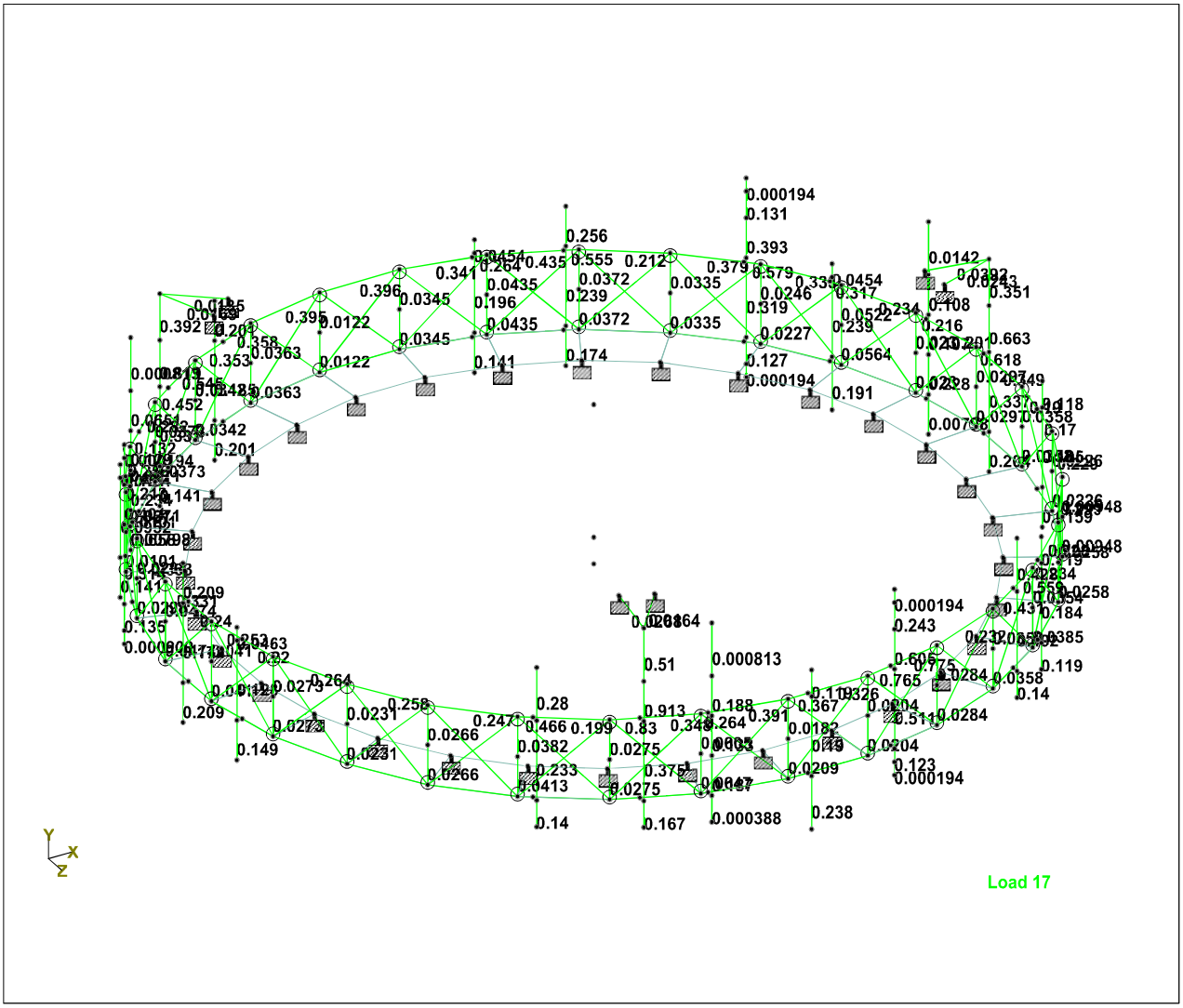
Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
288	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
290	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
292	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
294	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
296	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
298	Rect 7.99x0.	N/A						3.261	17.356	0.045	0.175
300	PIPS20	PIPS20	0.016	1.000	0.016	Eq. H1-1b	13	1.020	0.627	0.627	1.254
301	PIPS20	PIPS20	0.204	1.000	0.204	Eq. H1-1b	13	1.020	0.627	0.627	1.254
302	PIPS20	PIPS20	0.008	1.000	0.008	Eq. H1-1b	13	1.020	0.627	0.627	1.254
303	PIPS20	PIPS20	0.191	1.000	0.191	Eq. H1-1b	13	1.020	0.627	0.627	1.254
304	PIPS20	PIPS20	0.000	1.000	0.000	Eq. Sec. D2	17	1.020	0.627	0.627	1.254
305	PIPS20	PIPS20	0.174	1.000	0.174	Eq. H1-1b	13	1.020	0.627	0.627	1.254
306	PIPS20	PIPS20	0.141	1.000	0.141	Eq. H1-1b	13	1.020	0.627	0.627	1.254
307	PIPS20	PIPS20	0.045	1.000	0.045	Eq. H1-1b	13	1.020	0.627	0.627	1.254
308	PIPS20	PIPS20	0.256	1.000	0.256	Eq. H1-1b	13	1.020	0.627	0.627	1.254
309	PIPS20	PIPS20	0.045	1.000	0.045	Eq. H1-1b	13	1.020	0.627	0.627	1.254
310	PIPS20	PIPS20	0.393	1.000	0.393	Eq. H1-1b	13	1.020	0.627	0.627	1.254
311	PIPS20	PIPS20	0.108	1.000	0.108	Eq. H1-1b	13	1.020	0.627	0.627	1.254
312	PIPS20	PIPS20	0.228	1.000	0.228	Eq. H1-1b	17	1.020	0.627	0.627	1.254
313	PIPS20	PIPS20	0.239	1.000	0.239	Eq. H1-1b	17	1.020	0.627	0.627	1.254
314	PIPS20	PIPS20	0.319	1.000	0.319	Eq. H1-1b	17	1.020	0.627	0.627	1.254
315	PIPS20	PIPS20	0.239	1.000	0.239	Eq. H1-1b	17	1.020	0.627	0.627	1.254
316	PIPS20	PIPS20	0.196	1.000	0.196	Eq. H1-1b	17	1.020	0.627	0.627	1.254
317	PIPS20	PIPS20	0.663	1.000	0.663	Eq. H1-1b	17	1.020	0.627	0.627	1.254
318	PIPS20	PIPS20	0.118	1.000	0.118	Eq. H1-1b	13	1.020	0.627	0.627	1.254
319	PIPS20	PIPS20	0.105	1.000	0.105	Eq. H1-1b	17	1.020	0.627	0.627	1.254
320	PIPS20	PIPS20	0.337	1.000	0.337	Eq. H1-1b	17	1.020	0.627	0.627	1.254
321	L30304	L30304	0.024	1.000	0.024	Eq. Sec. D2	13	1.440	0.493	1.996	0.03
322	L30304	L30304	0.039	1.000	0.039	Eq. H2-1	13	1.440	0.493	1.996	0.03
323	L30304	L30304	0.014	1.000	0.014	Eq. H2-1	17	1.440	0.493	1.996	0.03
324	L30304	L30304	16893	1.000	0.016893	Sec. E1	17	1.440	0.493	1.996	0.03
325	PIPS20	PIPS20	0.392	1.000	0.392	Eq. H1-1b	17	1.020	0.627	0.627	1.254
326	PIPS20	PIPS20	0.351	1.000	0.351	Eq. H1-1b	17	1.020	0.627	0.627	1.254
327	PIPS20	PIPS20	0.131	1.000	0.131	Eq. H1-1b	13	1.020	0.627	0.627	1.254
328	PIPS20	PIPS20	0.014	1.000	0.014	Eq. H1-1b	13	1.020	0.627	0.627	1.254
329	PIPS20	PIPS20	0.131	1.000	0.131	Eq. H1-1b	13	1.020	0.627	0.627	1.254
330	PIPS20	PIPS20	0.001	1.000	0.001	Sec. E1	17	1.020	0.627	0.627	1.254
331	L2X1.5X0.18	L2X1.5X0.18	0.018	1.000	0.018	Eq. H3-8	17	0.621	0.064384	0.303	0.007
332	L2X1.5X0.18	L2X1.5X0.18	0.020	1.000	0.020	Eq. H3-8	13	0.621	0.064384	0.303	0.007
333	L2X1.5X0.18	L2X1.5X0.18	0.028	1.000	0.028	Eq. H3-8	17	0.621	0.064384	0.303	0.007
334	L2X1.5X0.18	L2X1.5X0.18	0.036	1.000	0.036	Eq. H3-8	17	0.621	0.064384	0.303	0.007
335	L2X1.5X0.18	L2X1.5X0.18	0.035	1.000	0.035	Eq. H2-1	13	0.621	0.064384	0.303	0.007
336	L2X1.5X0.18	L2X1.5X0.18	0.026	1.000	0.026	Eq. H3-8	17	0.621	0.064384	0.303	0.007
337	L2X1.5X0.18	L2X1.5X0.18	0.009	1.000	0.009	Eq. H3-8	13	0.621	0.064384	0.303	0.007
338	L2X1.5X0.18	L2X1.5X0.18	0.023	1.000	0.023	Eq. H3-8	17	0.621	0.064384	0.303	0.007

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)
339	L2X1.5X0.18	L2X1.5X0.18	0.036	1.000	0.036	Eq. H3-8	17	0.621	0.064384	0.303	0.007
340	L2X1.5X0.18	L2X1.5X0.18	0.030	1.000	0.030	Eq. H3-8	17	0.621	0.064384	0.303	0.007
341	L2X1.5X0.18	L2X1.5X0.18	0.023	1.000	0.023	Eq. H3-8	17	0.621	0.064384	0.303	0.007
342	L2X1.5X0.18	L2X1.5X0.18	0.052	1.000	0.052	Eq. H2-1	17	0.621	0.064384	0.303	0.007
343	L2X1.5X0.18	L2X1.5X0.18	0.025	1.000	0.025	Eq. H2-1	13	0.621	0.064384	0.303	0.007
344	L2X1.5X0.18	L2X1.5X0.18	0.034	1.000	0.034	Eq. H3-8	17	0.621	0.064384	0.303	0.007
345	L2X1.5X0.18	L2X1.5X0.18	0.037	1.000	0.037	Eq. H3-8	17	0.621	0.064384	0.303	0.007
346	L2X1.5X0.18	L2X1.5X0.18	0.043	1.000	0.043	Eq. H3-8	13	0.621	0.064384	0.303	0.007
347	L2X1.5X0.18	L2X1.5X0.18	0.034	1.000	0.034	Eq. H3-8	13	0.621	0.064384	0.303	0.007
348	L2X1.5X0.18	L2X1.5X0.18	0.012	1.000	0.012	Eq. H3-8	17	0.621	0.064384	0.303	0.007
349	L2X1.5X0.18	L2X1.5X0.18	0.036	1.000	0.036	Eq. H3-8	13	0.621	0.064384	0.303	0.007
350	L2X1.5X0.18	L2X1.5X0.18	0.034	1.000	0.034	Eq. H3-8	17	0.621	0.064384	0.303	0.007
351	L2X1.5X0.18	L2X1.5X0.18	37308	1.000	0.037308	Eq. H3-8	17	0.621	0.064384	0.303	0.007
352	L2X1.5X0.18	L2X1.5X0.18	0.027	1.000	0.027	Eq. H3-8	17	0.621	0.064384	0.303	0.007
353	L2X1.5X0.18	L2X1.5X0.18	0.010	1.000	0.010	Eq. H3-8	17	0.621	0.064384	0.303	0.007
354	L2X1.5X0.18	L2X1.5X0.18	0.030	1.000	0.030	Eq. H3-8	13	0.621	0.064384	0.303	0.007
355	L2X1.5X0.18	L2X1.5X0.18	0.047	1.000	0.047	Eq. H3-8	17	0.621	0.064384	0.303	0.007
356	L2X1.5X0.18	L2X1.5X0.18	0.041	1.000	0.041	Eq. H3-8	17	0.621	0.064384	0.303	0.007
357	L2X1.5X0.18	L2X1.5X0.18	0.027	1.000	0.027	Eq. H3-8	17	0.621	0.064384	0.303	0.007
358	L2X1.5X0.18	L2X1.5X0.18	0.023	1.000	0.023	Eq. H3-8	13	0.621	0.064384	0.303	0.007
359	L2X1.5X0.18	L2X1.5X0.18	0.027	1.000	0.027	Eq. H3-8	17	0.621	0.064384	0.303	0.007
360	L2X1.5X0.18	L2X1.5X0.18	0.038	1.000	0.038	Eq. H2-1	13	0.621	0.064384	0.303	0.007
361	L2X1.5X0.18	L2X1.5X0.18	0.028	1.000	0.028	Eq. H3-8	17	0.621	0.064384	0.303	0.007
362	L2X1.5X0.18	L2X1.5X0.18	0.060	1.000	0.060	Sec. E1	17	0.621	0.064384	0.303	0.007
371	PIPS20	PIPS20	0.000	1.000	0.000	Sec. E1	17	1.020	0.627	0.627	1.254
372	PIPS20	PIPS20	0.123	1.000	0.123	Eq. H1-1b	13	1.020	0.627	0.627	1.254
373	PIPS20	PIPS20	0.000	1.000	0.000	Sec. E1	17	1.020	0.627	0.627	1.254
374	PIPS20	PIPS20	0.127	1.000	0.127	Eq. H1-1b	13	1.020	0.627	0.627	1.254
375	PIPS20	PIPS20	0.000	1.000	0.000	Sec. E1	17	1.020	0.627	0.627	1.254
376	PIPS20	PIPS20	0.135	1.000	0.135	Eq. H1-1b	13	1.020	0.627	0.627	1.254
377	PIPS20	PIPS20	0.133	1.000	0.133	Eq. H1-1b	13	1.020	0.627	0.627	1.254
378	PIPS20	PIPS20	0.107	1.000	0.107	Eq. H1-1b	17	1.020	0.627	0.627	1.254
379	PIPS20	PIPS20	0.129	1.000	0.129	Eq. H1-1b	17	1.020	0.627	0.627	1.254

Failed Members

There is no data of this type.



Utility Ratio

Beam Force Detail Summary

Sign convention as diagrams:- positive above line, negative below line except Fx where positive is compression. Distance d is given from beam end A.

				Axial	Shear		Torsion	Bending	
	Beam	L/C	d (ft)	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-in)	My (kip-in)	Mz (kip-in)
Max Fx	25	13:1.2D+1.6Wl	0	**0.770**	0	0	0	0	0
Min Fx	44	13:1.2D+1.6Wl	0	**-0.548**	0	0	0	0	0
Max Fy	3	1:DEAD	0	0.026	**0**	0	0	0	0
Min Fy	3	1:DEAD	0	0.026	**0**	0	0	0	0
Max Fz	3	1:DEAD	0	0.026	0	**0**	0	0	0
Min Fz	3	1:DEAD	0	0.026	0	**0**	0	0	0
Max Mx	3	1:DEAD	0	0.026	0	0	**0**	0	0
Min Mx	3	1:DEAD	0	0.026	0	0	**0**	0	0
Max My	3	1:DEAD	0	0.026	0	0	0	**0**	0
Min My	3	1:DEAD	0	0.026	0	0	0	**0**	0
Max Mz	3	1:DEAD	0	0.026	0	0	0	0	**0**
Min Mz	3	1:DEAD	0	0.026	0	0	0	0	**0**

Dewberry

Job Number	50121918
Made by:	DAP
Date:	5/25/21
Checked by:	SA
Date:	5/26/21

(Site Name) - 1.5" x 0.25" Plate Check

\\bos-fs\Boston\Projects\50121487\50121918 - Essex CT\Engineering\Structural\Mount Analysis\Rev 0\Calcs\Site Name_Rec & Rod Mount Member Check XX-XX-XX (V1.1).xlsx V1.1

Design Method

**References can be found in the AISC Steel Design Manual 14th Ed.*

LRFD

Tensile Yield Φ : 0.9 Compression Φ : 0.9

Tensile Rupture Φ : 0.75 Flexure Φ : 0.9

Member Properties

E = 29000 ksi

F_y = 36.0 ksi b = t = 1/4 in $I = \frac{bh^3}{12}$ $r = \sqrt{\frac{I}{A}}$ $Z = \frac{bh^2}{4}$

F_u = 58.0 ksi h = d = 1 1/2 in

U = 1.00 *(Table D3.1)* I_x = 0.07 in⁴ r_x = 0.43 in Z_x = 0.14 in³

A_g = 0.38 in² *(Sec. B4.3a)* C_b = I_y = 0.00 in⁴ r_y = 0.07 in Z_y = 0.02 in³

A_n = 0.38 in² *(Sec. B4.3b)* $S = \frac{bh^2}{6}$

A_e = 0.38 in² *(D3-1)*

S_x = 0.09 in³

S_y = 0.02 in³

Unbraced Length Effective Length Factor (Table C-A-7.1, AISC)

L_x = 2.12 ft = 25.4 in Major Axis K = 0.80

L_y = 2.12 ft = 25.4 in Minor Axis

Check Tension

Tensile Yielding (D2-1) =	F_yA_g =	13.500 k	**Tensile Yield Controls**	P_n=	13.500 k	**ΦPn =**	**12.150 k**	**>**	**0.548 k**
Tensile Rupture (D2-2) =	F_uA_e =	21.750 k		Φ =	0.90				STAAD Output

Check Compression

$\frac{KL_x}{r_x}$ = 47.0 $\frac{KL_y}{r_y}$ = 282.0 KL/r = 282.0 > 133.7 $= 4.71\sqrt{\frac{E}{F_y}}$ *Use (E3-3)*

$F_{cr} = \begin{cases} \left[0.658^{\frac{F_y}{F_e}}\right] F_y & \textit{(E3-2)} \\ 0.877\,F_e & \textit{(E3-3)} \end{cases}$ = 3.16 ksi $F_e = \frac{\pi^2 E}{\left(\frac{KF}{r}\right)^2}$ = 3.60 ksi *(E3-4)*

P_n *(E3-1)* = $F_{cr}A_g$ = 1.184 k **ΦPn =** **1.065 k** **>** **0.770 k**

Φ = 0.9 STAAD Output

Check Flexure

Major Axis

L_bd/t^2 = 611 0.08 E/F_y = 64 1.9 E/F_y = 1531

M_p = F_yZ_x = 0.422 k-ft M_y = F_yS_x = 0.281 k-ft $F_{cr} = \frac{1.9\,EC_b}{L_bd/t^2}$ = 90.2 ksi

(F11-1) $M_n = M_p = F_yZ_x \le 1.6\,M_y$ *(F11-2)* $M_n = C_b[1.52-0.247(L_bd/t^2)(F_y/E)]M_y \le M_p$ *(F11-3)* $M_n = F_{cr}S_x \le M_p$

M_n = 0.422 k-ft M_n = 0.369 k-ft M_n = 0.422 k-ft

Check (F11-2)

M_{nx} = 0.369 k-ft Φ = 0.9 **ΦMnx =** **0.332 k-ft** **>** **0.000 k-ft**

Minor Axis

$M_n = M_p = F_yZ \le 1.6\,M_y$ *(F11-1)*

M_p = F_yZ_y = 0.070 k-ft Φ = 0.9 **ΦMny =** **0.063 k-ft** **>** **0.000 k-ft**

1.6 M_y = 1.6 F_yS_y = 0.075 k-ft STAAD Output

Utilization

Max Utilization of Member **72.3%**

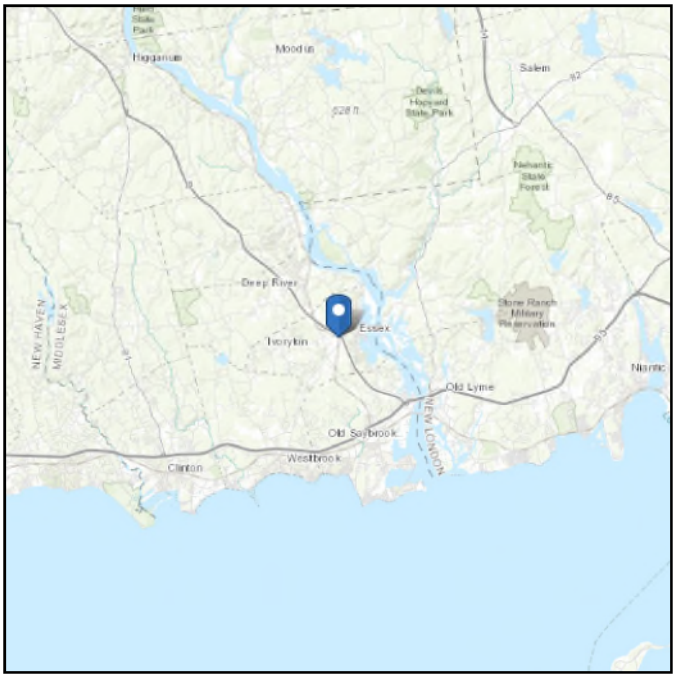
APPENDIX B

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class:

Elevation: 38.87 ft (NAVD 88)
Latitude: 41.35121
Longitude: -72.406197



Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Tue May 25 2021

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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verizon fuze | RFDS

NORTH EAST > North East > New England > New England West > ESSEX CT

Summers, Melissa - melissa.summers@verizonwireless.com - 1/12/2021 15:52:49

Project Details

Carrier Aggregation:	false
MPT Id:	
eCIP-0:	false
Project Name:	5G L-Sub6 - Carrier Add
FUZE Project ID:	16271934
Designed Sector Carrier 4G:	15
Designed Sector Carrier 5G:	N/A
Additional Sector Carrier 4G:	N/A
Additional Sector Carrier 5G:	N/A
SiteTraker Project Id:	
FP Solution Type & Tech Type:	MODIFICATION;4G_850,4G_PCS,5G_L-Sub6-Prep,5G_Radio Swap
Suffix:	REV1

Location Information

Site ID:	323862
E-NodeB ID:	0064155,064155
PSLC:	467615
Switch Name:	Wallingford 1
Tower Owner:	
Tower Type:	Tank
Site Type:	MACRO
Street Address:	10 Main Street
City:	Essex
State:	CT
Zip Code:	06426
County:	Middlesex
Latitude:	41.35121 / 41° 21' 4.356" N
Longitude:	-72.406197 / 72° 24' 22.3092" W

RFDS Project Scope: RFDS SOW: 850A/ PCS/ L-Sub6 carrier add, Samsung dual band RRH swap, antenna change

REV1 (1/12/21): Upgrades existing Hybriflex to LI

1- Retain 700/ AWS carriers and add 850A/ PCS/ L-Sub6 carrier
2- Replace (6) existing LTE antennas with (6) new Commscope JAHH-65B-R3B antennas on new BSAMNT-SBS-2-2 mounts to position 3 or 4*. Retain (6) existing CDMA antennas in their current positions
3- Add (3) L-Sub6 All-in-One antenna/ RRHs to position 2*
4- Remove (6) existing Nokia RRHs from tank and add (3) new Samsung B5/B13 RRH-BR04C (RFV01U-D2A) and (3) new Samsung B2/B66A RRH-BR049 (RFV01U-D1A)
5- Add (3) Commscope CBC78-T-DS-43-2X diplexers on tank
6- Swap (3) existing hybriflex with (3) new 6x12 Hybriflex LI
7- Plumb 700/ 850/ PCS/ AWS/ L-Sub6 according to the plumbing diagram
8- Use RF ports on dual band RRHs to communicate with RETs via Smart bias-T built into the antenna
9- Cap and weatherproof unused ports/connectors

Antenna Summary

Added

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
LTE	LTE	LTE	LTE								ANDREW	JAHH-65B-R3B	106	109	20(01) 140(02) 250(03)	true	true	PHYSICAL	6
										5G	TBD	nL-Sub6 Antenna	106	108.1	20(0001) 140(0002) 250(0003)	false	false	PHYSICAL	3

Removed

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
LTE			LTE								ANDREW	SBNHH-1D65B	106	109	20(01) 140(02) 250(03)	false	false	PHYSICAL	6

Retained

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
	CDMA										ANTEL	LPA-80063/6CF	106	109	150(D2) 270(D3)	false	false	PHYSICAL	4
	CDMA										ANTEL	LPA-80080/6CF	106	109	30(D1)	false	false	PHYSICAL	2

Added: 9 | Removed: 6 | Retained: 6

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GH:	31 GHz	39 GH:	CBRS	LAA	L-Sub(	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Mount	Tower												Commscope	BSAMNT-SBS-2-2			PHYSICAL	3
Diplexer	Tower	LTE	LTE										Commscope	CBC78T-DS-43-2X			PHYSICAL	3
RRU	Tower			LTE	LTE								Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3
RRU	Tower	LTE	LTE										Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3
RRU	Tower											5G	Samsung	VZS01			PHYSICAL	3
Hybrid Cable	Tower	LTE	LTE	LTE	LTE							5G		6x12 Hybriflex LI		1 5/8"	PHYSICAL	3

Removed

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GH:	31 GHz	39 GH:	CBRS	LAA	L-Sub(	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower	LTE											Nokia	UHBA B13 RRH 4x30			PHYSICAL	3
RRU	Tower				LTE								Nokia	UHIE B66A RRH 4x45			PHYSICAL	3
Hybrid Cable	Tower	LTE			LTE									6x12 Hybriflex non-LI		1 5/8"	PHYSICAL	3

Retained

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GH:	31 GHz	39 GH:	CBRS	LAA	L-Sub(	Make	Model	Cable Length	Cable Size	Install Type	Quantity
OVP Box	Tower	LTE	LTE	LTE	LTE							5G	Raycap	RRFDC-3315-PF-48			PHYSICAL	3
Coaxial Cables	Tower		CDMA											AVA7-50		1 5/8"	PHYSICAL	3

Service Info

nL-Sub6

				5GLS		
Sector				**0001**	**0002**	**0003**
Azimuth				20	140	250
Cell / ENode B ID				0064155	0064155	0064155
Antenna Model				nL-Sub6 Antenna	nL-Sub6 Antenna	nL-Sub6 Antenna
Antenna Make				TBD	TBD	TBD
Antenna Centerline(Ft)				106	106	106
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				3	3	3
Tip Height				108.1	108.1	108.1
Regulatory Power				0	0	0
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				VZS01	VZS01	VZS01
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				9035649	9035650	9035651
Source				ATOLL_API	ATOLL_API	ATOLL_API

700 MHz LTE

		0000		5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	20	140	250	20	140	250
Cell / ENode B ID	064155	064155	064155	064155	064155	064155
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	109	109	109	109	109	109
Regulatory Power	115.87	115.87	115.87	69.75	69.75	69.75
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	2,4	2,4	2,4	4,4	4,4	4,4
Position						
Transmitter Id	1962431	1962499	1962501	9035608	9035616	9035622
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz LTE

				5GLS		
Sector				**01**	**02**	**03**
Azimuth				20	140	250
Cell / ENode B ID				064155	064155	064155
Antenna Model				JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make				ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)				106	106	106
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				2	2	2
Tip Height				109	109	109
Regulatory Power				322.42	322.42	322.42
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				9380470	9380471	9380472
Source				ATOLL_API	ATOLL_API	ATOLL_API

850 MHz CDMA

	0000			5GLS		
Sector	D1	D2	D3	D1	D2	D3
Azimuth	30	150	270	30	150	270
Cell / ENode B ID						
Antenna Model	LPA-80080/6CF (178916)	LPA-80063/6CF (178376)	LPA-80063/6CF (178376)	LPA-80080/6CF (178916)	LPA-80063/6CF (178376)	LPA-80063/6CF (178376)
Antenna Make	ANTEL	ANTEL	ANTEL	ANTEL	ANTEL	ANTEL
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	0	0	0	0	0	0
Tip Height	109	109	109	109	109	109
Regulatory Power	440.55	494.31	494.31	440.55	494.31	494.31
TMA Make						
TMA Model						
RRU Make						
RRU Model						
Number of Tx, Rx Lines						
Position						
Transmitter Id						
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

1900 MHz LTE

				5GLS		
Sector				01	02	03
Azimuth				20	140	250
Cell / ENode B ID				064155	064155	064155
Antenna Model				JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make				ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)				106	106	106
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				2	2	2
Tip Height				109	109	109
Regulatory Power				278.01	278.01	278.01
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				9380473	9380474	9380475
Source				ATOLL_API	ATOLL_API	ATOLL_API

2100 MHz LTE

	0000			5GLS		
Sector	01	02	03	01	02	03
Azimuth	20	140	250	20	140	250
Cell / ENode B ID	064155	064155	064155	064155	064155	064155
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	109	109	109	109	109	109
Regulatory Power	159.82	159.82	159.82	136.09	136.09	136.09
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	2,4	2,4	2,4	4,4	4,4	4,4
Position						
Transmitter Id	1962432	1962500	1962502	9035613	9035619	9035625
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

Callsigns Per Antenna

Sector	Antenna Ma	Antenna Mo	Ant CL Height AGL	Tip Height	Azimuth (TI	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz
02	ANDREW	JAHH-65B-R3B	106	109	140	2	0	16.033001	63.25	278.01			KNLH251 WPOJ730				
D2	ANTEL	LPA-80063/6C (178376)	106	109	150	0	0	14.5	63	494.31		KNKA404					
D3	ANTEL	LPA-80063/6C (178376)	106	109	270	0	0	14.5	63	494.31		KNKA404					
03	ANDREW	JAHH-65B-R3B	106	109	250	2	0	12.806	65	322.42		KNKA404					
01	ANDREW	JAHH-65B-R3B	106	109	20	2	0	16.033001	63.25	278.01			KNLH251 WPOJ730				
03	ANDREW	JAHH-65B-R3B	106	109	250	2	0	16.033001	63.25	278.01			KNLH251 WPOJ730				
D1	ANTEL	LPA-80080/6C (178916)	106	109	30	0	0	14	83.5	440.55		KNKA404					
02	ANDREW	JAHH-65B-R3B	106	109	140	2	0	15.941	66.25	136.09				WQGA906 WQGB276			
03	ANDREW	JAHH-65B-R3B	106	109	250	2	0	12.178	67.5	69.75	WQJQ689						
02	ANDREW	JAHH-65B-R3B	106	109	140	2	0	12.178	67.5	69.75	WQJQ689						
D3	ANTEL	LPA-80063/6C (178376)	106	109	270	0	0	14.5	63	348.36		KNKA404					
03	ANDREW	JAHH-65B-R3B	106	109	250	2	0	15.941	66.25	136.09				WQGA906 WQGB276			
01	ANDREW	JAHH-65B-R3B	106	109	20	2	0	12.178	67.5	69.75	WQJQ689						
02	ANDREW	JAHH-65B-R3B	106	109	140	2	0	12.806	65	322.42		KNKA404					
01	ANDREW	JAHH-65B-R3B	106	109	20	2	0	15.941	66.25	136.09				WQGA906 WQGB276			
01	ANDREW	JAHH-65B-R3B	106	109	20	2	0	12.806	65	322.42		KNKA404					

Callsigns

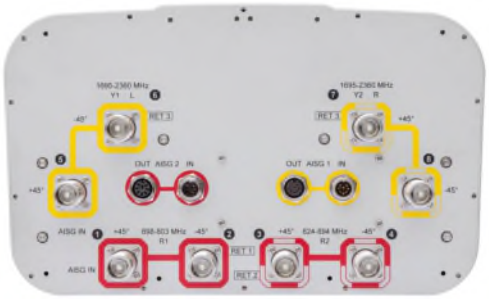
Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq Mi	Status	Action	Approved for Insvc
WQJQ689	*Northeast*	*WU*	*REA001*	*C*	*CT*	*Middlesex*	Cellco Partnership	*Yes*	*22.000*	*746.000-757.000*	*776.000-787.000*	*.000-.000*	*.000-.000*	*69.75*	*1000*	*448.62*	*Active*	*added*	*Yes*
KNKA404	*Hartford-New Britain-Bristol, CT*	*CL*	*CMA032*	*A*	*CT*	*Middlesex*	Cellco Partnership	*Yes*	*25.000*	*824.000-835.000*	*869.000-880.000*	*845.000-846.500*	*890.000-891.500*	*494.31*	*500*	*448.62*	*Active*	*added*	*Yes*
WPOJ730	*Hartford, CT*	*CW*	*BTA184*	*C*	*CT*	*Middlesex*	Cellco Partnership	*Yes*	*15.000*	*1895.000-1902.500*	*1975.000 1982.500*	*.000-.000*	*.000-.000*	*278.01*	*1640*	*448.62*	*Active*	*added*	*Yes*
KNLH251	*Hartford, CT*	*CW*	*BTA184*	*F*	*CT*	*Middlesex*	Cellco Partnership	*Yes*	*10.000*	*1890.000-1895.000*	*1970.000 1975.000*	*.000-.000*	*.000-.000*	*278.01*	*1640*	*448.62*	*Active*	*added*	*Yes*
WQGB276	*Hartford-New Britain-Bristol, CT*	*AW*	*CMA032*	*A*	*CT*	*Middlesex*	Cellco Partnership	*Yes*	*20.000*	*1710.000 1720.000*	*2110.000 2120.000*	*.000-.000*	*.000-.000*	*136.09*	*1640*	*448.62*	*Active*	*added*	*Yes*
WQGA906	*New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA-*	*AW*	*BEA010*	*B*	*CT*	*Middlesex*	Cellco Partnership	*Yes*	*20.000*	*1720.000 1730.000*	*2120.000-2130.000*	*.000-.000*	*.000-.000*	*136.09*	*1640*	*448.62*	*Active*	*added*	*Yes*
WPOH943	Hartford, CT	LD	BTA184	A	CT	Middlesex	Cellco Partnership	Yes	300.000	29100.000-29250.000	31075.000-31225.000	.000-.000	.000-.000			448.62	Active		No
WPLM398	Hartford, CT	LD	BTA184	B	CT	Middlesex	Cellco Partnership	Yes	150.000	31000.000-31075.000	31225.000-31300.000	.000-.000	.000-.000			448.62	Active		No
WRBA710	Hartford, CT	UU	BTA184	L1	CT	Middlesex	Cellco Partnership	Yes	325.000	27500.000-27600.000	27700.000-27925.000	.000-.000	.000-.000			448.62	Active		Yes
WRBA711	Hartford, CT	UU	BTA184	L2	CT	Middlesex	Cellco Partnership	Yes	325.000	27925.000-28050.000	28150.000-28350.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD609	New York, NY	UU	PEA001	M1	CT	Middlesex	Straight Path um, LLC	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD610	New York, NY	UU	PEA001	M10	CT	Middlesex	Straight Path um, LLC	Yes	100.000	38500.000-38600.000	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD611	New York, NY	UU	PEA001	M2	CT	Middlesex	Straight Path um, LLC	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD612	New York, NY	UU	PEA001	M3	CT	Middlesex	Straight Path um, LLC	Yes	100.000	37800.000-37900.000	.000-.000	.000-.000	.000-.000			448.62	Active		Yes

WRHD613	New York, NY	UU	PEA001	M4	CT	Middlesex	Straight Path um, LLC	Yes	100.000	37900.000-38000.00(	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD614	New York, NY	UU	PEA001	M5	CT	Middlesex	Straight Path um, LLC	Yes	100.000	38000.000-38100.00	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD615	New York, NY	UU	PEA001	M6	CT	Middlesex	Straight Path um, LLC	Yes	100.000	38100.000-38200.00(	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD616	New York, NY	UU	PEA001	M7	CT	Middlesex	Straight Path um, LLC	Yes	100.000	38200.000-38300.00	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD617	New York, NY	UU	PEA001	M8	CT	Middlesex	Straight Path um, LLC	Yes	100.000	38300.000-38400.00	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD618	New York, NY	UU	PEA001	M9	CT	Middlesex	Straight Path um, LLC	Yes	100.000	38400.000-38500.00	.000-.000	.000-.000	.000-.000			448.62	Active		Yes
WRHD619	New York, NY	UU	PEA001	N1	CT	Middlesex	Straight Path um, LLC	Yes	100.000	38600.000-38700.00	.000-.000	.000-.000	.000-.000			448.62	Active		No
WRDG500	New York, NY	UU	PEA001	S2	CT	Middlesex	Cellco Partnership	Yes	400.000	37800.000-38200.00(	.000-.000	.000-.000	.000-.000			448.62	Active		Yes

Band	Sector 1 (Alpha) Color Codes							Sector 2 (Beta) Color Codes							Sector 3 (Gamma) Color Codes						
850 CDMA	R							B							G						
	R	R						B	B						G	G					
700	R	P						B	P						G	P					
	R	R	P					B	B	P					G	G	P				
	R	R	R	P				B	B	B	P				G	G	G	P			
	R	R	R	R	P			B	B	B	B	P			G	G	G	G	P		
850 LTE	R	P	P					B	P	P					G	P	P				
	R	R	P	P				B	B	P	P				G	G	P	P			
	R	R	R	P	P			B	B	B	P	P			G	G	G	P	P		
	R	R	R	R	P	P		B	B	B	B	P	P		G	G	G	G	P	P	
700 / 850	R	P	P	P				B	P	P	P				G	P	P	P			
	R	R	P	P	P			B	B	P	P	P			G	G	P	P	P		
	R	R	R	P	P	P		B	B	B	P	P	P		G	G	G	P	P	P	
	R	R	R	R	P	P	P	B	B	B	B	P	P	P	G	G	G	G	P	P	P
AWS	R	W						B	W						G	W					
	R	R	W					B	B	W					G	G	W				
	R	R	R	W				B	B	B	W				G	G	G	W			
	R	R	R	R	W			B	B	B	B	W			G	G	G	G	W		
PCS	R	W	W					B	W	W					G	W	W				
	R	R	W	W				B	B	W	W				G	G	W	W			
	R	R	R	W	W			B	B	B	W	W			G	G	G	W	W		
	R	R	R	R	W	W		B	B	B	B	W	W		G	G	G	G	W	W	
AWS / PCS	R	W	W	W				B	W	W	W				G	W	W	W			
	R	R	W	W	W			B	B	W	W	W			G	G	W	W	W		
	R	R	R	W	W	W		B	B	B	W	W	W		G	G	G	W	W	W	
	R	R	R	R	W	W	W	B	B	B	B	W	W	W	G	G	G	G	W	W	W
CBRS	R	Y						B	Y						G	Y					
	R	R	Y					B	B	Y					G	G	Y				
	R	R	R	Y				B	B	B	Y				G	G	G	Y			
	R	R	R	R	Y			B	B	B	B	Y			G	G	G	G	Y		
LAA	R	Y	Y					B	Y	Y					G	Y	Y				
	R	R	Y	Y				B	B	Y	Y				G	G	Y	Y			

Band	Sector 4 (Delta) Color Codes							Sector 5 (Epsilon) Color Codes							Sector 6 (Zeta) Color Codes						
850 CDMA	Gray	R						Gray	B						Gray	G					
	Gray	R	R					Gray	B	B					Gray	G	G				
700	Gray	R	P					Gray	B	P					Gray	G	P				
	Gray	R	R	P				Gray	B	B	P				Gray	G	G	P			
	Gray	R	R	R	P			Gray	B	B	B	P			Gray	G	G	G	P		
	Gray	R	R	R	R	P		Gray	B	B	B	B	P		Gray	G	G	G	G	P	
850 LTE	Gray	R	P	P				Gray	B	P	P				Gray	G	P	P			
	Gray	R	R	P	P			Gray	B	B	P	P			Gray	G	G	P	P		
	Gray	R	R	R	P	P		Gray	B	B	B	P	P		Gray	G	G	G	P	P	
	Gray	R	R	R	R	P	P	Gray	B	B	B	B	P	P	Gray	G	G	G	G	P	P
700 / 850	Gray	R	P	P	P			Gray	B	P	P	P			Gray	G	P	P	P		
	Gray	R	R	P	P	P		Gray	B	B	P	P	P		Gray	G	G	P	P	P	
	Gray	R	R	R	P	P	P	Gray	B	B	B	P	P	P	Gray	G	G	G	P	P	P
	Gray	R	R	R	R	P	P	P	Gray	B	B	B	B	P	P	P	Gray	G	G	G	G	P	P
AWS	Gray	R	W					Gray	B	W					Gray	G	W				
	Gray	R	R	W				Gray	B	B	W				Gray	G	G	W			
	Gray	R	R	R	W			Gray	B	B	B	W			Gray	G	G	G	W		
	Gray	R	R	R	R	W		Gray	B	B	B	B	W		Gray	G	G	G	G	W	
PCS	Gray	R	W	W				Gray	B	W	W				Gray	G	W	W			
	Gray	R	R	W	W			Gray	B	B	W	W			Gray	G	G	W	W		
	Gray	R	R	R	W	W		Gray	B	B	B	W	W		Gray	G	G	G	W	W	
	Gray	R	R	R	R	W	W	Gray	B	B	B	B	W	W	Gray	G	G	G	G	W	W
AWS / PCS	Gray	R	W	W	W			Gray	B	W	W	W			Gray	G	W	W	W		
	Gray	R	R	W	W	W		Gray	B	B	W	W	W		Gray	G	G	W	W	W	
	Gray	R	R	R	W	W	W	Gray	B	B	B	W	W	W	Gray	G	G	G	W	W	W
	Gray	R	R	R	R	W	W	W	Gray	B	B	B	B	W	W	W	Gray	G	G	G	G	W	W	W
CBRS	Gray	R	Y					Gray	B	Y					Gray	G	Y				
	Gray	R	R	Y				Gray	B	B	Y				Gray	G	G	Y			
	Gray	R	R	R	Y			Gray	B	B	B	Y			Gray	G	G	G	Y		
	Gray	R	R	R	R	Y		Gray	B	B	B	B	Y		Gray	G	G	G	G	Y	
LAA	Gray	R	Y	Y				Gray	B	Y	Y				Gray	G	Y	Y			
	Gray	R	R	Y	Y			Gray	B	B	Y	Y			Gray	G	G	Y	Y		

RET motors per antenna:	3		
850 Band:	A	6	
850 CDMA RET	N		
AWS Carriers:	1	2	
AWS3 Carriers:	N		
PCS Carriers:	1	4	
eNB ID:	064155		
Sector	**Antenna Desc**	**Base Station ID**	**Sector ID**
Alpha	700	064155_1_1	064155_1
Alpha	850	064155_1_6	064155_1_6
Alpha	AWS	064155_1_2	064155_1_2
Alpha	PCS	064155_1_4	064155_1_4
Beta	700	064155_2_1	064155_2
Beta	850	064155_2_6	064155_2_6
Beta	AWS	064155_2_2	064155_2_2
Beta	PCS	064155_2_4	064155_2_4
Gamma	700	064155_3_1	064155_3
Gamma	850	064155_3_6	064155_3_6
Gamma	AWS	064155_3_2	064155_3_2
Gamma	PCS	064155_3_4	064155_3_4



BSAMNT-SBS-2-2

Port are for low band MHz

Port are for high band MHz

Smart Bias Tee is through port for low band and port for high band

AISG cable is only needed when drawn in the diagrams below if it is not drawn then SBT is enough to control all RET motors

Not all SBT ports are needed to control RET only green port connection to green port will control RET

RET DC signal pass for RET
Port that will control RET

Ant

Diplexer

DC signal capable Port

AISG Cable

RET DC signal pass for RET
Port that will control RET

Hybriflex cables

OVP Box

(1) OVP-6/
(1) 6x12 Hybriflex
per sector

Tower/
Watertank/
Rooftop

Equipment
Pad

6x12

Cell

Comments:

Diagram shows antenna port configuration as viewed from below antennas.

Antenna positions are indicated as viewed from IN FRONT of antennas.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable. (For the coax colors follow Coax Colors guide above)

APPENDIX C

Existing Alpha Sector

Existing Beta Sector

Dewberry

Site Name: Essex CT

Site Address: 10 Main Street
Essex, Connecticut

Existing Gamma Sector

Dewberry

ATTACHMENT 5


154
154
Railroad Ave
Essex Plaza
SANITARY EASEMENT
15' ELECTRIC EASEMENT
10' ACCESS EASEMENT
CL&P EASEMENT
STORAGE EASEMENT
25' ROW
22
16
0.82
24
0.7
13
0.15
12
8
12
1.55
14
2.96
17-1
0.96
26
16
10
29
1.55
30
0.76
10A
28
8.52
6
33
17
3
2.63
25-1
0
1
4
20.9
3-1
2.16
20
2
35-41
10
8
9
30
12
Google AppGeo

ESSEX,CT

6 MAIN ST CTBK

Location
6 MAIN ST CTBK
Mblu
33/ 028/ / /
Acct#
00200100
Owner
MACBETH VENTURES LLC
Assessment
$2,435,600
Appraisal
$3,479,400
PID
1860
Building Count
3

Current Value

Appraisal

Valuation Year	Total
2018	$3,479,400

Assessment

Valuation Year	Total
2018	$2,435,600

Owner of Record

Owner MACBETH VENTURES LLC
Co-Owner C/O HT PARTNER LLC
Address 6 MAIN ST SUITE 312
CENTERBROOK, CT 06409
Sale Price $1,250,000
Certificate
Book & Page 0180/0285
Sale Date 05/26/1999
Instrument 07

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
MACBETH VENTURES LLC	$1,250,000		0180/0285	07	05/26/1999

Building Information
Building 1 : Section 1

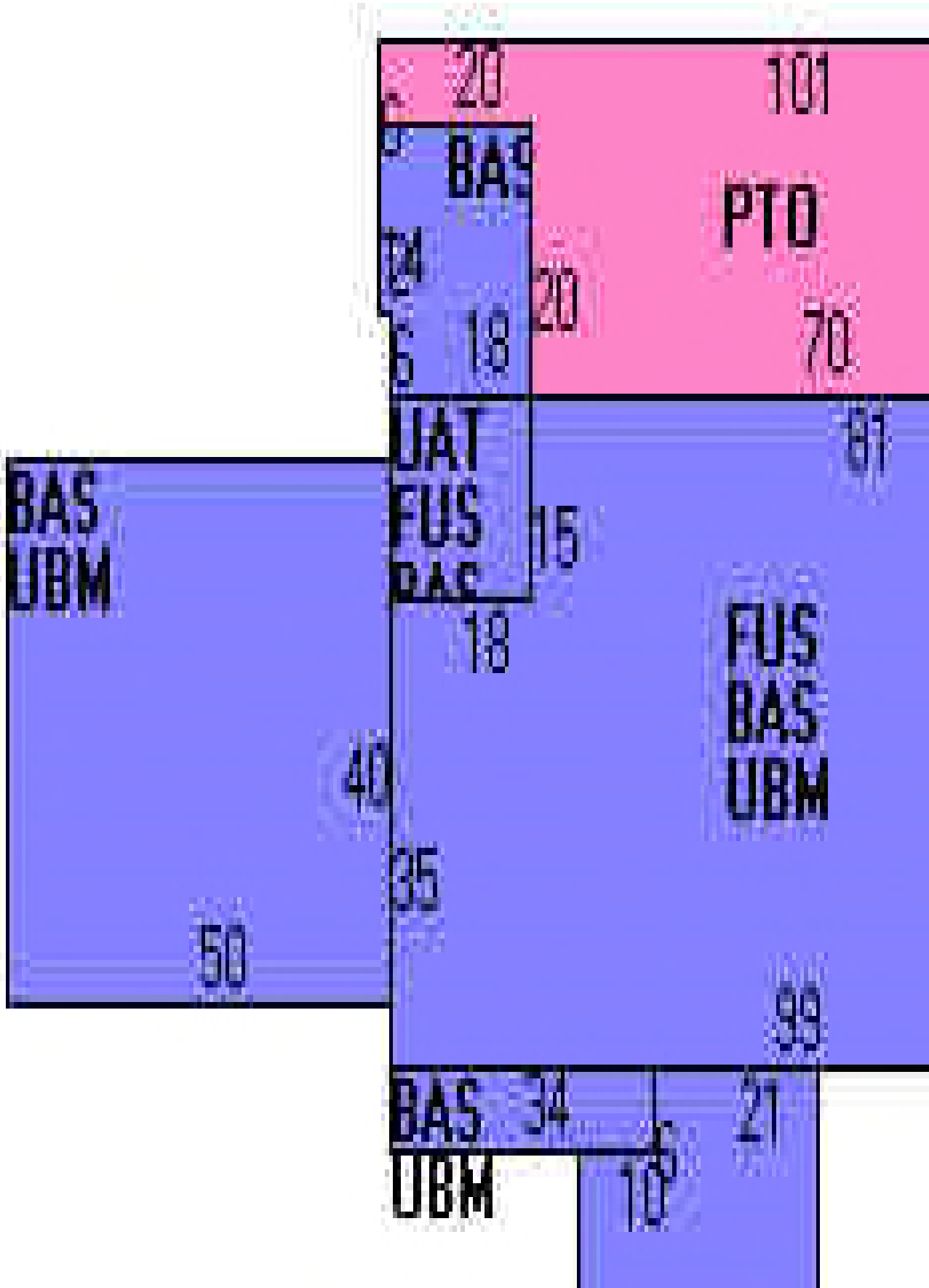
Year Built: 1910
Living Area: 18,575
Building Percent Good: 61

Building Attributes

Field	Description
STYLE	Office
MODEL	Comm/Ind
Grade	C+
Stories:	2 Stories
Occupancy	6.00
Ext Wall 1	Brick

Exterior Wall 2	Asbestos
Roof Structure	Flat
Roof Cover	Tar + Gravel
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	Hardwood
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	Central
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
Usrfld 218	
Usrfld 219	
1st Floor Use:	
Heat/AC	Heat/AC Packag
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	Average
Wall Height	10.00
% Comn Wall	

Building Photo


20
101
BAS
PTD
UBM
20
70
18
UAT
FUS
BAS
UBM
15
18
FUS
BAS
UBM
40
35
50
99
BAS
34
21
UBM
10

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	11,375	11,375
FUS	Full Upper Story	7,200	7,200
FOP	Open Porch	66	0
PTO	Patio	2,226	0
UAT	Unfinished Attic	270	0
UBM	Basement	10,987	0
		32,124	18,575

Building 2 : Section 1

Year Built: 1910

Living Area: 1,742

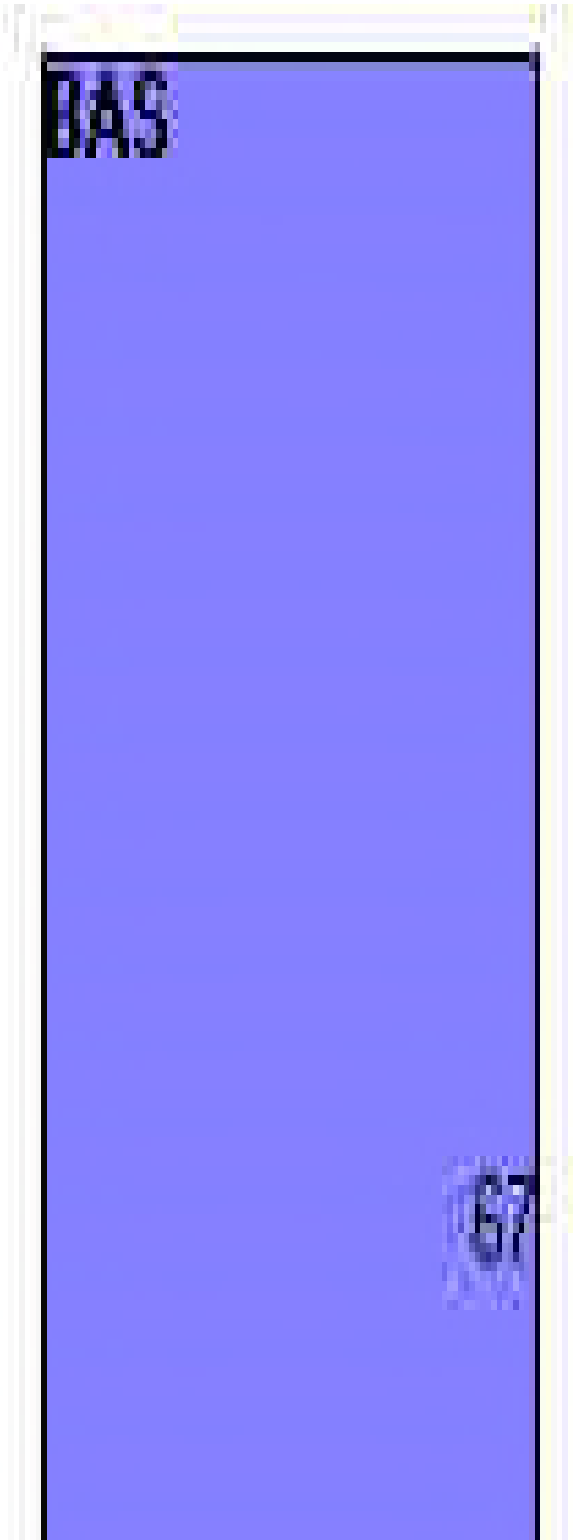
Building Percent Good: 61

Building Attributes : Bldg 2 of 3

Field	Description
STYLE	Office
MODEL	Comm/Ind
Grade	C+
Stories:	1 Story
Occupancy	1.00
Ext Wall 1	Brick
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar + Gravel
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	

Heating Fuel	Oil
Heating Type	Forced Air
AC Type	Heat Pump
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
Usrfld 218	
Usrfld 219	
1st Floor Use:	
Heat/AC	Heat Only
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	Light
Wall Height	12.00
% Comn Wall	

Building Photo


DAS
67

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	1,742	1,742
		1,742	1,742

Building 3 : Section 1

Year Built: 1910

Living Area: 11,932

Building Percent Good: 61

Building Attributes : Bldg 3 of 3

Field	Description
STYLE	Office
MODEL	Comm/Ind
Grade	C+
Stories:	1 Story
Occupancy	9.00
Ext Wall 1	Brick
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar + Gravel
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air
AC Type	Central
Struct Class	
Bldg Use	Commercial MDL-94

Total Rooms	
Total Bedrms	
Total Baths	
Usrfld 218	
Usrfld 219	
1st Floor Use:	
Heat/AC	Heat/AC Packag
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	Average
Wall Height	10.00
% Comn Wall	

Building Photo


BAS
157

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	11,932	11,932
		11,932	11,932

Extra Features

Extra Features Legend

Code	Description	Sub Code	Sub Description	Size
SPR1	Sprinklers-Wet			11932.00 S.F.
SPR1	Sprinklers-Wet			20575.00 S.F.
ELV1	Elevator-Pass			3.00 STOPS
GEN	Generator			1.00 UNITS

Land

Land Use

Use Code 200
Description Commercial MDL-94
Zone CML
Neighborhood CI4

Land Line Valuation

Size (Acres) 8.52
Depth
Assessed Value $646,700
Appraised Value $923,900

Outbuildings

Outbuildings Legend

Code	Description	Sub Code	Sub Description	Size
CELL	Cell Tower			1.00 UNITS
SHD1	Shed-utility			180.00 S.F.
FGR1	Garage-Ave			1350.00 S.F.

SHD1	Shed-utility			1000.00 S.F.
PAV1	Paving			40000.00 S.F.
SHD1	Shed-utility			180.00 S.F.
SHD1	Shed-utility			48.00 S.F.

Valuation History

Appraisal

Valuation Year	Total
2020	$3,479,400

Assessment

Valuation Year	Total
2020	$2,435,600

closecloseclose

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

ESSEX

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 280 Trumbull Street Hartford, CT 06103	3	3	neopost 07/09/2021 US POSTAGE $002.89⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)* Y.P		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Norman Needleman, First Selectman Town of Essex 29 West Avenue Essex, CT 06426				
2.	Carey Duques, Land Use Official Town of Essex 29 West Avenue Essex, CT 06426				
3.	Macbeth Ventures LLC c/o HT Partners LLC 6 Main Street, Suite Centerbrook, CT 06409				
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103 JUL - 9 2021 USPS