

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

September 24, 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
723 Leetes Island Road, Branford, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility located at 723 Leetes Island Road in Branford (the “Property”). The facility consists of antennas and remote radio heads located inside a faux water tank and related equipment on the ground, near the base of the water tank. The water tank facility and Cellco’s use of the structure was approved by the Siting Council (“Council”) in July 2011 (Docket No. 413). A copy of Docket No. 413 Decision and Order is included in [Attachment 1](#).

Cellco now intends to modify its facility by replacing three (3) existing antennas with three (3) Samsung MT6407-77A antennas on its existing mounting brackets, inside the faux water tank. A set of project plans showing Cellco’s proposed facility modifications and new antennas 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 Branford’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 faux water tower.
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 modifications will not result in an 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 Cellco's 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 ("SA") and Mount Analysis ("MA"), the existing faux water tower, its foundation and Cellco's antenna mounting structure 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).

Melanie A. Bachman, Esq.
September 24, 2021
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Enclosures

Copy to:

James Cosgrove, First Selectman for the Town of Branford
Harry Smith, Town Planner
James Medlyn, Property Owner
Alex Tyurin

ATTACHMENT 1

DOCKET NO. 413 - Cellco Partnership d/b/a Verizon Wireless } Connecticut
application for a Certificate of Environmental Compatibility and }
Public Need for the construction, maintenance and operation of a } Siting
telecommunications facility located at 723 Leetes Island Road, }
Branford, Connecticut. } Council

July 28, 2011

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and operation of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership d/b/a Verizon Wireless, hereinafter referred to as the Certificate Holder, for a telecommunications facility located at 723 Leetes Island Road, Branford, Connecticut.

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

1. The tower shall be a monopole designed and constructed to look like an old-fashioned railroad water tank. The water tank/tower shall be no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of the Certificate Holder and other entities, both public and private, but the top of such water tank/tower shall not exceed a height of 109 feet above ground level.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Branford for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
 - b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Branford public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.
8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Branford. Any proposed modifications to this Decision and Order shall likewise be so served.
9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
10. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.
12. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.
13. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.
14. The Certificate Holder shall maintain the facility and associated equipment in a reasonable physical and operational condition, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping, that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the New Haven Register.

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

The parties and intervenors to this proceeding are:

Applicant

Cellco Partnership d/b/a
Verizon Wireless

Intervenor

T-Mobile Northeast, LLC

Its Representative

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

Its Representatives

Julie D. Kohler, Esq.
Jesse A. Langer, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604

Intervenor

New Cingular Wireless PCS, LLC (AT&T)

Intervenor

Town of Branford

Its Representatives

Christopher B. Fisher, Esq.
Lucia Chiochio, Esq.
Cuddy & Feder LLP
445 Hamilton Avenue, 14th floor
White Plains, NY 10601

Its Representative

Keith R. Ainsworth, Esq.
Evans Feldman & Ainsworth, L.L.C.
#101240
261 Bradley Street
P.O. Box 1694
New Haven, CT 06507-1694

ATTACHMENT 2



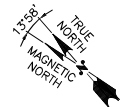
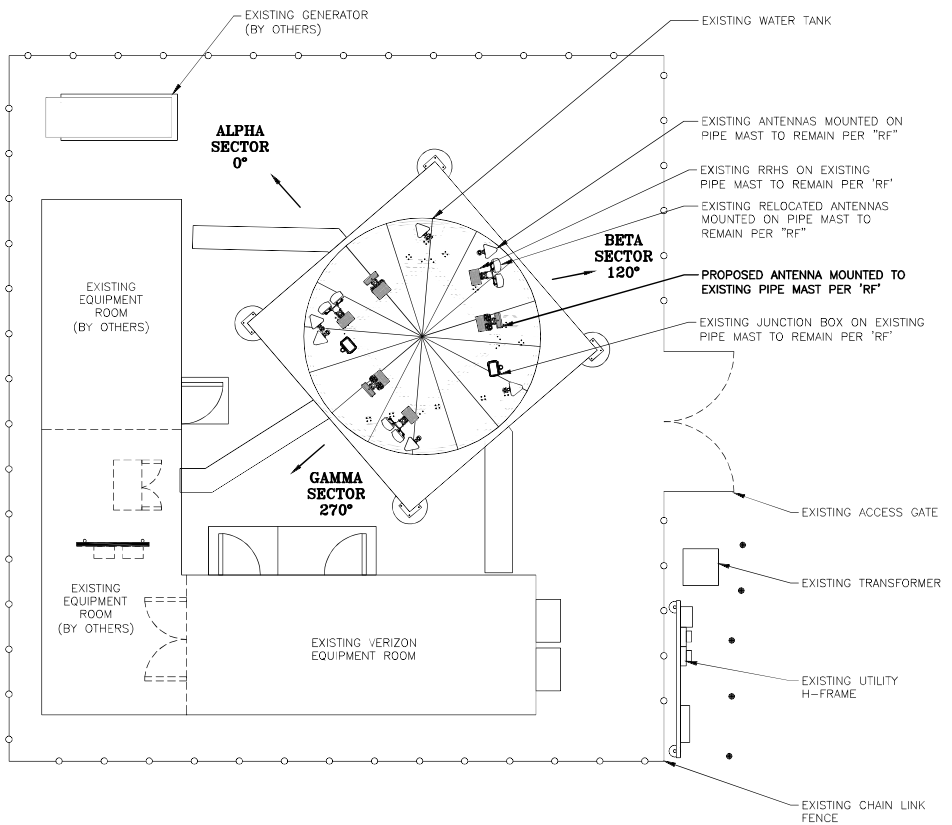
VICINITY MAP
SCALE: N.T.S.

APPROXIMATE LATITUDE: N41° 15' 58.87"
COORDINATES: LONGITUDE: W72° 43' 59.70"

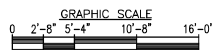
NOTE:
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DATED: MAY 11, 2021

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING IS BASED UPON THE LATEST MOUNT ASSESSMENT BY MASER CONSULTING P.A.

NOTE:
PROPOSED MT6407-77A ANTENNA SIZE AND WEIGHT ARE NOT TO EXCEED:
DIMENSIONS H35.12"xW16.06"xD5.51"
WEIGHT (INCLUDING INTEGRATED RRH) 87.1 LBS



COMPOUND PLAN
22x34 SCALE: 3/16"=1'-0"
11x17 SCALE: 3/32"=1'-0"



FIELD INSPECTION DATE: 11-08-2020

- SCOPE**
- EXISTING (12) ANTENNAS TO REMAIN PER "RF", EXISTING (3) ANTENNA TO BE REMOVED PER "RF", INSTALL (3) ANTENNAS PER "RF".
 - EXISTING (3) DIPLEXERS TO REMAIN PER "RF".
 - EXISTING (6) RRH's TO REMAIN PER "RF", INSTALL (3) RRH's PER "RF".
 - EXISTING (2) JUNCTION BOX TO REMAIN PER "RF".
 - EXISTING (2) HYBRID CABLE TO REMAIN PER "RF".
 - EXISTING (6) COAX CABLES TO REMAIN PER "RF".
 - ALL REPLACEMENT ANTENNAS TO MATCH EXISTING CONDITION & HEIGHTS.
 - RECONFIGURE/RELOCATE EXISTING ANTENNA MOUNTS AS NECESSARY TO ACCOMMODATE HORIZONTAL SEPARATION, PROPOSED AZIMUTHS, AND ANTENNAS CONFIGURATION.

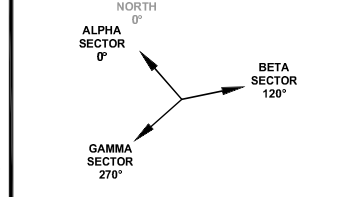
NEW ANTENNA CONFIGURATION

NOTE TO GENERAL CONTRACTOR:
"RF" DESIGN AND EQUIPMENT IS BASED UPON RFDS ISSUED BY VZW DATED: AUGUST 05, 2021 (REV4)
THE CONTRACTOR OF RECORD SHALL CONTACT VZW PRIOR TO ANY AND ALL ORDERING/PURCHASING/INSTALLATION OF EQUIPMENT TO VERIFY THAT THE "RF" LISTED IN THE DRAWING SET IS CURRENT AND UP TO DATE.

NOTES

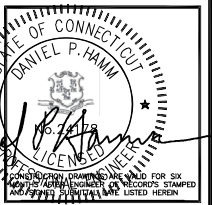
- NORTH SHOWN AS APPROXIMATE.
- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- ANTENNAS WILL BE CAMOUFLAGED WITH 3M WRAP OR SHERWIN-WILLIAMS PRO INDUSTRIAL DTM ACRYLIC PAINT, AS NEEDED, PER VERIZON WIRELESS AND BUILDING OWNER'S APPROVAL.
- PRIOR TO COMMENCEMENT OF ANY WORK, PROPOSED ANTENNA INSTALLATION IS PURSUANT TO FINDINGS DICTATED IN STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO VERIFY CAPACITY OF EXISTING STRUCTURE TO ENSURE STRUCTURAL INTEGRITY FOLLOWING INSTALLATION OF PROPOSED ANTENNAS, COAX CABLES AND REQUIRED HARDWARE. COPY OF STRUCTURAL ANALYSIS TO BE SENT TO DESIGN ENGINEER.
- CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, VERIZON WIRELESS ANTENNA MOUNT LOCATION AND ANTENNAS TO BE INSTALLED.
- CONTRACTOR SHALL NOTIFY ENGINEERS IF FIELD CONDITIONS DIFFER FROM DESIGN.
- RAD CENTERS MEASURED IN THE FIELD WITH LASER BY HDG. RAD CENTERS MAY NOT MATCH RF ANTENNA DESIGN SHEET.

ANTENNA ORIENTATION



PREPARED FOR:
verizon
118 RANDERS ROAD
WEBBOKROUGH, MA 0158

HDG HUDSON Design Group LLC
45 BEECHWOOD DRIVE TEL: (978) 557-5555
N. ANDOVER, MA 01846 FAX: (978) 530-5591



CHECKED BY: JX
APPROVED BY: DPH

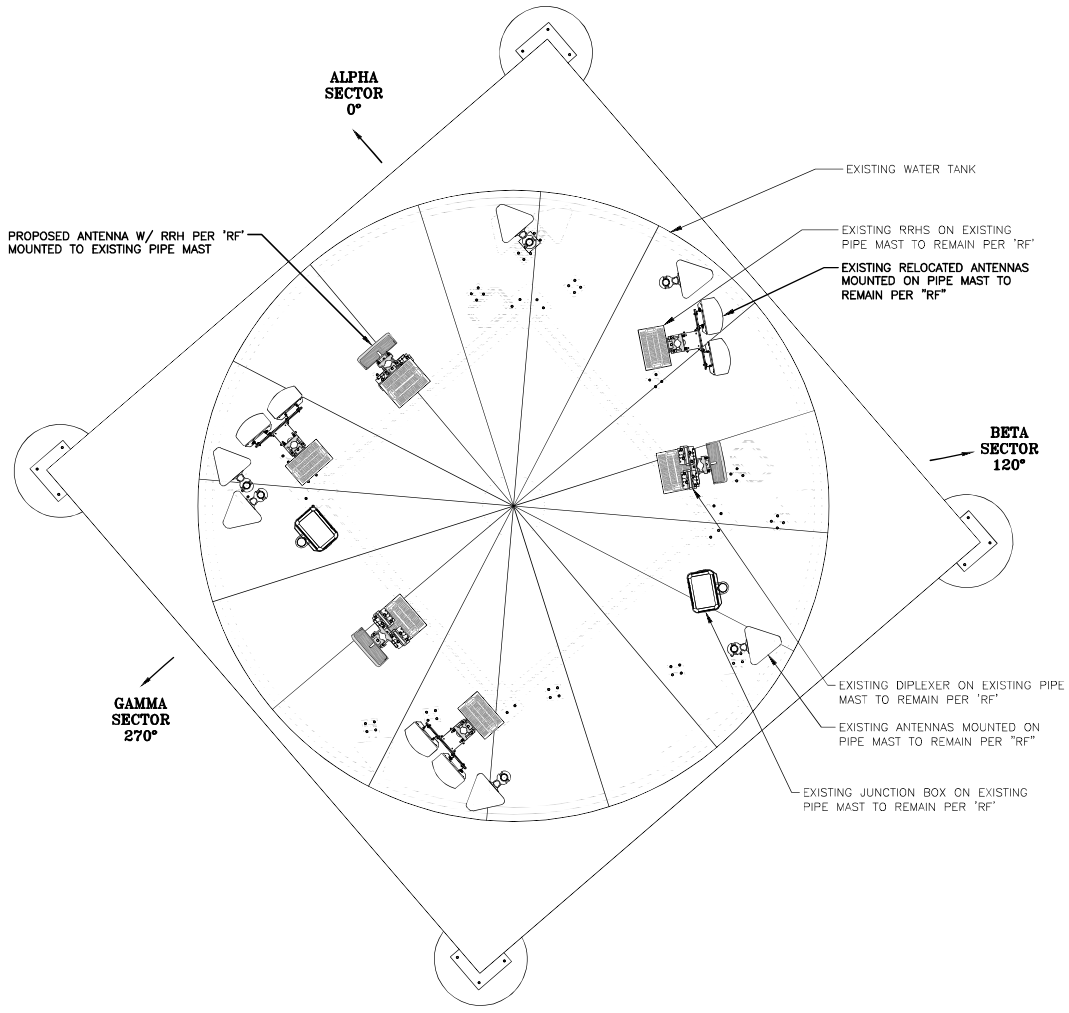
SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	08/05/21	REMOVED PER NEW RFDS	SF
0	05/14/21	FOR CONSTRUCTION	DPH

SITE NAME:
BRANFORD SOUTH CT
SITE ADDRESS:
723 LEETES ISLAND ROAD
BRANFORD, CT 06405

SHEET TITLE:
COMPOUND PLAN

SHEET NUMBER:
A-1



NOTE:
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DIMENSIONS H35.12"W16.06"D5.51"
WEIGHT (INCLUDING INTEGRATED RRH) 87.1 LBS

PREPARED FOR:
verizon
118 Flanders Road
Westborough, MA 01581

HG
HUDSON
Design Group LLC
45 Beechwood Drive TEL: (978) 557-5553
N. Andover, MA 01845 FAX: (978) 536-5504

STATE OF CONNECTICUT
DANIEL P. HAMM
LICENSED PROFESSIONAL ENGINEER
CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS FROM THE DATE OF RECORDS STAMPING AND MUST BE RE-VALIDATED AS LISTED HEREIN

CHECKED BY: JX
APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	06/05/21	REMOVED PER NEW RFDS	SF
0	05/14/21	FOR CONSTRUCTION	DPH/02

SITE NAME:
BRANFORD SOUTH CT
SITE ADDRESS:
723 LEEETES ISLAND ROAD
BRANFORD, CT 06405

SHEET TITLE:
ANTENNA PLAN

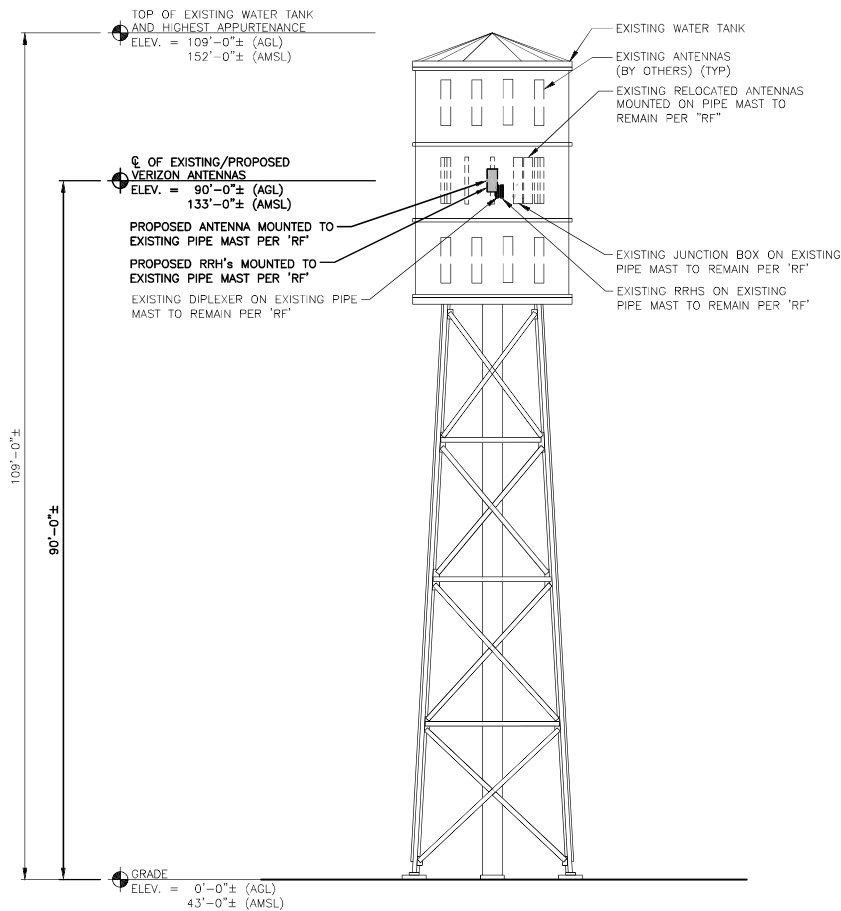
SHEET NUMBER:
A-2

135° 38' TRUE NORTH
MAGNETIC NORTH

ANTENNA PLAN
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

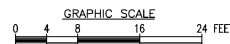
1
A-2

GRAPHIC SCALE
0 1 2 4 6 FEET



ELEVATION
 22x34 SCALE: 1/8"=1'-0"
 11x17 SCALE: 1/16"=1'-0"

1
A-3



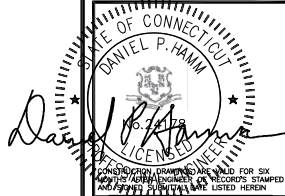
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PREPARED FOR:
verizon
 118 RANDERS ROAD
 WEBSTER, MA 01581

HG
HUDSON
 Design Group LLC
 45 BEECHWOOD DRIVE TEL: (978) 557-5553
 N. ANDOVER, MA 01845 FAX: (978) 536-5591



CHECKED BY: JX
 APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	06/05/21	REVISION PER NEW RFDS	SF
0	05/14/21	FOR CONSTRUCTION	DPH/05

SITE NAME:
 BRANFORD SOUTH CT
 SITE ADDRESS:
 723 LEETES ISLAND ROAD
 BRANFORD, CT 06405

SHEET TITLE:
 ELEVATION

SHEET NUMBER:
A-3

STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
- STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL", 14TH EDITION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
- UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x11 5/8"x12GA UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
- EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
- WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
- ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
- NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
- SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST
BEFORE CONSTRUCTION

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³

ADDITIONAL TESTING AND INSPECTIONS:
DURING CONSTRUCTION

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT

ADDITIONAL TESTING AND INSPECTIONS:
AFTER CONSTRUCTION

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS

NOTES:

- REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL BOLTS OR STEEL.
- PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
- PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
- HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C.D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
- ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 308.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 308.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
- AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

- ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"Ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
- SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
- SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
- VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
- CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
- EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

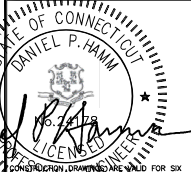
PREPARED FOR:



118 RANDERS ROAD
WEBSTER, MA 01581



45 BEECHWOOD DRIVE TEL: (978) 557-5553
N. ANDOVER, MA 01845 FAX: (978) 530-5591



CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS FROM DATE OF REVIEW. ALL RECORDS STAMPED AND SIGNED BY REGISTERED PROFESSIONAL ENGINEER.

CHECKED BY: JX

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	06/05/21	REVISION PER NEW RFD'S	SF
0	05/14/21	FOR CONSTRUCTION	DPH

SITE NAME:
BRANFORD SOUTH CT

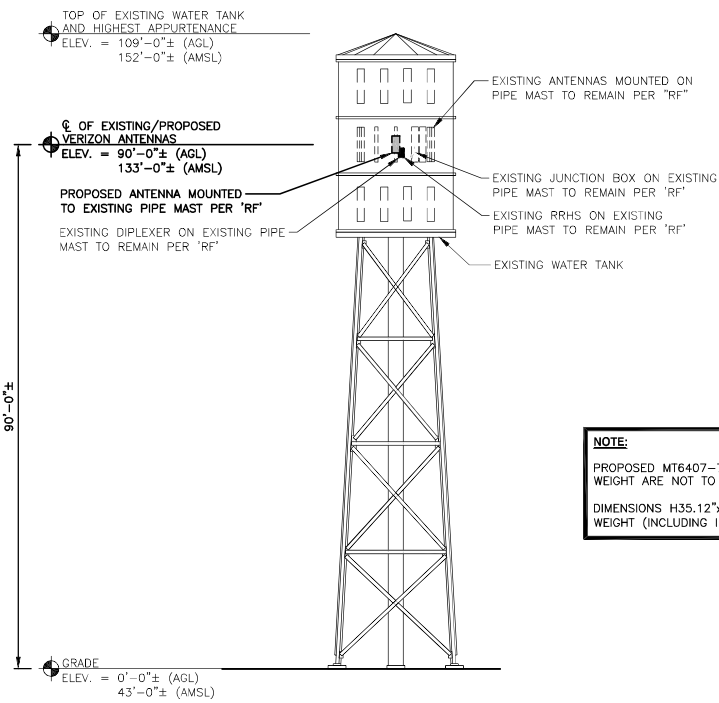
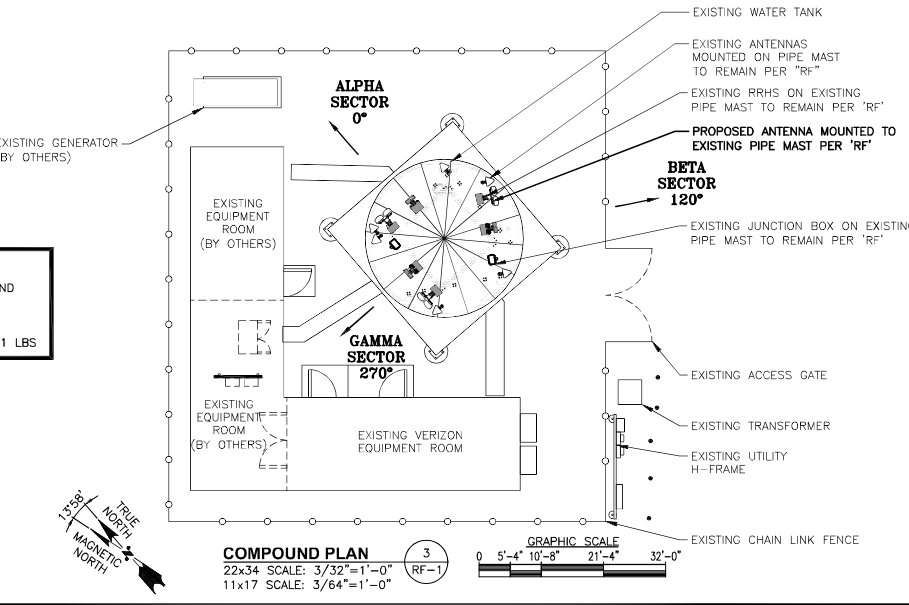
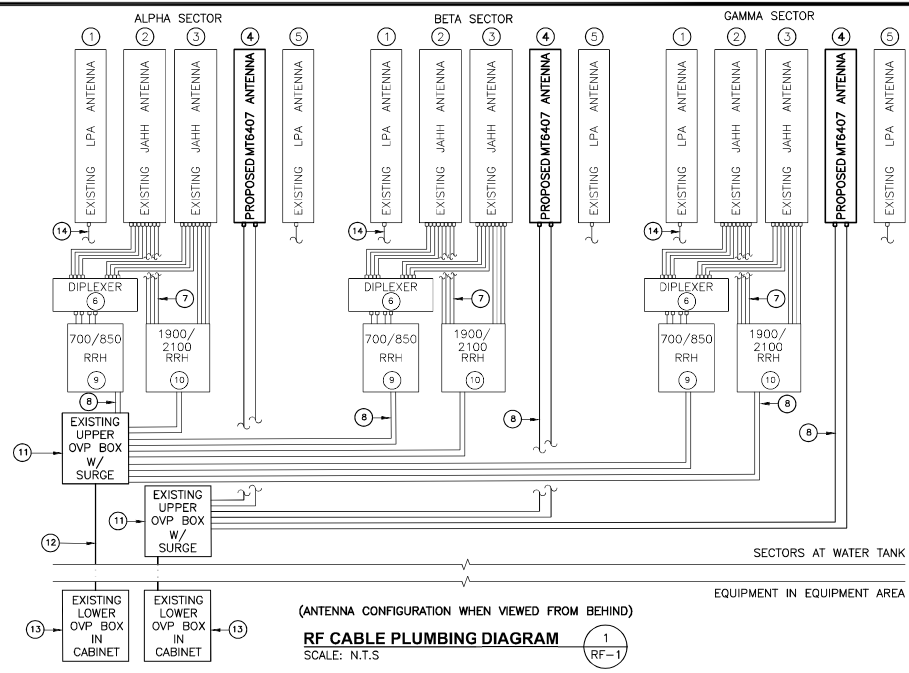
SITE ADDRESS:
723 LEETES ISLAND ROAD
BRANFORD, CT 06405

SHEET TITLE
**STRUCTURAL NOTES
&
SPECIAL INSPECTIONS**

SHEET NUMBER
SN-1

BILL OF MATERIALS				
SITE NAME: BRANFORD SOUTH CT				
ITEM	DESCRIPTION	QTY	LENGTH	COMMENTS
①	EXISTING LPA-80063/6CF 2 ANTENNA	3		MOUNTED TO EXISTING PIPE MAST
②	EXISTING JAHH-65B-R3B ANTENNA	3		MOUNTED TO EXISTING PIPE MAST
③	EXISTING JAHH-65B-R3B ANTENNA	3		MOUNTED TO EXISTING PIPE MAST
④	PROPOSED MT6407-77A ANTENNA	3		MOUNTED TO EXISTING PIPE MAST
⑤	EXISTING LPA-80063/6CF 2 ANTENNA	3		MOUNTED TO EXISTING PIPE MAST
⑥	EXISTING FDJ85020Q4-S1 DIPLEXER	3		MOUNTED TO EXISTING PIPE MAST
⑦	EXISTING 1/2" TOP COAX JUMPERS	60	10 FT.	ROUTE FROM RRH/DIPLEXER TO ANTENNA
⑧	EXISTING SAMSUNG FIBER JUMPER CABLES	6	10 FT.	ROUTE FROM OVP TO RRH/ANTENNA
⑨	EXISTING SAMSUNG POWER JUMPER CABLES	6	10 FT.	ROUTE FROM OVP TO RRH/ANTENNA
⑩	PROPOSED SAMSUNG FIBER JUMPER CABLES	3	10 FT.	ROUTE FROM OVP TO RRH/ANTENNA
⑪	PROPOSED SAMSUNG POWER JUMPER CABLES	3	10 FT.	ROUTE FROM OVP TO RRH/ANTENNA
⑫	EXISTING LTE 700/850 RRH	3		SAMSUNG RRH B5/B13 RRH-BR04C PIPE MAST MOUNTED
⑬	EXISTING PCS/AWS 1900/2100 RRH	3		SAMSUNG RRH B2/B66A RRH-BR049 PIPE MAST MOUNTED
⑭	EXISTING UPPER OVP	2		MOUNTED TO EXISTING PIPE MAST
⑮	EXISTING HYBRID CABLE	2	155 FT.	ROUTE FROM EQUIPMENT TO ANTENNA SECTOR
⑯	EXISTING LOWER OVP	2		MOUNTED INSIDE CABINET
⑰	EXISTING 1-5/8" COAX CABLES	6		ROUTE FROM EQUIPMENT TO ANTENNA SECTOR

THE ABOVE RF-BOM SHEET IS BASED ON INFORMATION LISTED ON ANTENNA RECOMMENDATION SHEET DATED 08/05/21



NOTE:
PROPOSED MT6407-77A ANTENNA SIZE AND WEIGHT ARE NOT TO EXCEED:
DIMENSIONS H35.12"xW16.06"xD5.51"
WEIGHT (INCLUDING INTEGRATED RRH) 87.1 LBS

PREPARED FOR:
verizon
118 Flanders Road
Westborough, MA 01581

HG
HUDSON
Design Group LLC
45 Beechwood Drive
N. Andover, MA 01845
TEL: (978) 557-5553
FAX: (978) 530-5599

CHECKED BY: JX
APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	08/05/21	REMOVED PER NEW RFDS	SF
0	05/14/21	BILL OF MATERIAL	DA/DS

SITE NAME:
BRANFORD SOUTH CT

SITE ADDRESS:
723 LEETES ISLAND ROAD
BRANFORD, CT 06405

SHEET TITLE:
**RF PLUMBING
DIAGRAM & BILL OF
MATERIAL**

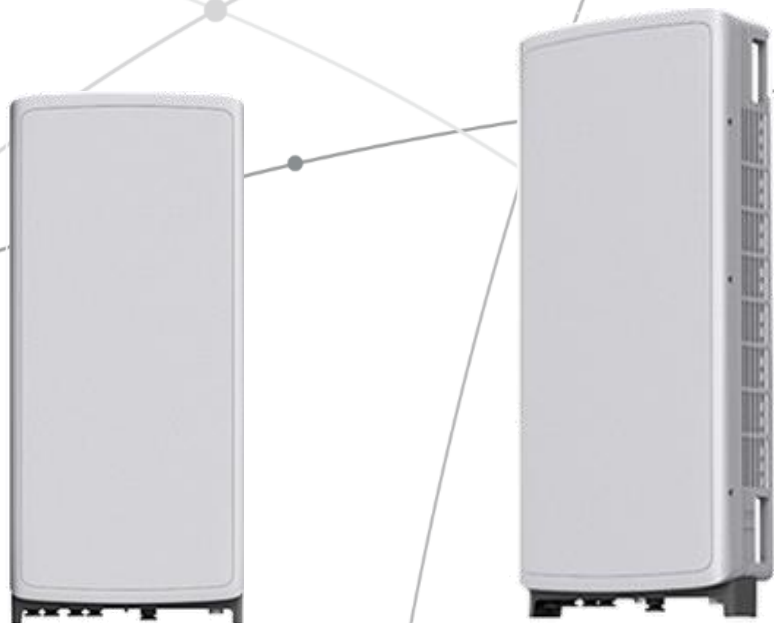
SHEET NUMBER:
RF-1

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



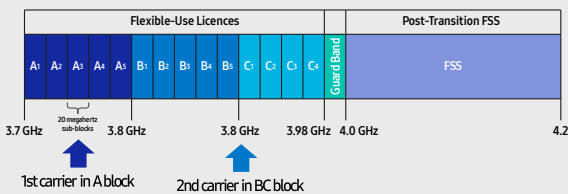
Points of Differentiation

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

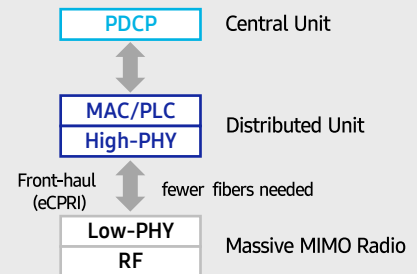
C-Band spectrum supported by Massive MIMO Radio



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.

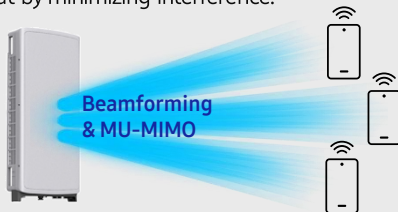


Enhanced Performance

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.

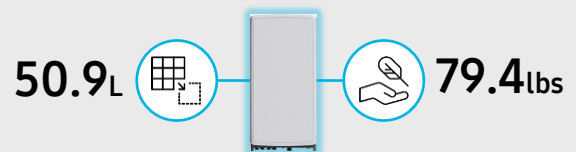
Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



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

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ATTACHMENT 3

	General	Power	Density					
Site Name: Branford S								
Tower Height: Verizon @ 90ft								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	FREQ.	CALC. POWER DENS	MAX. PERMISS. EXP.	FRACTION MPE	Total
*AT&T	1	500	100	880	0.0203	0.5867	0.35%	
*AT&T	1	500	100	1900	0.0203	1.0000	0.20%	
*AT&T	3	296	100	880	0.0361	0.5867	0.62%	
*AT&T	1	427	100	1900	0.0174	1.0000	0.17%	
*AT&T	1	500	100	740	0.0203	0.4933	0.41%	
*T-Mobile	8	101	80	1945	0.0530	1.0000	0.53%	
*T-Mobile	2	806	80	2100	0.1059	1.0000	1.06%	
VZW 700	4	628	90	751	0.0111	0.5007	2.23%	
VZW Cellular	4	725	90	874	0.0129	0.5827	2.21%	
VZW PCS	4	1067	90	1975	0.0189	1.0000	1.89%	
VZW AWS	4	1587	90	2120	0.0282	1.0000	2.82%	
VZW CBAND	4	6531	90	3730.08	0.1160	1.0000	11.60%	
								24.09%
* Source: Siting Council								

ATTACHMENT 4

(REVISED)
STRUCTURAL ANALYSIS REPORT

For

BRANFORD SOUTH CT

723 Leetes Island Road
Branford, CT 06405

Antennas Mounted within Stealth Enclosure



Prepared for:

verizon[✓]

20 Alexander Drive
Wallingford CT 06492

Dated: September 2, 2021 (Rev.1)
May 11, 2021

Prepared by:

H D G **HUDSON**
Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553 (F) 978.336.5586
www.hudsondesigngroupllc.com





SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by Verizon to conduct a structural evaluation of the structure supporting the proposed equipment located in the areas depicted in the latest HDG construction drawings.

This report represents this office's findings, conclusions and recommendations pertaining to the support of Verizon's proposed antennas listed below.

HDG's subconsultant, Provertic LLC, conducted an on-site visual survey of the above site on December 8, 2020.

The following documents were used for our reference:

Previous HDG Structural Analysis Report dated January 9, 2019.

Mount Structural Analysis Report prepared by Maser Consulting Connecticut dated August 11, 2021.

Design Drawings prepared by Vector Engineering dated March 20, 2012.

Structural Analysis Report prepared by Vector Engineering dated March 12, 2012.

Based on our evaluation, we have determined that the existing structure **IS CAPABLE** of supporting the proposed equipment loading.

	Original Design Loading	% Increase	Pass/Fail
Dead Load Comparison	114.7 Kips	3.8%	PASS

Note:

The Mount Structural Analysis is to be performed by other. Mount modifications that may be proposed in the Mount Structural Analysis are designed by others.



APPURTENANCE CONFIGURATION:

Appurtenances	Dimensions	Weight	**Elevation	Mount
(6) JAHH-65B-R3B Antennas	72.0" x13.8" x8.2"	64 lbs	90'	Pipe Mast
(6) LPA-80063/6CF Antennas	70.9"x15.0"x13.1"	27 lbs	90'	Pipe Mast
(3) B2/B66A RRH-BR049 RRH's	15.0"x15.0"x10.0"	98 lbs	-	Pipe Mast
(3) B5/B13 RRH-BR04C RRH's	15.0"x15.0"x8.1"	82 lbs	-	Pipe Mast
(3) FDJ85020Q4-S1 Diplexers	6.8"x16.9"x6.3"	24 lbs	-	Pipe Mast
(2) Junction Box	28.9"x15.7"x10.3	32 lbs	-	Pipe Mast
(3) MT6407-77A Antennas	Not to Exceed 35.12"x16.06"x5.51"	Not to Exceed 87.1 lbs	90'	Pipe Mast

* Proposed equipment shown in bold.

** Elevation to antenna centerline.

DESIGN CRITERIA:

International Building Code (IBC) 2015 with 2018 Connecticut State Building Code Amendments, and ASCE 7-10 (Minimum Design Loads for Buildings and Other Structures).		
Wind		
Reference Wind Speed:	130 mph	(2018 CSBC Appendix N)
Exposure Category:	C	(ASCE 7-10 Chapter 26)
Risk Category:	II	(ASCE 7-10 Table 1.5-1)
Snow		
Ground Snow, P _g :	30	(2018 CSBC Appendix N)
Importance Factor (I _s):	1.0	(ASCE 7-10 Table 1.5-2)
Exposure Factor (C _e):	1.1	(Sheltered, Table 7-2)
Thermal Factor (C _t):	1.0	(ASCE 7-10 Table 7-3)
Flat Roof Snow Load:	23 psf	(ASCE 7-10 Equation 7.3-1)
Min. Flat Roof Snow Load:	30 psf	(2018 CSBC Appendix N)
EIA/TIA-222-H Structural Standards for Steel Antenna Towers and Antenna Supporting Structures		
Wind		
City/Town:	Branford	
County:	New Haven	
Wind Load:	130 mph	(TIA-222-H Figure B-2)
Ice		
Design Ice Thickness (t _i):	1.0 in	(TIA-222-H Figure B-9)
Structure Class:	II	(TIA-222-H Table 2-1)
Importance Factor (I _i):	1.0	(TIA-222-H Table 2-3)



ANTENNA SUPPORT RECOMMENDATIONS:

The new antennas are proposed to be mounted on existing pipe masts fastened to existing steel grating secured with G clips within the existing Stealth water tank.

The equipment is to be hidden within the existing fiberglass enclosure. The existing enclosure will not have any additional wind load.

RRH SUPPORT RECOMMENDATIONS:

The new RRH's are proposed to be mounted to new unistrut components secured in the interior of the Stealth water tank.

Limitations and Assumptions:

1. Reference the latest HDG construction drawings for all the equipment locations and details.
2. All detail requirements will be designed and furnished in the construction drawings.
3. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
4. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
5. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.
6. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.

FIELD PHOTOS:



Photo 1: Sample photo illustrating existing antennas.



Photo 2: Sample photo illustrating existing equipment located under canopy.



HUDSON
Design Group LLC

Calculations

Date: 9/2/2021
 Project Name: Branford South CT
 Designed By: KM Checked By: MSC



Weight of Equipment:

Item	Wt. (Lbs.)	Linear Foot	Qty.	Total (kips)
MT6407-77A Antenna	87.1	--	3	0.261
LPA-80063-6CF-EDIN	27	--	6	0.162
JAHH-65B-R3B	64	--	6	0.384
Antenna 1	83	--	3	0.249
Antenna 2	96	--	3	0.288
Antenna 3	37	--	9	0.333
B5/B13 RRH-BR04C	82	--	3	0.246
B2/B66A RRH-BR049	98	--	3	0.294
RRH 1	51	--	6	0.306
RRH 2	45	--	6	0.270
TMA	16	--	3	0.048
FDJ85020Q4-S1 Diplexer	24	--	3	0.072
Junction Box	32	--	2	0.064
DC6	33	--	3	0.099
1-5/8" Coax Cable	0.9	79.08	8	0.569
Cable 1	0.9	79.08	6	0.427
Cable 2	0.5	79.08	3	0.119
Cable 3	0.9	79.08	2	0.142
Cable 4	0.3	79.08	3	0.071

Total, T_{weight} **4.4** Kips

Design Dead Load on Stealth Enclosure:

Item	Wt. (Lbs.)	Linear Foot	Qty.	Total (kips)
Water Tank	114700	--	1	114.700

Total, T_{weight} **114.7** Kips

Percent Increase

(Proposed Load) / (Design Load) ≤ 5% → 3.8% < 5% **Therefore, OK!**

*Note: Existing Stealth Water Tank dead load data taken from previous Structural Analysis Report prepared by Vector Engineers dated March 12, 2012. Existing equipment information gathered from on-site visual survey on November 29, 2018. If field conditions differ from what is assumed in this report, the engineer on record is to be notified immediately.



HUDSON
Design Group LLC

Reference Documents



JOB NO.: U0142-542-121
DATE: 03/12/12

DESIGNED: JSP
CHECKED: BDV

SHEET

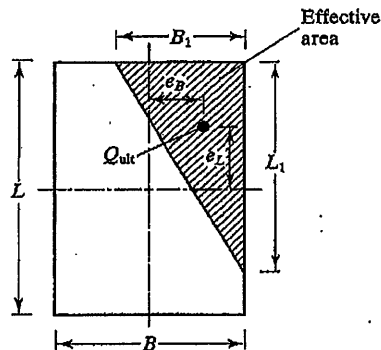
OF

PROJECT: BRANFORD SOUTH

Square Mat Foundation Design (Resultant Lies Outside Footing Kern)

Design Loads (Factored / ϕ_c):

Max. Base Shear, $V_u / 0.75$:	93.3	k
Max. Overturning Moment, $M_u / 0.75$:	6,776.0	k-ft
Max. Down, $P_{u-down} / 0.75$:	114.7	k
Structure Weight:	58.0	k
Moment Components, $M_y = M_x$:	4791.4	k-ft



Mat Properties:

Mat Width, $L = B$:	26.0	ft
Mat Thickness, t :	3.0	ft
Pier Diameter, b :	3.0	ft
Height of Pier:	6.5	ft
Depth of Soil Above Mat:	6.0	ft
Unit Weight of Soil:	110.0	pcf
Number of Legs:	4	

Volume of Concrete:	2212	ft ³
Volume of Concrete:	81.9	yd ³
Weight of Concrete:	331.8	k
Weight of Soil:	441.5	k

Soil Properties:

Allow. Bearing Pressure:	30,000	psf
Factor of Safety:	1	
1/3 Increase for short term loads?	NO	
Passive Pressure:	100	pcf
Factor of Safety:	2	
Max. Passive Pressure (opt'l):	1,000	psf
1/3 increase for short term loads?	No	
Top Depth to Ignore:	0.0	ft

Eff. Bearing Pressure:	30000	psf
Coefficient of Friction:	0.30	
Factor of Safety:	2	
% Passive for Sliding:	50.00	
% Friction for Sliding:	100.00	

Check Bearing:

Total Moment, $M_y = M_x$:	5,418.3	k-ft
Total Axial Load, Q :	1,351.9	k
Load eccentricity, $e_L = e_B$:	4.01	ft
Effective Mat Brg Width, $B_1 = L_1$:	26.98	ft
Effective Area, $A' = 1/2(B_1)(L_1)$:	363.85	ft ²
Allowable axial load:	10916	k

Bearing Capacity OK.



Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
greg.dulnik@colliersengineering.com

Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10019436
Maser Consulting Connecticut Project #: 20777356A (Rev. 2)

August 11, 2021

Site Information

Site ID: 468552-VZW / Branford South CT
Site Name: Branford South CT
Carrier Name: Verizon Wireless
Address: 723 Leetes Island Road
Branford, Connecticut 06405
New Haven County
Latitude: 41.266353°
Longitude: -72.733250°

Structure Information

Tower Type: 105-Ft Water Tank
Mount Type: (12) 9.13-Ft Mount Pipes

FUZE ID # 16244098

Analysis Results

Mount Pipes: **3.7% Pass**

*****Contractor PMI Requirements:**

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

Contractor - Please Review Specific Site PMI Requirements Upon Award

Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

Report Prepared By: Nathan LaPorte



Digitally signed by Justin Linette
Date: 2021.08.12 15:55:55-04'00'

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only, and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS Site ID: 624263, dated August 5, 2021</i>
<i>Mount Mapping Report</i>	<i>Tower Engineering Professionals, Site ID: 468552, dated November 10, 2020</i>
<i>Construction Drawings</i>	<i>Hudson Design Group, LLC Site Name: Branford South CT, dated May 14, 2021</i>

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} :	122 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e :	0.998
Seismic Parameters:	S_s :	0.201
	S_1 :	0.053
Maintenance Parameters:	Wind Speed (3-sec. Gust):	N/A
	Maintenance Live Load, L_v :	N/A
	Maintenance Live Load, L_m :	N/A
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
85.00	90.00	3	Samsung	MT6407-77A	Added
		6	Commscope	JAHH-65B-R3B	Retained
		6	Antel	LPA-80063/6CF 2	
		3	RFS	FDJ85020Q4-S1	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		2	Raycap	RRFDC-3315-PF-48*	

* Equipment is mounted on the structure. They are not mounted on the mount pipes and are not included in this mount analysis.

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by Maser Consulting Connecticut, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

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

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
<i>Mount Pipe</i>	<i>3.7%</i>	<i>Pass</i>
<i>Connection Check</i>	<i>1.3%</i>	<i>Pass</i>

Structure Rating – (Controlling Utilization of all Components)	3.7%
---	-------------

Component	Fx (lbs)	Fy (lbs)	Fz (lbs)	Mx (lb*ft)	My (lb*ft)	Mz (lb*ft)
<i>Connection</i>	<i>0.00</i>	<i>275.48</i>	<i>0.00</i>	<i>9.00</i>	<i>0.00</i>	<i>0.00</i>

Note: the above reactions are factored reactions based on TIA-222-H LRFD load cases. Information regarding the connection to the supporting structure was not available. We recommend that the above reactions be used to determine the adequacy of the connection to the supporting structure and the supporting structure.

Recommendation:

The existing mounts are **SUFFICIENT** for the final loading configuration and do not require modifications.

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

Attachments:

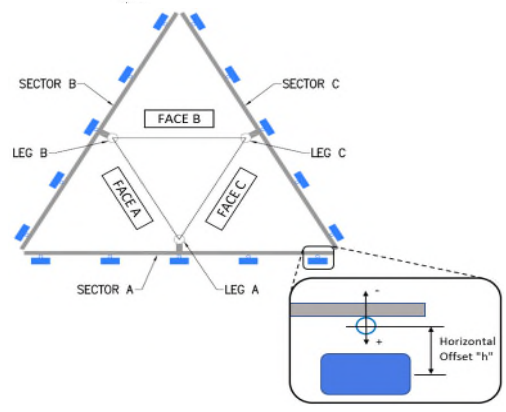
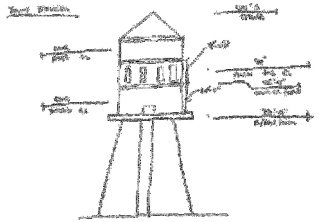
1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter



	Antenna Mount Mapping Form (PATENT PENDING)			FCC #
				Unknown
Tower Owner:	Unknown		Mapping Date:	11/10/2020
Site Name:	Branford South CT		Tower Type:	Other
Site Number or ID:	468552		Tower Height (Ft.):	105
Mapping Contractor:	TEP		Mount Elevation (Ft.):	85

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Notes: For north arrow
 Ant. 100'
 Ant. 100'
 Ant. 100'
 Ant. 100'

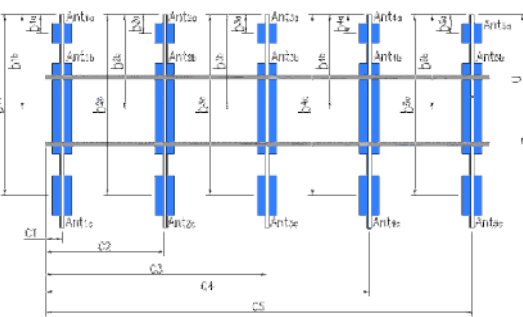


Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "U"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "U"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"Ø x 5/32" x 9'-1.5"	109.50		C1	2.4"Ø x 5/32" x 9'-1.5"	109.50	
A2	2.4"Ø x 5/32" x 9'-1.5"	109.50		C2	2.4"Ø x 5/32" x 9'-1.5"	109.50	
A3	2.4"Ø x 5/32" x 9'-1.5"	109.50		C3	2.4"Ø x 5/32" x 9'-1.5"	109.50	
A4	2.4"Ø x 5/32" x 9'-1.5"	109.50		C4	2.4"Ø x 5/32" x 9'-1.5"	109.50	
A5				C5			
A6				C6			
B1	2.4"Ø x 5/32" x 9'-1.5"	109.50		D1			
B2	2.4"Ø x 5/32" x 9'-1.5"	109.50		D2			
B3	2.4"Ø x 5/32" x 9'-1.5"	109.50		D3			
B4	2.4"Ø x 5/32" x 9'-1.5"	109.50		D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. : 0.00
 Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :
 Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :
 Please enter additional information or comments below.
 Horizontal offset dimensions do not apply to this mount type. See Sketch for details.
 Tower Face Width at Mount Elev. = inner diameter of faux tank/shroud

Tower Face Width at Mount Elev. (ft.):	19.67	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):
--	-------	---

Ants. Items	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]				Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b _{1a} , b _{2a} , b _{3a} , b _{1b} ,..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers	
Sector A											
Ant _{1a}	LPA-80063-6CF-EDIN	14.96	13.07	70.87	None	90.5417	43.00	13.50	0.00	87-90	
Ant _{1b}											
Ant _{1c}											
Ant _{2a}	(2) JAHH-65B-R3B	13.78	8.19	71.97	Raycap	89.9583	50.00	13.00	0.00	93-94, 103-104	
Ant _{2b}	RFV01U-D2A	15.88	10.03	19.73		89.625	54.00	8.00		96-97	
Ant _{2c}	FDJ85020Q4-S1	16.90	6.30	6.80		88.625	66.00	5.00		101-102	
Ant _{3a}	LPA-171063-12CF-ED	7.90	8.00	73.90	None	90.375	45.00	10.00	0.00	105-106	
Ant _{3b}											
Ant _{3c}											
Ant _{4a}	LPA-80063-6CF-EDIN	14.96	13.07	70.87	None	90.5417	43.00	13.50	0.00	107-108	
Ant _{4b}											
Ant _{4c}											
Ant _{5a}											
Ant _{5b}											
Ant _{5c}											
Ant on Standoff	RFV01U-D1A	15.88	10.03	19.73			59.00	9.50		91-92	
Ant on Standoff											
Ant on Tower	RRFDC-3315-PF-48	15.73	10.25	25.66	(1) 1.5 Hybrid					99-100	
Ant on Tower											



Antenna Layout (Looking Out From Tower)

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector		Sector B																			
Sector A:	0.00	Deg	Leg A:		Deg	Ant _{1a}	LPA-80063-6CF-EDIN	14.96	13.07	70.87	None	90.5417	43.00	13.50	120.00	109-110									
Sector B:	120.00	Deg	Leg B:		Deg	Ant _{1b}																			
Sector C:	270.00	Deg	Leg C:		Deg	Ant _{2a}	(2) JAHH-65B-R3B	13.78	8.19	71.97	Raycap	89.9583	50.00	13.00	120.00	115-116, 121-122									
Sector D:		Deg	Leg D:		Deg	Ant _{2b}	RFV01U-D2A	15.88	10.03	19.73		89.625	54.00	8.00		119-120									
Climbing Facility Information						Ant _{2c}	FDJ8502Q4-S1	16.90	6.30	6.80		88.625	66.00	5.00		117-118									
Location:	Center Riser	Deg	N/A			Ant _{3a}	LPA-171063-12CF-ED	7.90	8.00	73.90	None	90.375	45.00	10.00	120.00	123-124									
Climbing Facility	Corrosion Type:	Good condition.				Ant _{3b}																			
	Access:	Climbing path was unobstructed.				Ant _{3c}																			
	Condition:	Good condition.				Ant _{4a}	LPA-80063-6CF-EDIN	14.96	13.07	70.87	None	90.5417	43.00	13.50	120.00	125-126									
						Ant _{4b}																			
						Ant _{4c}																			
						Ant _{5a}																			
						Ant _{5b}																			
						Ant _{5c}																			
						Ant on Standoff	RFV01U-D1A	15.88	10.03	19.73								59.00	9.50		113-114				
						Ant on Standoff																			
						Ant on Tower	RRFDC-3315-PF-48	15.73	10.25	25.66	(1) 1.5 Hybrid										111-112				
						Ant on Tower																			
						Sector C						Ant _{1a}	LPA-80063-6CF-EDIN	14.96	13.07	70.87	None	90.5417	43.00	13.50	270.00	128-129			
												Ant _{1b}													
												Ant _{1c}													
												Ant _{2a}	(2) JAHH-65B-R3B	13.78	8.19	71.97	Raycap	89.9583	50.00	13.00	270.00	132-133, 139-140			
												Ant _{2b}	RFV01U-D2A	15.88	10.03	19.73		89.625	54.00	8.00		136-138			
												Ant _{2c}	FDJ8502Q4-S1	16.90	6.30	6.80		88.625	66.00	5.00		134-135			
Ant _{3a}	LPA-171063-12CF-ED	7.90	8.00	73.90	None							90.375	45.00	10.00	270.00	141-142									
Ant _{3b}																									
Ant _{3c}																									
Ant _{4a}	LPA-80063-6CF-EDIN	14.96	13.07	70.87	None							90.5417	43.00	13.50	270.00	143-144									
Ant _{4b}																									
Ant _{4c}																									
Ant _{5a}																									
Ant _{5b}																									
Ant _{5c}																									
Ant on Standoff	RFV01U-D1A	15.88	10.03	19.73													59.00	9.50		130-131					
Ant on Standoff																									
Ant on Tower																									
Ant on Tower																									
Sector D						Ant _{1a}																			
						Ant _{1b}																			
						Ant _{1c}																			
						Ant _{2a}																			
						Ant _{2b}																			
						Ant _{2c}																			
						Ant _{3a}																			
						Ant _{3b}																			
						Ant _{3c}																			
						Ant _{4a}																			
						Ant _{4b}																			
						Ant _{4c}																			
						Ant _{5a}																			
						Ant _{5b}																			
						Ant _{5c}																			
						Ant on Standoff																			
Ant on Standoff																									
Ant on Tower																									
Ant on Tower																									

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1		
2		
3		
4		
5		
6		
7		
8		

Mapping Notes

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions

1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.



Antenna Mount Mapping Form (PATENT PENDING)

FCC #
Unknown

Tower Owner:	Unknown	Mapping Date:	11/10/2020
Site Name:	Branford South CT	Tower Type:	Other
Site Number or ID:	468552	Tower Height (Ft.):	105
Mapping Contractor:	TEP	Mount Elevation (Ft.):	85

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Please Insert Sketches of the Antenna Mount

Branford South CT

Verizon Code:

(G) FA 156

(B) Hybrid 174

safety: 3/8" mid c pps

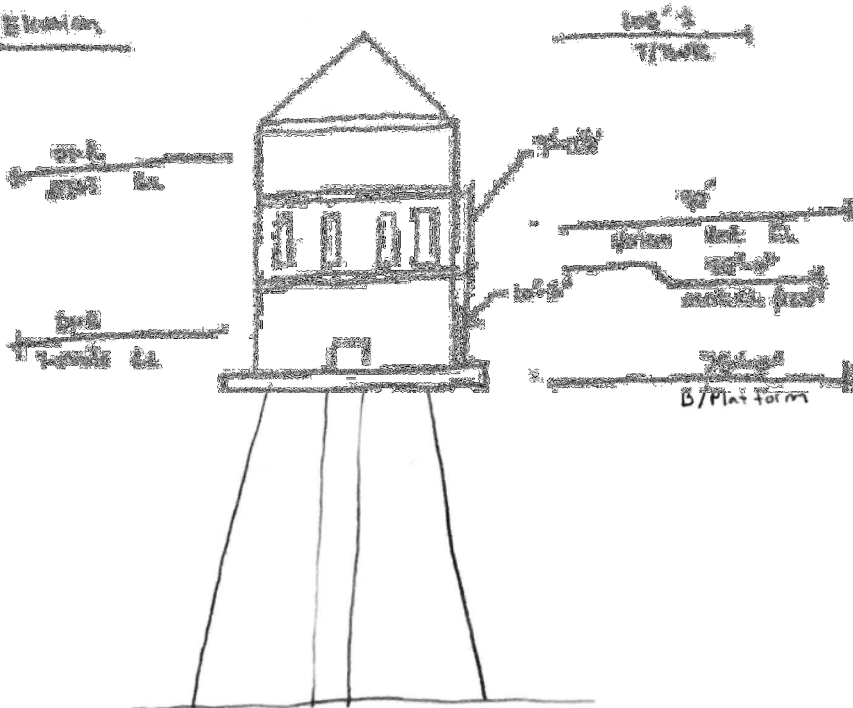
h₂: 240"

W Platform: 75'-0"

mid cl: 86'-0" (716wds)

4 (G) FA 146 not connected

Tower Elevation

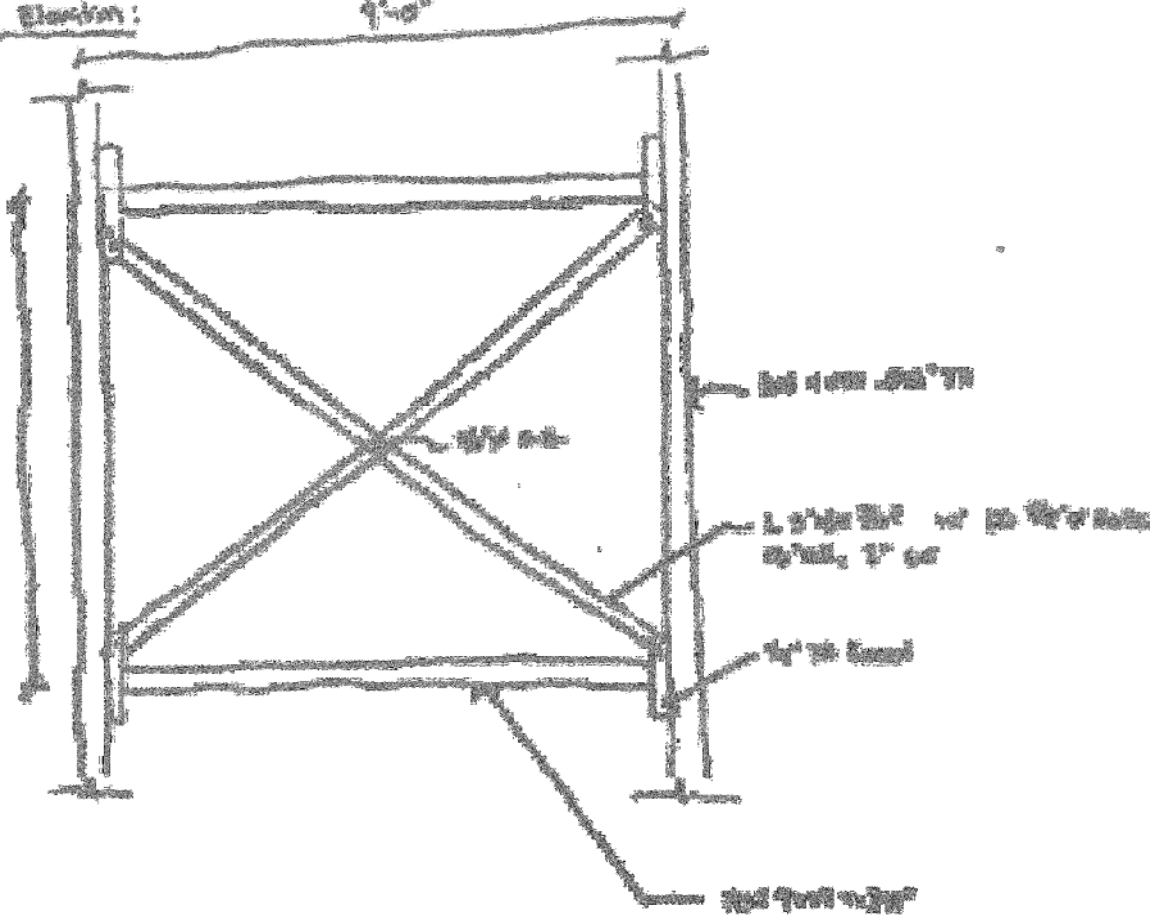


Typical sec.

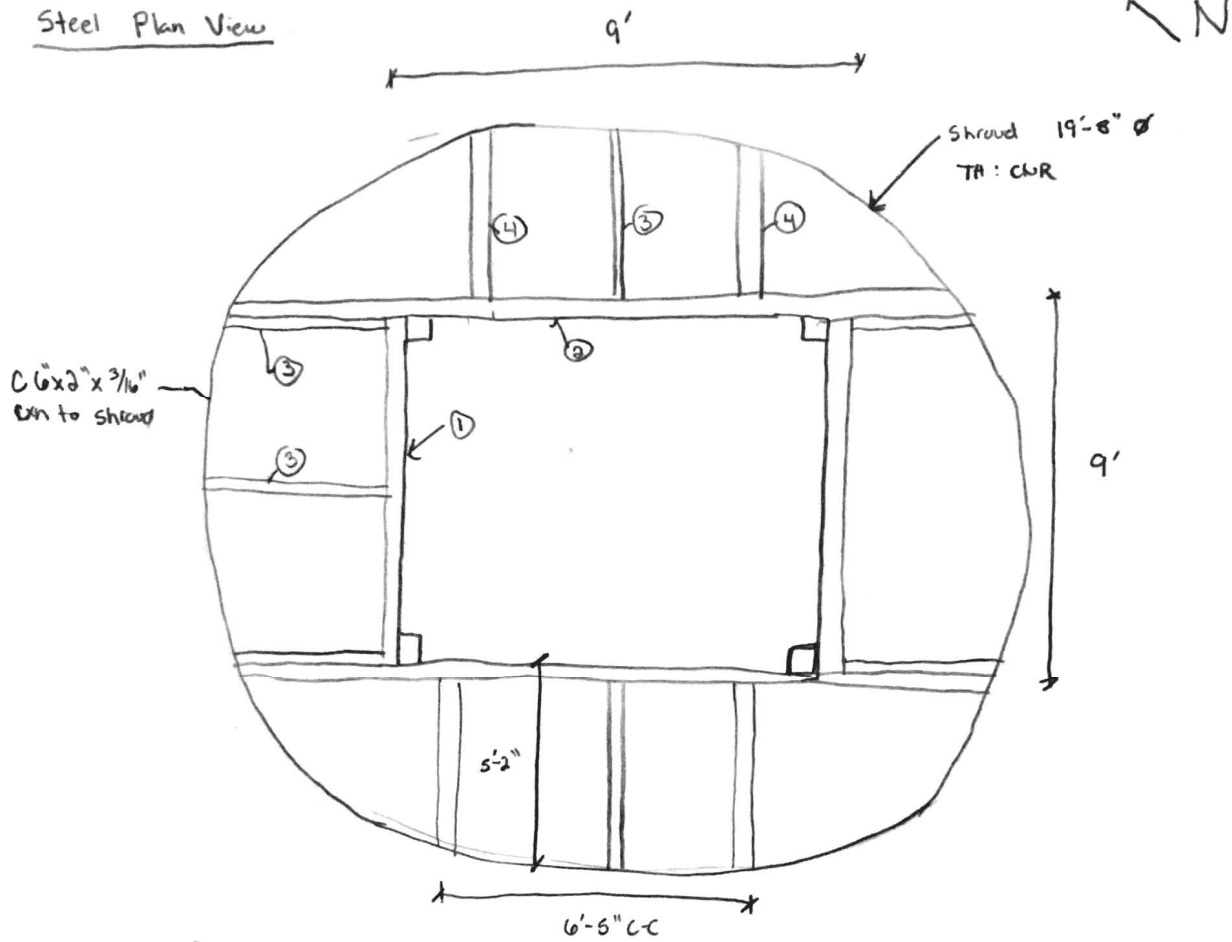
Front Elevation:

9'-0"

9'-0"



Steel Plan View



① HSS 4x4 x 1/4"

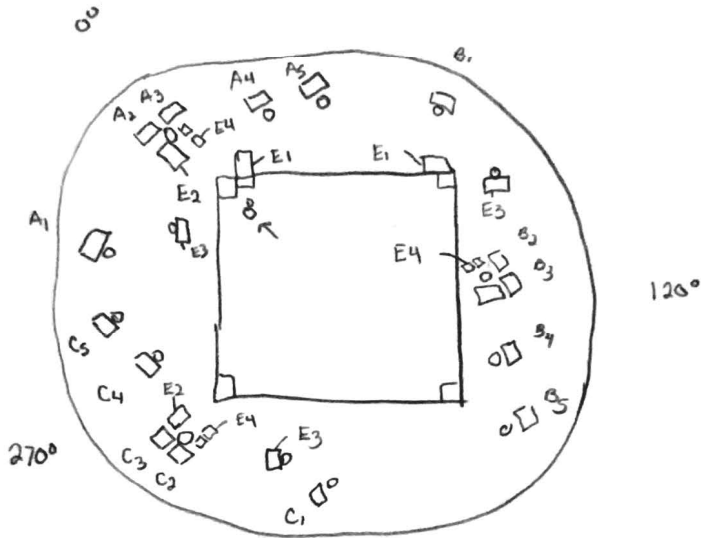
② HSS 4x4 x 1/4"

③ C 4" x 1 1/2" x 3/16" (welded)

④ HSS 4x4 x 1/4" (welded)

Antenna Plan View

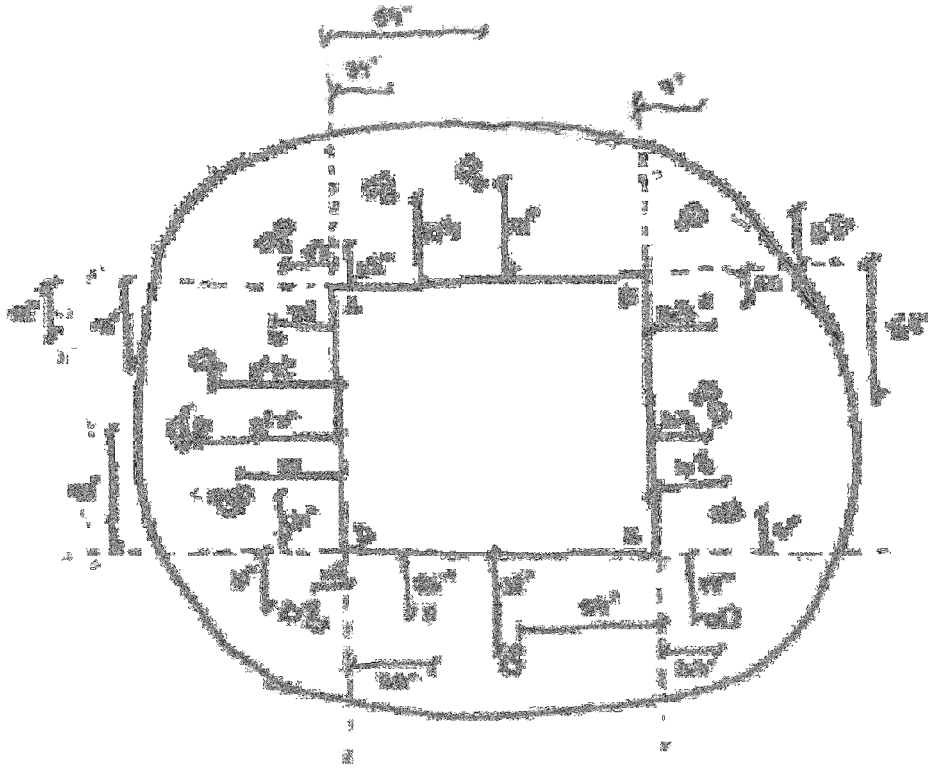
N



All Pos # 1 & 5 = LPA-980063/6CF-EDIN	<u>Ø</u>	<u>U</u>	<u>H</u>
Pos # 2/3 Ant = JATH-66B-R3B	43"	9'-1 1/2"	13 1/2"
Pos 4 = LPA-171063-12CF-EDIN-2	50"	↓	13"
	4.5"		10"
E1 = Raycap RRFDC-3315-PF-49 (Type)	<u>Ø</u>	<u>U</u>	<u>H</u>
E2 = D2A	—	—	— mnt on HSS
E3 = D1A	54"	9'-1 1/2"	8"
E4 = RFS Diplexers	59"	↓	9 1/2"
	46"		5"

* Pos 1,4,5 all Disconnected Antennas

M.R. Placement:



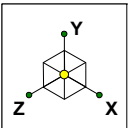
All m.p.'s = 24" x 24" x 9'-15"

Bottom cm = PL 6x6x3/8 w/ (4) 5/8" bolts under: 6PL 1"x2"x1/4"
 3" LC #4V

Top cm =

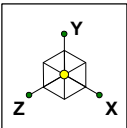
L 2 1/2" x 2 1/2" x 1/4" x 2" w/ pipe clamp w/

(1) 5/8" T.R.



Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 1
NL		Aug 11, 2021 at 8:23 AM
20777356A		468552-VZW_MT_LOT_A_H.r3d

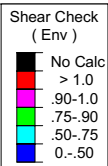
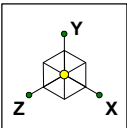


Code Check (Env)	
Black	No Calc
Red	> 1.0
Pink	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0.-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 2
NL		Aug 11, 2021 at 8:23 AM
20777356A		468552-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 3
NL		Aug 11, 2021 at 8:24 AM
20777356A		468552-VZW_MT_LOT_A_H.r3d

Basic Load Cases

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

Basic Load Cases (Continued)

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	DistributedArea(Me...Surface(...
57 Structure Wi (120 Deg)	None						2
58 Structure Wi (150 Deg)	None						2
59 Structure Wi (180 Deg)	None						2
60 Structure Wi (210 Deg)	None						2
61 Structure Wi (240 Deg)	None						2
62 Structure Wi (270 Deg)	None						2
63 Structure Wi (300 Deg)	None						2
64 Structure Wi (330 Deg)	None						2
65 Structure Wm (0 Deg)	None						2
66 Structure Wm (30 Deg)	None						2
67 Structure Wm (60 Deg)	None						2
68 Structure Wm (90 Deg)	None						2
69 Structure Wm (120 Deg)	None						2
70 Structure Wm (150 Deg)	None						2
71 Structure Wm (180 Deg)	None						2
72 Structure Wm (210 Deg)	None						2
73 Structure Wm (240 Deg)	None						2
74 Structure Wm (270 Deg)	None						2
75 Structure Wm (300 Deg)	None						2
76 Structure Wm (330 Deg)	None						2
77 Lm1	None					1	
78 Lm2	None					1	
79 Lv1	None					1	
80 Lv2	None					1	

Load Combinations

Description	Solve P...	S...	BLCFac...	BLCFac...	BLC Fac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
1 1.2D+1.0Wo (0 De...	Y		1	1.2	39	1.2	3	1	41	1		
2 1.2D+1.0Wo (30 D...	Y		1	1.2	39	1.2	4	1	42	1		
3 1.2D+1.0Wo (60 D...	Y		1	1.2	39	1.2	5	1	43	1		
4 1.2D+1.0Wo (90 D...	Y		1	1.2	39	1.2	6	1	44	1		
5 1.2D+1.0Wo (120 ...	Y		1	1.2	39	1.2	7	1	45	1		
6 1.2D+1.0Wo (150 ...	Y		1	1.2	39	1.2	8	1	46	1		
7 1.2D+1.0Wo (180 ...	Y		1	1.2	39	1.2	9	1	47	1		
8 1.2D+1.0Wo (210 ...	Y		1	1.2	39	1.2	10	1	48	1		
9 1.2D+1.0Wo (240 ...	Y		1	1.2	39	1.2	11	1	49	1		
10 1.2D+1.0Wo (270 ...	Y		1	1.2	39	1.2	12	1	50	1		
11 1.2D+1.0Wo (300 ...	Y		1	1.2	39	1.2	13	1	51	1		
12 1.2D+1.0Wo (330 ...	Y		1	1.2	39	1.2	14	1	52	1		
13 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	15	1
14 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	16	1
15 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	17	1
16 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	18	1
17 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	19	1
18 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	20	1
19 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	21	1
20 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	22	1
21 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	23	1
22 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	24	1
23 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	25	1
24 1.2D + 1.0Di + 1.0...	Y		1	1.2	39	1.2	2	1	40	1	26	1
25 1.2D + 1.5Lm1 + 1...	Y		1	1.2	39	1.2	77	1.5	27	1	65	1
26 1.2D + 1.5Lm1 + 1...	Y		1	1.2	39	1.2	77	1.5	28	1	66	1
27 1.2D + 1.5Lm1 + 1...	Y		1	1.2	39	1.2	77	1.5	29	1	67	1
28 1.2D + 1.5Lm1 + 1...	Y		1	1.2	39	1.2	77	1.5	30	1	68	1

Load Combinations (Continued)

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	0	9.125	0	0	
3	N3	0	8.125	0	0	
4	N4	0	4.125	0	0	
5	N5	0	6.125	0	0	
6	N6	0	5.125	0	0	
7	N7	0	7.125	0	0	

Hot Rolled Steel Section Sets

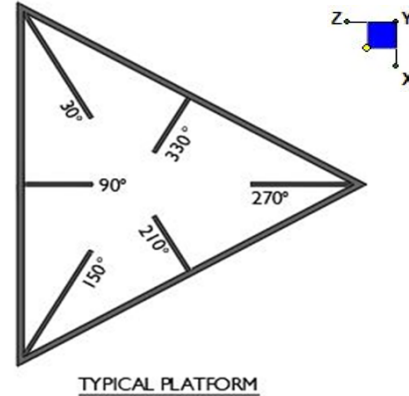
	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25



I. Mount-to-Tower Connection Check

RISA Model Data

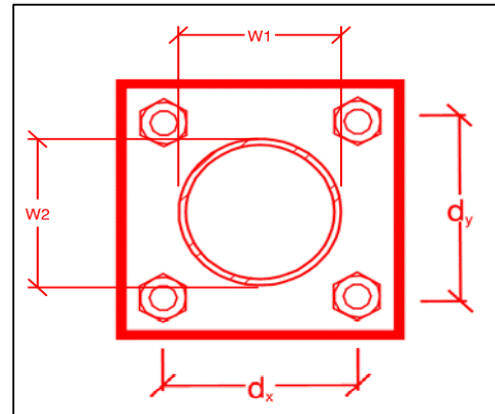
Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N1	90



Tower Connection Bolt Checks

Any moment resistance?:
 Bolt Quantity per Reaction:
 d_x (in) (Delta X of typ. bolt config. sketch) :
 d_y (in) (Delta Y of typ. bolt config. sketch) :
 Bolt Type:
 Bolt Diameter (in):
 Required Tensile Strength (kips):
 Required Shear Strength (kips):
 Tensile Strength / bolt (kips):
 Shear Strength / bolt (kips):
 Tensile Capacity Overall:
 Shear Capacity Overall:

yes
4
3.5
3.5
A307
0.5
0.3
0.0
6.4
3.8
1.3%*
0.0%



*Note: Tension reduction not required if tension or shear capacity < 30%

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:
 Plate Width (in):
 Plate Height (in):
 W_1 (in):
 W_2 (in):
 F_y (ksi, plate):
 t_{plate} (in):
 Weld Size (1/16 in):
 $\Phi * R_n$ (kip/in):
 Required Weld Strength (kip/in):
 Plate Bending Capacity:
 Weld Capacity:

Round
6
6
2.4
2.4
36
0.375
3
4.18
0.04
0.2%
1.0%

Max Plate Bending Strengths

$M_{u_{xx}}$ (kip-in) :	0.0
$\Phi * M_{n_{xx}}$ (kip-in) :	6.8
$M_{u_{yy}}$ (kip-in) :	0.0
$\Phi * M_{n_{yy}}$ (kip-in) :	6.8

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

Purpose – to provide Maser Consulting Connecticut the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.


















Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to <https://pmi.vzwsmart.com> as depicted on the drawings

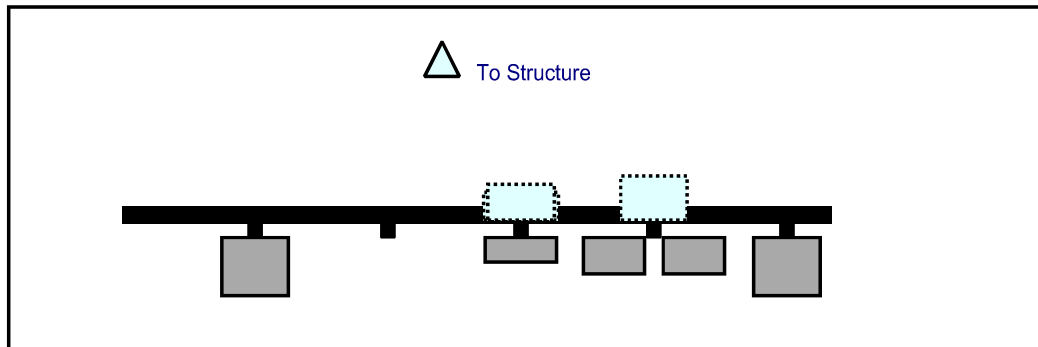
Photo Requirements:

- Base and “During Installation Photos”
 - Base pictures include
 - Photo of Gate Signs showing the tower owner, site name, and number
 - Photo of carrier shelter showing the carrier site name and number if available
 - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
 - “During Installation Photos if provided - must be placed only in this folder
- Photos taken at ground level
 - Overall tower structure before and after installation of the equipment modifications
 - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- Photos taken at Mount Elevation
 - Photos showing each individual sector before and also after installation of equipment.
These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis

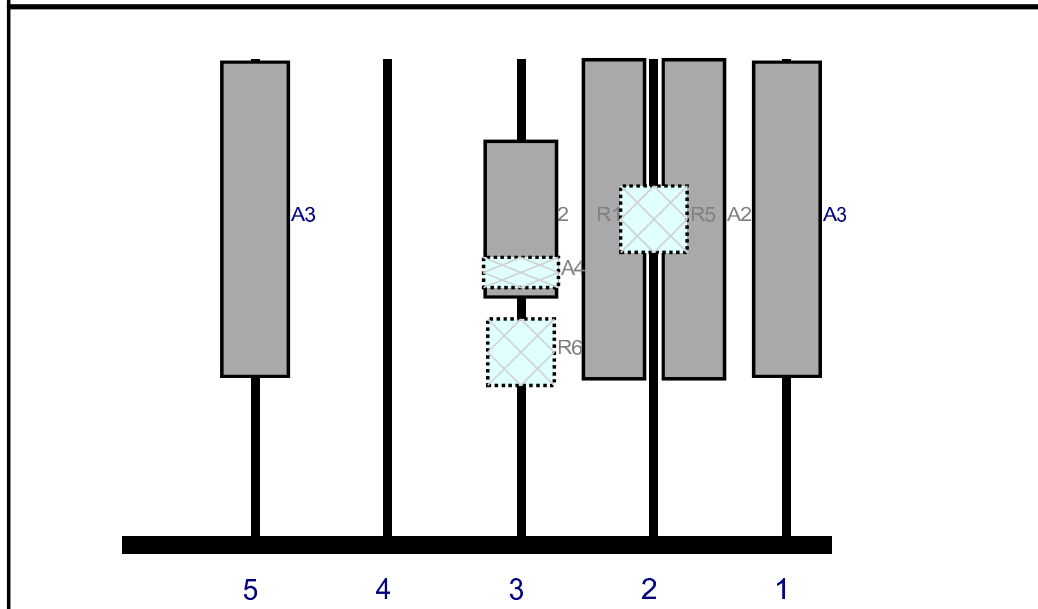
Schedule A – Photo & Document File Structure

-  VzW Site Number / Name
 -  Base & “During Installation” Photos
 -  Pre-Installation Photos
 -  Alpha
 -  Beta
 -  Gamma
 -  Ground Level
 -  Tape Drop
 -  Post-Installation Photos
 -  Alpha
 -  Beta
 -  Gamma
 -  Ground Level
 -  Tape Drop
 -  Photos of climbing facility and safety climb – If Present
-  Certifications – Submission of this document including certifications
-  Specific Required Additional Photos

Plan View

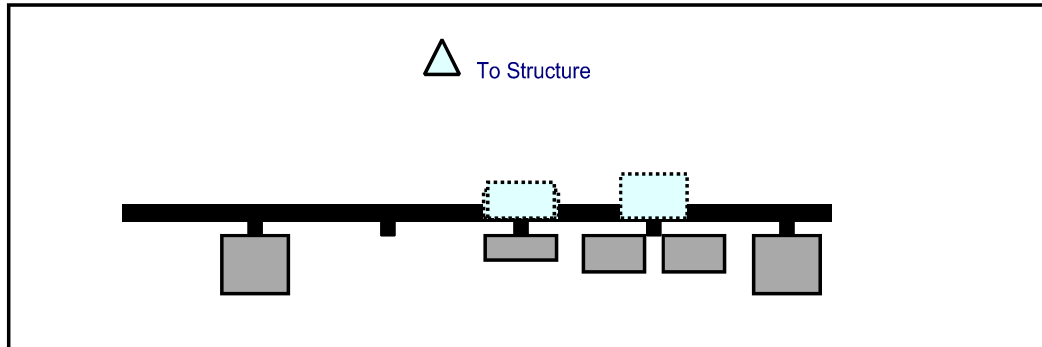


Front View
Looking at Structure

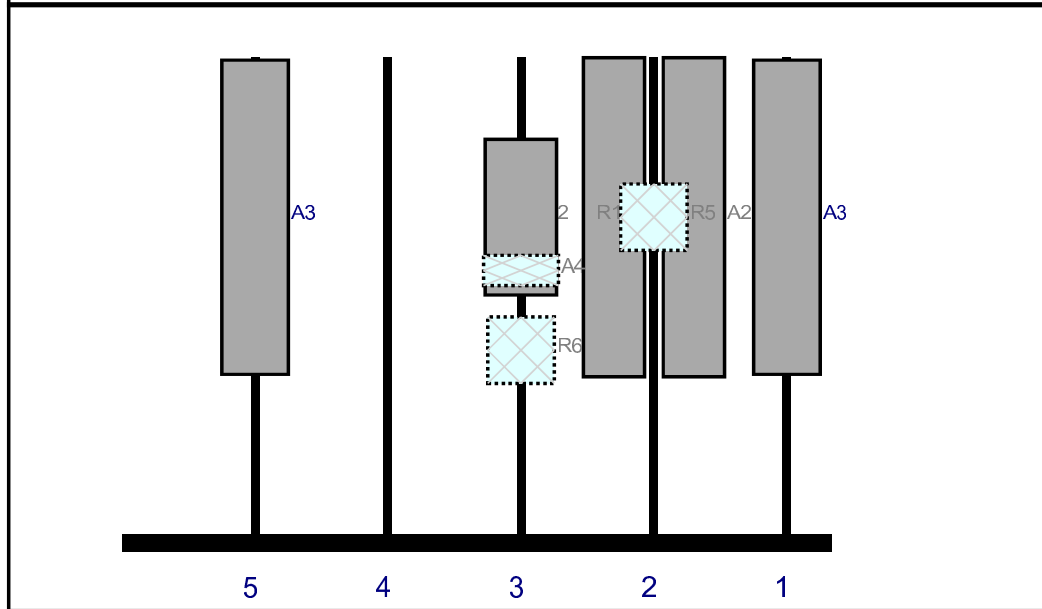


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80063/6CF 2	70.9	15	150	1	a	Front	36	0	Retained	11/10/2020
A2	JAHH-65B-R3B	72	13.8	120	2	a	Front	36	9	Retained	11/10/2020
A2	JAHH-65B-R3B	72	13.8	120	2	b	Front	36	-9	Retained	11/10/2020
R5	B2/B66A RRH-BR049	15	15	120	2	a	Behind	36	0	Retained	11/10/2020
R1	MT6407-77A	35.1	16.1	90	3	a	Front	36	0	Added	
A4	FDJ85020Q4-S1	6.8	16.9	90	3	a	Behind	48	0	Retained	11/10/2020
R6	B5/B13 RRH-BR04C	15	15	90	3	a	Behind	66	0	Retained	11/10/2020
A3	LPA-80063/6CF 2	70.9	15	30	5	a	Front	36	0	Retained	11/10/2020

Plan View



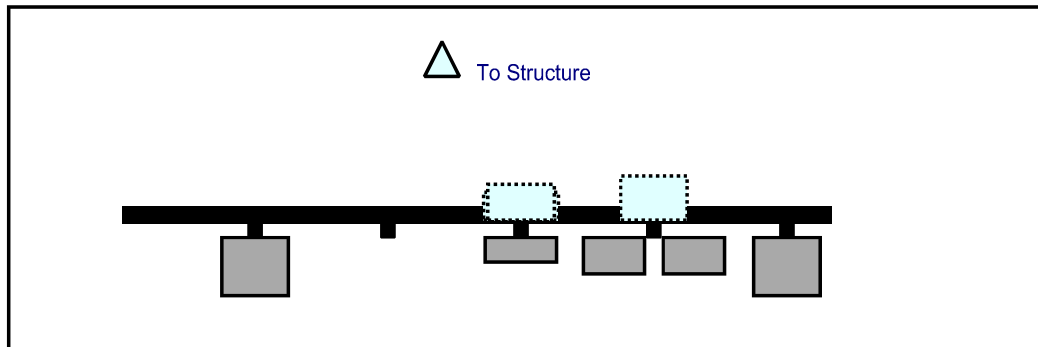
Front View
Looking at Structure



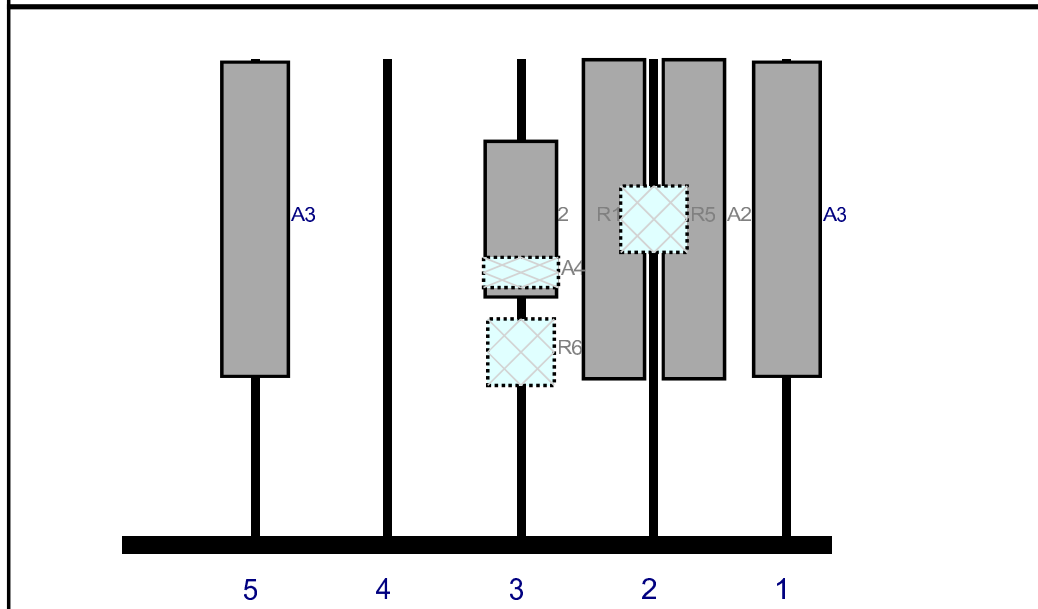
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80063/6CF 2	70.9	15	150	1	a	Front	36	0	Retained	11/10/2020
A2	JAHH-65B-R3B	72	13.8	120	2	a	Front	36	9	Retained	11/10/2020
A2	JAHH-65B-R3B	72	13.8	120	2	b	Front	36	-9	Retained	11/10/2020
R5	B2/B66A RRH-BR049	15	15	120	2	a	Behind	36	0	Retained	11/10/2020
R1	MT6407-77A	35.1	16.1	90	3	a	Front	36	0	Added	
A4	FDJ85020Q4-S1	6.8	16.9	90	3	a	Behind	48	0	Retained	11/10/2020
R6	B5/B13 RRH-BR04C	15	15	90	3	a	Behind	66	0	Retained	11/10/2020
A3	LPA-80063/6CF 2	70.9	15	30	5	a	Front	36	0	Retained	11/10/2020



Plan View



Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80063/6CF 2	70.9	15	150	1	a	Front	36	0	Retained	11/10/2020
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R6	B5/B13 RRH-BR04C	15	15	90	3	a	Behind	66	0	Retained	11/10/2020
A3	LPA-80063/6CF 2	70.9	15	30	5	a	Front	36	0	Retained	11/10/2020

<u>Subject</u>	TIA-222-H Usage
<u>Site Information</u>	Site ID: 468552-VZW / Branford South CT Site Name: Branford South CT Carrier Name: Verizon Wireless Address: 723 Leetes Island Road Branford, Connecticut 06405 New Haven County Latitude: 41.266353° Longitude: -72.733250°
<u>Structure Information</u>	Tower Type: 105-Ft Water Tank Mount Type: (12) 9.13-Ft Mount Pipes

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. The TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed map by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling method, seismic analysis, 30-degree increment wind direction and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,



Digitally signed by Justin Linette
Date: 2021.08.12 15:56:27-04'00'

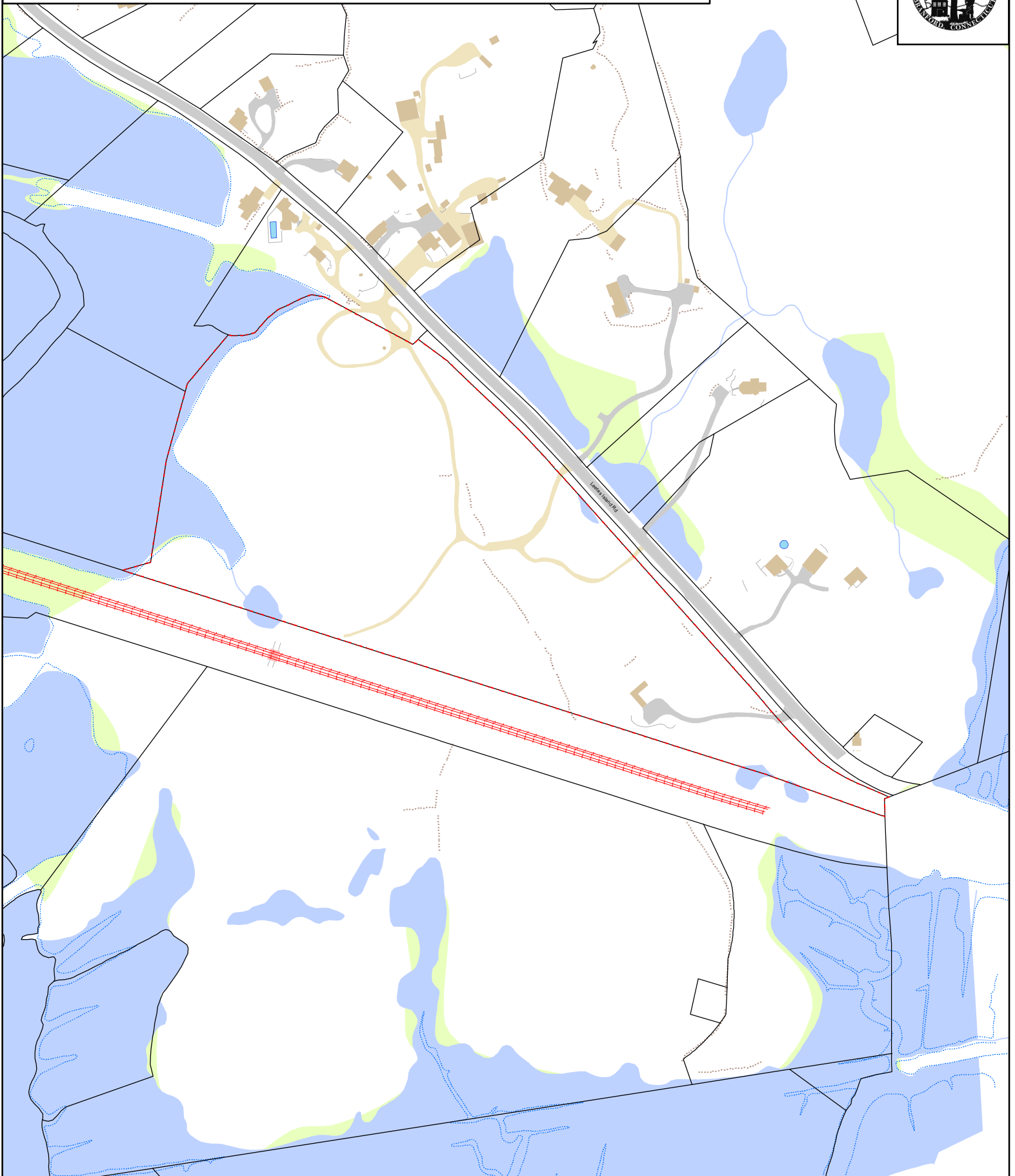
Justin Linette, PE
Senior Technical Manager

ATTACHMENT 5

Town of Branford, Connecticut - Assessment Parcel Map

Parcel: K09-000-004-00008

Address: 723 LEETES ISLAND RD



Approximate Scale: 1 inch : 300 feet

Grand List Date June 2021

Disclaimer:

This map is for informational purposes only. All information is subject to verification by any user. The Town of Branford and its mapping contractors assume no legal responsibility for the information contained herein.



Town of Branford, CT

Property Listing Report

Map Block Lot

K09/000/004/

Bldg # 1

Sec # 1

PID

13123

Account

005957

Property Information

Property Location	723 LEETES ISLAND RD
Owner	MEDLYN JAMES JOHN
Co-Owner	na
Mailing Address	710 LEETES ISLAND RD BRANFORD CT 06405
Land Use	7100 FARM
Land Class	S
Zoning Code	R5
Census Tract	

Neighborhood	0080
Acreage	19.12
Utilities	UNKNOWN
Lot Setting/Desc	Suburban Below Street
Book / Page	0270/0272

Primary Construction Details

Year Built	0
Building Desc.	FARM
Building Style	UNKNOWN
Building Grade	
Stories	
Occupancy	
Exterior Walls	
Exterior Walls 2	NA
Roof Style	
Roof Cover	
Interior Walls	
Interior Walls 2	NA
Interior Floors 1	
Interior Floors 2	NA

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	NA
Fin Bsmt Area	
Fin Bsmt Quality	
Bsmt Gar	
Fireplaces	

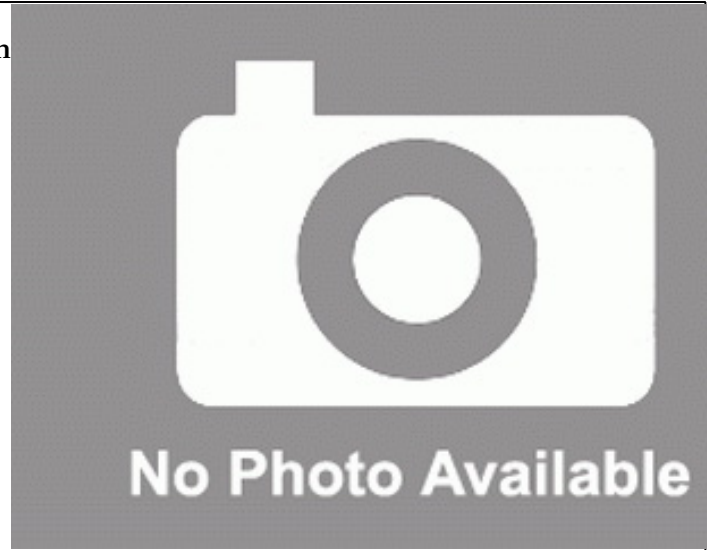
(*Industrial / Commercial Details)

Building Use	Vacant
Building Condition	
Sprinkler %	NA
Heat / AC	NA
Frame Type	NA
Baths / Plumbing	NA
Ceiling / Wall	NA
Rooms / Prtns	NA
Wall Height	NA
First Floor Use	NA
Foundation	NA

Report Created On

9/22/2021

Ph



Sketch



ATTACHMENT 6



**BRANFORD SOUTH
Certificate of Mailing — Firm**

Name and Address of Sender Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here <i>Postmark with Date</i>
Postmaster, per (name of receiving employee) <div style="font-size: 2em; text-align: center;">B</div>			<div style="text-align: right;"> neopost^{3d} 09/24/2021 US POSTAGE \$002.99⁰ </div> <div style="text-align: right; margin-top: 10px;"> ZIP 06103 041L12203937 </div>



USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	James Cosgrove, First Selectman Town of Branford 1019 Main Street Branford, CT 06405				
2.	Harry Smith, Town Planner Town of Branford 1019 Main Street Branford, CT 06405				
3.	James Medlyn 710 Leetes Island Road Branford, CT 06405				
4.					
5.					
6.					