

October 26, 2021

Tom Wolsey, CEO/CZO
Al Yager, Town Engineer
Town of Lysander
8220 Loop Road
Baldwinsville, NY 13027
Via Email: zoning@townoflysander.org; engineer@townoflysander.org

Re: T-Mobile Modification at 2846 BELGIUM ROAD (Site #3ONS014B)

Greetings:

T-Mobile proposes to upgrade certain equipment to support its network. As part of this effort, T-Mobile will need to perform work at the above referenced Property, which includes a 20' tower extension. There will be no lease area expansion or compound expansion; all ground equipment is going inside existing shelter/cabinets. We are submitting this application as an eligible facilities request under Section 6409 of the Federal Middle Class Tax Relief and Job Creation Act ("Section 6409") as adopted in 2012.

Please find attached the following:

- Building Permit Application
- Wireless Telecommunications Special Use Permit Application
- Stamped Construction drawings
- Structural Analysis
- Certificates of Insurance; Liability, WC 105.2 and DB 120.1
- Checks in the amount of \$2,500 for application fee and \$2,500 escrow deposit for permit review will be transmitted via mail. Please advise if any additional documentation or fees are required.

Under Section 6409, your town retains discretionary zoning review over the construction of *new* towers, but simple collocations and/or equipment upgrades at existing telecommunications facilities must be approved. The law provides that:

"a State or local government may not deny, and **shall approve**, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station."

The federal law defines an "eligible facilities request" as "(A) **collocation of new transmission equipment**; (B) **removal of transmission equipment**; or (C) **replacement of transmission equipment**."

The Federal Communications Commission issued a Wireless Infrastructure Report and Order on October 17, 2014 ("FCC Order") which established regulations that clarify and streamline the municipal approval process for eligible facilities requests under Section 6409. The FCC Order clarifies that municipal review of an eligible facilities request is **limited to determining whether the request falls within Section 6409**:

“a State or local government may require the applicant to provide documentation or information **only to the extent reasonably related to determining whether the request meets the requirements of this section** [Section 6409]. A State or local government **may not require an applicant to submit any other documentation**, including but not limited to documentation intended to illustrate the need for such wireless facilities or to justify the business decision to modify such wireless facilities.” 47 C.F.R. 1.40001(c)(1)

The FCC Order also specifies that the term “base station” includes any structure that “supports or houses” communications equipment. Since this structure already supports communications equipment, it is considered a “base station” under Section 6409.

T-Mobile’s Application is an Eligible Facilities Request under Section 6409

T-Mobile’s application qualifies as an eligible facilities request under Section 6409 because the proposed installation involves “a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.”

T-Mobile’s installation will consist of a 20’ tower extension and modification within the existing compound (see enclosed plans). Accordingly, this installation involves the collocation of new transmission equipment including a 20’ extension on this existing facility. As a result, the installation “does not substantially change the physical dimensions of such tower or base station.” Therefore, these proposed equipment upgrades constitute an “eligible facilities request” under Section 6409, and must be approved.

Timeline for Review and Approval

We would like to highlight an important timing requirement for processing this application. The FCC Order determined that **a municipality must act on an eligible facilities request within sixty (60) days of receiving the application**. 47 C.F.R. 1.40001(c)(2) (Emphasis added). (Note, the sixty (60)-day period is also known as the “Shot Clock”). Thus, the city must approve this application within sixty (60) days of its receipt. The FCC Order provides that upon a municipality’s failure to act prior to expiration of the Shot Clock, the **“request shall be deemed granted”** and T-Mobile will be legally entitled to proceed with construction. 47 C.F.R. 1.40001(c)(4).

Note that the FCC Order does allow the Shot Clock to be tolled if an application is incomplete. However, in order to do so, a municipality must provide written notice that the application is incomplete within thirty (30) days of the submittal. 47 C.F.R. 1.40001(c)(3)(i). The notice must “clearly and specifically” describe the missing documents or information, 47 C.F.R. 1.40001(c)(3)(i), and, as previously mentioned, such documentation must be necessary to the determination of whether the application qualifies as an eligible facilities request. If the municipality requests additional information after the first thirty (30) days have passed, we will still provide any “reasonably related” information allowed under the FCC Order, but the Shot Clock will not be tolled.

In light of the foregoing, T-Mobile respectfully requests that its proposed collocation be approved. Once the permit is issued, please forward via email to me at my email address below.

In the meantime, if you have any questions, or requests, or if anything would assist in your review, please call or email me.

Sincerely,

Jennille A. Smith

Jennille Smith | Site Acquisition Consultant

Phone: 774.409.5807

jsmith@clinellc.com

Centerline Communications LLC

750 W. Center Street
Suite 301
W. Bridgewater, MA 02379
(781) 713-4725

ROCKLAND TRUST
MEDFIELD, MA 02052

53-447/113

029697

29697

DATE

AMOUNT

10/22/2021

*****2,500.00

THE SUM OF TWO THOUSAND FIVE HUNDRED DOLLARS AND NO CENTS *****

PAY
TO THE
ORDER
OF

Town of Lysander NY

VOID AFTER 90 DAYS

AUTHORIZED SIGNATURE

⑈029697⑈ ⑆011304478⑆ 2922009879⑈

Security features. Details on back



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TOWN OF LYSANDER
Department of Zoning, Planning & Code Enforcement
8220 LOOP ROAD, BALDWINSVILLE, NY 13027
(315)638-1210/FAX: (315)635-1515
BUILDING PERMIT APPLICATION

Instructions:

Submit a plot pan showing location of the lot, buildings, public streets and detailed description of the property or a copy of the survey with 1 set of drawings. Upon approval of this application, the Zoning Department will issue a Building Permit for the work covered by this application which should not be started before issuance of this Permit. No building or any permitted activity shall be occupied or used in whole or in part for any purpose whatsoever until a Certificate of Compliance or a Certificate of Occupancy has been issued by the Zoning Department.

Applicant General Information:

Scope of Work: New Build ☐ Addition ☒ Repair/Alteration ☐ Pool ☐ Fire Place ☐
Project Will Include (check all that apply): Plumbing (☐) Electrical (☐) Highway Permit (☐) Water (☐)
Location of Proposed Project 2846 BELGIUM RD., BALDWINSVILLE, NY 13027
Tax Map No. _____ Lot No. _____
Owner/Agent Name AMERICAN TOWER Telephone 774-409-5807
Owner Address, if different 10 PRESIDENTIAL WAY, WOBURN, MA 01801
Contractor BLUEWAVE COMMUNICATIONS INC Telephone 315-484-6453
Contractor Address 801 KIMRY MOON, FAYETTEVILLE, NY 13066
Zoning Classification _____ Survey/Plot Plan _____
Existing Use or Occupancy CELL TOWER Intended Use or Occupancy NO CHANGE

Insurance –Note:

Any Contractor or Individuals hiring employees shall hold insurance to cover workers' compensation, as required by New York State Law.

Contractors Liability Insurance: Attached X On File _____
Workers' Compensation Insurance: Attached X On File _____
Does proposed project violate any zoning or building code NO
Square Foot _____ Estimated Cost \$75,000.00 Fee _____

Applicant Certification: I hereby certify that this application is true and correct to the best of my knowledge. That all work done under any resulting permit will comply with the requirements of the 2010 New York State Uniform Fire Prevention and Building Code, the Town of Lysander Zoning Law and all other applicable regulations. I also understand that the granting of a permit does not give authority to violate or cancel the provisions of any other laws or regulations. I understand I am responsible to ensure that the required building inspections are performed by appropriate inspector and have been approved prior to concealing my work. By signing this application I agree to allow representatives of the Town of Lysander access to the above referenced property at reasonable times for the purpose of obtaining information relevant to the processing of this application and to ascertain compliance with any resulting permit.

SIGNATURE OF OWNER/AGENT JENNILLE SMITH **DATE** 10/26/2021

OFFICE USE ONLY:

Paid _____ Date _____ Permit No. _____
Approved _____ Disapproved _____

TOWN OF LYSANDER

WIRELESS TELECOMMUNICATIONS TOWER SPECIAL USE PERMIT APPLICATION

Applicable Sections of the Wireless Telecommunications Ordinance

Express exemptions to height limitations for communications towers are applicable.

Otherwise, federal law applies as to Section 6409 (see attached letter).

Applicant

Name T-Mobile

Street Number 103 Monarch Drive

Municipality Liverpool

State NY Zip Code 13088

Property

Street Number 2846 BELGIUM ROAD

Municipality LYSANDER

State NY Zip Code 13027

Tax Map Number _____

Owner (if different than applicant)

Name AMERICAN TOWER

Address 10 PRESIDENTIAL WAY

WOBURN, MA 01801

Zoning District _____ Overlay Control _____

Size of Property _____ acres

Existing Structures/Uses (X) Conforming () Nonconforming

Need and Description

Provide a description of the proposed project and the needs that will be addressed by the project (Attach additional pages if necessary).

T-MOBILE PROPOSES TO EXTEND THE EXISTING TOWER BY 20' TO MEET ITS COVERAGE
NETWORK REQUIREMENTS. NO CHANGES TO THE GROUND LEASE AREA OR EQUIPMENT
SPACE IS REQUIRED. PLEASE SEE THE CONSTRUCTION DRAWINGS ATTACHED.

Alternatives

Explain in detail why the proposed action cannot be conducted in a manner where a special use permit would not be required. (Attach additional pages if necessary).

BECAUSE A TOWER EXTENSION IS REQUIRED TO MEET COVERAGE GOALS FOR APPLICANT, A SPECIAL USE PERMIT IS BEING REQUESTED. ANTENNAS PLACED BELOW EXISTING CARRIERS WOULD NOT ALLOW APPLICANT TO MEET ITS COVERAGE OBJECTIVES. NOTE THAT THE IMPACT IS MINIMIZED BY NOT PROPOSING A NEW TOWER. PLEASE SEE THE STRUCTURAL ANALYSIS ATTACHED TO SHOW THAT THE EXISTING STRUCTURE WILL SUPPORT THE PROPOSED EXTENSION.

Sworn this 26 day of OCT, 2021

JENNILLE A. SMITH

Applicant/Representative Signature

Notary Public

JENNILLE A. SMITH

Owner/Representative Signature

Information below to be provided by the Town of Lysander Codes Office

Application Number _____ Date _____ Fee _____

**Review by Onondaga County
Planning Board**

() Required () Not Required

**Review by Town of Lysander
Board**

() Required () Not Required

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

***** 823894960
CH INSURANCE BROKERAGE SRVS CO
THE ATRIUM
100 SOUTH SALINA ST STE 370
SYRACUSE NY 13202



SCAN TO VALIDATE
AND SUBSCRIBE

POLICYHOLDER BLUEWAVE COMMUNICATIONS INC 801 KIMRY MOOR FAYETTEVILLE NY 13066		CERTIFICATE HOLDER 3ONS014B//ANCHOR TOWN OF LYSANDER 8220 LOOP RD BALDWINVILLE NY 13027	
POLICY NUMBER S2448 520-3	CERTIFICATE NUMBER 690644	POLICY PERIOD 06/30/2021 TO 06/30/2022	DATE 7/8/2021

THIS IS TO CERTIFY THAT THE POLICYHOLDER NAMED ABOVE IS INSURED WITH THE NEW YORK STATE INSURANCE FUND UNDER POLICY NO. 2448 520-3, COVERING THE ENTIRE OBLIGATION OF THIS POLICYHOLDER FOR WORKERS' COMPENSATION UNDER THE NEW YORK WORKERS' COMPENSATION LAW WITH RESPECT TO ALL OPERATIONS IN THE STATE OF NEW YORK, EXCEPT AS INDICATED BELOW, AND, WITH RESPECT TO OPERATIONS OUTSIDE OF NEW YORK, TO THE POLICYHOLDER'S REGULAR NEW YORK STATE EMPLOYEES ONLY.

IF YOU WISH TO RECEIVE NOTIFICATIONS REGARDING SAID POLICY, INCLUDING ANY NOTIFICATION OF CANCELLATIONS, OR TO VALIDATE THIS CERTIFICATE, VISIT OUR WEBSITE AT [HTTPS://WWW.NYSIF.COM/CERT/CERTVAL.ASP](https://www.nysif.com/cert/certval.asp). THE NEW YORK STATE INSURANCE FUND IS NOT LIABLE IN THE EVENT OF FAILURE TO GIVE SUCH NOTIFICATIONS.

THIS POLICY DOES NOT COVER CLAIMS OR SUITS THAT ARISE FROM BODILY INJURY SUFFERED BY THE OFFICERS OF THE INSURED CORPORATION.

PRESIDENT
MICHAEL A SHEA
BLUEWAVE COMMUNICATIONS INC
ONE OF ONE-PERSON CORPORATION

THE POLICY INCLUDES A WAIVER OF SUBROGATION ENDORSEMENT UNDER WHICH NYSIF AGREES TO WAIVE ITS RIGHT OF SUBROGATION TO BRING AN ACTION AGAINST THE CERTIFICATE HOLDER TO RECOVER AMOUNTS WE PAID IN WORKERS' COMPENSATION AND/OR MEDICAL BENEFITS TO OR ON BEHALF OF AN EMPLOYEE OF OUR INSURED IN THE EVENT THAT, PRIOR TO THE DATE OF THE ACCIDENT, THE CERTIFICATE HOLDER HAS ENTERED INTO A WRITTEN CONTRACT WITH OUR INSURED THAT REQUIRES THAT SUCH RIGHT OF SUBROGATION BE WAIVED.

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS NOR INSURANCE COVERAGE UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICY.

NEW YORK STATE INSURANCE FUND

DIRECTOR, INSURANCE FUND UNDERWRITING

VALIDATION NUMBER: 537923604

CERTIFICATE OF INSURANCE COVERAGE

DISABILITY AND PAID FAMILY LEAVE BENEFITS LAW

PART 1. To be completed by Disability and Paid Family Leave Benefits Carrier or Licensed Insurance Agent of that Carrier

<p>1a. Legal Name & Address of Insured (use street address only)</p> <p>Bluewave Communications Inc. 801 Kimry Moon Fayetteville, NY 13066</p> <p><small>Work Location of Insured (Only required if coverage is specifically limited to certain locations in New York State, i.e., Wrap-Up Policy)</small></p>	<p>1b. Business Telephone Number of Insured</p> <p style="text-align: center;">315-484-6453</p> <p>1c. Federal Employer Identification Number of Insured or Social Security Number</p> <p style="text-align: center;">823894960</p>
<p>2. Name and Address of Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder)</p> <p>Town of Lysander 8220 Loop Road Baldwinsville, NY 13027</p>	<p>3a. Name of Insurance Carrier</p> <p style="text-align: center;">Arch Insurance Company</p> <p>3b. Policy Number of Entity Listed in Box "1a"</p> <p style="text-align: center;">11DBL1074700</p> <p>3c. Policy effective period</p> <p style="text-align: center;">6/30/2021 to 6/29/2022</p>

4. Policy provides the following benefits:

☒ A. Both disability and paid family leave benefits.

☐ B. Disability benefits only.

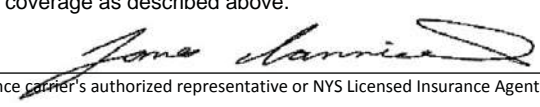
☐ C. Paid family leave benefits only.

5. Policy covers:

☒ A. All of the employer's employees eligible under the NYS Disability and Paid Family Leave Benefits Law.

☐ B. Only the following class or classes of employer's employees:

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has NYS Disability and/or Paid Family Leave Benefits insurance coverage as described above.

Date Signed 7/8/2021 By 

(Signature of insurance carrier's authorized representative or NYS Licensed Insurance Agent of that insurance carrier)

Telephone Number 201-743-3937 Name and Title James Iannicelli, AVP Accident & Health

IMPORTANT: If Boxes 4A and 5A are checked, and this form is signed by the insurance carrier's authorized representative or NYS Licensed Insurance Agent of that carrier, this certificate is COMPLETE. Mail it directly to the certificate holder.

If Box 4B, 4C or 5B is checked, this certificate is NOT COMPLETE for purposes of Section 220, Subd. 8 of the NYS Disability and Paid Family Leave Benefits Law. It must be mailed for completion to the Workers' Compensation Board, Plans Acceptance Unit, PO Box 5200, Binghamton, NY 13902-5200.

PART 2. To be completed by the NYS Workers' Compensation Board (Only if Box 4C or 5B of Part 1 has been checked)

State of New York
Workers' Compensation Board

According to information maintained by the NYS Workers' Compensation Board, the above-named employer has complied with the NYS Disability and Paid Family Leave Benefits Law with respect to all of his/her employees.

Date Signed _____ By _____

(Signature of Authorized NYS Workers' Compensation Board Employee)

Telephone Number _____ Name and Title _____


Please Note: Only insurance carriers licensed to write NYS disability and paid family leave benefits insurance policies and NYS licensed insurance agents of those insurance carriers are authorized to issue Form DB-120.1. **Insurance brokers are NOT authorized to issue this form.**





LOCATION MAP

100 FT SELF SUPPORT TOWER
W/ PROPOSED 20 FT EXTENSION

PROJECT TEAM	PROJECT DESCRIPTION	SHEET	SHEET TITLE	REV.	
<div><u>TOWER OWNER</u></div> <div>AMERICAN TOWER</div> <div>10 PRESIDENTAL WAY</div> <div>WOBURN, MA 01801</div> <div><u>ENGINEERED BY</u></div> <div>ATC TOWER SERVICES</div> <div>3500 REGENCY PARKWAY, SUITE 100</div> <div>CARY, NC 27518</div> <div><u>CARRIER INFORMATION</u></div> <div>CARRIER: T-MOBILE</div> <div>CARRIER SITE NAME: BVILLE_EAST</div> <div>CARRIER SITE NUMBER: 3ONS014B</div>	THE PROJECT DEPICTED IN THESE PLANS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 13544814_C3_04 DATED 03/25/21. SATISFACTORY COMPLETION OF THE WORK INDICATED IN THESE PLANS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED.	G-002	IBC GENERAL NOTES	0	
	PROJECT NOTE	G-003	SPECIAL INSPECTION CHECKLIST	0	
		G-004	BILL OF MATERIALS	0	
		C-101	DETAILED SITE PLAN	0	
		S-201	MODIFICATION PROFILE	0	
		S-501	20 FT EXTENSION INSTALLATION DETAILS	0	
	COMPLIANCE CODE	THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.6100 (B)(7).	Z-501	20 FT EXTENSION FABRICATION DETAILS	0
		ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.	Z-502	EXTENSION BRACING FABRICATION DETAILS	0
<div></div> <div>Know what's below.</div> <div>Call before you dig.</div>		1. ANSI/TIA/EIA: STRUCTURAL STANDARDS (222-H EDITION)			
	2. INTERNATIONAL BUILDING CODE (2018 IBC)				
	3. NEW YORK BUILDING CODE (2020)				
	PROJECT LOCATION				
		GEOGRAPHIC COORDINATES			
	LATITUDE: 43.163439				
	LONGITUDE: -76.311661				

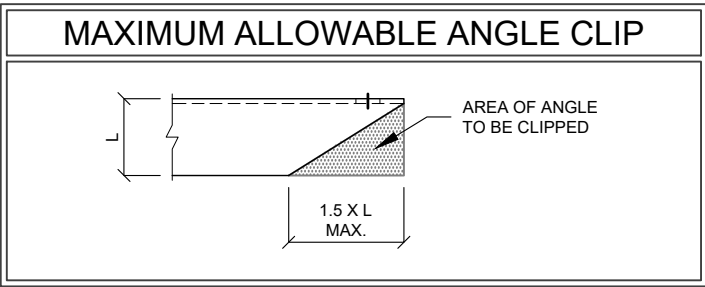


GENERAL

1. ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
3. ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
5. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
6. ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-14 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
7. CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
8. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.



PAINT

1. AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
4. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER AND/OR BASE METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
5. IN CASES WHERE BASE METAL GRADE IS UNKNOWN, ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES; ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES, UNLESS NOTED OTHERWISE.
6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

BOLT TIGHTENING PROCEDURE

1. STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
2. FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
3. IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

4. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

8.2.1 TURN-OF-NUT PRETENSIONING

BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

5. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

APPLICABLE CODES AND STANDARDS


1. ANSI/TIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-H EDITION.
2. 2018 INTERNATIONAL BUILDING CODE.
3. 2020 NEW YORK BUILDING CODE.
4. ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE. REFERENCE LATEST APPROPRIATE EDITION TO MATCH LOCAL AND/OR INTERNATIONAL BUILDING CODE(S) LISTED ABOVE.
5. CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
6. AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
7. AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

SPECIAL INSPECTION

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH IBC 2018, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:

a) STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELD ONLY)

b) HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 EXTENSION FLANGE BOLTS TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD)
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH IBC 2018, SECTION 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.



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ATC SITE NUMBER:

413161

ATC SITE NAME:

BALDWINSVILLE NY SQA

NEW YORK

SITE ADDRESS:

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BALDWINSVILLE, NY 13027



DRAWN BY:	NYG
APPROVED BY:	MER
DATE DRAWN:	05/14/21
ATC JOB NO:	13544814_C6_05

IBC GENERAL NOTES

SHEET NUMBER: <div>G-002</div>	REVISION: <div>0</div>
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MODIFICATION INSPECTION NOTES

THE SPECIAL INSPECTION (SI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE SI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR AND THE INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED FROM AMERICAN TOWER CORPORATION (ATC). IT IS EXPECTED THAT EACH PARTY WILL PROACTIVELY REACH OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR AMERICAN TOWER POINT OF CONTACT.

SPECIAL INSPECTOR

THE SPECIAL INSPECTOR IS REQUIRED TO CONTACT THE GENERAL CONTRACTOR AS SOON AS RECEIVING A PO FROM ATC. UPON RECEIVING A PO FROM ATC THE SPECIAL INSPECTOR AT A MINIMUM MUST:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE GENERAL CONTRACTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- ANY CONCERNS WITH THE SCOPE OF WORK OR PROJECT COMMITMENT MUST BE RELAYED TO THE ATC POINT OF CONTACT IMMEDIATELY.

THE SPECIAL INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR INSPECTION AND TEST REPORTS, REVIEWING THESE DOCUMENTS FOR ADHERENCE TO CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE SI REPORT TO AMERICAN TOWER CORPORATION.


GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO CONTACT THE SI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE SI TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE SI CHECKLIST.

SPECIAL INSPECTION CHECKLIST								
INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY	SI REVIEW REQUIRED			INSPECTION FREQUENCY	
				PRE CX	DURING CX	POST CX	PERIODIC	CONTINUOUS
SPECIAL INSPECTION FIELD WORK & REPORT	DOCUMENTATION AND SITE VISIT CONDUCTED BY AN ATC APPROVED SPECIAL INSPECTOR AS REQUIRED BY ATC AND OTHER AUTHORITIES HAVING JURISDICTION. INSPECTION PARAMETERS TO FOLLOW ATC'S STANDARD SPECIFICATION FOR WIRELESS TOWER SITES.	✓	SI			✓		
ENGINEERING ASSEMBLY DRAWINGS	GC SHALL SUBMIT DRAWINGS TO SI FOR INCLUSION IN SI REPORT	✓	GC	✓				
FABRICATED MATERIAL VERIFICATION & INSPECTION	MTR AND OR MILL CERTIFICATIONS FOR SUPPLIED MATERIALS GC SHALL SUPPLY SI WITH REPORTS TO BE INCLUDED IN SI REPORT WHEN REQUIRED BY ATC	✓	SI	✓				
CERTIFIED WELD INSPECTION	INSPECTION AND REPORT OF STRUCTURAL WELDING PERFORMED DURING PROJECT COMPLETED BY A CWI AND INCLUDED WITHIN SI REPORT		GC / TA					
FOUNDATION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF FOUNDATION EXCAVATION, REBAR PLACEMENT, CASING/SHORING/FORMING PLACEMENT, AND ANCHOR TEMPLATE AND ANCHOR PLACEMENT - TO BE SI APPROVED PRIOR TO CONCRETE POUR AND DOCUMENTED IN THE SI REPORT		SI					
ANCHOR, ROCK ANCHOR OR HELICAL PULL-OUT TEST	PULL TESTING OF INSTALLED ANCHORS TO BE COMPLETED AND DOCUMENTED IN SI REPORT		GC / TA					
CONCRETE INSPECTION & VERIFICATION	CONCRETE MIX DESIGN, SLUMP TEST, COMPRESSIVE TESTING, AND SAMPLE GATHERING TECHNIQUES ARE TO BE PROVIDED FOR INCLUSION IN THE SI REPORT. SI SHALL VERIFY CONCRETE PLACEMENT AS REQUIRED BY THE DESIGN DOCUMENTS (INSPECTION FREQUENCY IS MARKED CONTINUOUS)		GC / TA					
DYWDAG PLACEMENT/ANCHOR BOLT EMBEDMENT - EPOXY/GROUT INSTALL	ANCHOR/BAR EMBEDMENT, HOLE SIZE, EPOXY/GROUT TYPE, INSTALLATION TEMPERATURE AND INSTALLATION SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT		GC / SI					
BASE PLATE GROUT INSPECTION & VERIFICATION	BASE PLATE GROUTING TYPE AND PLACEMENT SHALL BE CONFIRMED BY THE SI AND INCLUDED IN THE SI REPORT		GC / SI					
EARTHWORK INSPECTION & VERIFICATION	EXCAVATION, FILL, SLOPE, GRADE AND OTHER EARTHWORK REQUIREMENTS PER PLANS SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT		GC / TA					
COMPACTION VERIFICATION	CONTRACTOR SHALL PROVIDE AN INDEPENDENT THIRD PARTY CERTIFIED INSPECTION WHICH PROVIDES TEST RESULTS FOR COMPACTION TEST OF SOILS IN PLACE TO ASTM STANDARDS.		GC / TA					
GROUND TESTING & VERIFICATION	GC SHALL PROVIDE DOCUMENTATION SHOWING THAT THE GROUNDING SYSTEM SHALL HAVE A MEASURED RESISTANCE TO THE GROUND OF NOT MORE THAN THE RECOMMENDED 10 OHMS. PER THE ATC CONSTRUCTION SPECIFICATION UNDER SECTION 2.15 THIS DOCUMENTATION MUST BE AN INDEPENDENT CERTIFICATION.		GC					
STEEL CONSTRUCTION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF STEEL CONSTRUCTION TO BE PERFORMED BY THE SI. INSPECTION TO INCLUDE VERIFICATION OF NEW CONSTRUCTION OR MODIFICATION OF EXISTING CONSTRUCTION PER ENGINEERED PLANS. DETAILED VERIFICATION SHALL BE INCLUDED IN SI REPORT.	✓	SI			✓	✓	
ON-SITE COLD GALVANIZING VERIFICATION	SI SHALL VERIFY WITH GC ALL COLD GALVANIZATION TYPE AND APPLICATION AND INCLUDE SUMMARY IN SI REPORT	✓	GC			✓	✓	
GUY WIRE TENSIONING & TOWER ALIGNMENT REPORT	GC SHALL PROVIDE SI EVIDENCE OF PROPER GUY TENSIONING AND TOWER PLUMB PER PLANS. SI SHALL VERIFY AND INCLUDE PLUMB AND TENSION REPORTING IN SI REPORT.		GC					
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	GC SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO SI FOR APPROVAL/REVIEW AND INCLUSION IN SI REPORT	✓	GC			✓		
SI AS-BUILT DRAWINGS WITH INSPECTION RED-LINES (AS REQUIRED)	SI SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS WITHIN SI REPORT	✓	SI			✓		
TIA INSPECTION	SI SHALL COMPLETE TIA INSPECTION AND PROVIDE SEPARATE TIA INSPECTION DOCUMENTATION TO ATC CM		SI					
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF SPECIAL INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE SI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN SI REPORT.	✓	GC / SI			✓		
NOTE: SPECIAL INSPECTIONS ARE INTENDED TO BE A COLLABORATIVE EFFORT BETWEEN GC AND SI. WHENEVER POSSIBLE GC IS TO PROVIDE SI WITH PHOTOGRAPHIC OR OTHER ACCEPTABLE EVIDENCE OF PROPER INSTALLATION IF PERIODIC INSPECTION FREQUENCY IS ACCEPTABLE. THE GC AND SI SHALL WORK TO COMPILE EVIDENCE OF PROPER CONSTRUCTION AND LIMIT THE NUMBER OF SI SITE VISITS REQUIRED.								
TABLE KEY: SI - ATC APPROVED SPECIAL INSPECTOR CX - CONSTRUCTION GC - GENERAL CONTRACTOR CM - CONSTRUCTION MANAGER TA - 3RD PARTY TESTING AGENCY ATC - AMERICAN TOWER CORPORATION								



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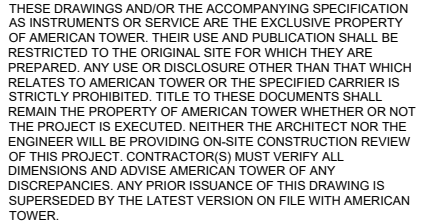
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SPECIAL INSPECTION CHECKLIST	
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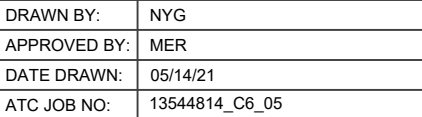
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AV, A/V

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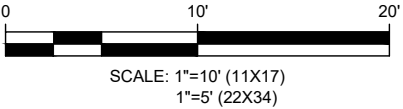
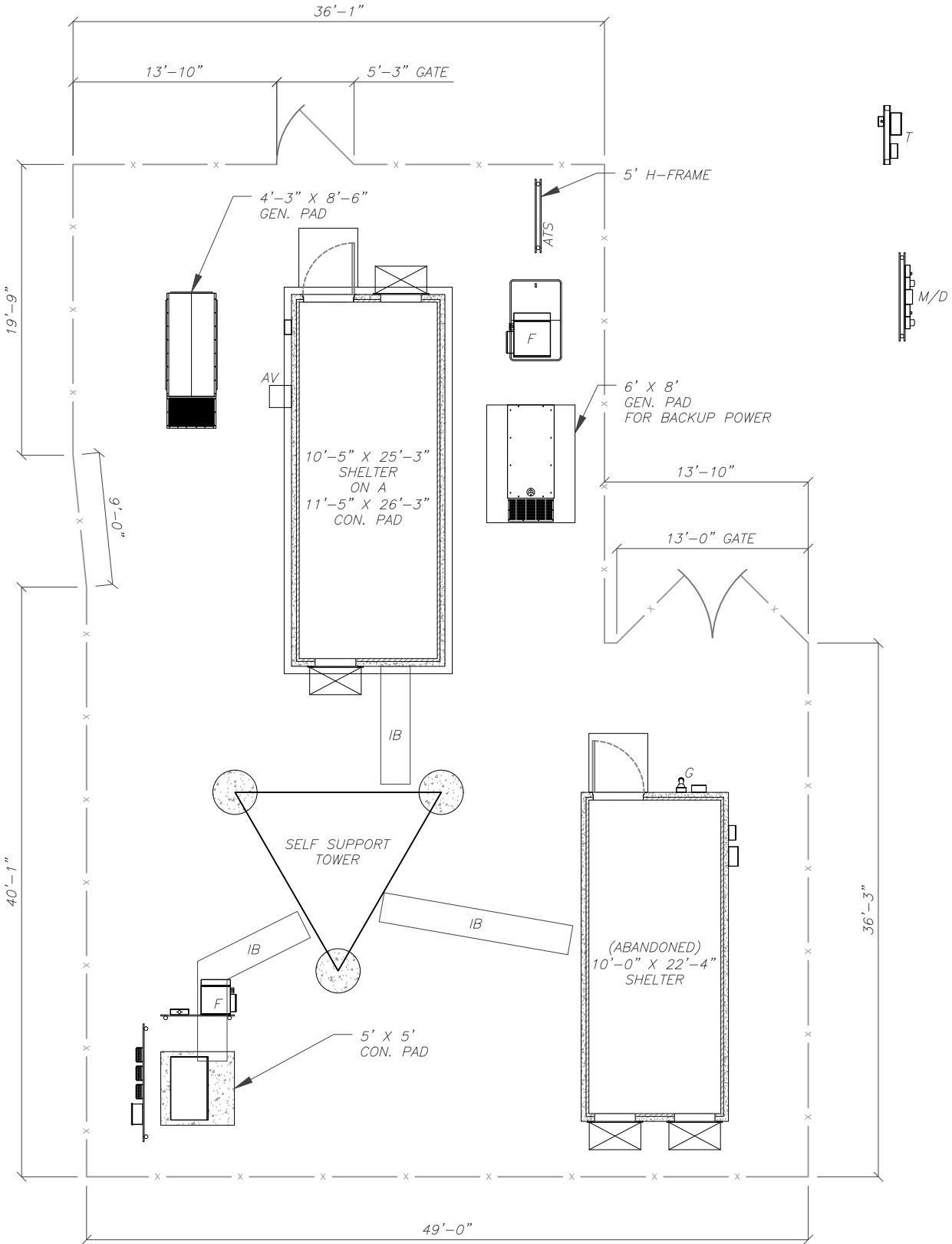
PB


PP

T

TRN

GROUNDING TEST WELL
AIR VENT
AUTOMATIC TRANSFER SWITCH
BOLLARD
CABINET
COAX SHROUD
CELL SITE CABINET
DISCONNECT
ELECTRICAL
FIBER
GENERATOR
GENERATOR RECEPTACLE
HAND HOLE, VAULT
HYDROGEN FUEL CELL
HYDROGEN STORAGE MATERIAL
ICE BRIDGE
KENTROX BOX
LIGHTING CONTROL
LIQUID PROPANE GAS
METER
OVERHEAD WIRE
POWER
PULL BOX
POWER POLE
TELCO
TRANSFORMER
PROPERTY LINE
ADJACENT PROPERTY LINE
LEASE AREA
EASEMENT
WOOD FENCE
WIRE FENCE
METAL FENCE
GUARD RAIL
CHAINLINK FENCE
ROAD (DIRT)
ROAD (STONE)
ROAD (PAVED)





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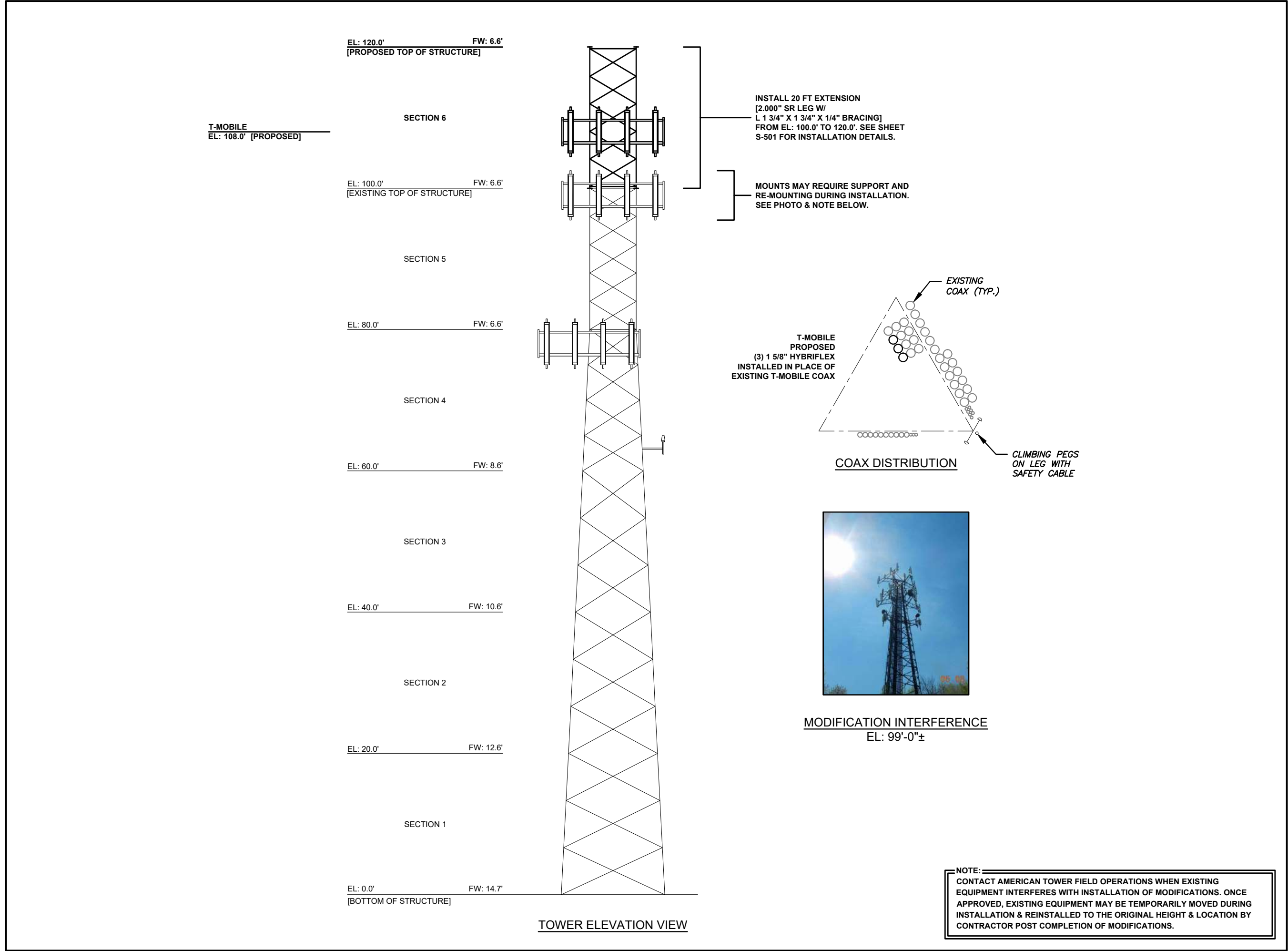
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DETAILED SITE PLAN	
SHEET NUMBER: C-101	REVISION: 0





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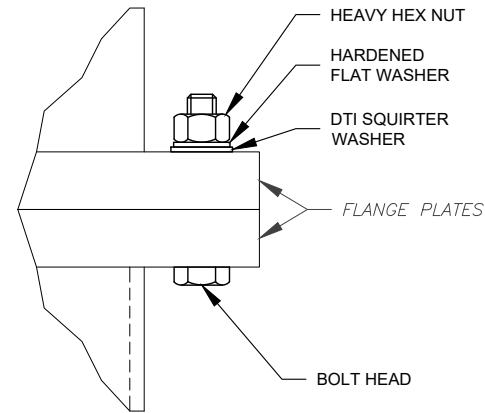
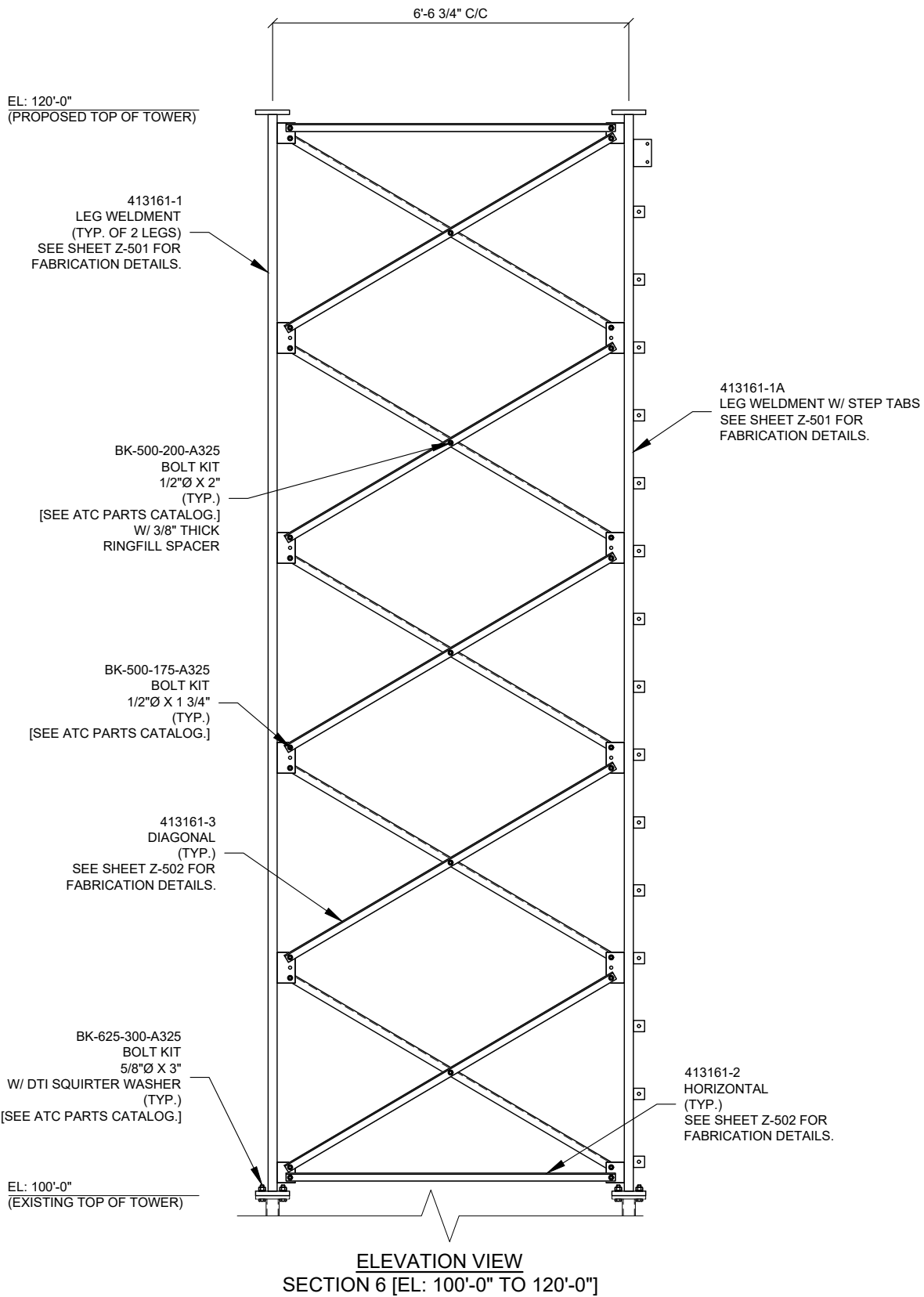
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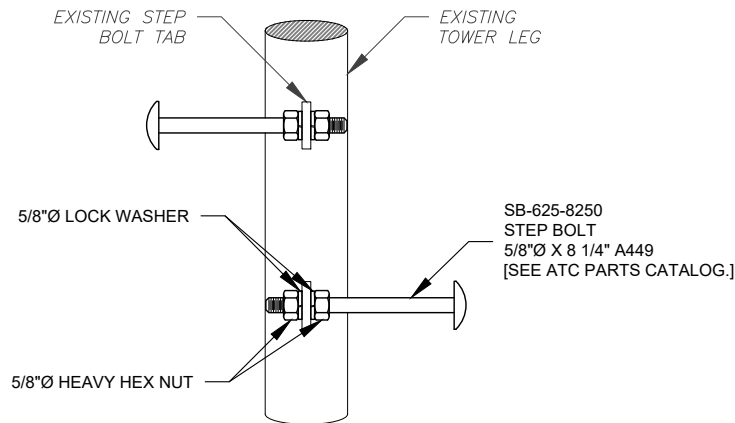
MODIFICATION PROFILE

SHEET NUMBER: S-201	REVISION: 0
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**FLANGE BOLT INSTALLATION
TYPICAL DETAIL**

1. ALL FLANGE BOLTS SHALL BE TIGHTENED USING DTI SQUIRTER WASHERS FOR TENSION VERIFICATION. SEE SHEET G-002 FOR DETAILS.
2. PROPER TORQUE GENERATING EQUIPMENT, WHICH MAY INCLUDE IMPACT WRENCHES, IS REQUIRED IN ORDER TO ACHIEVE DTI COMPRESSION WITH SQUIRT INDICATION. MANUFACTURER GUIDELINES FOR DTI INSTALLATION ARE TO BE FOLLOWED.



**STEP BOLT INSTALLATION
TYPICAL DETAIL**

- NOTES:**
1. ALIGN PROPOSED LEG WELDMENT W/ STEP TABS TO MATCH EXISTING CLIMBING PATH AND SAFETY CLIMB SYSTEM.
 2. REMOVE EXISTING SAFETY CLIMB CABLE AND ASSOCIATED HARDWARE / MOUNTS. INSTALL NEW ATC-APPROVED SAFETY CLIMB SYSTEM WITH NEW 3/8"Ø SAFETY CLIMB CABLE. ENSURE 100% TIE-OFF IS MAINTAINED AND CABLE IS FREE OF ALL OBSTRUCTIONS. CONTRACTOR SHALL INSTALL THE SAFETY CLIMB IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.


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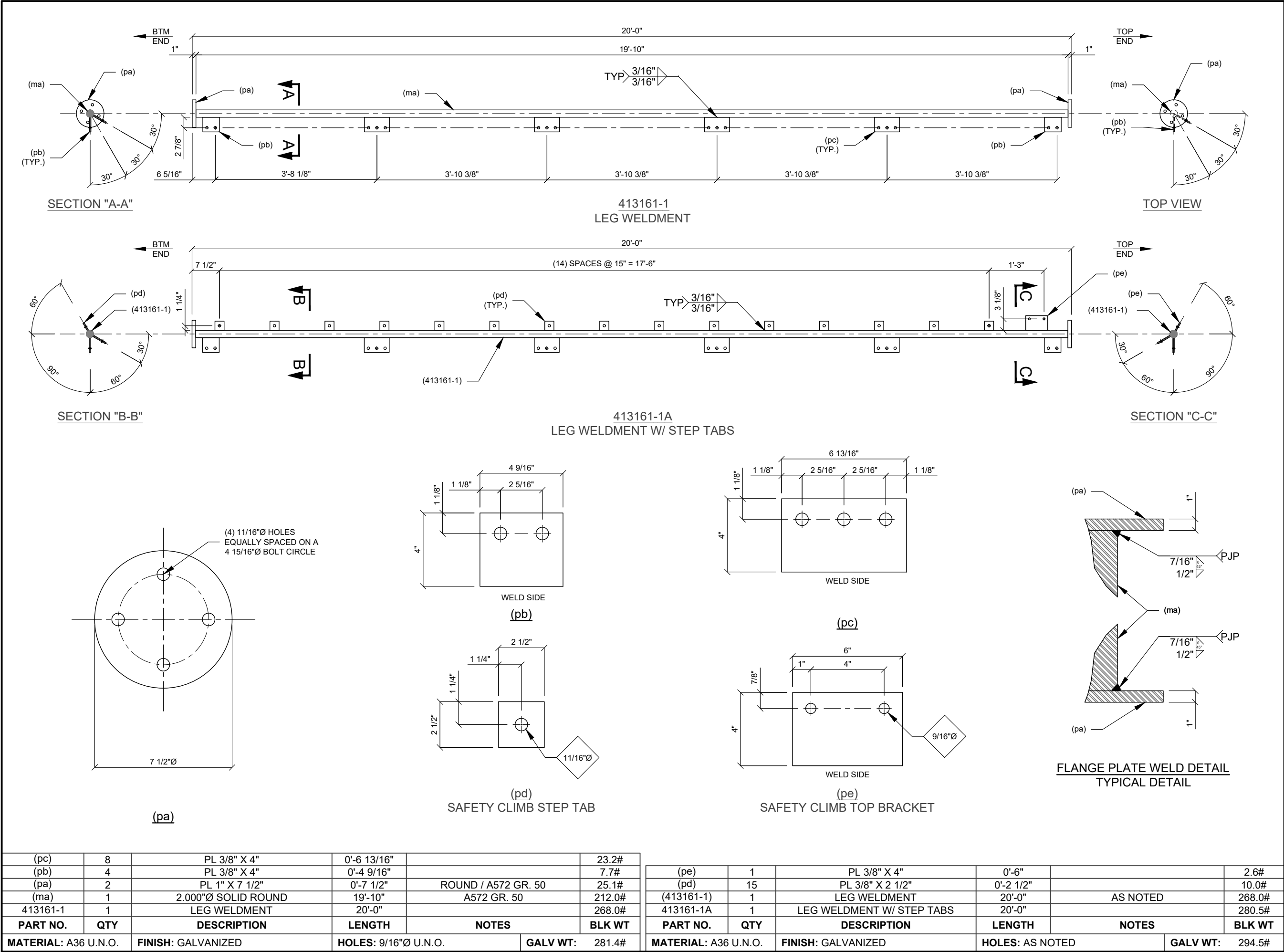
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**20 FT EXTENSION
INSTALLATION DETAILS**

SHEET NUMBER:	REVISION:
S-501	0





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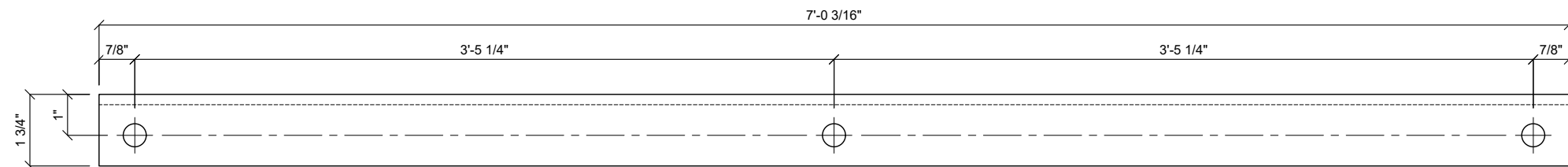
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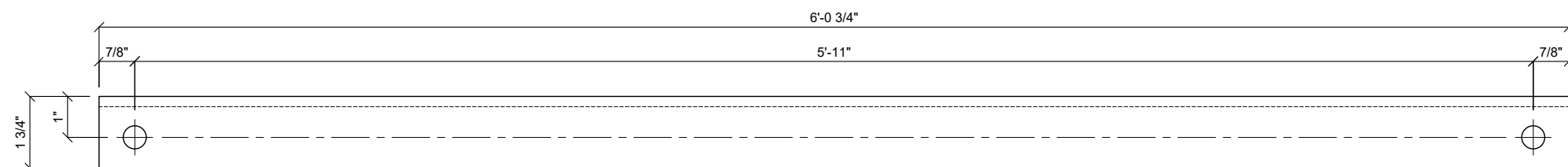
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**20 FT EXTENSION
FABRICATION DETAILS**

SHEET NUMBER: Z-501	REVISION: 0
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413161-3
DIAGONAL



413161-2
HORIZONTAL

413161-3	L 1 3/4" X 1 3/4" X 1/4"	7'-0 3/16"		19.4#	20.4#
413161-2	L 1 3/4" X 1 3/4" X 1/4"	6'-0 3/4"		16.8#	17.6#
PART NO.	DESCRIPTION	LENGTH	NOTES	BLK WT	GALV WT
MATERIAL: A36		FINISH: GALVANIZED		HOLES: 9/16"Ø	



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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	NYG	05/14/21

ATC SITE NUMBER:
413161

ATC SITE NAME:
BALDWINSVILLE NY SQA

NEW YORK

SITE ADDRESS:
2846 BELGIUM RD
BALDWINSVILLE, NY 13027



DRAWN BY:	NYG
APPROVED BY:	MER
DATE DRAWN:	05/14/21
ATC JOB NO:	13544814_C6_05

EXTENSION BRACING
FABRICATION DETAILS

SHEET NUMBER: Z-502	REVISION: 0
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AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



**TOWER
ENGINEERING
PROFESSIONALS**

Structural Analysis Report

Structure : 100 ft Self Supported Tower with Proposed 20 ft Extension

ATC Site Name : Baldwinsville NY SQA, NY

ATC Asset Number : 413161

Engineering Number : 13544814_C3_04

Proposed Carrier : T-Mobile

Carrier Site Name : bville_east

Carrier Site Number : 3ONS014B

Site Location : 2846 Belgium Rd
Baldwinsville, NY 13027-8839
43.163400,-76.311700

County : Onondaga

Date : March 25, 2021

Max Usage : 94%

Result : Pass

Prepared By:
Chris Tahara, E.I.
TEP

Reviewed By:



03/25/2021



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment	2
Structure Usages	3
Foundations	3
Deflection, Twist, and Sway.....	3
Standard Conditions	4
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 100 ft self supported tower with proposed 20 ft extension to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	Rohn Drawing #C951343, dated August 23, 1995
Foundation Drawing	Rohn Drawing #D870532 R2, dated December 10, 1987
Geotechnical Report	Delta Oaks Group Project #GEO16-00253-02, dated April 15, 2016
Modifications	C&S Site #NY-SYR047, dated September 27, 2006

Analysis

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

Basic Wind Speed:	109 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1-1/2" radial ice concurrent
Code:	ANSI/TIA-222-H / 2018 IBC / 2020 New York Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	$S_s = 0.14$, $S_1 = 0.05$
Site Class:	D - Stiff Soil

Conclusion

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

The design for the tower extension will be done in a future service.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier	
108.0	-	-	-	(6) 1 1/4" Coax	T-MOBILE	
99.0	3	CSS XAP-460-V	Sector Frames	(18) 1 5/8" Coax (6) 3/8" (0.38"-9.5mm) RET Control Cable	VERIZON WIRELESS	
	2	Commscope SBNHH-1D65C				
	6	CSS V7C-865-2i				
	1	CSS X7C-FRO-860-VR4				
90.0	1	VZW Unused Reserve (2304 sqin)	Leg	-		
88.0	1	VZW Unused Reserve (2304 sqin)				
78.0	9	EMS FV90-12-000AL2	Sector Frames	(10) 7/8" Coax	OTHER	
77.0	1	Radio Waves SP2-2.4				
66.0	1	Generic GPS	Leg	(3) 1/2" Coax		
63.0	1	Generic GPS				
59.0	1	Generic GPS	Leg	(1) 1/2" Coax	VERIZON WIRELESS	

Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
109.0	3	Commscope SBNHH-1D65B	-	(6) 1 1/4" Coax (3) 3/8" (0.38"-9.5mm) RET Control Cable	T-MOBILE
108.0	3	Andrew ETW190VS12UB (14.6 lb)			
	3	Ericsson KRY 112 144/1			
	6	EMS RR90-17-00DP			

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
108.0	3	Ericsson RRUS 4415 B25	SitePro VFA 12 Sector Mounts	(3) 1 5/8" Hybriflex	T-MOBILE
	3	Ericsson Air6449 B41			
	3	Ericsson AIR32 B66Aa/B2a			
	3	RFS APXVAALL24 43-U-NA20			
	3	Ericsson Radio 4449 B71 B85A			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax double stacked in the place of the existing T-Mobile coax.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	94%	Pass
Diagonals	94%	Pass
Horizontals	23%	Pass
Anchor Bolts	57%	Pass
Leg Bolts	55%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	92.3	59%
Axial (Kips)	107.1	66%
Shear (Kips)	11.5	10%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
108.0	Ericsson Radio 4449 B71 B85A	T-MOBILE	0.290	0.025	0.263
	Ericsson RRUS 4415 B25				
	Ericsson Air6449 B41				
	Ericsson AIR32 B66Aa/B2a				
	RFS APXVAALL24 43-U-NA20				
77.0	Radio Waves SP2-2.4	OTHER	0.144		0.215

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



Standard Conditions

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

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of ATC Tower Services, Inc.

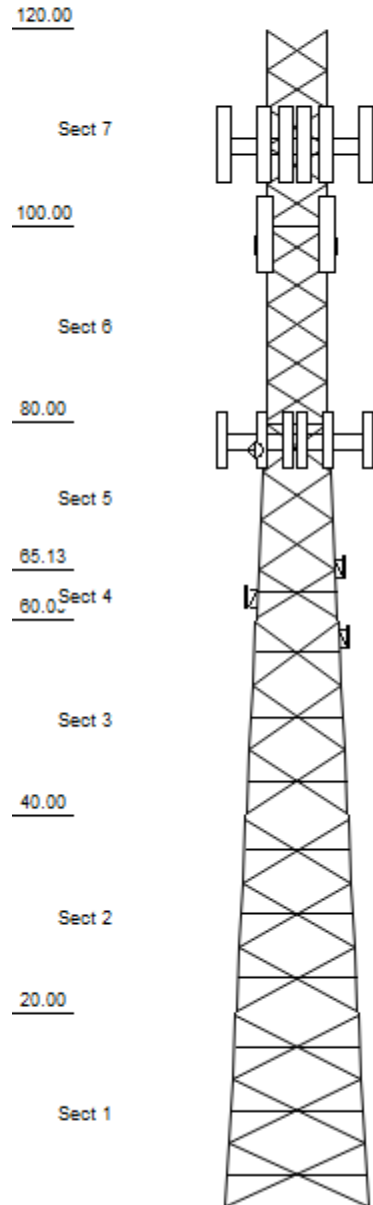
It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete.

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

Unless explicitly agreed by both the client and ATC Tower Services, Inc., all services will be performed in accordance with the current revision of ANSI/TIA-222.

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

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Loads: 109 mph no ice
 40 mph w/ 1"1/2 radial ice
 Site Class: D Ss: 0.14 S1: 0.05
 60 mph Serviceability

Job Information

Client : T-MOBILE			
Tower : 413161	Location : Baldwinsville NY	Base Width : 14.66 ft	
Code : ANSI/TIA-222-H	Topo Method: Method 1	Top Width : 6.45 ft	
Risk Cat : II	Topo: 1	Tower Ht : 120.00 ft	
	Exposure : B	Shape : Triangle	

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1	PX	50 ksi 3" DIA PIPE	SAE 36 ksi 2.5X2.5X0.1875	
2	PST	50 ksi 3" DIA PIPE	SAE 36 ksi 2.5X2.5X0.1875	
3	PX	50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 2X2X0.1875	
4	PST	50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.125	
5	PST	50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.125	SAE 36 ksi 1.75X1.75X0.125
6	PST	50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.5X1.5X0.125	SAE 36 ksi 1.5X1.5X0.125
7	PST	50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.5X1.5X0.125	

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
108.00	Mounting Frame	3	Site Pro VFA12
108.00		3	Ericsson Radio 4449 B71 B85A
108.00	Panel	3	RFS APXVAALL24 43-U-NA20
108.00	Panel	3	Ericsson AIR32 B66Aa/B2a
108.00	Panel	3	Ericsson Air6449 B41
108.00		3	Ericsson RRUS 4415 B25
99.00	Panel	1	CSS X7C-FRO-860-VR4
99.00	Panel	6	CSS V7C-865-2i
99.00	Panel	2	Commscope SBNHH-1D65C
99.00	Panel	3	CSS XAP-460-V
98.00	Mounting Frame	3	Round Sector Frame
90.00	Other	1	VZW Unused Reserve (2304 sqin)
88.00	Other	1	VZW Unused Reserve (2304 sqin)
78.00	Mounting Frame	3	Round Sector Frame
78.00	Panel	9	EMS FV90-12-000AL2
77.00	Dish	1	Radio Waves SP2-2.4
66.00	Whip	1	Generic GPS
63.00	Whip	1	Generic GPS
59.00	Whip	1	Generic GPS

Linear Appurtenance

Elev (ft)		Qty	Description
From	To		
0.00	108.00	3	1 5/8" Hybriflex
0.00	108.00	6	1 1/4" Coax
10.00	100.00	2	Waveguide
10.00	99.00	6	3/8" (0.38"- 9.5mm)
10.00	99.00	18	1 5/8" Coax
10.00	78.00	9	7/8" Coax
0.00	78.00	1	Waveguide
10.00	77.00	1	7/8" Coax
10.00	66.00	2	1/2" Coax
10.00	63.00	1	1/2" Coax
10.00	59.00	1	1/2" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	1,281.41	18.39	18.70
DL + WL + IL	311.06	59.38	4.60

Job Information		
Client : T-MOBILE		
Tower : 413161	Location : Baldwinsville NY	Base Width : 14.66 ft
Code : ANSI/TIA-222-H	Topo Method: Method 1	Top Width : 6.45 ft
Risk Cat : II	Topo: 1	Tower Ht : 120.00 ft
	Exposure : B	Shape : Triangle

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
107.09	92.34	11.45

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Analysis Parameters

Location:	Onondaga County, NY	Height (ft):	120
Code:	ANSI/TIA-222-H	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	14.66
Tower Manufacturer:	Rohn	Top Face Width (ft):	6.45
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:	0.85		
Ke:	0.98		

Ice & Wind Parameters

Exposure Category:	B	Design Windspeed Without Ice:	109 mph
Risk Category:	II	Design Windspeed With Ice:	40 mph
Topographic Factor Procedure:	Method 1	Operational Windspeed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.50 in
Crest Height:	0 ft	HMSL:	525.00 ft

Seismic Parameters

Analysis Method: Equivalent Lateral Force Method

Site Class: D - Stiff Soil

Period Based on Rayleigh Method (sec): 0.84

T_L (sec):	6	p:	1.3	C_s :	0.032
S_s :	0.143	S_1 :	0.051	C_s , Max:	0.032
F_a :	1.600	F_v :	2.400	C_s , Min:	0.030
S_{ds} :	0.153	S_{d1} :	0.082		

Load Cases

1.2D + 1.0W Normal	109 mph Normal with No Ice
1.2D + 1.0W 60 deg	109 mph 60 degree with No Ice
1.2D + 1.0W 90 deg	109 mph 90 degree with No Ice
1.2D + 1.0W 120 deg	109 mph 120 degree with No Ice
1.2D + 1.0W 180 deg	109 mph 180 degree with No Ice
1.2D + 1.0W 210 deg	109 mph 210 degree with No Ice
1.2D + 1.0W 240 deg	109 mph 240 degree with No Ice
1.2D + 1.0W 300 deg	109 mph 300 degree with No Ice
1.2D + 1.0W 330 deg	109 mph 330 degree with No Ice
0.9D + 1.0W Normal	109 mph Normal with No Ice (Reduced DL)
0.9D + 1.0W 60 deg	109 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.0W 90 deg	109 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.0W 120 deg	109 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.0W 180 deg	109 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.0W 210 deg	109 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.0W 240 deg	109 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.0W 300 deg	109 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.0W 330 deg	109 mph 330 deg with No Ice (Reduced DL)

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Analysis Parameters

1.2D + 1.0Di + 1.0Wi Normal	40 mph Normal with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	40 mph 60 deg with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	40 mph 90 deg with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 120 deg	40 mph 120 deg with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	40 mph 180 deg with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	40 mph 210 deg with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	40 mph 240 deg with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	40 mph 300 deg with 1.50 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	40 mph 330 deg with 1.50 in Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic Normal
1.2D + 1.0Ev + 1.0Eh 60 deg	Seismic 60 deg
1.2D + 1.0Ev + 1.0Eh 90 deg	Seismic 90 deg
1.2D + 1.0Ev + 1.0Eh 120 deg	Seismic 120 deg
1.2D + 1.0Ev + 1.0Eh 180 deg	Seismic 180 deg
1.2D + 1.0Ev + 1.0Eh 210 deg	Seismic 210 deg
1.2D + 1.0Ev + 1.0Eh 240 deg	Seismic 240 deg
1.2D + 1.0Ev + 1.0Eh 300 deg	Seismic 300 deg
1.2D + 1.0Ev + 1.0Eh 330 deg	Seismic 330 deg
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL) Normal
0.9D - 1.0Ev + 1.0Eh 60 deg	Seismic (Reduced DL) 60 deg
0.9D - 1.0Ev + 1.0Eh 90 deg	Seismic (Reduced DL) 90 deg
0.9D - 1.0Ev + 1.0Eh 120 deg	Seismic (Reduced DL) 120 deg
0.9D - 1.0Ev + 1.0Eh 180 deg	Seismic (Reduced DL) 180 deg
0.9D - 1.0Ev + 1.0Eh 210 deg	Seismic (Reduced DL) 210 deg
0.9D - 1.0Ev + 1.0Eh 240 deg	Seismic (Reduced DL) 240 deg
0.9D - 1.0Ev + 1.0Eh 300 deg	Seismic (Reduced DL) 300 deg
0.9D - 1.0Ev + 1.0Eh 330 deg	Seismic (Reduced DL) 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Tower Loading**Discrete Appurtenance Properties** 1.2D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
108.0	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.0	25.63	43	270
108.0	Ericsson RRUS 4415	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.0	25.63	48	166
108.0	Ericsson Air6449	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.0	25.63	187	374
108.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	25.63	242	476
108.0	Site Pro VFA12	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.63	529	1080
108.0	RFS APXVAALL24	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.0	25.63	667	442
99.00	CSS XAP-460-V	3	13	3.1	4.0	6.7	4.1	0.80	0.70	0.0	0.0	25.00	112	47
99.00	Commscope SBNHH-	2	50	11.4	8.0	11.9	7.1	0.80	0.54	0.0	0.0	25.00	210	119
99.00	CSS V7C-865-2i	6	37	11.9	8.0	12.5	7.0	0.80	0.69	0.0	0.0	25.00	834	263
99.00	CSS X7C-FRO-860-	1	49	13.4	8.0	14.6	8.2	0.80	1.00	0.0	0.0	25.00	228	58
98.00	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	24.92	460	1080
90.00	VZW Unused	1	0	16.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	24.32	298	0
88.00	VZW Unused	1	0	16.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	24.17	296	0
78.00	EMS FV90-12-000AL2	9	30	8.1	6.0	12.0	7.0	0.80	0.69	0.0	0.0	23.35	802	324
78.00	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	23.35	431	1080
77.00	Radio Waves SP2-2.4	1	22	4.0	2.0	24.0	0.0	1.00	1.00	0.0	0.0	23.26	78	26
66.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	22.26	17	12
63.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	21.97	17	12
59.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	21.56	16	12
Totals		51	4868	466.1									5515	5841

Discrete Appurtenance Properties 0.9D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
108.0	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.0	25.63	43	203
108.0	Ericsson RRUS 4415	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.0	25.63	48	124
108.0	Ericsson Air6449	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.0	25.63	187	281
108.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	25.63	242	357
108.0	Site Pro VFA12	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.63	529	810
108.0	RFS APXVAALL24	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.0	25.63	667	332
99.00	CSS XAP-460-V	3	13	3.1	4.0	6.7	4.1	0.80	0.70	0.0	0.0	25.00	112	35
99.00	Commscope SBNHH-	2	50	11.4	8.0	11.9	7.1	0.80	0.54	0.0	0.0	25.00	210	89
99.00	CSS V7C-865-2i	6	37	11.9	8.0	12.5	7.0	0.80	0.69	0.0	0.0	25.00	834	197
99.00	CSS X7C-FRO-860-	1	49	13.4	8.0	14.6	8.2	0.80	1.00	0.0	0.0	25.00	228	44
98.00	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	24.92	460	810
90.00	VZW Unused	1	0	16.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	24.32	298	0
88.00	VZW Unused	1	0	16.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	24.17	296	0
78.00	EMS FV90-12-000AL2	9	30	8.1	6.0	12.0	7.0	0.80	0.69	0.0	0.0	23.35	802	243
78.00	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	23.35	431	810
77.00	Radio Waves SP2-2.4	1	22	4.0	2.0	24.0	0.0	1.00	1.00	0.0	0.0	23.26	78	20
66.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	22.26	17	9
63.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	21.97	17	9
59.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	21.56	16	9
Totals		51	4868	466.1									5515	4381

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
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Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:25 PM

Customer: T-MOBILE

Tower Loading

108.0	Ericsson Radio 4449	3	133	2.5	1.3	13.2	10.5	0.80	0.50	0.0	0.0	3.45	9	445
108.0	Ericsson RRUS 4415	3	94	2.7	1.4	13.4	5.9	0.80	0.50	0.0	0.0	3.45	10	308
108.0	Ericsson Air6449	3	236	7.2	2.8	20.6	8.6	0.80	0.63	0.0	0.0	3.45	32	772
108.0	Ericsson AIR32	3	287	8.6	4.7	12.9	8.7	0.80	0.71	0.0	0.0	3.45	43	941
108.0	Site Pro VFA12	3	657	30.5	0.0	0.0	0.0	0.75	0.75	0.0	0.0	3.45	151	2152
108.0	RFS APXVAALL24	3	501	23.8	8.0	24.0	8.5	0.80	0.63	0.0	0.0	3.45	106	1577
99.00	CSS XAP-460-V	3	78	4.9	4.0	6.7	4.1	0.80	0.70	0.0	0.0	3.37	23	242
99.00	Commscope SBNHH-	2	268	14.5	8.0	11.9	7.1	0.80	0.54	0.0	0.0	3.37	36	556
99.00	CSS V7C-865-2i	6	260	14.9	8.0	12.5	7.0	0.80	0.69	0.0	0.0	3.37	142	1602
99.00	CSS X7C-FRO-860-	1	303	17.0	8.0	14.6	8.2	0.80	1.00	0.0	0.0	3.37	39	313
98.00	Round Sector Frame	3	650	30.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	3.36	130	2131
90.00	VZW Unused	1	0	26.6	0.0	0.0	0.0	1.00	0.90	0.0	0.0	3.28	67	0
88.00	VZW Unused	1	0	26.6	0.0	0.0	0.0	1.00	0.90	0.0	0.0	3.25	66	0
78.00	EMS FV90-12-000AL2	9	215	9.3	6.0	12.0	7.0	0.80	0.69	0.0	0.0	3.14	124	1988
78.00	Round Sector Frame	3	643	29.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	3.14	120	2108
77.00	Radio Waves SP2-2.4	1	99	5.1	2.0	24.0	0.0	1.00	1.00	0.0	0.0	3.13	13	104
66.00	Generic GPS	1	37	1.5	1.0	9.0	6.0	1.00	1.00	0.0	0.0	3.00	4	39
63.00	Generic GPS	1	37	1.5	1.0	9.0	6.0	1.00	1.00	0.0	0.0	2.96	4	39
59.00	Generic GPS	1	36	1.5	1.0	9.0	6.0	1.00	1.00	0.0	0.0	2.90	4	38
Totals		51	14382	703.1									1121	15355

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
108.0	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.0	7.76	13	225
108.0	Ericsson RRUS 4415	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.0	7.76	15	138
108.0	Ericsson Air6449	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.0	7.76	57	312
108.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	7.76	73	397
108.0	Site Pro VFA12	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	7.76	160	900
108.0	RFS APXVAALL24	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.0	7.76	202	368
99.00	CSS XAP-460-V	3	13	3.1	4.0	6.7	4.1	0.80	0.70	0.0	0.0	7.57	34	39
99.00	Commscope SBNHH-	2	50	11.4	8.0	11.9	7.1	0.80	0.54	0.0	0.0	7.57	64	99
99.00	CSS V7C-865-2i	6	37	11.9	8.0	12.5	7.0	0.80	0.69	0.0	0.0	7.57	253	219
99.00	CSS X7C-FRO-860-	1	49	13.4	8.0	14.6	8.2	0.80	1.00	0.0	0.0	7.57	69	49
98.00	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.55	139	900
90.00	VZW Unused	1	0	16.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	7.37	90	0
88.00	VZW Unused	1	0	16.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	7.32	90	0
78.00	EMS FV90-12-000AL2	9	30	8.1	6.0	12.0	7.0	0.80	0.69	0.0	0.0	7.08	243	270
78.00	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.08	131	900
77.00	Radio Waves SP2-2.4	1	22	4.0	2.0	24.0	0.0	1.00	1.00	0.0	0.0	7.05	24	22
66.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	6.75	5	10
63.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	6.66	5	10
59.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	6.53	5	10
Totals		51	4868	466.1									1671	4868

Site Number: 413161

Code:

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	108.0	1 1/4" Coax	6	1.55	0.63	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	108.0	1 5/8" Hybriflex	3	1.98	1.30	67	1	Block	0.00	N	1.00	1.00	0.00
10.00	100.0	Waveguide	2	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
10.00	99.00	1 5/8" Coax	18	1.98	0.82	67	1	Block	0.00	N	1.00	1.00	0.00
10.00	99.00	3/8" (0.38"-	6	0.38	0.23	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	78.00	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
10.00	78.00	7/8" Coax	9	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
10.00	77.00	7/8" Coax	1	1.09	0.33	10	2	Individual	0.00	N	1.00	1.00	0.00
10.00	66.00	1/2" Coax	2	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00
10.00	63.00	1/2" Coax	1	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00
10.00	59.00	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

Customer: T-MOBILE

Equivalent Lateral Force Method

Spectral Response Acceleration for Short Period (S_s):	0.14
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.15
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.08
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s :	0.03
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	0.84
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.17
Total Unfactored Dead Load:	15.33 k
Seismic Base Shear (E):	0.65 k

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

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
7	110.00	687	167,379	0.081	53	845
6	90.00	1,350	260,060	0.126	82	1,661
5	72.56	1,165	174,570	0.085	55	1,434
4	62.56	465	58,594	0.028	18	572
3	50.00	2,090	202,601	0.098	64	2,572
2	30.00	2,358	125,772	0.061	39	2,902
1	10.00	2,344	34,604	0.017	11	2,884
Ericsson Radio 4449 B71 B85A	108.00	225	53,658	0.026	17	277
Ericsson RRUS 4415 B25	108.00	138	32,910	0.016	10	170
Ericsson Air6449 B41	108.00	312	74,406	0.036	23	384
Ericsson AIR32 B66Aa/B2a	108.00	397	94,581	0.046	30	488
Site Pro VFA12	108.00	900	214,632	0.104	67	1,107
RFS APXVAALL24 43-U-NA20	108.00	368	87,856	0.043	28	453
CSS XAP-460-V	99.00	39	8,401	0.004	3	48
Commscope SBNHH-1D65C	99.00	99	21,369	0.010	7	122
CSS V7C-865-2i	99.00	219	47,175	0.023	15	269
CSS X7C-FRO-860-VR4	99.00	49	10,447	0.005	3	60
Round Sector Frame	98.00	900	191,583	0.093	60	1,107
VZW Unused Reserve (2304 sqin)	90.00	0	0	0.000	0	0
VZW Unused Reserve (2304 sqin)	88.00	0	0	0.000	0	0
EMS FV90-12-000AL2	78.00	270	44,012	0.021	14	332
Round Sector Frame	78.00	900	146,708	0.071	46	1,107
Radio Waves SP2-2.4	77.00	22	3,533	0.002	1	27

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Equivalent Lateral Force Method

Generic GPS	66.00	10	1,341	0.001	0	12
Generic GPS	63.00	10	1,270	0.001	0	12
Generic GPS	59.00	10	1,176	0.001	0	12
<hr/>						
		15,327	2,058,639	1.000	646	18,860

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

Section	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
7	110.00	687	167,379	0.081	53	597
6	90.00	1,350	260,060	0.126	82	1,173
5	72.56	1,165	174,570	0.085	55	1,013
4	62.56	465	58,594	0.028	18	404
3	50.00	2,090	202,601	0.098	64	1,818
2	30.00	2,358	125,772	0.061	39	2,050
1	10.00	2,344	34,604	0.017	11	2,038
Ericsson Radio 4449 B71 B85A	108.00	225	53,658	0.026	17	196
Ericsson RRUS 4415 B25	108.00	138	32,910	0.016	10	120
Ericsson Air6449 B41	108.00	312	74,406	0.036	23	271
Ericsson AIR32 B66Aa/B2a	108.00	397	94,581	0.046	30	345
Site Pro VFA12	108.00	900	214,632	0.104	67	783
RFS APXVAALL24 43-U-NA20	108.00	368	87,856	0.043	28	320
CSS XAP-460-V	99.00	39	8,401	0.004	3	34
Commscope SBNHH-1D65C	99.00	99	21,369	0.010	7	86
CSS V7C-865-2i	99.00	219	47,175	0.023	15	190
CSS X7C-FRO-860-VR4	99.00	49	10,447	0.005	3	42
Round Sector Frame	98.00	900	191,583	0.093	60	783
VZW Unused Reserve (2304 sqin)	90.00	0	0	0.000	0	0
VZW Unused Reserve (2304 sqin)	88.00	0	0	0.000	0	0
EMS FV90-12-000AL2	78.00	270	44,012	0.021	14	235
Round Sector Frame	78.00	900	146,708	0.071	46	783
Radio Waves SP2-2.4	77.00	22	3,533	0.002	1	19
Generic GPS	66.00	10	1,341	0.001	0	9
Generic GPS	63.00	10	1,270	0.001	0	9
Generic GPS	59.00	10	1,176	0.001	0	9
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		15,327	2,058,639	1.000	646	13,327

Site Number: 413161

Code:

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Force/Stress Summary

Section: 1		1		Bot Elev (ft): 0.00				Height (ft): 20.000							
		Pu	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Bolts	Num Holes	Shear		Use %	Controls
Max Compression Member		(kip)			X	Y	Z					phiRnv (kip)	Bear phiRn (kip)		
LEG	PX - 3" DIA PIPE	-104.28	1.2D + 1.0W Normal	6.51	50	50	50	34.3	50.0	124.72	0	0	0.00	0.00	83 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2.5X2.5X0.1875	-3.35	1.2D + 1.0W 90 deg	15.70	50	50	50	190.4	36.0	7.12	1	1	8.84	10.44	46 Member Z

		Pu	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
Max Tension Member		(kip)											
LEG	PX - 3" DIA PIPE	92.89	0.9D + 1.0W 60 deg	50	65	135.90	0	0	0.00	0.00		68	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.1875	3.50	1.2D + 1.0W 90 deg	36	58	25.99	1	1	8.84	6.20	8.77	56	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	78.50	0.9D + 1.0W 180 deg	0.00	0	0	
Top Compression	90.99	1.2D + 1.0W Normal	0.00	0		
Bot Tension	92.89	0.9D + 1.0W 180 deg	173.15	29	4	7/8 A354-BC
Bot Compression	107.41	1.2D + 1.0W Normal	201.32	57		

Section: 2		1		Bot Elev (ft): 20.00				Height (ft): 20.000														
				Pu	Len				Bracing %				F'y		Phic Pn Num		Num		Shear	Bear	Use	
				(kip)	Load Case				(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	phiRnv	phiRn	%	Controls
LEG	PST - 3" DIA PIPE			-87.54	1.2D + 1.0W Normal				6.51	50	50	50	33.7	50.0	92.36	0	0	0.00	0.00	94	Member X	
HORIZ				0.00					0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0		
DIAG	SAE - 2.5X2.5X0.1875			-3.54	1.2D + 1.0W 90 deg				12.70	50	50	50	154.0	36.0	10.89	1	1	8.84	10.44	40	Bolt Shear	
				Pu					Fy	Fu	Phit Pn		Num	Num	Shear		Bear		Blk Shear		Use	
				(kip)	Load Case				(ksi)	(ksi)	(kip)		Bolts	Holes	(kip)		(kip)		(kip)		%	Controls
LEG	PST - 3" DIA PIPE			78.61	0.9D + 1.0W 60 deg				50	65	100.35		0	0	0.00		0.00				78	Member
HORIZ				0.00					0	0	0.00		0	0	0.00		0.00		0.00		0	
DIAG	SAE - 2.5X2.5X0.1875			3.41	1.2D + 1.0W 90 deg				36	58	25.99		1	1	8.84		6.20		8.77		55	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	62.46	0.9D + 1.0W 60 deg	0.00	0	0	
Top Compression	72.51	1.2D + 1.0W 120 deg	0.00	0		
Bot Tension	78.50	0.9D + 1.0W 180 deg	166.22	47	4	0.875" A325
Bot Compression	0.00		0.00	0		

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

Customer: T-MOBILE

Force/Stress Summary

Section: 3		1	Bot Elev (ft): 40.00				Height (ft): 20.000									
		Pu			Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG	PX - 2-1/2" DIA PIPE	-68.75	1.2D + 1.0W Normal	6.51	50	50	50	42.3	50.0	88.84	0	0	0.00	0.00	77	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 2X2X0.1875	-3.15	1.2D + 1.0W 90 deg	12.09	50	50	50	184.1	36.0	6.04	1	1	8.84	10.44	52	Member Z

		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk Shear		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)		Bolts	Holes	phiRnv (kip)	phiRn (kip)	phit Pn (kip)	Use %	Controls
LEG	PX - 2-1/2" DIA PIPE	62.59	0.9D + 1.0W 60 deg	50	65	101.25		0	0	0.00	0.00		61	Member
HORIZ		0.00		0	0	0.00		0	0	0.00	0.00	0.00	0	
DIAG	SAE - 2X2X0.1875	3.24	1.2D + 1.0W 90 deg	36	58	19.89		1	1	8.84	6.20	6.73	52	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	44.78	0.9D + 1.0W 180 deg	0.00	0	0	
Top Compression	52.58	1.2D + 1.0W Normal	0.00	0		
Bot Tension	62.46	0.9D + 1.0W 60 deg	120.41	52	4	0.75" A325
Bot Compression	0.00		0.00	0		

Section: 4		1	Bot Elev (ft): 60.00				Height (ft): 5.125									
		Pu			Len	Bracing %			F'y	Phic	Pn	Num	Num	Shear	Bear	Use
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG	PST - 2-1/2" DIA PIP	-49.60	1.2D + 1.0W Normal	4.88	50	50	50	30.9	50.0	71.50	0	0	0.00	0.00	69	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 1.75X1.75X0.12	-2.83	1.2D + 1.0W 90 deg	9.563	50	50	50	165.3	36.0	4.40	1	1	8.84	6.96	64	Member Z

		Pu		Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk Shear		
Max Tension Member		(kip)	Load Case	(ksi)	(ksi)	(kip)		Bolts	Holes	phiRnv (kip)	phiRn (kip)	phit Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	44.89	0.9D + 1.0W 60 deg	50	65	76.68		0	0	0.00	0.00		58	Member
HORIZ		0.00		0	0	0.00		0	0	0.00	0.00	0.00	0	
DIAG	SAE - 1.75X1.75X0.12	2.84	1.2D + 1.0W 90 deg	36	58	11.41		1	1	8.84	4.13	3.81	74	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	39.56	0.9D + 1.0W 180 deg	0.00	0	0	
Top Compression	46.77	1.2D + 1.0W Normal	0.00	0		
Bot Tension	44.78	0.9D + 1.0W 180 deg	81.36	55	4	5/8 A325
Bot Compression	0.00		0.00	0		

Site Number: 413161

Code:

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

Customer: T-MOBILE

Force/Stress Summary

Section: 5		1	Bot Elev (ft): 65.13				Height (ft): 14.875								
		Pu			Len	Bracing %		F'y	Phic	Pn	Num	Num	Shear	Bear	Use
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	% Controls
LEG	PST - 2-1/2" DIA PIP	-44.19	1.2D + 1.0W Normal	4.88	100	100	100	61.9	50.0	57.95	0	0	0.00	0.00	76 Member X
HORIZ	SAE - 1.75X1.75X0.12	-0.55	1.2D + 1.0W 60 deg	6.475	100	100	100	223.9	36.0	2.40	1	1	8.84	6.96	23 Member Z
DIAG	SAE - 1.75X1.75X0.12	-2.73	1.2D + 1.0W 90 deg	9.136	50	50	50	158.0	36.0	4.82	1	1	8.84	6.96	56 Member Z

Max Tension Member		Pu			Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk Shear	Use	Controls
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	phiRnv	phiRn	phit Pn	%	
LEG	PST - 2-1/2" DIA PIP	37.31	0.9D + 1.0W 60 deg	50	65	76.68	0	0	0.00	0.00				48	Member
HORIZ	SAE - 1.75X1.75X0.12	0.49	1.2D + 1.0W Normal	36	58	11.41	1	1	8.84	4.13			3.81	12	Blk Shear
DIAG	SAE - 1.75X1.75X0.12	2.93	1.2D + 1.0W 90 deg	36	58	11.41	1	1	8.84	4.13			3.81	77	Blk Shear

Max Splice Forces		Pu			phiRnt	Use	Num		
		(kip)	Load Case	(kip)	%	Bolts	Bolt Type		
Top Tension		24.31	0.9D + 1.0W 180 deg	0.00	0	0			
Top Compression		29.38	1.2D + 1.0W Normal	0.00	0				
Bot Tension		39.56	0.9D + 1.0W 180 deg	0.00	0				
Bot Compression		0.00		0.00	0				

Section: 6		1	Bot Elev (ft): 80.00				Height (ft): 20.000								
		Pu			Len	Bracing %		F'y	Phic	Pn	Num	Num	Shear	Bear	Use
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	% Controls
LEG	PST - 2-1/2" DIA PIP	-26.22	1.2D + 1.0W Normal	3.90	100	100	100	49.4	50.0	64.14	0	0	0.00	0.00	40 Member X
HORIZ	SAE - 1.5X1.5X0.125	-0.32	1.2D + 1.0W 60 deg	6.450	100	100	100	261.5	36.0	1.51	1	1	8.84	6.96	21 Member Z
DIAG	SAE - 1.5X1.5X0.125	-3.00	1.2D + 1.0W 90 deg	7.537	50	50	50	152.8	36.0	4.41	1	1	8.84	6.96	67 Member Z

Max Tension Member		Pu			Fy	Fu	Phit	Pn	Num	Num	Shear	Bear	Blk Shear	Use	Controls
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	phiRnv	phiRn	phit Pn	%	
LEG	PST - 2-1/2" DIA PIP	24.21	0.9D + 1.0W 60 deg	50	65	76.68	0	0	0.00	0.00				31	Member
HORIZ	SAE - 1.5X1.5X0.125	0.37	1.2D + 1.0W Normal	36	58	9.45	1	1	8.84	4.13			3.13	11	Blk Shear
DIAG	SAE - 1.5X1.5X0.125	2.95	1.2D + 1.0W 90 deg	36	58	9.45	1	1	8.84	4.13			3.13	94	Blk Shear

Max Splice Forces		Pu			phiRnt	Use	Num		
		(kip)	Load Case	(kip)	%	Bolts	Bolt Type		
Top Tension		3.52	0.9D + 1.0W 180 deg	0.00	0	0			
Top Compression		5.99	1.2D + 1.0W Normal	0.00	0				
Bot Tension		24.31	0.9D + 1.0W 180 deg	81.36	30	4	5/8 A325		
Bot Compression		0.00		0.00	0				

Site Number: 413161

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Force/Stress Summary

Section: 7		1	Bot Elev (ft): 100.0				Height (ft): 20.000									
			Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear		
			(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	Use
Max Compression Member																
LEG	PST - 2-1/2" DIA PIP	-5.91	1.2D + 1.0W Normal	0.25	100	100	100	3.2	50.0	76.62	0	0	0.00	0.00	7	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 1.5X1.5X0.125	-1.12	1.2D + 1.0W 90 deg	7.537	50	50	50	152.8	36.0	4.41	1	1	8.84	6.96	25	Member Z
			Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear				
			(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phiRn	Use			Controls
LEG	PST - 2-1/2" DIA PIP	3.29	1.2D + 1.0W 60 deg	50	65	76.68	0	0	0.00	0.00			4			Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00		0.00	0			
DIAG	SAE - 1.5X1.5X0.125	1.11	1.2D + 1.0W 90 deg	36	58	9.45	1	1	8.84	4.13		3.13	35			Blk Shear
Max Splice Forces			Pu		phiRnt		Use	Num								
			(kip)	Load Case	(kip)		%	Bolts	Bolt Type							
Top Tension			0.00		0.00		0	0								
Top Compression			0.18	1.2D + 1.0Ev + 1.0Eh	0.00		0									
Bot Tension			3.52	0.9D + 1.0W 180 deg	81.36		4	4	5/8 A325							
Bot Compression			0.00		0.00		0									

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.0W Normal	8.46	00.00	0	1	0.00	107.09	-11.45	
	8.46	00.00	120	1a	3.88	-44.35	-3.63	
	8.46	00.00	240	1b	-3.88	-44.35	-3.63	
1.2D + 1.0W 60 deg	8.46	00.00	0	1	-1.13	54.68	-5.64	
	8.46	00.00	120	1a	-5.45	54.68	1.84	
	8.46	00.00	240	1b	-8.81	-90.96	-5.09	
1.2D + 1.0W 90 deg	8.46	00.00	0	1	-1.32	6.13	-0.36	
	8.46	00.00	120	1a	-8.67	91.05	4.23	
	8.46	00.00	240	1b	-8.02	-78.79	-3.87	
1.2D + 1.0W 120 deg	8.46	00.00	0	1	-1.20	-44.35	5.18	
	8.46	00.00	120	1a	-9.91	107.09	5.72	
	8.46	00.00	240	1b	-5.08	-44.35	-1.55	
1.2D + 1.0W 180 deg	8.46	00.00	0	1	0.00	-90.96	10.18	
	8.46	00.00	120	1a	-4.31	54.68	3.80	
	8.46	00.00	240	1b	4.31	54.68	3.80	
1.2D + 1.0W 210 deg	8.46	00.00	0	1	0.65	-78.79	8.88	
	8.46	00.00	120	1a	0.35	6.13	1.32	
	8.46	00.00	240	1b	8.00	91.05	5.39	
1.2D + 1.0W 240 deg	8.46	00.00	0	1	1.20	-44.35	5.18	
	8.46	00.00	120	1a	5.08	-44.35	-1.55	
	8.46	00.00	240	1b	9.91	107.09	5.72	
1.2D + 1.0W 300 deg	8.46	00.00	0	1	1.13	54.68	-5.64	
	8.46	00.00	120	1a	8.81	-90.96	-5.09	
	8.46	00.00	240	1b	5.45	54.68	1.84	
1.2D + 1.0W 330 deg	8.46	00.00	0	1	0.67	91.05	-9.62	
	8.46	00.00	120	1a	7.36	-78.79	-5.01	
	8.46	00.00	240	1b	0.97	6.13	-0.97	
0.9D + 1.0W Normal	8.46	00.00	0	1	0.00	105.39	-11.35	
	8.46	00.00	120	1a	3.97	-45.80	-3.68	
	8.46	00.00	240	1b	-3.97	-45.80	-3.68	
0.9D + 1.0W 60 deg	8.46	00.00	0	1	-1.14	53.07	-5.54	
	8.46	00.00	120	1a	-5.36	53.07	1.78	
	8.46	00.00	240	1b	-8.90	-92.34	-5.14	
0.9D + 1.0W 90 deg	8.46	00.00	0	1	-1.33	4.60	-0.26	
	8.46	00.00	120	1a	-8.58	89.38	4.18	
	8.46	00.00	240	1b	-8.10	-80.19	-3.92	
0.9D + 1.0W 120 deg	8.46	00.00	0	1	-1.20	-45.80	5.28	
	8.46	00.00	120	1a	-9.82	105.39	5.67	
	8.46	00.00	240	1b	-5.17	-45.80	-1.60	
0.9D + 1.0W 180 deg	8.46	00.00	0	1	0.00	-92.34	10.28	
	8.46	00.00	120	1a	-4.23	53.07	3.75	
	8.46	00.00	240	1b	4.23	53.07	3.75	
0.9D + 1.0W 210 deg	8.46	00.00	0	1	0.65	-80.19	8.98	
	8.46	00.00	120	1a	0.44	4.60	1.28	

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Engineering Number: 13544814_C3_04

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	8.46	00.00	240	1b	7.91	89.38	5.34
0.9D + 1.0W 240 deg	8.46	00.00	0	1	1.20	-45.80	5.28
	8.46	00.00	120	1a	5.17	-45.80	-1.60
	8.46	00.00	240	1b	9.82	105.39	5.67
0.9D + 1.0W 300 deg	8.46	00.00	0	1	1.14	53.07	-5.54
	8.46	00.00	120	1a	8.90	-92.34	-5.14
	8.46	00.00	240	1b	5.36	53.07	1.78
0.9D + 1.0W 330 deg	8.46	00.00	0	1	0.67	89.38	-9.52
	8.46	00.00	120	1a	7.45	-80.19	-5.05
	8.46	00.00	240	1b	0.89	4.60	-1.02
1.2D + 1.0Di + 1.0Wi Normal	8.46	00.00	0	1	0.00	44.30	-3.45
	8.46	00.00	120	1a	0.41	7.54	-0.58
	8.46	00.00	240	1b	-0.41	7.54	-0.58
1.2D + 1.0Di + 1.0Wi 60 deg	8.46	00.00	0	1	-0.29	31.84	-2.06
	8.46	00.00	120	1a	-1.92	31.84	0.78
	8.46	00.00	240	1b	-1.69	-4.30	-0.97
1.2D + 1.0Di + 1.0Wi 90 deg	8.46	00.00	0	1	-0.33	19.79	-0.72
	8.46	00.00	120	1a	-2.72	40.75	1.38
	8.46	00.00	240	1b	-1.47	-1.16	-0.66
1.2D + 1.0Di + 1.0Wi 120 deg	8.46	00.00	0	1	-0.29	7.54	0.64
	8.46	00.00	120	1a	-2.99	44.30	1.72
	8.46	00.00	240	1b	-0.70	7.54	-0.07
1.2D + 1.0Di + 1.0Wi 180 deg	8.46	00.00	0	1	0.00	-4.30	1.95
	8.46	00.00	120	1a	-1.64	31.84	1.28
	8.46	00.00	240	1b	1.64	31.84	1.28
1.2D + 1.0Di + 1.0Wi 210 deg	8.46	00.00	0	1	0.17	-1.16	1.60
	8.46	00.00	120	1a	-0.46	19.79	0.65
	8.46	00.00	240	1b	2.55	40.75	1.67
1.2D + 1.0Di + 1.0Wi 240 deg	8.46	00.00	0	1	0.29	7.54	0.64
	8.46	00.00	120	1a	0.70	7.54	-0.07
	8.46	00.00	240	1b	2.99	44.30	1.72
1.2D + 1.0Di + 1.0Wi 300 deg	8.46	00.00	0	1	0.29	31.84	-2.06
	8.46	00.00	120	1a	1.69	-4.30	-0.97
	8.46	00.00	240	1b	1.92	31.84	0.78
1.2D + 1.0Di + 1.0Wi 330 deg	8.46	00.00	0	1	0.17	40.75	-3.05
	8.46	00.00	120	1a	1.30	-1.16	-0.94
	8.46	00.00	240	1b	0.79	19.79	0.07
1.2D + 1.0Ev + 1.0Eh Normal M1	8.46	00.00	0	1	0.00	10.35	-0.79
	8.46	00.00	120	1a	-0.20	4.02	0.09
	8.46	00.00	240	1b	0.20	4.02	0.09
1.2D + 1.0Ev + 1.0Eh 60 deg M1	8.46	00.00	0	1	-0.02	8.18	-0.59
	8.46	00.00	120	1a	-0.53	8.18	0.28
	8.46	00.00	240	1b	0.03	2.01	0.02
1.2D + 1.0Ev + 1.0Eh 90 deg M1	8.46	00.00	0	1	-0.03	6.13	-0.41
	8.46	00.00	120	1a	-0.65	9.78	0.36
	8.46	00.00	240	1b	0.06	2.47	0.05
1.2D + 1.0Ev + 1.0Eh 120 deg M1	8.46	00.00	0	1	-0.02	4.07	-0.22
	8.46	00.00	120	1a	-0.68	10.24	0.39
	8.46	00.00	240	1b	0.18	4.07	0.13

Site Number: 413161

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Customer: T-MOBILE

1.2D + 1.0Ev + 1.0Eh 180 deg M1	8.46	00.00	0	1	0.00	1.91	-0.02
	8.46	00.00	120	1a	-0.51	8.24	0.32
	8.46	00.00	240	1b	0.51	8.24	0.32
1.2D + 1.0Ev + 1.0Eh 210 deg M1	8.46	00.00	0	1	0.01	2.56	-0.08
	8.46	00.00	120	1a	-0.34	6.13	0.23
	8.46	00.00	240	1b	0.63	9.69	0.38
1.2D + 1.0Ev + 1.0Eh 240 deg M1	8.46	00.00	0	1	0.02	4.07	-0.22
	8.46	00.00	120	1a	-0.18	4.07	0.13
	8.46	00.00	240	1b	0.68	10.24	0.39
1.2D + 1.0Ev + 1.0Eh 300 deg M1	8.46	00.00	0	1	0.02	8.18	-0.59
	8.46	00.00	120	1a	-0.03	2.01	0.02
	8.46	00.00	240	1b	0.53	8.18	0.28
1.2D + 1.0Ev + 1.0Eh 330 deg M1	8.46	00.00	0	1	0.01	9.69	-0.73
	8.46	00.00	120	1a	-0.08	2.56	0.03
	8.46	00.00	240	1b	0.37	6.13	0.18
0.9D - 1.0Ev + 1.0Eh Normal M1	8.46	00.00	0	1	0.00	8.54	-0.67
	8.46	00.00	120	1a	-0.09	2.22	0.03
	8.46	00.00	240	1b	0.09	2.22	0.03
0.9D - 1.0Ev + 1.0Eh 60 deg M1	8.46	00.00	0	1	-0.02	6.38	-0.48
	8.46	00.00	120	1a	-0.42	6.38	0.22
	8.46	00.00	240	1b	-0.08	0.22	-0.04
0.9D - 1.0Ev + 1.0Eh 90 deg M1	8.46	00.00	0	1	-0.03	4.33	-0.29
	8.46	00.00	120	1a	-0.54	7.98	0.30
	8.46	00.00	240	1b	-0.05	0.68	-0.01
0.9D - 1.0Ev + 1.0Eh 120 deg M1	8.46	00.00	0	1	-0.02	2.27	-0.10
	8.46	00.00	120	1a	-0.57	8.44	0.33
	8.46	00.00	240	1b	0.07	2.27	0.07
0.9D - 1.0Ev + 1.0Eh 180 deg M1	8.46	00.00	0	1	0.00	0.12	0.10
	8.46	00.00	120	1a	-0.40	6.44	0.26
	8.46	00.00	240	1b	0.40	6.44	0.26
0.9D - 1.0Ev + 1.0Eh 210 deg M1	8.46	00.00	0	1	0.01	0.77	0.04
	8.46	00.00	120	1a	-0.23	4.33	0.17
	8.46	00.00	240	1b	0.52	7.89	0.32
0.9D - 1.0Ev + 1.0Eh 240 deg M1	8.46	00.00	0	1	0.02	2.27	-0.10
	8.46	00.00	120	1a	-0.07	2.27	0.07
	8.46	00.00	240	1b	0.57	8.44	0.33
0.9D - 1.0Ev + 1.0Eh 300 deg M1	8.46	00.00	0	1	0.02	6.38	-0.48
	8.46	00.00	120	1a	0.08	0.22	-0.04
	8.46	00.00	240	1b	0.42	6.38	0.22
0.9D - 1.0Ev + 1.0Eh 330 deg M1	8.46	00.00	0	1	0.01	7.89	-0.61
	8.46	00.00	120	1a	0.03	0.77	-0.03
	8.46	00.00	240	1b	0.26	4.33	0.12
1.0D + 1.0W Service Normal	8.46	00.00	0	1	0.00	35.45	-3.67
	8.46	00.00	120	1a	0.98	-10.06	-0.99
	8.46	00.00	240	1b	-0.98	-10.06	-0.99
1.0D + 1.0W Service 60 deg	8.46	00.00	0	1	-0.34	19.70	-1.92
	8.46	00.00	120	1a	-1.83	19.70	0.66
	8.46	00.00	240	1b	-2.47	-24.07	-1.43

Site Number: 413161

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

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Customer: T-MOBILE

1.0D + 1.0W Service 90 deg	8.46	00.00	0	1	-0.40	5.11	-0.33
	8.46	00.00	120	1a	-2.80	30.63	1.38
	8.46	00.00	240	1b	-2.23	-20.41	-1.06
1.0D + 1.0W Service 120 deg	8.46	00.00	0	1	-0.36	-10.06	1.34
	8.46	00.00	120	1a	-3.17	35.45	1.83
	8.46	00.00	240	1b	-1.34	-10.06	-0.36
1.0D + 1.0W Service 180 deg	8.46	00.00	0	1	0.00	-24.07	2.85
	8.46	00.00	120	1a	-1.49	19.70	1.25
	8.46	00.00	240	1b	1.49	19.70	1.25
1.0D + 1.0W Service 210 deg	8.46	00.00	0	1	0.20	-20.41	2.46
	8.46	00.00	120	1a	-0.08	5.11	0.51
	8.46	00.00	240	1b	2.60	30.63	1.73
1.0D + 1.0W Service 240 deg	8.46	00.00	0	1	0.36	-10.06	1.34
	8.46	00.00	120	1a	1.34	-10.06	-0.36
	8.46	00.00	240	1b	3.17	35.45	1.83
1.0D + 1.0W Service 300 deg	8.46	00.00	0	1	0.34	19.70	-1.92
	8.46	00.00	120	1a	2.47	-24.07	-1.43
	8.46	00.00	240	1b	1.83	19.70	0.66
1.0D + 1.0W Service 330 deg	8.46	00.00	0	1	0.20	30.63	-3.12
	8.46	00.00	120	1a	2.03	-20.41	-1.40
	8.46	00.00	240	1b	0.48	5.11	-0.18

Max Uplift:	92.34 (kip)	Moment Ice:	311.06 (kip-ft)	Moment:	1,281.41 (kip-ft)	1.2D + 1.0W Normal
Max Down:	107.09(kip)	Total Down Ice:	59.38 (kip)	Total Down:	18.39 (kip)	
Max Shear:	11.45 (kip)	Total Shear Ice:	4.60 (kip)	Total Shear:	18.70 (kip)	

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

Customer: T-MOBILE

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
109 mph Normal with No Ice	59.75	0.291	0.0494	0.8011	0.8011
109 mph Normal with No Ice	65.13	0.348	0.0493	0.5854	0.5875
109 mph Normal with No Ice	74.88	0.462	0.0592	0.6860	0.6886
109 mph Normal with No Ice	79.75	0.525	0.0690	0.9405	0.9405
109 mph Normal with No Ice	88.05	0.641	0.0697	0.8250	0.8280
109 mph Normal with No Ice	99.75	0.812	0.0692	0.9254	0.9254
109 mph Normal with No Ice	108.05	0.935	0.0694	0.8434	0.8448
109 mph 60 degree with No Ice	59.75	0.281	0.0522	0.7572	0.7572
109 mph 60 degree with No Ice	65.13	0.336	0.0508	0.5648	0.5670
109 mph 60 degree with No Ice	74.88	0.447	0.0610	0.6630	0.6657
109 mph 60 degree with No Ice	79.75	0.507	0.0725	0.9081	0.9081
109 mph 60 degree with No Ice	88.05	0.620	0.0723	0.7991	0.8013
109 mph 60 degree with No Ice	99.75	0.785	0.0724	0.8961	0.8961
109 mph 60 degree with No Ice	108.05	0.903	0.0720	0.8171	0.8171
109 mph 90 degree with No Ice	59.75	0.283	-0.0580	0.7491	0.7497
109 mph 90 degree with No Ice	65.13	0.339	-0.0572	0.5809	0.5837
109 mph 90 degree with No Ice	74.88	0.450	-0.0688	0.6774	0.6809
109 mph 90 degree with No Ice	79.75	0.511	-0.0810	0.8974	0.8985
109 mph 90 degree with No Ice	88.05	0.625	-0.0814	0.8054	0.8088
109 mph 90 degree with No Ice	99.75	0.792	-0.0811	0.8908	0.8917
109 mph 90 degree with No Ice	108.05	0.911	-0.0810	0.8229	0.8239
109 mph 120 degree with No Ice	59.75	0.291	0.0503	0.8013	0.8013
109 mph 120 degree with No Ice	65.13	0.348	0.0502	0.5855	0.5875
109 mph 120 degree with No Ice	74.88	0.462	0.0600	0.6861	0.6886
109 mph 120 degree with No Ice	79.75	0.525	0.0698	0.9405	0.9405
109 mph 120 degree with No Ice	88.05	0.641	0.0705	0.8250	0.8280
109 mph 120 degree with No Ice	99.75	0.812	0.0699	0.9254	0.9254
109 mph 120 degree with No Ice	108.05	0.935	0.0701	0.8434	0.8448
109 mph 180 degree with No Ice	59.75	0.281	0.0512	0.7570	0.7570
109 mph 180 degree with No Ice	65.13	0.336	0.0499	0.5648	0.5670
109 mph 180 degree with No Ice	74.88	0.447	0.0601	0.6630	0.6657
109 mph 180 degree with No Ice	79.75	0.507	0.0716	0.9081	0.9081
109 mph 180 degree with No Ice	88.05	0.620	0.0715	0.7991	0.8013
109 mph 180 degree with No Ice	99.75	0.785	0.0716	0.8961	0.8961
109 mph 180 degree with No Ice	108.05	0.903	0.0713	0.8171	0.8171
109 mph 210 degree with No Ice	59.75	0.283	0.0298	0.7490	0.7496
109 mph 210 degree with No Ice	65.13	0.339	0.0288	0.5809	0.5837
109 mph 210 degree with No Ice	74.88	0.450	0.0349	0.6773	0.6808
109 mph 210 degree with No Ice	79.75	0.511	0.0420	0.8974	0.8984
109 mph 210 degree with No Ice	88.05	0.625	0.0417	0.8054	0.8088
109 mph 210 degree with No Ice	99.75	0.792	0.0420	0.8908	0.8916
109 mph 210 degree with No Ice	108.05	0.911	0.0416	0.8229	0.8238
109 mph 240 degree with No Ice	59.75	0.291	0.0494	0.8013	0.8013
109 mph 240 degree with No Ice	65.13	0.348	0.0493	0.5855	0.5875
109 mph 240 degree with No Ice	74.88	0.462	0.0591	0.6861	0.6886
109 mph 240 degree with No Ice	79.75	0.525	0.0689	0.9405	0.9405
109 mph 240 degree with No Ice	88.05	0.641	0.0696	0.8250	0.8280
109 mph 240 degree with No Ice	99.75	0.812	0.0690	0.9254	0.9254
109 mph 240 degree with No Ice	108.05	0.935	0.0692	0.8434	0.8448
109 mph 300 degree with No Ice	59.75	0.281	0.0512	0.7572	0.7572
109 mph 300 degree with No Ice	65.13	0.336	0.0499	0.5648	0.5670
109 mph 300 degree with No Ice	74.88	0.447	0.0601	0.6630	0.6657
109 mph 300 degree with No Ice	79.75	0.507	0.0716	0.9081	0.9081
109 mph 300 degree with No Ice	88.05	0.620	0.0714	0.7991	0.8013
109 mph 300 degree with No Ice	99.75	0.785	0.0715	0.8961	0.8961

Site Number: 413161

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ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

Customer: T-MOBILE

109 mph 300 degree with No Ice	108.05	0.903	0.0711	0.8171	0.8171
109 mph 330 degree with No Ice	59.75	0.283	0.0308	0.7489	0.7495
109 mph 330 degree with No Ice	65.13	0.339	0.0297	0.5809	0.5837
109 mph 330 degree with No Ice	74.88	0.450	0.0358	0.6773	0.6808
109 mph 330 degree with No Ice	79.75	0.511	0.0430	0.8974	0.8984
109 mph 330 degree with No Ice	88.05	0.625	0.0427	0.8054	0.8088
109 mph 330 degree with No Ice	99.75	0.792	0.0430	0.8908	0.8916
109 mph 330 degree with No Ice	108.05	0.911	0.0427	0.8229	0.8238
109 mph Normal with No Ice (Reduced DL)	59.75	0.290	0.0493	0.7996	0.7996
109 mph Normal with No Ice (Reduced DL)	65.13	0.348	0.0492	0.5840	0.5861
109 mph Normal with No Ice (Reduced DL)	74.88	0.461	0.0590	0.6842	0.6868
109 mph Normal with No Ice (Reduced DL)	79.75	0.524	0.0687	0.9384	0.9384
109 mph Normal with No Ice (Reduced DL)	88.05	0.640	0.0695	0.8226	0.8255
109 mph Normal with No Ice (Reduced DL)	99.75	0.810	0.0689	0.9228	0.9228
109 mph Normal with No Ice (Reduced DL)	108.05	0.933	0.0691	0.8412	0.8423
109 mph 60 deg with No Ice (Reduced DL)	59.75	0.280	0.0520	0.7549	0.7549
109 mph 60 deg with No Ice (Reduced DL)	65.13	0.336	0.0506	0.5634	0.5656
109 mph 60 deg with No Ice (Reduced DL)	74.88	0.446	0.0608	0.6614	0.6641
109 mph 60 deg with No Ice (Reduced DL)	79.75	0.506	0.0722	0.9050	0.9050
109 mph 60 deg with No Ice (Reduced DL)	88.05	0.619	0.0720	0.7967	0.7992
109 mph 60 deg with No Ice (Reduced DL)	99.75	0.783	0.0721	0.8932	0.8932
109 mph 60 deg with No Ice (Reduced DL)	108.05	0.901	0.0717	0.8146	0.8146
109 mph 90 deg with No Ice (Reduced DL)	59.75	0.283	-0.0578	0.7477	0.7483
109 mph 90 deg with No Ice (Reduced DL)	65.13	0.338	-0.0570	0.5795	0.5823
109 mph 90 deg with No Ice (Reduced DL)	74.88	0.449	-0.0685	0.6757	0.6791
109 mph 90 deg with No Ice (Reduced DL)	79.75	0.510	-0.0807	0.8954	0.8965
109 mph 90 deg with No Ice (Reduced DL)	88.05	0.624	-0.0810	0.8029	0.8065
109 mph 90 deg with No Ice (Reduced DL)	99.75	0.790	-0.0808	0.8879	0.8888
109 mph 90 deg with No Ice (Reduced DL)	108.05	0.909	-0.0807	0.8204	0.8214
109 mph 120 deg with No Ice (Reduced DL)	59.75	0.290	0.0502	0.7998	0.7998
109 mph 120 deg with No Ice (Reduced DL)	65.13	0.348	0.0500	0.5840	0.5861
109 mph 120 deg with No Ice (Reduced DL)	74.88	0.461	0.0598	0.6843	0.6868
109 mph 120 deg with No Ice (Reduced DL)	79.75	0.524	0.0696	0.9384	0.9384
109 mph 120 deg with No Ice (Reduced DL)	88.05	0.640	0.0703	0.8226	0.8256
109 mph 120 deg with No Ice (Reduced DL)	99.75	0.810	0.0697	0.9228	0.9228
109 mph 120 deg with No Ice (Reduced DL)	108.05	0.933	0.0698	0.8412	0.8423
109 mph 180 deg with No Ice (Reduced DL)	59.75	0.280	0.0510	0.7547	0.7547
109 mph 180 deg with No Ice (Reduced DL)	65.13	0.336	0.0497	0.5634	0.5656
109 mph 180 deg with No Ice (Reduced DL)	74.88	0.446	0.0599	0.6613	0.6640
109 mph 180 deg with No Ice (Reduced DL)	79.75	0.506	0.0714	0.9050	0.9050
109 mph 180 deg with No Ice (Reduced DL)	88.05	0.619	0.0712	0.7967	0.7991
109 mph 180 deg with No Ice (Reduced DL)	99.75	0.783	0.0714	0.8932	0.8932
109 mph 180 deg with No Ice (Reduced DL)	108.05	0.901	0.0710	0.8146	0.8146
109 mph 210 deg with No Ice (Reduced DL)	59.75	0.283	0.0297	0.7476	0.7482
109 mph 210 deg with No Ice (Reduced DL)	65.13	0.338	0.0287	0.5795	0.5823
109 mph 210 deg with No Ice (Reduced DL)	74.88	0.449	0.0347	0.6756	0.6791
109 mph 210 deg with No Ice (Reduced DL)	79.75	0.510	0.0418	0.8954	0.8964
109 mph 210 deg with No Ice (Reduced DL)	88.05	0.624	0.0416	0.8029	0.8065
109 mph 210 deg with No Ice (Reduced DL)	99.75	0.790	0.0418	0.8879	0.8887
109 mph 210 deg with No Ice (Reduced DL)	108.05	0.909	0.0415	0.8204	0.8214
109 mph 240 deg with No Ice (Reduced DL)	59.75	0.290	0.0492	0.7998	0.7998
109 mph 240 deg with No Ice (Reduced DL)	65.13	0.348	0.0491	0.5840	0.5861
109 mph 240 deg with No Ice (Reduced DL)	74.88	0.461	0.0589	0.6843	0.6868
109 mph 240 deg with No Ice (Reduced DL)	79.75	0.524	0.0687	0.9384	0.9384
109 mph 240 deg with No Ice (Reduced DL)	88.05	0.640	0.0693	0.8226	0.8256
109 mph 240 deg with No Ice (Reduced DL)	99.75	0.810	0.0687	0.9228	0.9228
109 mph 240 deg with No Ice (Reduced DL)	108.05	0.933	0.0689	0.8412	0.8423
109 mph 300 deg with No Ice (Reduced DL)	59.75	0.280	0.0510	0.7549	0.7549
109 mph 300 deg with No Ice (Reduced DL)	65.13	0.336	0.0497	0.5634	0.5656
109 mph 300 deg with No Ice (Reduced DL)	74.88	0.446	0.0598	0.6614	0.6641
109 mph 300 deg with No Ice (Reduced DL)	79.75	0.506	0.0713	0.9050	0.9050
109 mph 300 deg with No Ice (Reduced DL)	88.05	0.619	0.0711	0.7967	0.7992

Site Number: 413161

Code:

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

Customer: T-MOBILE

109 mph 300 deg with No Ice (Reduced DL)	99.75	0.783	0.0712	0.8932	0.8932
109 mph 300 deg with No Ice (Reduced DL)	108.05	0.901	0.0708	0.8146	0.8146
109 mph 330 deg with No Ice (Reduced DL)	59.75	0.283	0.0307	0.7475	0.7481
109 mph 330 deg with No Ice (Reduced DL)	65.13	0.338	0.0296	0.5795	0.5823
109 mph 330 deg with No Ice (Reduced DL)	74.88	0.449	0.0357	0.6756	0.6791
109 mph 330 deg with No Ice (Reduced DL)	79.75	0.510	0.0428	0.8954	0.8964
109 mph 330 deg with No Ice (Reduced DL)	88.05	0.624	0.0426	0.8029	0.8065
109 mph 330 deg with No Ice (Reduced DL)	99.75	0.790	0.0428	0.8879	0.8887
109 mph 330 deg with No Ice (Reduced DL)	108.05	0.909	0.0425	0.8204	0.8214
40 mph Normal with 1.50 in Radial Ice	59.75	0.070	0.0071	0.1867	0.1867
40 mph Normal with 1.50 in Radial Ice	65.13	0.084	0.0062	0.1391	0.1393
40 mph Normal with 1.50 in Radial Ice	74.88	0.111	0.0073	0.1622	0.1623
40 mph Normal with 1.50 in Radial Ice	79.75	0.126	0.0092	0.2131	0.2131
40 mph Normal with 1.50 in Radial Ice	88.05	0.153	0.0082	0.1950	0.1952
40 mph Normal with 1.50 in Radial Ice	99.75	0.193	0.0069	0.2135	0.2135
40 mph Normal with 1.50 in Radial Ice	108.05	0.222	0.0064	0.1980	0.1981
40 mph 60 deg with 1.50 in Radial Ice	59.75	0.070	0.0073	0.1920	0.1920
40 mph 60 deg with 1.50 in Radial Ice	65.13	0.083	0.0063	0.1363	0.1365
40 mph 60 deg with 1.50 in Radial Ice	74.88	0.109	0.0074	0.1598	0.1600
40 mph 60 deg with 1.50 in Radial Ice	79.75	0.124	0.0093	0.2252	0.2252
40 mph 60 deg with 1.50 in Radial Ice	88.05	0.151	0.0083	0.1938	0.1938
40 mph 60 deg with 1.50 in Radial Ice	99.75	0.191	0.0070	0.2154	0.2154
40 mph 60 deg with 1.50 in Radial Ice	108.05	0.219	0.0064	0.1965	0.1965
40 mph 90 deg with 1.50 in Radial Ice	59.75	0.070	-0.0082	0.1852	0.1852
40 mph 90 deg with 1.50 in Radial Ice	65.13	0.083	-0.0071	0.1399	0.1401
40 mph 90 deg with 1.50 in Radial Ice	74.88	0.109	-0.0084	0.1625	0.1627
40 mph 90 deg with 1.50 in Radial Ice	79.75	0.125	-0.0106	0.2206	0.2207
40 mph 90 deg with 1.50 in Radial Ice	88.05	0.152	-0.0095	0.1941	0.1941
40 mph 90 deg with 1.50 in Radial Ice	99.75	0.191	-0.0080	0.2130	0.2131
40 mph 90 deg with 1.50 in Radial Ice	108.05	0.220	-0.0074	0.1968	0.1968
40 mph 120 deg with 1.50 in Radial Ice	59.75	0.070	0.0073	0.1868	0.1868
40 mph 120 deg with 1.50 in Radial Ice	65.13	0.084	0.0063	0.1391	0.1393
40 mph 120 deg with 1.50 in Radial Ice	74.88	0.111	0.0074	0.1622	0.1623
40 mph 120 deg with 1.50 in Radial Ice	79.75	0.126	0.0093	0.2131	0.2131
40 mph 120 deg with 1.50 in Radial Ice	88.05	0.153	0.0083	0.1950	0.1952
40 mph 120 deg with 1.50 in Radial Ice	99.75	0.193	0.0070	0.2135	0.2135
40 mph 120 deg with 1.50 in Radial Ice	108.05	0.222	0.0065	0.1980	0.1982
40 mph 180 deg with 1.50 in Radial Ice	59.75	0.070	0.0071	0.1920	0.1920
40 mph 180 deg with 1.50 in Radial Ice	65.13	0.083	0.0061	0.1363	0.1365
40 mph 180 deg with 1.50 in Radial Ice	74.88	0.109	0.0072	0.1598	0.1600
40 mph 180 deg with 1.50 in Radial Ice	79.75	0.124	0.0092	0.2252	0.2252
40 mph 180 deg with 1.50 in Radial Ice	88.05	0.151	0.0082	0.1938	0.1938
40 mph 180 deg with 1.50 in Radial Ice	99.75	0.191	0.0069	0.2154	0.2154
40 mph 180 deg with 1.50 in Radial Ice	108.05	0.219	0.0064	0.1965	0.1965
40 mph 210 deg with 1.50 in Radial Ice	59.75	0.070	0.0041	0.1852	0.1852
40 mph 210 deg with 1.50 in Radial Ice	65.13	0.083	0.0036	0.1399	0.1401
40 mph 210 deg with 1.50 in Radial Ice	74.88	0.109	0.0042	0.1625	0.1627
40 mph 210 deg with 1.50 in Radial Ice	79.75	0.125	0.0053	0.2206	0.2207
40 mph 210 deg with 1.50 in Radial Ice	88.05	0.152	0.0047	0.1941	0.1941
40 mph 210 deg with 1.50 in Radial Ice	99.75	0.191	0.0040	0.2130	0.2131
40 mph 210 deg with 1.50 in Radial Ice	108.05	0.220	0.0037	0.1968	0.1968
40 mph 240 deg with 1.50 in Radial Ice	59.75	0.070	0.0072	0.1868	0.1868
40 mph 240 deg with 1.50 in Radial Ice	65.13	0.084	0.0062	0.1391	0.1393
40 mph 240 deg with 1.50 in Radial Ice	74.88	0.111	0.0073	0.1622	0.1623
40 mph 240 deg with 1.50 in Radial Ice	79.75	0.126	0.0092	0.2131	0.2131
40 mph 240 deg with 1.50 in Radial Ice	88.05	0.153	0.0083	0.1950	0.1952
40 mph 240 deg with 1.50 in Radial Ice	99.75	0.193	0.0070	0.2135	0.2135
40 mph 240 deg with 1.50 in Radial Ice	108.05	0.222	0.0064	0.1980	0.1982
40 mph 300 deg with 1.50 in Radial Ice	59.75	0.070	0.0072	0.1920	0.1920
40 mph 300 deg with 1.50 in Radial Ice	65.13	0.083	0.0061	0.1363	0.1365
40 mph 300 deg with 1.50 in Radial Ice	74.88	0.109	0.0073	0.1598	0.1600
40 mph 300 deg with 1.50 in Radial Ice	79.75	0.124	0.0092	0.2252	0.2252

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

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3/25/2021 1:26:26 PM

Customer: T-MOBILE

40 mph 300 deg with 1.50 in Radial Ice	88.05	0.151	0.0082	0.1938	0.1938
40 mph 300 deg with 1.50 in Radial Ice	99.75	0.191	0.0069	0.2154	0.2154
40 mph 300 deg with 1.50 in Radial Ice	108.05	0.219	0.0064	0.1965	0.1965
40 mph 330 deg with 1.50 in Radial Ice	59.75	0.070	0.0042	0.1852	0.1852
40 mph 330 deg with 1.50 in Radial Ice	65.13	0.083	0.0036	0.1399	0.1401
40 mph 330 deg with 1.50 in Radial Ice	74.88	0.109	0.0042	0.1625	0.1627
40 mph 330 deg with 1.50 in Radial Ice	79.75	0.125	0.0054	0.2206	0.2207
40 mph 330 deg with 1.50 in Radial Ice	88.05	0.152	0.0048	0.1941	0.1941
40 mph 330 deg with 1.50 in Radial Ice	99.75	0.191	0.0040	0.2130	0.2131
40 mph 330 deg with 1.50 in Radial Ice	108.05	0.220	0.0037	0.1968	0.1968
Seismic Normal M1	59.75	0.013	0.0011	0.0330	0.0330
Seismic Normal M1	65.13	0.016	0.0010	0.0277	0.0277
Seismic Normal M1	74.88	0.021	0.0011	0.0327	0.0327
Seismic Normal M1	79.75	0.024	0.0014	0.0440	0.0440
Seismic Normal M1	88.05	0.030	0.0012	0.0411	0.0411
Seismic Normal M1	99.75	0.038	0.0009	0.0478	0.0478
Seismic Normal M1	108.05	0.044	0.0008	0.0433	0.0433
Seismic 60 deg M1	59.75	0.012	0.0011	0.0363	0.0363
Seismic 60 deg M1	65.13	0.015	0.0009	0.0267	0.0268
Seismic 60 deg M1	74.88	0.020	0.0010	0.0316	0.0316
Seismic 60 deg M1	79.75	0.023	0.0014	0.0467	0.0467
Seismic 60 deg M1	88.05	0.029	0.0011	0.0405	0.0405
Seismic 60 deg M1	99.75	0.037	0.0008	0.0476	0.0476
Seismic 60 deg M1	108.05	0.043	0.0006	0.0422	0.0422
Seismic 90 deg M1	59.75	0.013	-0.0013	0.0358	0.0358
Seismic 90 deg M1	65.13	0.016	-0.0011	0.0281	0.0281
Seismic 90 deg M1	74.88	0.021	-0.0012	0.0331	0.0331
Seismic 90 deg M1	79.75	0.024	-0.0017	0.0468	0.0468
Seismic 90 deg M1	88.05	0.030	-0.0014	0.0415	0.0415
Seismic 90 deg M1	99.75	0.038	-0.0010	0.0481	0.0481
Seismic 90 deg M1	108.05	0.044	-0.0009	0.0434	0.0434
Seismic 120 deg M1	59.75	0.013	0.0011	0.0321	0.0321
Seismic 120 deg M1	65.13	0.015	0.0009	0.0270	0.0270
Seismic 120 deg M1	74.88	0.020	0.0010	0.0319	0.0319
Seismic 120 deg M1	79.75	0.023	0.0014	0.0428	0.0429
Seismic 120 deg M1	88.05	0.029	0.0011	0.0400	0.0400
Seismic 120 deg M1	99.75	0.037	0.0008	0.0464	0.0464
Seismic 120 deg M1	108.05	0.043	0.0006	0.0421	0.0421
Seismic 180 deg M1	59.75	0.013	0.0011	0.0372	0.0372
Seismic 180 deg M1	65.13	0.015	0.0010	0.0275	0.0275
Seismic 180 deg M1	74.88	0.021	0.0011	0.0325	0.0325
Seismic 180 deg M1	79.75	0.024	0.0015	0.0480	0.0480
Seismic 180 deg M1	88.05	0.029	0.0012	0.0416	0.0416
Seismic 180 deg M1	99.75	0.038	0.0009	0.0489	0.0489
Seismic 180 deg M1	108.05	0.044	0.0008	0.0434	0.0434
Seismic 210 deg M1	59.75	0.013	0.0006	0.0350	0.0350
Seismic 210 deg M1	65.13	0.015	0.0005	0.0273	0.0274
Seismic 210 deg M1	74.88	0.020	0.0006	0.0322	0.0322
Seismic 210 deg M1	79.75	0.023	0.0008	0.0455	0.0455
Seismic 210 deg M1	88.05	0.029	0.0006	0.0403	0.0404
Seismic 210 deg M1	99.75	0.037	0.0004	0.0468	0.0468
Seismic 210 deg M1	108.05	0.043	0.0004	0.0422	0.0422
Seismic 240 deg M1	59.75	0.013	0.0011	0.0321	0.0321
Seismic 240 deg M1	65.13	0.015	0.0009	0.0270	0.0270
Seismic 240 deg M1	74.88	0.020	0.0010	0.0319	0.0319
Seismic 240 deg M1	79.75	0.023	0.0014	0.0428	0.0429
Seismic 240 deg M1	88.05	0.029	0.0011	0.0400	0.0400
Seismic 240 deg M1	99.75	0.037	0.0008	0.0464	0.0464
Seismic 240 deg M1	108.05	0.043	0.0006	0.0421	0.0421
Seismic 300 deg M1	59.75	0.012	0.0011	0.0363	0.0363
Seismic 300 deg M1	65.13	0.015	0.0009	0.0267	0.0268
Seismic 300 deg M1	74.88	0.020	0.0010	0.0316	0.0316

Site Number: 413161

Code:

ANSI/TIA-222-H

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Site Name: Baldwinsville NY SQA, NY

Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

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Seismic 300 deg M1	79.75	0.023	0.0014	0.0467	0.0467
Seismic 300 deg M1	88.05	0.029	0.0011	0.0405	0.0405
Seismic 300 deg M1	99.75	0.037	0.0008	0.0476	0.0476
Seismic 300 deg M1	108.05	0.043	0.0006	0.0422	0.0422
Seismic 330 deg M1	59.75	0.013	0.0006	0.0350	0.0350
Seismic 330 deg M1	65.13	0.015	0.0005	0.0273	0.0274
Seismic 330 deg M1	74.88	0.020	0.0006	0.0322	0.0322
Seismic 330 deg M1	79.75	0.023	0.0008	0.0455	0.0455
Seismic 330 deg M1	88.05	0.029	0.0006	0.0403	0.0404
Seismic 330 deg M1	99.75	0.037	0.0004	0.0468	0.0468
Seismic 330 deg M1	108.05	0.043	0.0004	0.0422	0.0422
Seismic (Reduced DL) Normal M1	59.75	0.013	0.0011	0.0335	0.0335
Seismic (Reduced DL) Normal M1	65.13	0.016	0.0010	0.0276	0.0276
Seismic (Reduced DL) Normal M1	74.88	0.021	0.0011	0.0326	0.0326
Seismic (Reduced DL) Normal M1	79.75	0.024	0.0014	0.0435	0.0435
Seismic (Reduced DL) Normal M1	88.05	0.029	0.0012	0.0409	0.0409
Seismic (Reduced DL) Normal M1	99.75	0.038	0.0009	0.0478	0.0478
Seismic (Reduced DL) Normal M1	108.05	0.044	0.0008	0.0432	0.0432
Seismic (Reduced DL) 60 deg M1	59.75	0.012	0.0011	0.0356	0.0356
Seismic (Reduced DL) 60 deg M1	65.13	0.015	0.0009	0.0267	0.0267
Seismic (Reduced DL) 60 deg M1	74.88	0.020	0.0010	0.0316	0.0316
Seismic (Reduced DL) 60 deg M1	79.75	0.023	0.0014	0.0458	0.0458
Seismic (Reduced DL) 60 deg M1	88.05	0.029	0.0011	0.0401	0.0401
Seismic (Reduced DL) 60 deg M1	99.75	0.037	0.0008	0.0473	0.0473
Seismic (Reduced DL) 60 deg M1	108.05	0.043	0.0006	0.0420	0.0420
Seismic (Reduced DL) 90 deg M1	59.75	0.013	-0.0013	0.0352	0.0352
Seismic (Reduced DL) 90 deg M1	65.13	0.015	-0.0011	0.0280	0.0280
Seismic (Reduced DL) 90 deg M1	74.88	0.021	-0.0012	0.0330	0.0330
Seismic (Reduced DL) 90 deg M1	79.75	0.024	-0.0017	0.0460	0.0460
Seismic (Reduced DL) 90 deg M1	88.05	0.029	-0.0014	0.0411	0.0411
Seismic (Reduced DL) 90 deg M1	99.75	0.038	-0.0010	0.0478	0.0478
Seismic (Reduced DL) 90 deg M1	108.05	0.044	-0.0009	0.0432	0.0432
Seismic (Reduced DL) 120 deg M1	59.75	0.013	0.0011	0.0326	0.0326
Seismic (Reduced DL) 120 deg M1	65.13	0.015	0.0009	0.0269	0.0269
Seismic (Reduced DL) 120 deg M1	74.88	0.020	0.0010	0.0317	0.0318
Seismic (Reduced DL) 120 deg M1	79.75	0.023	0.0014	0.0423	0.0423
Seismic (Reduced DL) 120 deg M1	88.05	0.029	0.0011	0.0398	0.0398
Seismic (Reduced DL) 120 deg M1	99.75	0.037	0.0008	0.0465	0.0465
Seismic (Reduced DL) 120 deg M1	108.05	0.043	0.0006	0.0420	0.0420
Seismic (Reduced DL) 180 deg M1	59.75	0.013	0.0011	0.0365	0.0365
Seismic (Reduced DL) 180 deg M1	65.13	0.015	0.0009	0.0274	0.0274
Seismic (Reduced DL) 180 deg M1	74.88	0.021	0.0011	0.0324	0.0325
Seismic (Reduced DL) 180 deg M1	79.75	0.024	0.0014	0.0471	0.0471
Seismic (Reduced DL) 180 deg M1	88.05	0.029	0.0012	0.0412	0.0412
Seismic (Reduced DL) 180 deg M1	99.75	0.038	0.0009	0.0486	0.0486
Seismic (Reduced DL) 180 deg M1	108.05	0.044	0.0008	0.0432	0.0432
Seismic (Reduced DL) 210 deg M1	59.75	0.012	0.0006	0.0343	0.0343
Seismic (Reduced DL) 210 deg M1	65.13	0.015	0.0005	0.0273	0.0273
Seismic (Reduced DL) 210 deg M1	74.88	0.020	0.0006	0.0321	0.0321
Seismic (Reduced DL) 210 deg M1	79.75	0.023	0.0008	0.0447	0.0448
Seismic (Reduced DL) 210 deg M1	88.05	0.029	0.0006	0.0400	0.0400
Seismic (Reduced DL) 210 deg M1	99.75	0.037	0.0004	0.0465	0.0465
Seismic (Reduced DL) 210 deg M1	108.05	0.043	0.0004	0.0420	0.0420
Seismic (Reduced DL) 240 deg M1	59.75	0.013	0.0011	0.0326	0.0326
Seismic (Reduced DL) 240 deg M1	65.13	0.015	0.0009	0.0269	0.0269
Seismic (Reduced DL) 240 deg M1	74.88	0.020	0.0010	0.0317	0.0318
Seismic (Reduced DL) 240 deg M1	79.75	0.023	0.0014	0.0423	0.0423
Seismic (Reduced DL) 240 deg M1	88.05	0.029	0.0011	0.0398	0.0398
Seismic (Reduced DL) 240 deg M1	99.75	0.037	0.0008	0.0465	0.0465
Seismic (Reduced DL) 240 deg M1	108.05	0.043	0.0006	0.0420	0.0420
Seismic (Reduced DL) 300 deg M1	59.75	0.012	0.0011	0.0356	0.0356
Seismic (Reduced DL) 300 deg M1	65.13	0.015	0.0009	0.0267	0.0267

Site Number: 413161

Code:

ANSI/TIA-222-H

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Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

Customer: T-MOBILE

Seismic (Reduced DL) 300 deg M1	74.88	0.020	0.0010	0.0316	0.0316
Seismic (Reduced DL) 300 deg M1	79.75	0.023	0.0014	0.0458	0.0458
Seismic (Reduced DL) 300 deg M1	88.05	0.029	0.0011	0.0401	0.0401
Seismic (Reduced DL) 300 deg M1	99.75	0.037	0.0008	0.0473	0.0473
Seismic (Reduced DL) 300 deg M1	108.05	0.043	0.0006	0.0420	0.0420
Seismic (Reduced DL) 330 deg M1	59.75	0.012	0.0006	0.0343	0.0343
Seismic (Reduced DL) 330 deg M1	65.13	0.015	0.0005	0.0273	0.0273
Seismic (Reduced DL) 330 deg M1	74.88	0.020	0.0006	0.0321	0.0321
Seismic (Reduced DL) 330 deg M1	79.75	0.023	0.0008	0.0447	0.0448
Seismic (Reduced DL) 330 deg M1	88.05	0.029	0.0006	0.0400	0.0400
Seismic (Reduced DL) 330 deg M1	99.75	0.037	0.0004	0.0465	0.0465
Seismic (Reduced DL) 330 deg M1	108.05	0.043	0.0004	0.0420	0.0420
Serviceability - 60 mph Wind Normal	59.75	0.087	0.0086	0.2368	0.2368
Serviceability - 60 mph Wind Normal	65.13	0.105	0.0075	0.1760	0.1761
Serviceability - 60 mph Wind Normal	74.88	0.139	0.0088	0.2063	0.2065
Serviceability - 60 mph Wind Normal	79.75	0.158	0.0111	0.2799	0.2799
Serviceability - 60 mph Wind Normal	88.05	0.192	0.0100	0.2476	0.2478
Serviceability - 60 mph Wind Normal	99.75	0.244	0.0084	0.2766	0.2766
Serviceability - 60 mph Wind Normal	108.05	0.280	0.0078	0.2524	0.2525
Serviceability - 60 mph Wind 60 deg	59.75	0.084	0.0086	0.2304	0.2304
Serviceability - 60 mph Wind 60 deg	65.13	0.101	0.0074	0.1698	0.1700
Serviceability - 60 mph Wind 60 deg	74.88	0.134	0.0087	0.1993	0.1995
Serviceability - 60 mph Wind 60 deg	79.75	0.152	0.0111	0.2741	0.2741
Serviceability - 60 mph Wind 60 deg	88.05	0.186	0.0099	0.2400	0.2400
Serviceability - 60 mph Wind 60 deg	99.75	0.235	0.0084	0.2687	0.2687
Serviceability - 60 mph Wind 60 deg	108.05	0.271	0.0077	0.2450	0.2450
Serviceability - 60 mph Wind 90 deg	59.75	0.085	-0.0098	0.2239	0.2239
Serviceability - 60 mph Wind 90 deg	65.13	0.102	-0.0085	0.1748	0.1750
Serviceability - 60 mph Wind 90 deg	74.88	0.135	-0.0100	0.2038	0.2041
Serviceability - 60 mph Wind 90 deg	79.75	0.153	-0.0127	0.2704	0.2704
Serviceability - 60 mph Wind 90 deg	88.05	0.187	-0.0114	0.2419	0.2419
Serviceability - 60 mph Wind 90 deg	99.75	0.237	-0.0096	0.2671	0.2671
Serviceability - 60 mph Wind 90 deg	108.05	0.273	-0.0089	0.2468	0.2468
Serviceability - 60 mph Wind 120 deg	59.75	0.087	0.0088	0.2369	0.2369
Serviceability - 60 mph Wind 120 deg	65.13	0.105	0.0076	0.1760	0.1761
Serviceability - 60 mph Wind 120 deg	74.88	0.139	0.0090	0.2063	0.2065
Serviceability - 60 mph Wind 120 deg	79.75	0.158	0.0113	0.2799	0.2799
Serviceability - 60 mph Wind 120 deg	88.05	0.192	0.0101	0.2476	0.2478
Serviceability - 60 mph Wind 120 deg	99.75	0.244	0.0085	0.2766	0.2766
Serviceability - 60 mph Wind 120 deg	108.05	0.280	0.0079	0.2524	0.2525
Serviceability - 60 mph Wind 180 deg	59.75	0.084	0.0084	0.2304	0.2304
Serviceability - 60 mph Wind 180 deg	65.13	0.101	0.0072	0.1698	0.1700
Serviceability - 60 mph Wind 180 deg	74.88	0.134	0.0085	0.1993	0.1995
Serviceability - 60 mph Wind 180 deg	79.75	0.152	0.0110	0.2741	0.2741
Serviceability - 60 mph Wind 180 deg	88.05	0.186	0.0098	0.2400	0.2400
Serviceability - 60 mph Wind 180 deg	99.75	0.235	0.0083	0.2687	0.2687
Serviceability - 60 mph Wind 180 deg	108.05	0.271	0.0076	0.2450	0.2450
Serviceability - 60 mph Wind 210 deg	59.75	0.085	0.0048	0.2238	0.2239
Serviceability - 60 mph Wind 210 deg	65.13	0.102	0.0042	0.1748	0.1750
Serviceability - 60 mph Wind 210 deg	74.88	0.135	0.0050	0.2038	0.2041
Serviceability - 60 mph Wind 210 deg	79.75	0.153	0.0063	0.2704	0.2704
Serviceability - 60 mph Wind 210 deg	88.05	0.187	0.0056	0.2419	0.2419
Serviceability - 60 mph Wind 210 deg	99.75	0.237	0.0048	0.2671	0.2671
Serviceability - 60 mph Wind 210 deg	108.05	0.273	0.0044	0.2468	0.2468
Serviceability - 60 mph Wind 240 deg	59.75	0.087	0.0086	0.2369	0.2369
Serviceability - 60 mph Wind 240 deg	65.13	0.105	0.0075	0.1760	0.1761
Serviceability - 60 mph Wind 240 deg	74.88	0.139	0.0088	0.2063	0.2065
Serviceability - 60 mph Wind 240 deg	79.75	0.158	0.0112	0.2799	0.2799
Serviceability - 60 mph Wind 240 deg	88.05	0.192	0.0100	0.2476	0.2478
Serviceability - 60 mph Wind 240 deg	99.75	0.244	0.0085	0.2766	0.2766
Serviceability - 60 mph Wind 240 deg	108.05	0.280	0.0078	0.2524	0.2525
Serviceability - 60 mph Wind 300 deg	59.75	0.084	0.0085	0.2304	0.2304

Site Number: 413161

Code:

ANSI/TIA-222-H

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Engineering Number: 13544814_C3_04

3/25/2021 1:26:26 PM

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Serviceability - 60 mph Wind 300 deg	65.13	0.101	0.0073	0.1698	0.1700
Serviceability - 60 mph Wind 300 deg	74.88	0.134	0.0086	0.1993	0.1995
Serviceability - 60 mph Wind 300 deg	79.75	0.152	0.0110	0.2741	0.2741
Serviceability - 60 mph Wind 300 deg	88.05	0.186	0.0098	0.2400	0.2400
Serviceability - 60 mph Wind 300 deg	99.75	0.235	0.0083	0.2687	0.2687
Serviceability - 60 mph Wind 300 deg	108.05	0.271	0.0077	0.2450	0.2450
Serviceability - 60 mph Wind 330 deg	59.75	0.085	0.0050	0.2239	0.2239
Serviceability - 60 mph Wind 330 deg	65.13	0.102	0.0042	0.1747	0.1750
Serviceability - 60 mph Wind 330 deg	74.88	0.135	0.0050	0.2038	0.2041
Serviceability - 60 mph Wind 330 deg	79.75	0.153	0.0064	0.2704	0.2704
Serviceability - 60 mph Wind 330 deg	88.05	0.187	0.0057	0.2419	0.2419
Serviceability - 60 mph Wind 330 deg	99.75	0.237	0.0049	0.2671	0.2671
Serviceability - 60 mph Wind 330 deg	108.05	0.273	0.0045	0.2468	0.2468

Maximum Reactions Summary

Anchor Group	Vertical (kip)		UpLift	Shear	Horizontal (kip)		Moment (kip-ft)	
	DL+WL	DL+WL+IL			DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	18.39	59.38	107.09	11.45	18.70	4.60	1281.41	311.06

Pier Foundation Analysis (ANSI/TIA-222-H)

Foundation Analysis Parameters

Pier Diameter	D	3.00	ft
Pier Embedment	$L-h$	22.8	ft
Pier Height above Ground	H	0.50	ft
Water Table Depth [BGL]	GW	8	ft
Pullout Angle	Θ	30	°
Unit Weight of Concrete		150	pcf
Uplift Skin Friction Factor		0.750	

Reactions

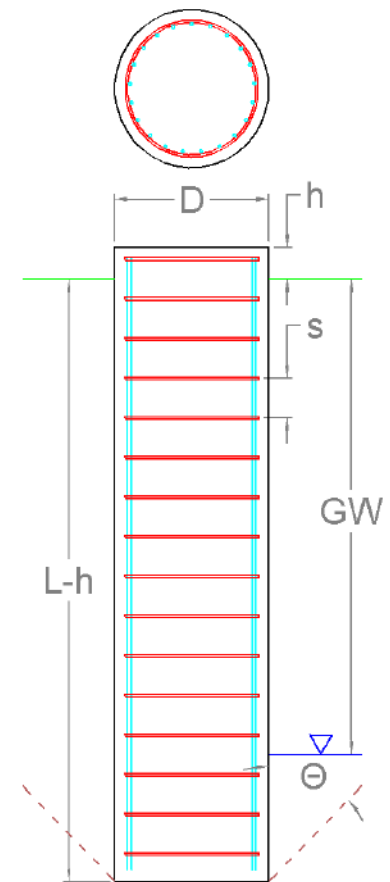
Moment, M_u	0.0	k-ft
Shear, V_u	11.5	k
Axial, P_u	107.1	k
Uplift, T_u	92.3	k

Soil Properties

Layer Depth (ft)		Unit Weight	Cohesion	Friction Angle	Ultimate Skin Friction	Ultimate Bearing Pressure
TOP	BTM	pcf	psf	°	psf	psf
0.0	5.0	105	0	0	0	0
5.0	6.0	105	0	29	675	0
6.0	8.0	110	0	30	835	0
8.0	10.0	110	0	31	970	0
10.0	15.0	125	0	37	1,115	0
15.0	20.0	130	4,000	0	2,045	0
20.0	25.0	130	0	40	1,505	0
25.0	30.0	130	0	40	1,650	38,910

Soil Strength Capacities

Volume of Concrete	164.3	ft ³
Weight of Concrete [Buoyancy Considered]	18.2	k
Average Soil Unit Weight	78.3	pcf
Skin Friction Resistance	228.3	k
Compressive Bearing Resistance	0.0	k
Pullout Weight [Minus Concrete Weight]	432.3	k
Uplift Force, T_u	76.0	k
Nominal Uplift Capacity, $\phi_s T_n$	128.4	k
$T_u / \phi_s T_n$	59.2%	
Compressive Force, P_u	113.1	k
Nominal Compressive Capacity, $\phi_s P_n$	171.2	k
$P_u / \phi_s P_n$	66.1%	
Total Lateral Resistance	914.5	k
Inflection Point [BGL]	17.0	ft
Moment at Inflection Point, M_D	200.7	k-ft
Nominal Moment Capacity, $\phi_s M_n$	2,351.0	k-ft
$M_D / \phi_s M_n$	8.5%	



Pier Strength Capacities		
Concrete Compressive Strength, f'_c	3,000	psi
Rebar Size #	6	
Rebar Area (Single)	0.44	in ²
Rebar Quantity	12	
Rebar Yield Strength, F_y	60	ksi
Vertical Rebar Clear Cover	3	in
Tie Rebar Size #	4	
Tie Rebar Area (Single)	0.20	in ²
Tie Rebar Spacing	12.0	in
Tie Rebar Yield Strength, F_y	60	ksi
Rebar Cage Diameter	28.25	in
Strength Bending/Tension Reduction Factor, ϕ_B	0.90	
Strength Shear Reduction Factor, ϕ_V	0.75	
Strength Compression Reduction Factor, ϕ_C	0.65	
Steel Elastic Modulus	29,000	ksi
Design Moment, M_u	70.9	k-ft
Moment Capacity, $\phi_B M_n$	329.0	k-ft
$M_u / \phi_B M_n$	21.5%	
Design Shear, V_u	11.5	k
Shear Capacity, $\phi_V V_n$	111.6	k
$V_u / \phi_V V_n$	10.3%	
Design Tension, T_u	92.3	k
Tension Capacity, $\phi_T T_n$	285.1	k
$T_u / \phi_T T_n$	32.4%	
Design Compression, P_u	113.1	k
Compression Capacity, $\phi_P P_n$	1,507.4	k
$P_u / \phi_P P_n$	7.5%	
Bending Reinforcement Ratio	0.005	
$M_u / \phi_B M_n + T_u / \phi_T T_n$	53.9%	

