



Northeast Site Solutions
Victoria Masse
420 Main Street #2, Sturbridge, MA 01566
860-306-2326
victoria@northeastsitesolutions.com

May 25, 2021

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Exempt Modification Application
103 East Street AKA- 0 Clark Street, Naugatuck CT 06770
Latitude: 41.51780
Longitude: -73.01890
T-Mobile Site#: CTNH305B_Anchor_L600

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antenna at the 236-foot level of the existing 276-foot guyed tower at 103 East Street AKA- 0 Clark Street, Naugatuck CT 06770. The tower is owned by WTIC/WCCT-TV. The property is owned by Channel 20 Inc c/o WTIC TV. T-Mobile now intends to replace three (3) of its existing antenna with three (3) new 600/700/1900 MHz antenna. T-Mobile also intends to add three (3) new 2500 MHz 5G capable antenna. The new antennas would be installed at the 236-foot level of the tower. T-Mobile also intends to make the following modifications.

T-Mobile Planned Modifications:

Remove:
(4) RFS ATMA3P4-1A20
(2) RFS ATMA4P4-1A20
(12) Coax lines

Remove and Replace:

(3) Andrew DBXNH-6565A A2M (Remove) - (3) RFS-APXVAARR24_43-U-NA20 600/700/1900 MHz Antenna (Replace)
(3) RRUS11 B12 (Remove) - (3) Ericsson Radio 4449 B71+B85 (Replace)
(3) T-Arm Mounts (Remove) - (3) Sector Frames -SitePro1 VFA12-SD-S (Replace)

Install New:

(3) Ericsson AIR6449 B41 - 2500 MHz 5G Capable Antenna
(3) Radio 4415 B25
(3) Hybrid lines



Existing to Remain:
(3) Ericsson Air32 KRD901146 1900/2100 MHz Antenna
(3) Hybrid lines

Ground:
Extend existing concrete pad by 8'x7' (56 S.F.)
(1) BBU B160
(1) 6160 Radio Cabinet

This facility was approved by the Borough of Naugatuck. Approval was granted on July 17, 1991 to erect a transmission and communication tower with an overall height of 281-feet with supporting anchors and guy wires. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-SOj-73, a copy of this letter is being sent to Mayor N. Warren "Pete" Hess III, Elected Official for the Town of Naugatuck, as well as the property owner and the tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site. ·
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Victoria Masse
Mobile: 860-306-2326
Fax: 413-521-0558
Office: 420 Main Street, Unit 2, Sturbridge MA 01566
Email: victoria@norceansitesolutions.com



Turnkey Wireless Development

Attachments

cc: N. Warren "Pete" Hess III- Mayor - as elected official
(email only at NWhess@naugatuck-ct.gov)

Channel 20 Inc c/o WTIC TV - as tower owner & property owner
(email only at NCialfi@fox61.com)

Exhibit A



BOROUGH OF NAUGATUCK

INLAND WETLANDS COMMISSION
PLANNING COMMISSION
ZONING BOARD OF APPEALS
ZONING COMMISSION

LAND USE OFFICE
213 CHURCH STREET
NAUGATUCK, CT 06770
203/729-4571

I HEREBY CERTIFY THAT Channel 20, Inc. owner of record
(owners address) 414 Meadow Street, Waterbury CT 06702, filed an
application pursuant to Section 32 of the Zoning Regulations of
the Borough of Naugatuck for a SPECIAL PERMIT for property at
described in the attached Schedule A, which was APPROVED
AT THE MEETING OF THE ZONING COMMISSION HELD ON:

Wednesday July 17, 1991
DAY DATE

FOR THE PURPOSE OF: Erecting and operating a transmission and communication
tower with an overall height of 281 feet, with supporting anchors and
guy wires.

SIGNED: Robert Wagner, (C/fh) Michael Monile
Zoning Commission Chairman Zoning Enforcement Officer

This action shall be filed with the Town Clerk on the Land
Records of the Town as required by Section 8-3c(b) of the State
Statutes.

SCHEDULE A

All that certain piece or parcel of land situated on the southerly side of East Side Boulevard in the City of Waterbury and in the Borough of Naugatuck, County of New Haven and State of Connecticut, bounded and described as follows:

Beginning at a point in the southerly line of East Side Boulevard in the City of Waterbury, Connecticut at the north-easterly corner of a parcel designated as a 50' R.O.W. on a map entitled "Subdivision of Peach Orchard Estates, Section Four, Waterbury, Conn., August, 1972, Scale: 1"=50'", recorded in Map Drawer IV, Page 386 of Waterbury Land Records, said 50' R.O.W. being located easterly of Lot #107 as shown on said Map, thence running easterly in the southerly line of East Side Boulevard and in a line curving to the left having a radius of 110.26 feet, a distance of 50.00 feet to land now or formerly of L & M Builders, Incorporated, thence running in line of land now or formerly of L & M Builder, Incorporated S 2°43'42W and crossing the Waterbury-Naugatuck Town Line from Waterbury 15.17feet into Naugatuck S 1° 19' 46" E, 125.00 feet, thence continuing in line of land now or formerly of L & M Builders, Incorporated S 87° 32' 18" E, 100.22 feet to The Naugatuck-Prospect Town Line and land now or formerly of George and Jennie Nardozza, thence running in line of land now or formerly of George and Jennie Nardozza, land now or formerly of Mary F. Raynor, land now or formerly of Grace M. Perun, land now or formerly of Thomas Bros., Inc., and land now or formerly of Philip J. Langdo S 1° 19' 46" E, 821.13 feet to land now or formerly of Estate of Stanley J. Lucas, the last described line being the Naugatuck-Prospect Town Line, thence running in line of land now or formerly of Estate of Stanley J. Lucas N 73° 32' 16" W, 181.07 feet, N 70° 15' 58" W, 117.30 feet, and N 69° 28' 34" W, 130.68 feet, N 57° 19' 46" W, 94.73 feet, N 71° 30' 34" W, 73.64 feet, and N 80° 52' 16" W, 45.91 feet to a point, thence running in line of remaining land of Francis M. McWeeney, Jr., N 1° 19' 46" W, 200.00 feet, N 88° 40' 14" E, 266.87 feet, N 1° 19' 46" W, 516.79 feet to Lot #107 as shown on a map entitled "Subdivision of Peach Orchard Estates Section Four", thence running in line of said lot #107 and a 50' wide Right of Way S 97° 32' 18" E, 165.00 feet, the last described line being the Naugatuck-Waterbury Town Line, thence running in the easterly line of a 50' wide Right of Way N 30° 36' 32" E, 31.53 feet to East Side Boulevard and the point of beginning. Bounded:

Northerly - by Lot #107 "Peach Orchard Estates Section Four", a 50' wide Right of Way, East Side Boulevard, and land now or formerly of L & M Builders, Incorporated;

Easterly - by land now or formerly of George & Jennie Nardozza, land now or formerly of Mary F. Raynor, land now or formerly of Grace M. Perun, land now or formerly of Thomas Bros. Inc., and land now or formerly of Philip J. Langdo;

Southerly - by land now or formerly of Estate of Stanley J. Lucas;

Westerly - by land now or formerly of Francis M. McWeeney, Jr.

Being a portion of the premises conveyed to Francis M. McWeeney, Jr., by L & M Builders, Incorporated a/k/a L & M Builders, Inc. by Quit-Claim Deed dated and recorded December 11, 1973 in Volume 1122, Page 152 of the Waterbury Land Records and in Volume 180, Page 27 of the Naugatuck Land Records.

SCHEDULE A
(continued)

Together with a right of way over area designated at 50' R.O.W. on map of "Subdivision of Peach Orchard Estates Section Four, Waterbury, Conn., August, 1972, Scale: 1"=50'", recorded in Drawer IV, Page 386, Waterbury Land Records, said right of way being located easterly of Lot #107 as shown on said Map and running southerly from East Side Boulevard to the Waterbury-Naugatuck Town Line as described in Volume 1121, Pages 011 and 012 of Waterbury Land Records.

Together with an easement and right of way through, over, under and across (a) the remaining land owned by Francis M. McWeeney, Jr. located northerly of the Waterbury town line and lying between said town line and the southerly line of East Side Boulevard, as shown on a map entitled "Map of Land of Thomas Bros., Inc. Prospect, Conn. The A. J. Patton Co., Surveyor, Waterbury, Conn. June 15, 1979 Scale: 1" = 40' Additions Oct. 21, 1980" (the "Map"), and (b) the remaining land of Francis M. McWeeney, Jr. located in the Town of Naugatuck, bounded northerly by the Waterbury town line, westerly and southerly by the Premises and easterly by land N/F of Grace M. Franco, as shown on said Map, to use said lands for all purposes customarily made of a public highway, including, without limiting the generality of the foregoing, the right to pass and repass on foot or in vehicles, to enter upon, travel and transport materials over and upon said lands and, if necessary or convenient, in connection therewith, the right to grade, excavate, fill or otherwise improve said lands, said easement and right of way to terminate upon the completion of the construction of a television tower and station upon the Premises.

Together with a permanent easement and right of way sufficient in width to satisfy town road specifications for the zone district in which the remaining land of Francis M. McWeeney, Jr. (as defined herein and hereinafter referred to as the "Remaining Property") is located, said easement to begin at a point in the westerly boundary of the Premises and running therefrom generally westerly through, over, under and across the Remaining Property to any future public highway constructed on or which adjoins or benefits the Remaining Property, to use said land for all purposes customarily made of a public highway, including without limiting the generality of the foregoing, the right to lay, install and maintain sewer, water and storm water lines therein, the right to pass and repass on foot or in vehicles, and, if necessary or convenient, in connection therewith, the right to grade, excavate, fill or otherwise improve said right of way. Said easement and right of way shall be located in such area as Francis M. McWeeney, Jr. or his successor shall determine; provided, however, that said easement and right shall be subject to the approval of the Naugatuck Economic Development Commission.



BOROUGH OF NAUGATUCK

ZONING PERMIT

PERMIT NO.

DATE June 18 1991

PERMISSION TO: (BUILD) (MAKE ALTERATIONS) (BUILD ON ADDITION)

A TRANSMISSION TOWER transmission tower 281 feet high

DESCRIPTION OF PREMISES: ZONING PDD-8/ICC VALUE \$70,000

Northeast corner of Naugatuck, at rear of William C. Rado Sr. Drive
and Industrial Park, bordering Town of Prospect and City of Waterbury;

Tax Map 354 C, Block 20E138, Lot A.

Fee 35.00

ZONING

PLANNING

WETLAND--FLOOD PLAIN

ZONING BOARD OF APPEALS

HEALTH-LIQUID WASTE

SEPTIC TANK

Granted, DATE

ZONING ENFORCEMENT OFFICER

APPLICANT: I hereby certify that the information contained herein is accurate.

A handwritten signature in black ink, appearing to read "Robert H. Hall".

Signature of Applicant

Robert H. Hall, Attorney for Channel 20, Inc.

Name of Applicant (Print)

43 Main St., P.O. Box 395, Newtown, CT 06470

Address

426-8177

Telephone No.

THIS APPROVAL IS SUBJECT TO COMPLIANCE (PRIOR TO OCCUPANCY) WITH THE PROVISIONS OF THE ZONING REGULATIONS AND THE SUBDIVISION REGULATIONS OF THE BOROUGH OF NAUGATUCK (WHERE APPLICABLE) AND AS AUTHORIZED UNDER SECTION 8 OF THE CONNECTICUT GENERAL STATUTES, AS AMENDED. THIS PERMIT IS BASED UPON THE PLOT PLAN SUBMITTED. FALSIFICATION BY MISREPRESENTATION OR OMISSION SHALL CONSTITUTE A VIOLATION OF THE BOROUGH ZONING REGULATIONS.

Exhibit B



Town of Naugatuck, CT

Property Listing Report

Map Block Lot

K-20E138-A

Building # 1

PID 1697

Account

011-3060

Property Information

| | | | | | |
|-------------------|-------------------------------------|------------------|--------------|--|--|
| Property Location | 0 CLARK HILL RD | | | | |
| Owner | TEGNA BROADCAST HOLDINGS LLC | | | | |
| Co-Owner | | | | | |
| Mailing Address | 8350 BROAD STREET | | | | |
| | TYSON | VA | 22102 | | |
| Land Use | 4330 | RAD/TV TR | | | |
| Land Class | I | | | | |
| Zoning Code | R15 | | | | |
| Census Tract | | | | | |

| | |
|------------------|---------------|
| Neighborhood | D |
| Acreage | 7.9 |
| Utilities | |
| Lot Setting/Desc | |
| Book / Page | 1035/1 |
| Additional Info | |

Primary Construction Details

| | |
|-------------------|------------------------|
| Year Built | 1980 |
| Building Desc. | RAD/TV TR |
| Building Style | Transmit Bldg |
| Building Grade | C |
| Stories | 1 |
| Occupancy | 1.00 |
| Exterior Walls | Pre-finish Metl |
| Exterior Walls 2 | Aluminum Sidng |
| Roof Style | Gable |
| Roof Cover | Metal/Tin |
| Interior Walls | Drywall |
| Interior Walls 2 | NA |
| Interior Floors 1 | Concrete |
| Interior Floors 2 | |

| | |
|------------------|-----------------------|
| Heating Fuel | Electric |
| Heating Type | Forced Hot Air |
| AC Type | Central |
| Bedrooms | 0 |
| Full Bathrooms | 0 |
| Half Bathrooms | 0 |
| Extra Fixtures | 0 |
| Total Rooms | 0 |
| Bath Style | NA |
| Kitchen Style | NA |
| Fin Bsmt Area | |
| Fin Bsmt Quality | |
| Bsmt Gar | 0 |
| Fireplaces | 0 |

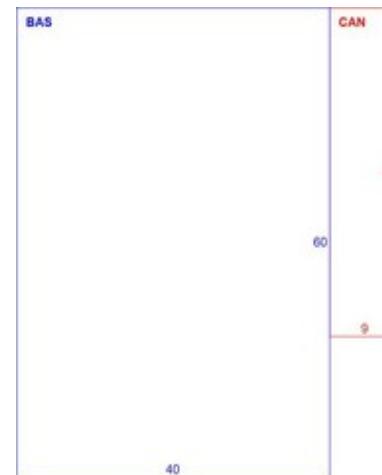
(*Industrial / Commercial Details)

| | |
|--------------------|-------------------------|
| Building Use | Ind/Comm |
| Building Condition | F |
| Sprinkler % | NA |
| Heat / AC | HEAT/AC SPLIT |
| Frame Type | STEEL |
| Baths / Plumbing | AVERAGE |
| Ceiling / Wall | CEIL & WALLS |
| Rooms / Prtns | AVERAGE |
| Wall Height | 12.00 |
| First Floor Use | NA |
| Foundation | NA |

Photo



Sketch





Town of Naugatuck, CT

Property Listing Report

Map Block Lot

K-20E138-A

Building # 1

PID 1697

Account

011-3060

| Valuation Summary | | (Assessed value = 70% of Appraised Value) | | | |
|-------------------|-----------|---|--------------|--------------------|---------------------|
| Item | Appraised | Assessed | Subarea Type | Gross Area (sq ft) | Living Area (sq ft) |
| Buildings | 258640 | 181050 | First Floor | 2400 | 2400 |
| Extras | 0 | 0 | Canopy | 378 | 0 |
| Improvements | | | | | |
| Outbuildings | 393320 | 275330 | | | |
| Land | 219000 | 153300 | | | |
| Total | 870960 | 609680 | | | |

Outbuilding and Extra Features

| Type | Description |
|------------|-------------|
| CELL BLDG | 140 S.F. |
| CELL BLDG | 170 S.F. |
| CELL BLDG | 360 S.F. |
| Fence 6 ft | 500 L.F. |
| TV TOWER | 280 HEIGHT |
| TV TOWER | 980 HEIGHT |
| CELL BLDG | 264 S.F. |
| | |
| | |
| | |

Sales History

| Owner of Record | Book/ Page | Sale Date | Sale Price |
|----------------------------------|------------|------------|------------|
| TRIBUNE BROADCASTING COMPANY LLC | 1034/883 | 2019-09-30 | 0 |
| CT-WTIC LLC | 1034/896 | 2019-09-30 | 10 |
| TEGNA BROADCAST HOLDINGS LLC | 1035/1 | 2019-09-30 | 611632 |
| CHANNEL 20 INC C/O WTIC TV | 0328/0466 | 1989-03-03 | 1800000 |

Borough of Naugatuck, Connecticut - Assessment Parcel Map
Parcel Account Number: 011-3060
Address: 0 CLARK HILL RD



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

Map Produced March 2019



0 25 50 75 100
Feet

Exhibit C

WIRELESS FACILITY UPGRADES BY



T-MOBILE NORTHEAST LLC

PROJECT: ANCHOR

SITE NUMBER: CTNH305B

SITE NAME: NH305/CHANNEL 20_ET

SITE ADDRESS: 103 EAST SIDE BOULEVARD

NAUGATUCK, CT 06770

(RF CONFIGURATION: 67D5994DB_2XAIR+1QP+1OP)

STRUCTURAL NOTES:

PRIOR TO INSTALLATION OF THE PROPOSED EQUIPMENT CONTRACTOR SHOULD REVIEW THE MOUNT STRUCTURAL ANALYSIS REPORT DATED 08/01/2019 AND TOWER STRUCTURAL ANALYSIS REPORT DATED 4/14/2021 BOTH PREPARED BY FDH INFRASTRUCTURE SERVICES. AND ADHERE TO THE REPORT FULLY AND ALL THE RECOMMENDATIONS THEREIN, INCLUDING BUT NOT LIMITED TO ANTENNA PLACEMENT, COAX ROUTING, STRUCTURAL IMPROVEMENTS, ETC.

PROJECT NOTES:

1. THIS IS AN UNMANNED TELECOMMUNICATION FACILITY AND NOT FOR HUMAN HABITATION: HANDICAPPED ACCESS IS NOT REQUIRED. POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED. NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
2. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACES THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
3. DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES, ORDINANCES AND SPECIFICATIONS.

CODE COMPLIANCE:

ALL WORK SHALL COMPLY WITH THE CURRENT NATIONAL AND CONNECTICUT STATE BUILDING AND LIFE SAFETY CODES, SUPPLEMENTS AND AMENDMENTS INCLUDING BUT NOT LIMITED TO THE LATEST EDITION OF:

CONNECTICUT STATE BUILDING CODE (CSBC).

ANSI/TIA-222-G STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

NATIONAL ELECTRICAL CODE (NEC) FOR POWER AND GROUNDING REQUIREMENTS.

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

NFPA - NATIONAL FIRE PROTECTION ASSOCIATION.

APPROVALS:

FSA CM DATE

RF ENGINEER DATE

FOPS DATE

T-MOBILE ENGINEERING AND DEVELOPMENT DATE

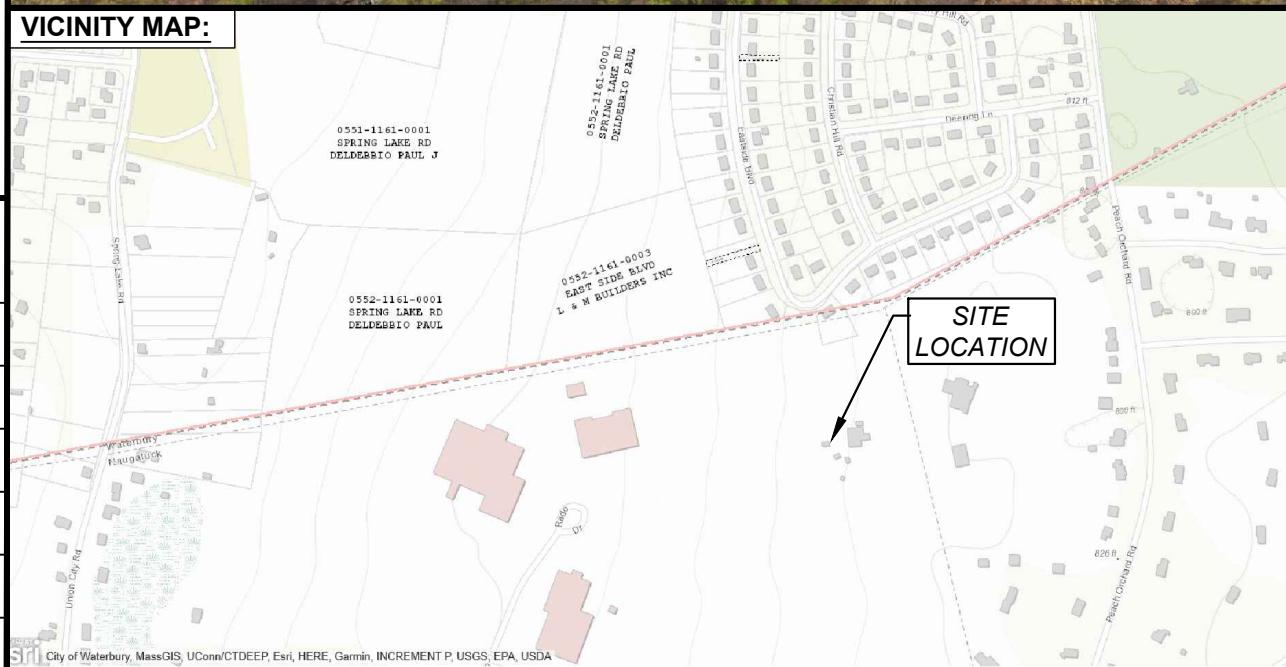
DATE

DATE

SITE IMAGE:



VICINITY MAP:



PROJECT SCOPE:

UPGRADE OF EXISTING WIRELESS FACILITY AS FOLLOWS:

CABINETS: UPGRADE EXISTING RBS 6102 CABINET INTERNALLY, ADD (1) 6160 AND (1) B160 CABINETS ON EXPANDED CONCRETE PAD.

ANTENNA MOUNTS: REPLACE EXISTING ANTENNA T-ARM MOUNTS WITH NEW SECTOR MOUNTS.

ANTENNAS: REMOVE ALL (6) EXISTING ANTENNAS AND ADD (9) NEW ANTENNAS TO THE NEW SECTOR MOUNT. REMOVE ALL (3) EXISTING TMAS, DIPLEXERS AND REMOTE RADIO UNITS. ADD (6) REMOTE RADIO UNITS AT ANTENNAS.

CABLES: REMOVE ALL (12) EXISTING COAXIAL LINES, REMOVE ANY 9X18 HCS LINES, ADD (3) 6X12 HCS FOR FINAL CONFIGURATION OF (6) 6X12 HCS CABLES.

PROJECT INFORMATION:

ADDRESS: 103 EAST SIDE BOULEVARD NAUGATUCK, CT 06770

STRUCTURE TYPE: GUYED TOWER

COORDINATES: 41°31'04.69" N 73°01'06.43" W

PARCEL ID: MAP 4, BLOCK 20E138, LOT A

ZONING DISTRICT: R-15

PROJECT TEAM:

APPLICANT: T-MOBILE NORTHEAST, LLC.
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

LANDLORD: CHANNEL 20 INC C/O WTIC-TV
1 CORPORATE CENTER
HARTFORD, CT 06103

PROJECT MANAGER: NORTHEAST SITE SOLUTIONS
420 MAIN STREET, BLDG 4
STURBRIDGE, MA 01566
SHELDON FREINCLE
SHELDON@NORTHEASTSITESOLUTIONS.COM
201-776-8521

CONSULTANTS: FORESITE LLC
462 WALNUT ST
NEWTON, MA 02460
SAEED MOSSAVAT
SMOSSAVAT@FORESITELLC.COM
617-212-3123

SHEET INDEX:

| | |
|------|---|
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| N-1: | GENERAL NOTES |
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| A-4: | ELEVATION AND ANTENNA PLANS AND DETAILS |
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APPLICANT:

T-Mobile

T-MOBILE NORTHEAST LLC

35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

PROJECT MANAGER



CONSULTANT:

FORESITE LLC

Architects . Engineers . Surveyors

462 WALNUT STREET
NEWTON, MA 02460
617-212-3123



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DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

| REV | DESCRIPTION | DATE |
|-----|--------------------------|----------|
| A | PRELIMINARY | 04/26/21 |
| 0 | FINAL ISSUED | 04/26/21 |
| 1 | ANTENNA MODEL CORRECTION | 05/03/21 |
| | | |
| | | |
| | | |
| | | |

SITE NUMBER: CTNH305B
SITE NAME: NH305/CHANNEL 20_ET
SITE ADDRESS: 103 EAST SIDE BOULEVARD NAUGATUCK, CT 06770

SHEET TITLE:

T-1: TITLE SHEET

GENERAL NOTES:

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAS MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE CLIENT'S REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK.
4. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
5. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
6. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT SECTIONS OF THE BASIC STATE BUILDING CODE, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
8. THE CONTRACTOR SHALL NOTIFY THE CLIENT'S REPRESENTATIVE IN WRITING WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE CLIENT'S REPRESENTATIVE.
9. THE WORK SHALL CONFORM TO THE CODES AND STANDARDS OF THE FOLLOWING AGENCIES AS FURTHER CITED HEREIN:
 - A. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS, AS PUBLISHED IN "COMPILATION OF ASTM STANDARDS BUILDING CODES" OR LATEST EDITION.
 - B. AWS: AMERICAN WELDING SOCIETY INC. AS PUBLISHED IN "STANDARD D1.1-08, STRUCTURAL WELDING CODE" OR LATEST EDITION.
 - C. AISC: AMERICAN INSTITUTE FOR STEEL CONSTRUCTION AS PUBLISHED IN "CODE FOR STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"; "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" (LATEST EDITION).
10. BOLTING:
 - A. BOLTS SHALL BE CONFORMING TO ASTM A325 HIGH STRENGTH, HOT DIP GALVANIZED WITH ASTM A153 HEAVY HEX TYPE NUTS.
 - B. BOLTS SHALL BE 3/4"Ø MINIMUM (UNLESS OTHERWISE NOTED)
 - C. ALL CONNECTIONS SHALL BE 2 BOLTS MINIMUM.
11. FABRICATION:
 - A. FABRICATION OF STEEL SHALL CONFORM TO THE AISC AND AWS STANDARDS AND CODES (LATEST EDITION).
 - B. ALL STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 (LATEST EDITION), UNLESS OTHERWISE NOTED.
12. ERECTION OF STEEL:
 - A. PROVIDE ALL ERECTION EQUIPMENT, BRACING, PLANKING, FIELD BOLTS, NUTS, WASHERS, DRIFT PINS, AND SIMILAR MATERIALS WHICH DO NOT FORM A PART OF THE COMPLETED CONSTRUCTION BUT ARE NECESSARY FOR ITS PROPER ERECTION.
 - B. ERECT AND ANCHOR ALL STRUCTURAL STEEL IN ACCORDANCE WITH AISC REFERENCE STANDARDS. ALL WORK SHALL BE ACCURATELY SET TO ESTABLISHED LINES AND ELEVATIONS AND RIGIDLY FASTENED IN PLACE WITH SUITABLE ATTACHMENTS TO THE CONSTRUCTION OF THE BUILDING.
 - C. TEMPORARY BRACING, GUYING AND SUPPORT SHALL BE PROVIDED TO KEEP THE STRUCTURE SAFE AND ALIGNED AT ALL TIMES DURING CONSTRUCTION, AND TO PREVENT DANGER TO PERSONS AND PROPERTY. CHECK ALL TEMPORARY LOADS AND STAY WITHIN SAFE CAPACITY OF ALL BUILDING COMPONENTS.

14. ANTENNA INSTALLATION:

- A. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND CLIENT'S REPRESENTATIVE SPECIFICATIONS.

- B. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.

- C. INSTALL COAXIAL / FIBER CABLES AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS.

15. ANTENNA AND COAXIAL / FIBER CABLE GROUNDING:

- A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH ANDREWS CONNECTOR/SPICE WEATHERPROOFING KIT TYPE #221213 OR EQUAL.

- B. ALL COAXIAL / FIBER CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL / FIBER CABLE (NOT WITHIN BENDS).

16. RELATED WORK, FURNISH THE FOLLOWING WORK AS SPECIFIED UNDER CONSTRUCTION DOCUMENTS, BUT COORDINATE WITH OTHER TRADES PRIOR TO BID:

- A. FLASHING OF OPENING INTO OUTSIDE WALLS

- B. SEALING AND CAULKING ALL OPENINGS

- C. PAINTING

- D. CUTTING AND PATCHING

17. REQUIREMENTS OF REGULATORY AGENCIES:

- A. FURNISH U.L. LISTED EQUIPMENT WHERE SUCH LABEL IS AVAILABLE. INSTALL IN CONFORMANCE WITH U.L. STANDARDS WHERE APPLICABLE.

- B. INSTALL ANTENNA, ANTENNA CABLES, GROUNDING SYSTEM IN ACCORDANCE WITH DRAWINGS AND SPECIFICATION IN EFFECT AT PROJECT LOCATION AND RECOMMENDATIONS OF STATE AND LOCAL BUILDING CODES, AND SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK. THIS WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- C. TIA-EIA - 222 (LATEST EDITION). STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.

- D. FAA - FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR AC 70/7460-IH, OBSTRUCTION MARKING AND LIGHTING.

- E. FCC - FEDERAL COMMUNICATIONS COMMISSION RULES AND REGULATIONS FORM 715, OBSTRUCTION MARKING AND LIGHTING SPECIFICATION FOR ANTENNA STRUCTURES AND FORM 715A, HIGH INTENSITY OBSTRUCTION LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES.

- F. AISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS (LATEST EDITION).

- G. NEC - NATIONAL ELECTRICAL CODE - ON TOWER LIGHTING KITS.

- H. UL - UNDERWRITER'S LABORATORIES APPROVED ELECTRICAL PRODUCTS.

- I. IN ALL CASES, PART 77 OF THE FAA RULES AND PARTS 17 AND 22 OF THE FCC RULES ARE APPLICABLE AND IN THE EVENT OF CONFLICT, SUPERSEDE ANY OTHER STANDARDS OR SPECIFICATIONS.

- J. 2018 LIFE SAFETY CODE NFPA - 101.

APPLICANT:

T-Mobile

T-MOBILE NORTHEAST LLC

35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

PROJECT MANAGER



CONSULTANT:

FORESITE LLC

Architects . Engineers . Surveyors
462 WALNUT STREET
NEWTON, MA 02460
617-212-3123



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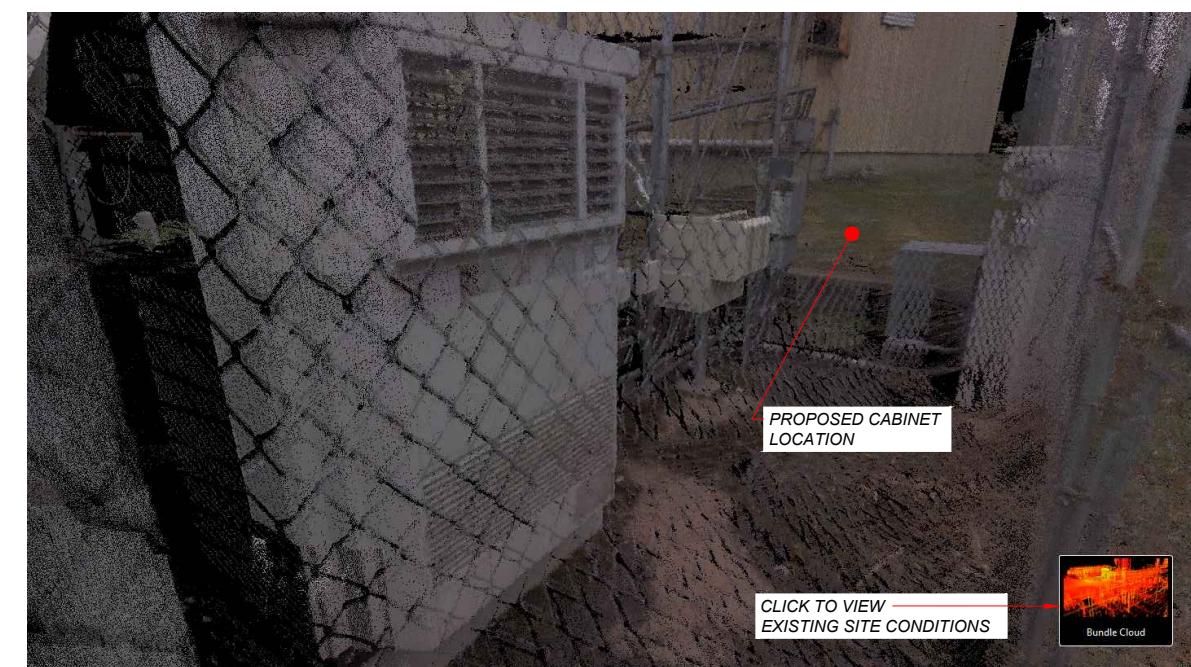
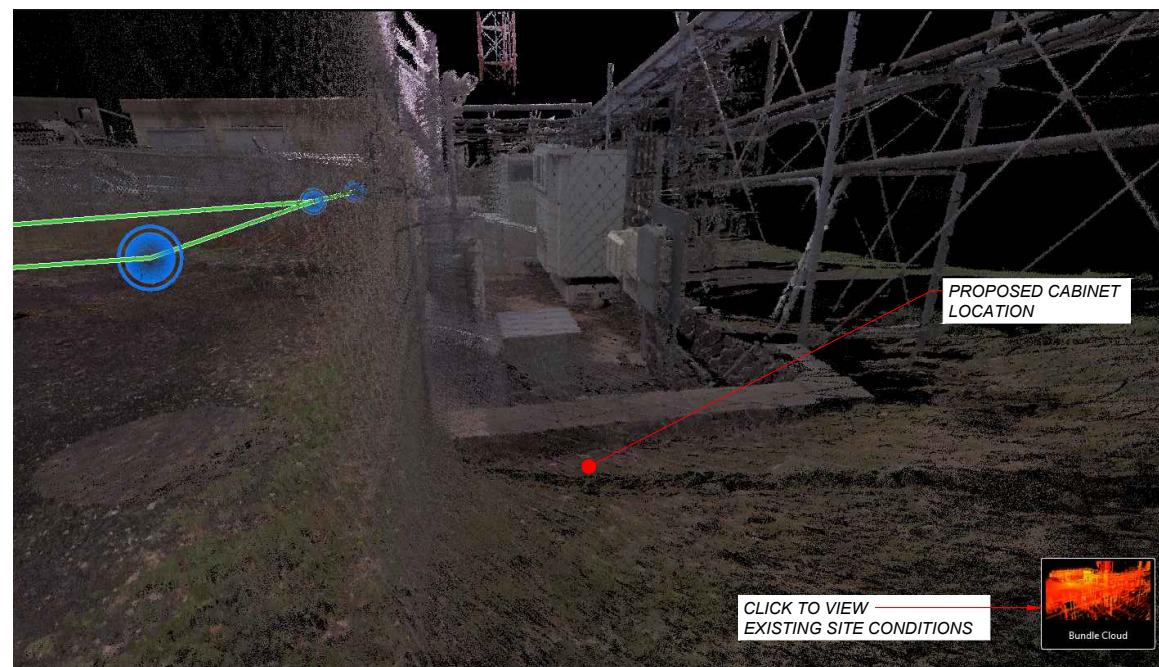
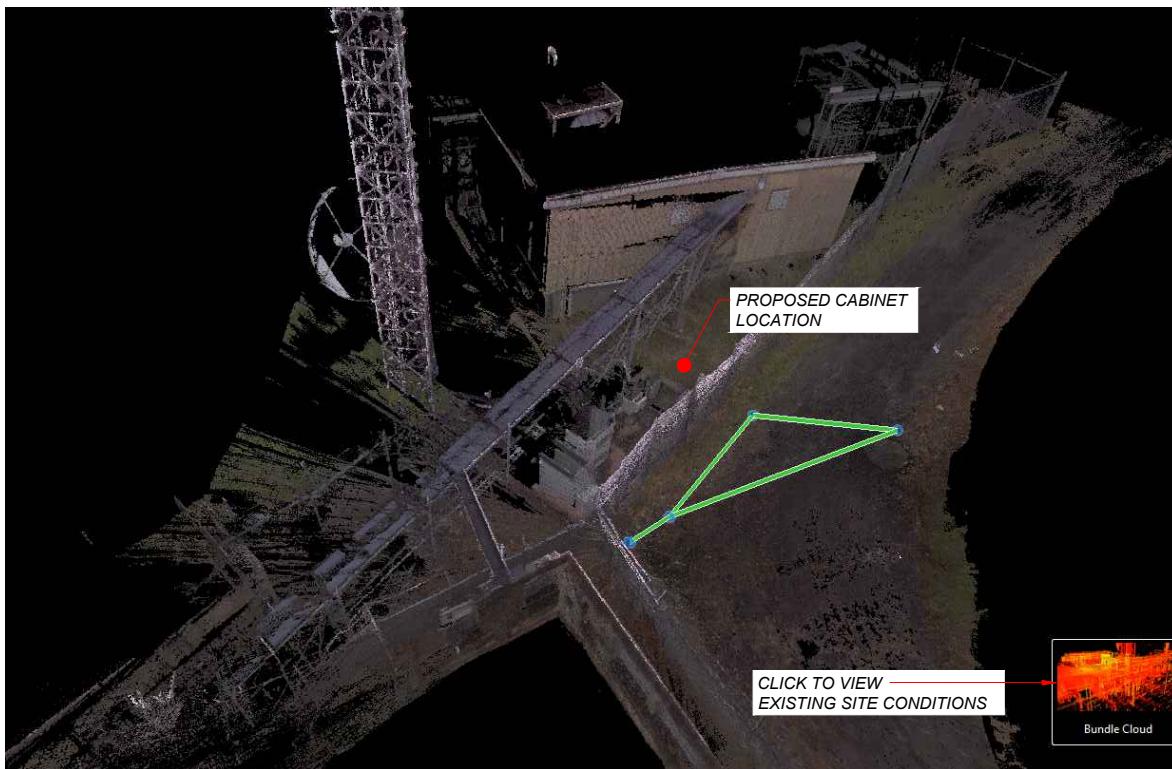
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| A | PRELIMINARY | 04/26/21 |
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| 1 | ANTENNA MODEL CORRECTION | 05/03/21 |
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SITE NUMBER: CTNH305B

SITE NAME: NH305/CHANNEL 20_ET
SITE ADDRESS: 103 EAST SIDE BOULEVARD
NAUGATUCK, CT 06770

SHEET TITLE:

N-1: GENERAL NOTES



SITE POINT CLOUD NTS

APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
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BLOOMFIELD, CT 06002
860-692-7100

35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

CONCLUSION

FORESITE LLC

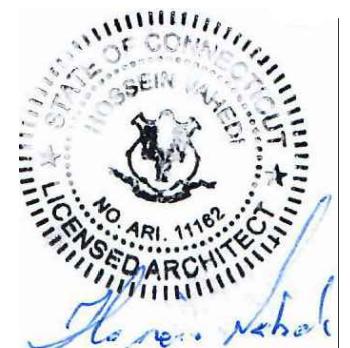
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THE ESTATE PLANNING

ANSWER

GEOSTATISTICS

SCHOLASTIC TESTS

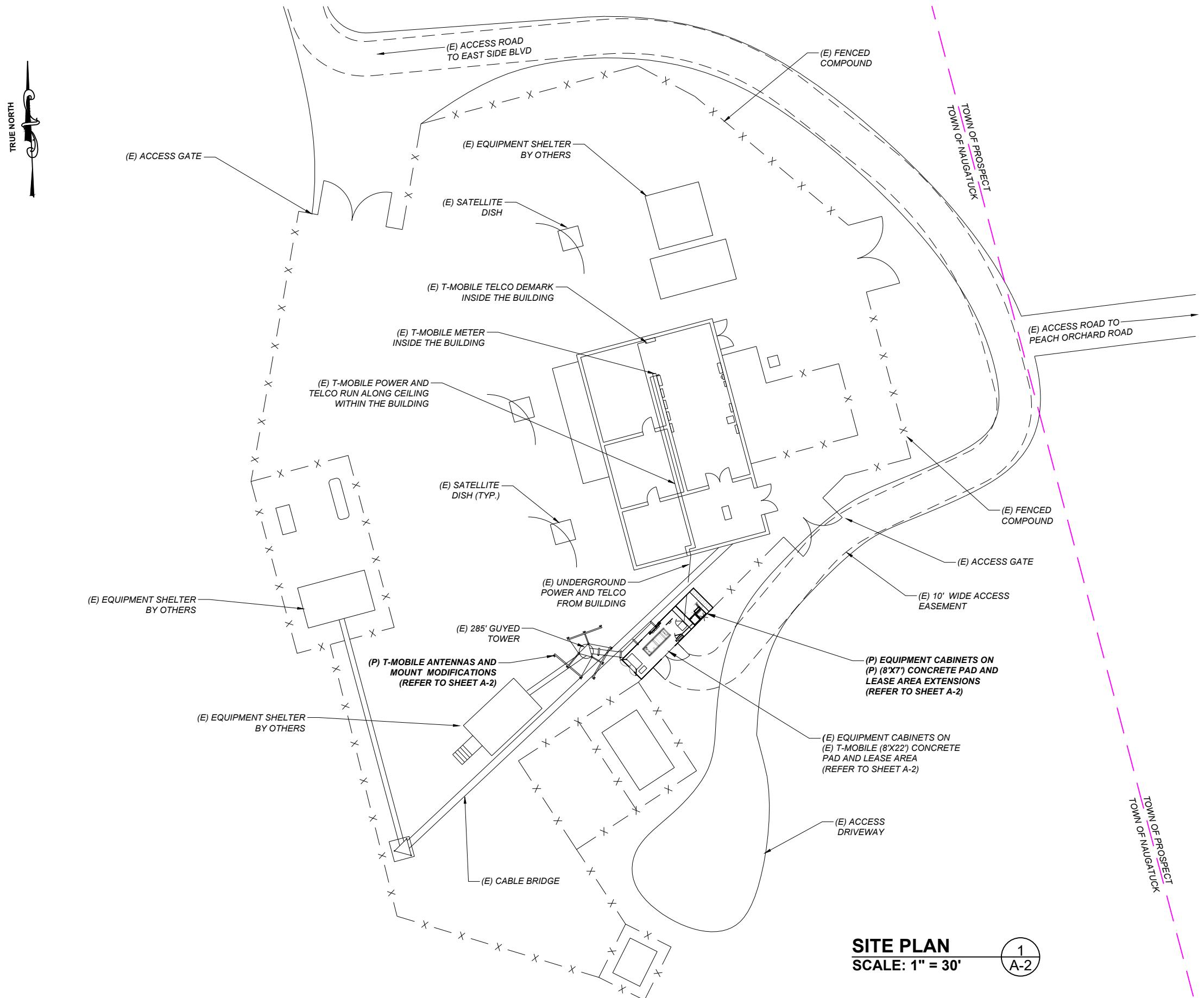


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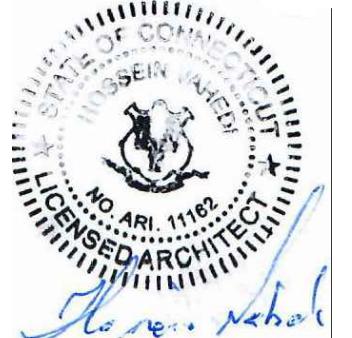
SHEET TITLE:



APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

PROJECT MANAGER
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CONSULTANT:
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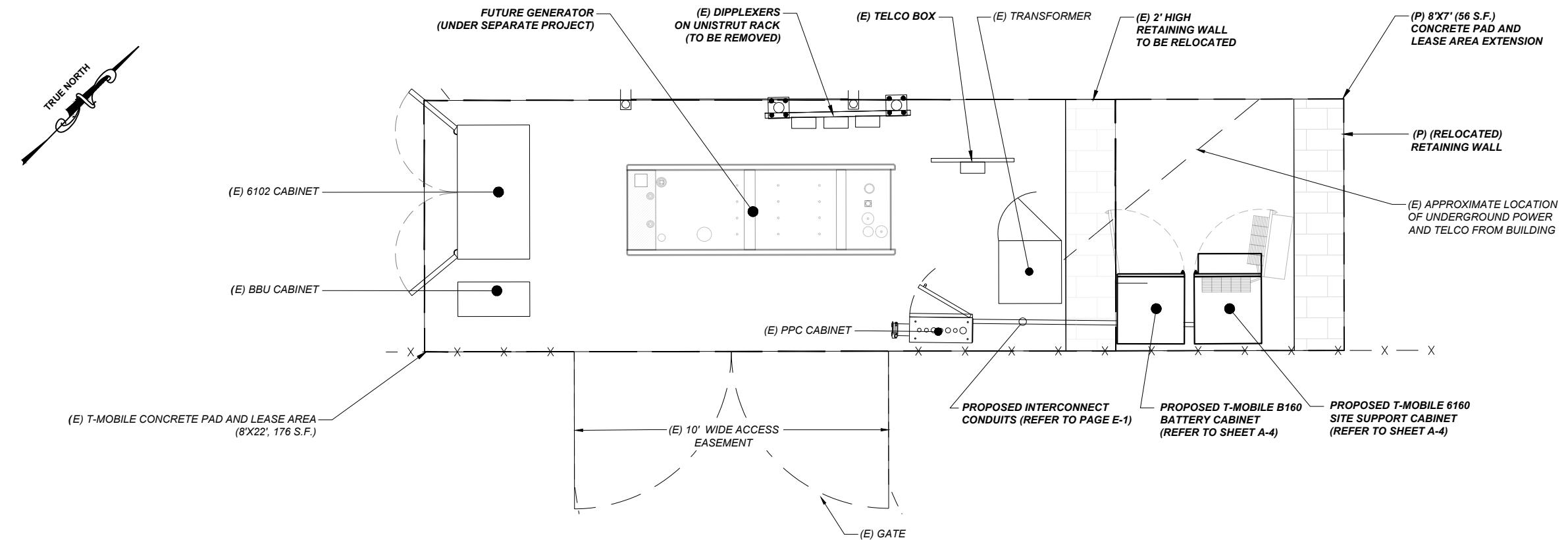
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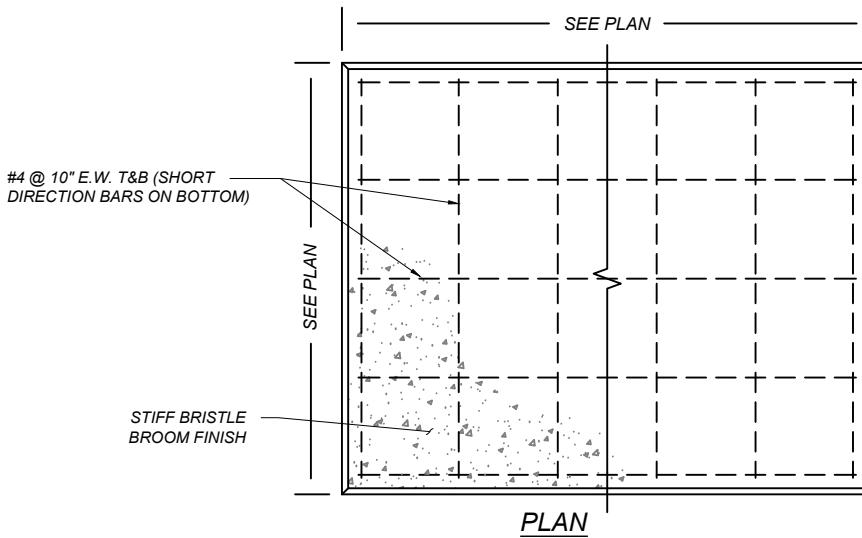
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NAUGATUCK, CT 06770

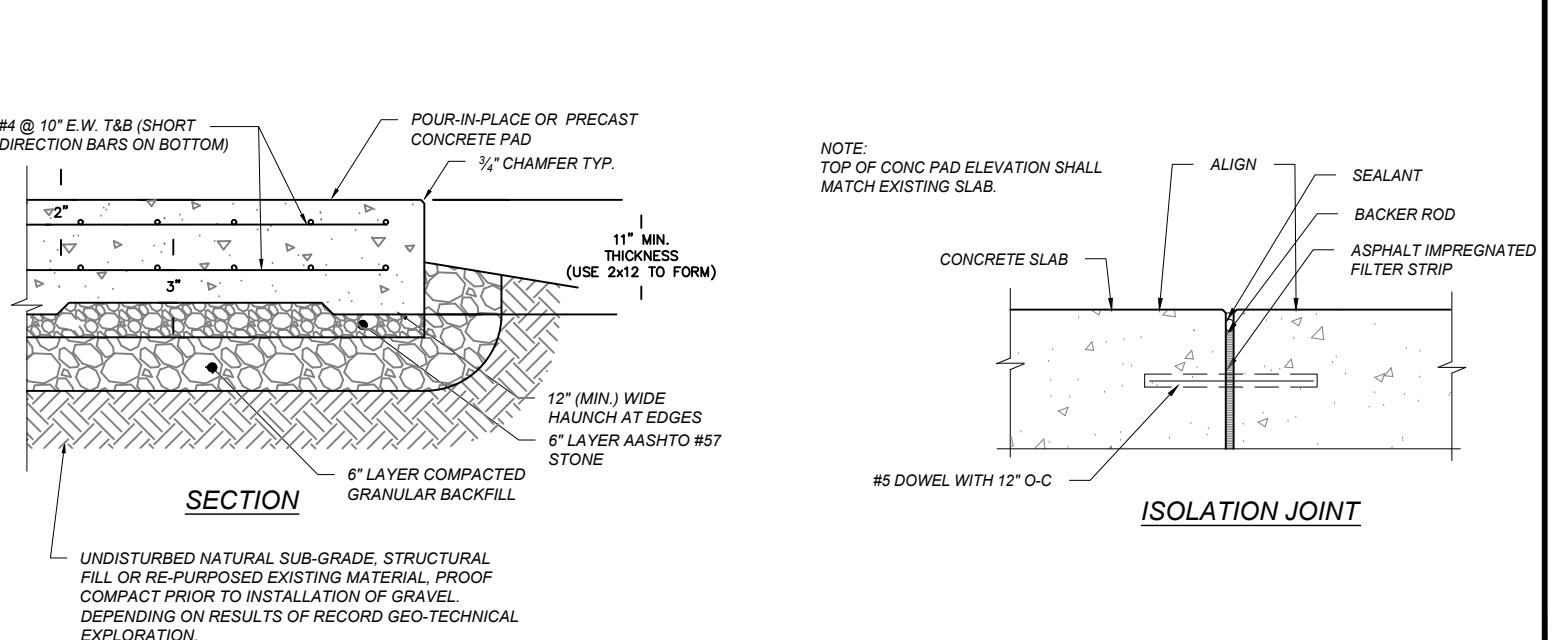
SHEET TITLE:
A-2: SITE PLAN



ENLARGED SITE PLAN 1
SCALE: 1/4" = 1'-0" A-3



CONCRETE PAD NOTES:
 1. BEARING STRATA MEDIUM TO DENSE INSET GRANULAR MATERIAL OR COMPAKTED FILL. 95% COMPACTION.
 2. SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED.
 3. CONCRETE FORM WORK SHALL BE CONSTRUCTED USING MINIMUM 2"X8" NOMINAL SIZE LUMBER. STRIP AND REMOVE UPON COMPLETION.
 4. CONCRETE SHALL HAVE 4000PSI 28-DAY COMPRESSIVE STRENGTH WITH 5(±1)% AIR ENTRAINMENT, 4 (±1)% SLUMP AND BRISTLE BROOM FINISH.



CONCRETE PAD DETAILS 2
N.T.S. A-3

APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
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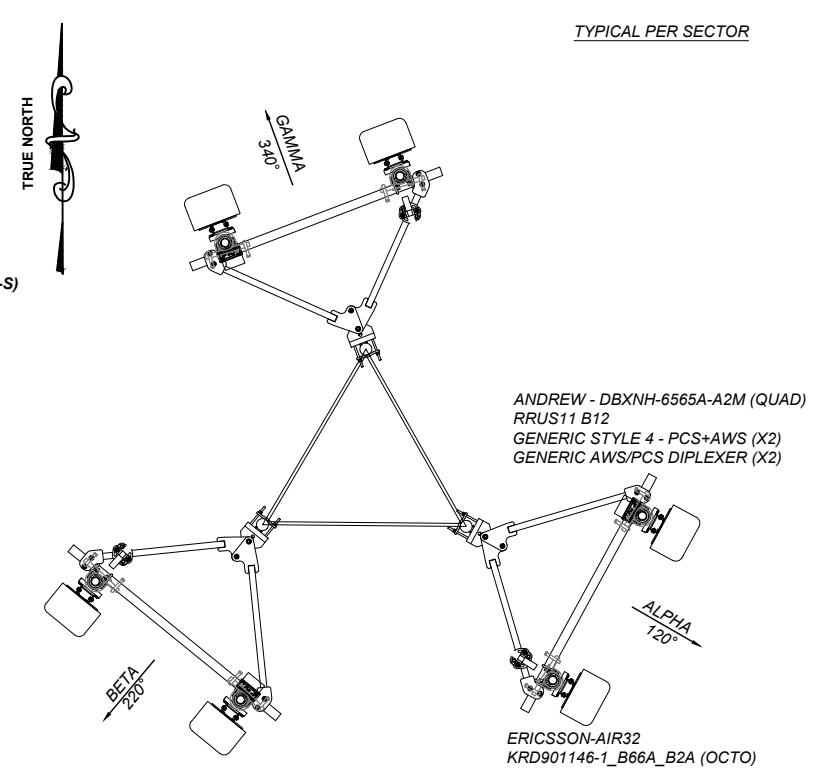
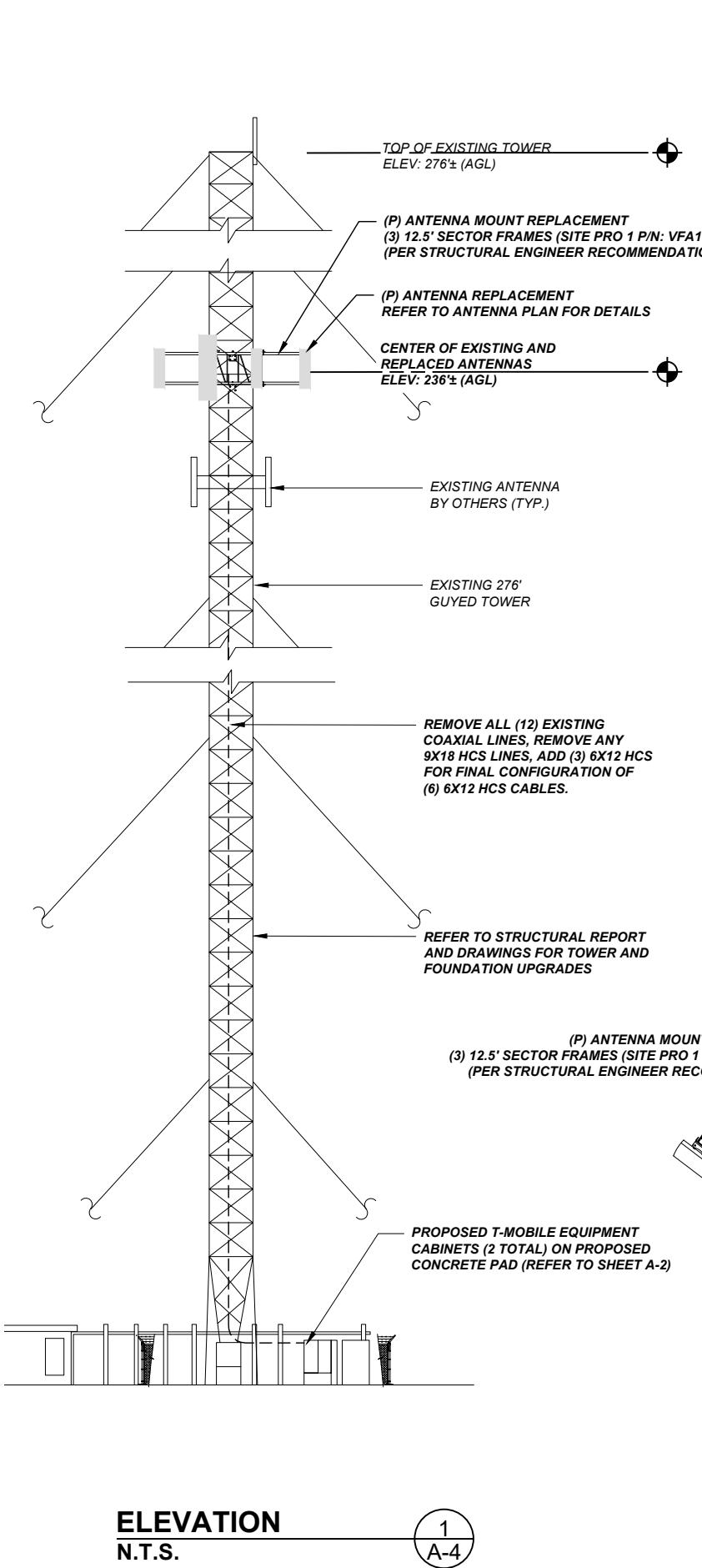
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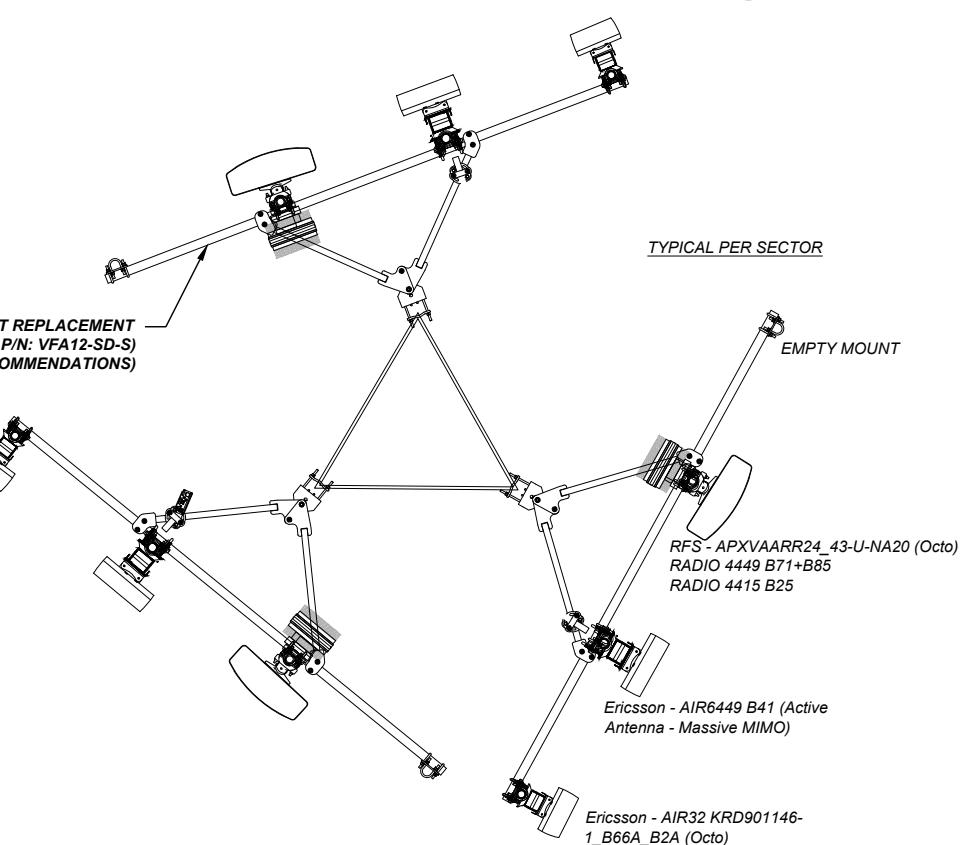
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SITE NUMBER: CTNH305B
 SITE NAME: NH305/CHANNEL 20_E1
 SITE ADDRESS: 103 EAST SIDE BOULEVARD
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SHEET TITLE:
 A-3: EQUIPMENT LAYOUT
 AND CONCRETE PAD DETAILS

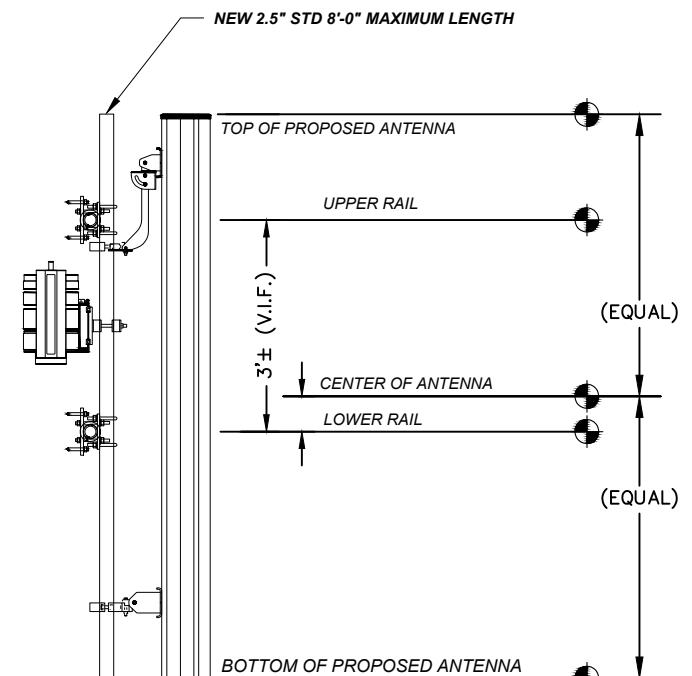


EXISTING ANTENNA PLAN
N.T.S. 2 A-4

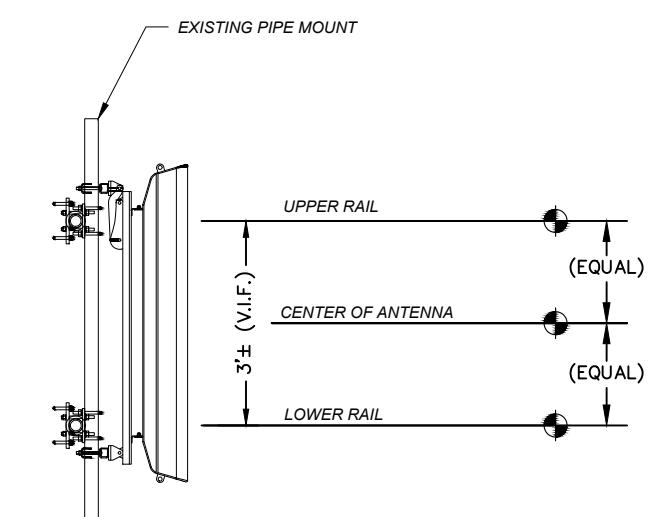


FINAL ANTENNA PLAN
N.T.S. 3 A-4

STRUCTURAL NOTES:
PRIOR TO INSTALLATION OF THE PROPOSED EQUIPMENT CONTRACTOR SHOULD REVIEW THE MOUNT STRUCTURAL ANALYSIS REPORT DATED 08/01/2019 AND TOWER STRUCTURAL ANALYSIS REPORT DATED 4/14/2021 BOTH PREPARED BY FDH INFRASTRUCTURE SERVICES. AND ADHERE TO THE REPORT FULLY AND ALL THE RECOMMENDATIONS THEREIN, INCLUDING BUT NOT LIMITED TO ANTENNA PLACEMENT, COAX ROUTING, STRUCTURAL IMPROVEMENTS, ETC.



APXVAAR24_43-U-NA20
ANTENNA MOUNTING
N.T.S. 4 A-4



AIR32 KRD901146-1_B66A_B2A
ANTENNA MOUNTING
N.T.S. 5 A-4

APPLICANT:
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860-692-7100

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CONSULTANT:
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Architects . Engineers . Surveyors
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NEWTON, MA 02460
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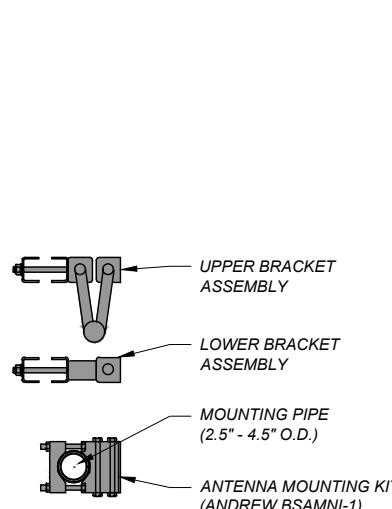
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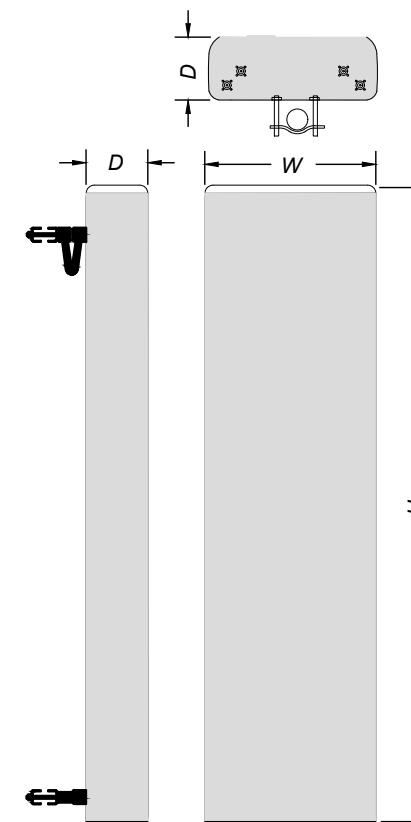
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SITE NUMBER: CTNH305B
SITE NAME: NH305/CHANNEL 20_ET
SITE ADDRESS: 103 EAST SIDE BOULEVARD
NAUGATUCK, CT 06770

SHEET TITLE:
A-4: ELEVATIONS, ANTENNA PLANS
AND DETAILS

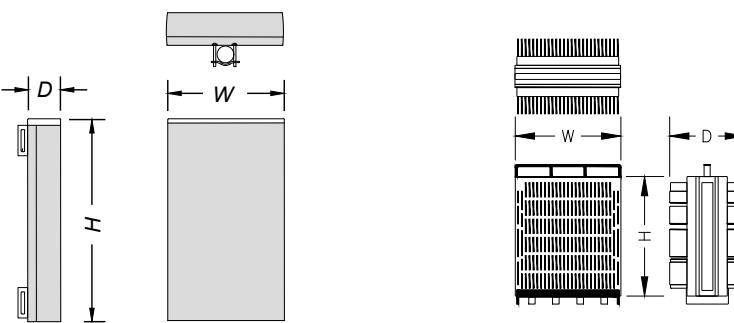


| RFS ANTENNA SPECIFICATIONS | |
|----------------------------|----------------------|
| MODEL # | APXVAARR24_43-U-NA20 |
| MANUF. | RFS |
| HEIGHT | 95.9" |
| WIDTH | 24.0" |
| DEPTH | 8.7" |
| WEIGHT | 128 LB |



RFS APX ANTENNA
N.T.S.

1
A-5



| ERICSSON ANTENNA SPECIFICATIONS | |
|---------------------------------|-------------|
| MODEL # | AIR6488 B41 |
| MANUF. | ERICSSON |
| HEIGHT | 34.8" |
| WIDTH | 20.5" |
| DEPTH | 7.2" |
| WEIGHT | 128 LB |

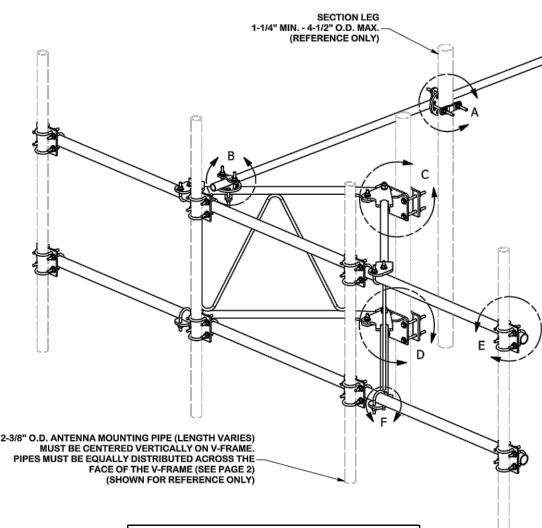
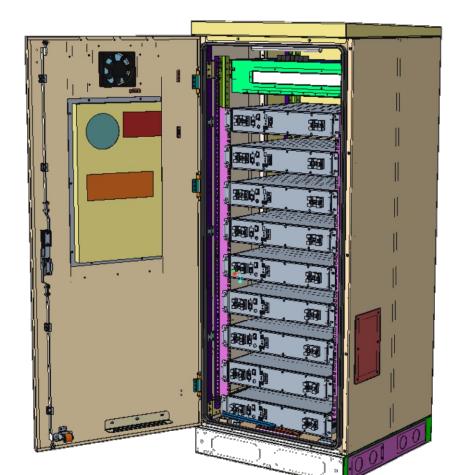
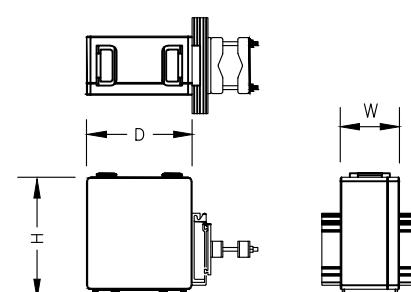
| REMOTE RADIO UNIT SPECIFICATIONS | |
|----------------------------------|--------------------|
| MODEL # | RADIO 4449 B71+B12 |
| MANUF. | ERICSSON |
| HEIGHT | 14.9" |
| WIDTH | 13.2" |
| DEPTH | 10.4" |
| WEIGHT | 74 LB |

AIR6488 ANTENNA
N.T.S.

2
A-5

REMOTE RADIO UNIT
N.T.S.

3
A-5



2-3/8" O.D. ANTENNA MOUNTING PIPE (LENGTH VARIES)
MUST BE CENTERED VERTICALLY ON V-FRAME.
PIPES MUST BE EQUALLY DISTRIBUTED ACROSS THE
FACE OF THE V-FRAME (SEE PAGE 2)
(SHOWN FOR REFERENCE ONLY)

| REMOTE RADIO UNIT SPECIFICATIONS | |
|----------------------------------|----------------|
| MODEL # | RADIO 4415 B25 |
| MANUF. | ERICSSON |
| HEIGHT | 14.9" |
| WIDTH | 13.2" |
| DEPTH | 5.4" |
| WEIGHT | 46.3 LB |

| SITE SUPPORT CABINET SPECIFICATIONS | |
|-------------------------------------|----------|
| MODEL # | 6160 |
| MANUF. | ERICSSON |
| HEIGHT | 63" |
| WIDTH | 25.6" |
| DEPTH | 25.6" |
| WEIGHT | |

| BATTERY CABINET SPECIFICATIONS | |
|--------------------------------|----------|
| MODEL # | B160 |
| MANUF. | ERICSSON |
| HEIGHT | 63" |
| WIDTH | 26" |
| DEPTH | 26" |
| WEIGHT | |

REMOTE RADIO UNIT
N.T.S.

4
A-5

SITE SUPPORT CABINET
N.T.S.

5
A-5

BATTERY CABINET
N.T.S.

6
A-5

NEW SECTOR MOUNT
N.T.S.

8
A-5

APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

PROJECT MANAGER

NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
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STURBRIDGE, MA 01566
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CONSULTANT:
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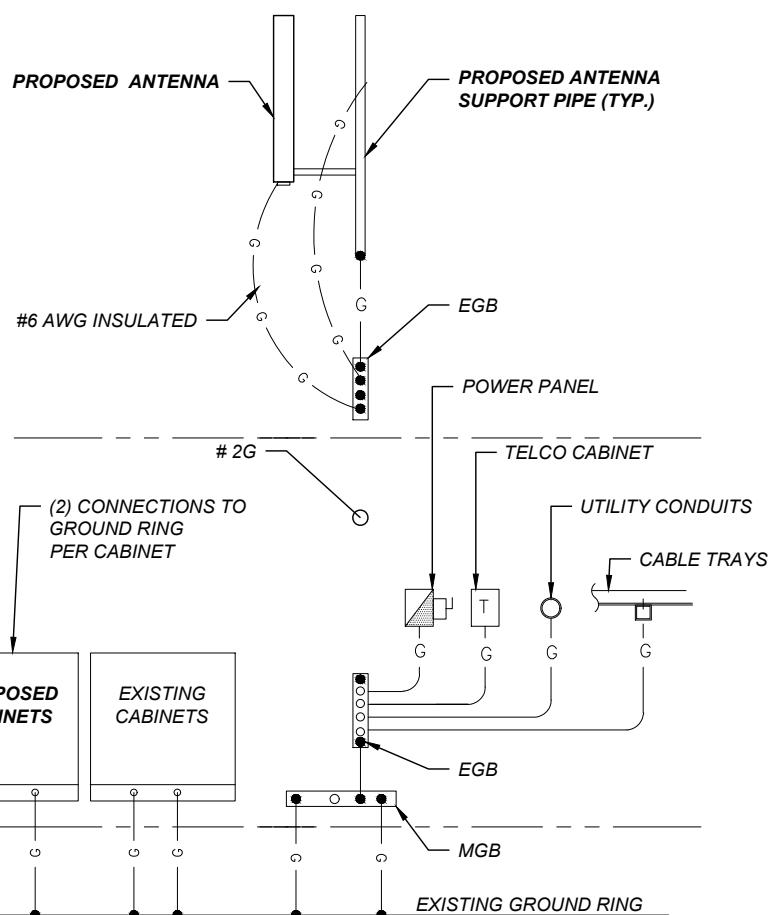
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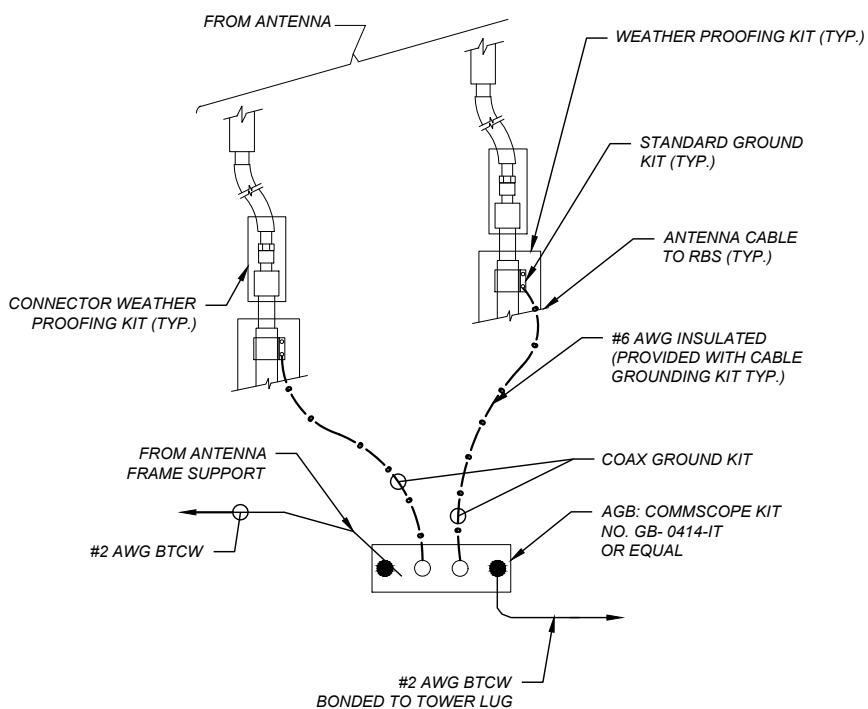
SHEET TITLE:
A-5: ANTENNA AND
EQUIPMENT SPECIFICATIONS

ELECTRICAL & GROUNDING NOTES

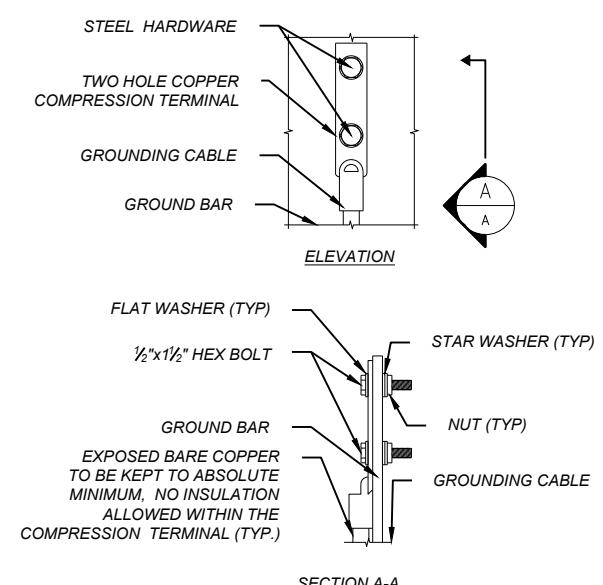
1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PRODUCED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) ND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLING BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE ARE PEDESTAL AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCTION POINT AND PROPOSED CELL SITE TELECOM CABINET AND RBS CABINET AS INDICATED ON DRAWING A-1. PROVIDE FULL LENGTH PULL ROPE INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NAME 3R ENCLOSURE.
11. GROUNDING SHALL COMPLY WITH NEC ART. 250.
12. GROUNDING COAX CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURES COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
13. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSTALLATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE GROUND.
14. ALL GROUND CONNECTION TO BE BURNDY HYGROUNDRY COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
15. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AS RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY BOND ANY METER OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
16. CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PROCEDURES (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN RBS UNIT).
17. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
18. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTION.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. BOND ANTENNA EGB'S AND MGB TO WATER MAIN.
21. TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
22. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
23. VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.



GROUNDING RISER DIAGRAM
N.T.S. 1 E-1

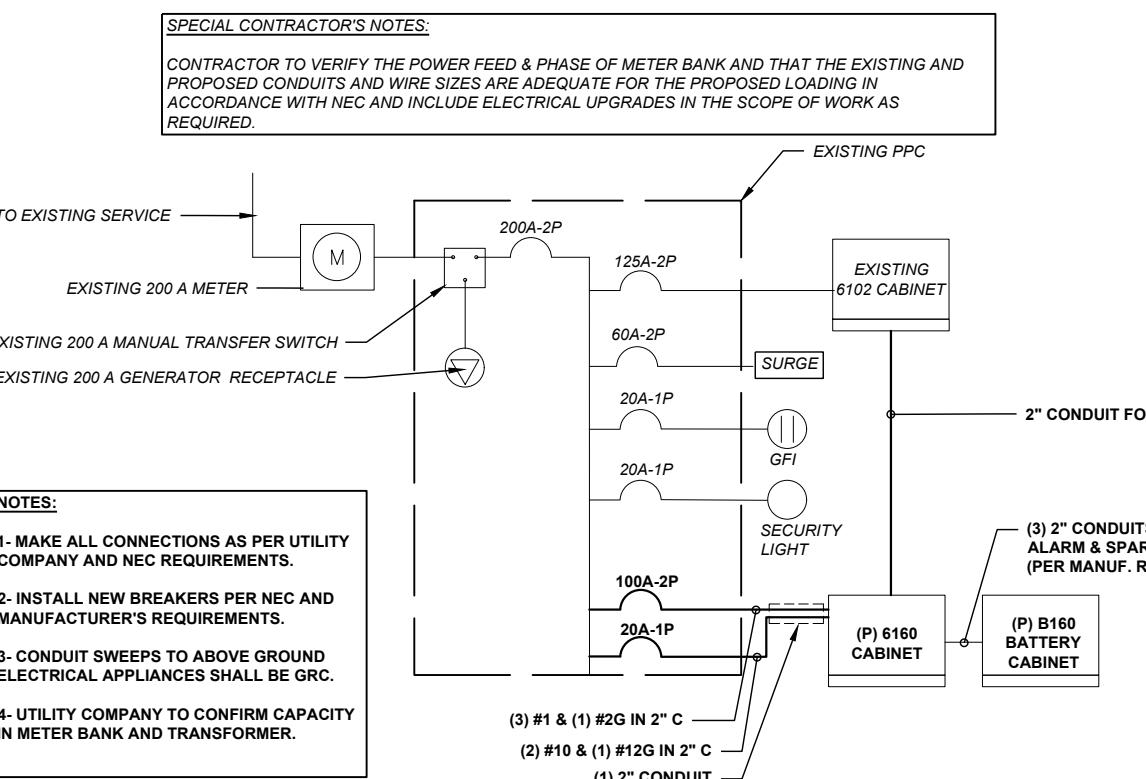


ANTENNA CABLE GROUNDING
N.T.S. 2 E-1



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

GROUND BAR CONNECTIONS
N.T.S. 3 E-1



TYPICAL ONE LINE DIAGRAM
N.T.S. 4 E-1

APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

PROJECT MANAGER
NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
www.northeastsitesolutions.com
420 MAIN STREET, BLDG 4
STURBRIDGE, MA 01566
203-275-6669

CONSULTANT:
FORESITE LLC
Architects . Engineers . Surveyors
462 WALNUT STREET
NEWTON, MA 02460
617-212-3123



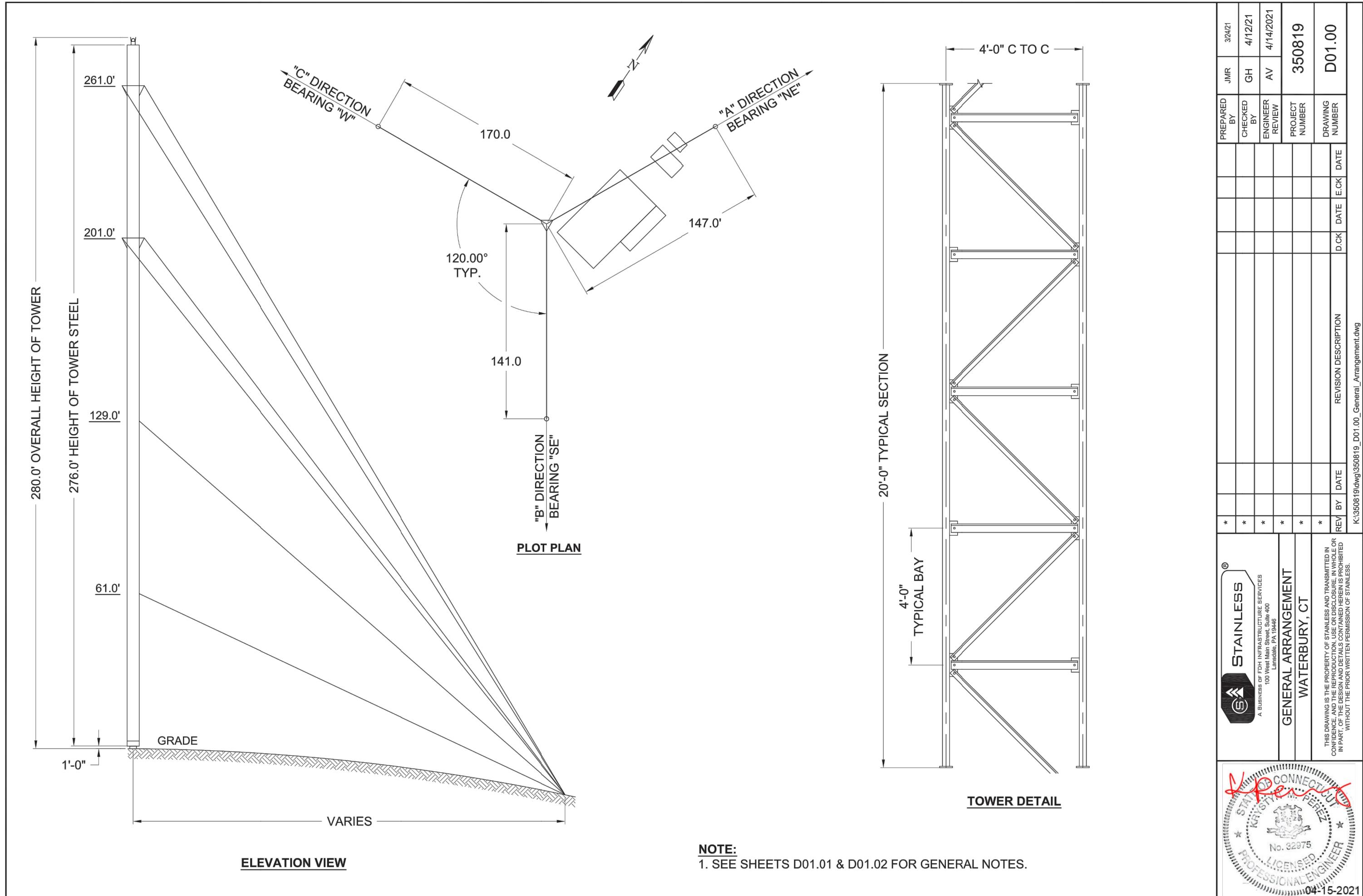
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DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

| REV | DESCRIPTION | DATE |
|-----|--------------------------|----------|
| A | PRELIMINARY | 04/26/21 |
| 0 | FINAL ISSUED | 04/26/21 |
| 1 | ANTENNA MODEL CORRECTION | 05/03/21 |

SITE NUMBER: CTNH305B
SITE NAME: NH305/CHANNEL 20_E1
SITE ADDRESS: 103 EAST SIDE BOULEVARD
NAUGATUCK, CT 06770

SHEET TITLE:
E-1: GROUNDING DETAILS
AND ONE LINE DIAGRAM



1. The tower is a guyed, triangular, non-insulated, open face structure.
2. The tower was analyzed per Stainless Rigorous Structural Analysis Report 350818 dated 3/19/2021. It was analyzed in accordance with the 2018 Connecticut Building Code, referencing the 2015 IBC and ANSI/TIA-222-G, Structural Standard for Antenna Supporting Structures and Antennas, including addenda 1 and 2 dated 2007 and 2009 for the following parameters to support equipment as listed below:

- Risk Category II
- 125 mph ultimate 3-second gust wind speed with no ice.
- 50 mph nominal design wind speed with 3/4" design ice thickness.
- Exposure Category B
- Topographic Category 5 (H = 360', 2Lh = 2880', and x = 370')
- 0.19 earthquake spectral response acceleration at short periods (S_s)
- Earthquake Site Class D

| Appurtenance | ELEVATION,ft | FEED LINES |
|--|--------------|---|
| 5/8" diameter x 4.3' lightning rod | 276 | -- |
| Beacon w/ ice shield | 276 | 5/8" cable |
| (2) 6' x 6' ice shield | 270 | -- |
| (2) 6' diameter MW dishes w/radome | 265 | (4) EW63 |
| Scala grid dish | 255 | 7/8" |
| (3) Andrew DBXNH-6565A-A2M (To Be Removed) | | |
| (3) Ericsson RRUS11 B12 (To Be Removed) | | |
| (4) RFS ATMA3P4-1A20 (To Be Removed) | | |
| (2) RFS ATMA4P4-1A20 (To Be Removed) | | |
| (3) T-Arm Mounts (To Be Removed) | | |
| (3) Ericsson AIR32 KRD901146-1_B66A_B2A | 236 | (12) 1-5/8" lines (To Be Removed) |
| (3) RFS-APXVAARR24_43-U-NA20 (Proposed) | | (3) 1-5/8" fiber cable (Existing) |
| (3) Ericsson AIR6449 B41 (Proposed) | | (3) 1-5/8" Hybrid Cable (Proposed) |
| (3) Ericsson Radio 4449 B71+B85 (Proposed) | | |
| (3) Radio 4415 B25 (Proposed) | | |
| (3) 12.5' Sector Frames [SitePro1 P/N: VFA12-SD-S] (Proposed) | | |
| (6) Alcatel-Lucent RRH 2x50-800 RRUs | 210 | (1) 1-1/2" Fiber |
| (3) RRH 8x20-25-FEU 8T8R RRUs | | (3) 1-1/4" hybrid |
| (6) RRH 1900-4x45 RRUs | | |
| (3) 70"x12"x8" panels | | |
| (3) Andrew DT465B-2XR-V2 panels | | |
| (3) Sector mounts | | |
| 15' whip antenna w/ (3) elements | 195 | (1) 1/2" coax |
| 6' x 6' ice shield | 174 | -- |
| 10' dipole w/(2) elements | 171 | 7/8" |
| (1) Mark 4' diameter grid dish | 169 | 1/4" coax |
| (1) 9-1/2" x 2-1/2" x 2-1/2" ODU | | |
| Diamond D-130N | 164 | 7/8" |
| (3) Raycap DC6-48-60-18-8C SPDs | | |
| (6) Ericsson RRUS 32 B30 RRUs | | |
| (3) Powerwave 7770.00J1 panels | | |
| (6) Ericsson KRC 161 689/3 RRUs | | |
| (6) CCI TPX-070821 diplexers | | |
| (6) Powerwave LGP 21401 TMAs | | |
| (6) Ericsson KRC 161 472/3 RRUs | | |
| (3) Kathrein 80010965 panels | | |
| (3) CCI HPA-65R-BW-H6 panels | | |
| (3) Quintel QS665122E53617881 panels | | |
| (3) Ericsson RRUS 11 B12 | | |
| (3) T-arm mounts | | |

| | | |
|--|--------------------------|----------------------|
| (3) L-810 side markers | 133 | 3/8" cable |
| 12" standoff (unused) | 52 | -- |
| 3-1/2" diameter x 9" Omni | 17 | 1/4" coax |
| -- | 236 | 3/8" grounding cable |
| Inside climbing ladder with safety cable | Full height of the tower | 3/8" |

3. In order to achieve an ultimate 3-second gust wind speed of 125 mph with no ice and a nominal wind speed of 50 mph with 3/4" design ice thickness in accordance with the 2018 Connecticut Building Code (referencing the 2015 IBC) and ANSI/TIA-222-G with the analysis parameters of Section D, the following modifications are required:

- Reinforce the tower base foundation.
- Adjust the initial guy tensions to the following values at 60 degrees F:

| Level | Tension (lbs) |
|----------|---------------|
| 1A | 4600 |
| 2A | 4400 |
| 3A | 4400 |
| 4A (Top) | 2500 |

- Install additional horizontal sub-bracing members at the midpoints of the following bays:

| Location | No. of bays |
|-----------------|-------------|
| 229.0' - 241.0' | 3 |

- Replace existing diagonal braces with new, higher capacity members at the following bays:

| Location | No. of bays |
|-----------------|-------------|
| 5.0' - 9.0' | 1 |
| 37.0' - 45.0' | 2 |
| 129.0' - 141.0' | 3 |
| 149.0' - 153.0' | 1 |
| 205.0' - 209.0' | 1 |
| 221.0' - 225.0' | 1 |

- The design of the tower modifications above has been based upon Stainless Report 350818 dated 3/19/2021. The details contained within this design drawing package are included for information and are not intended to be used as shop or final fabrication drawings. The Contractor shall field verify all dimensions, elevations and existing site conditions and notify Stainless immediately of any site discrepancies or variances. Contractor shall not scale dimensions from the design drawings.

- All work shown on this design drawing package shall be performed by qualified contractor(s) with a minimum of 5 years experience in tower and foundation construction.

- All fabricated elements shall be in accordance with the notes, specifications and drawings. All deviations and substitutions must be approved by a registered Professional Engineer in the state where the work is being done and submitted to Stainless for approval prior to installation. The Contractor shall furnish satisfactory evidence as to the kind and quality of the materials and equipment being substituted. Contractor shall also be responsible for obtaining all necessary permits, licenses and any other requirements for the construction. Submit calculations for connection details based upon the design loads shown on the drawings.

| | | |
|--|--|---------------|
| PREPARED BY | JMR | 3/24/21 |
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | D01.01 |
| DRAWING NUMBER | | |
| REV BY DATE | | |
| REVISION DESCRIPTION | K:\350819\dwg\350819_D01.01_General Notes.docx | |
|  | | GENERAL NOTES |
| | | WATERBURY, CT |
| <p>THIS DRAWING IS THE PROPERTY OF STAINLESS AND TRANSMITTED IN CONFIDENCE AND THE REPRODUCTION, USE OR DISCLOSURE, IN WHOLE OR IN PART, OF THE DESIGN AND DETAILS CONTAINED HEREIN IS PROHIBITED WITHOUT THE PRIOR WRITTEN PERMISSION OF STAINLESS.</p> <p><i>K. P. PEREZ</i></p> <p>PROFESSIONAL ENGINEER No. 32975 LICENCED ENGINEER 04-15-2021</p> | | |

7. Contractor shall observe safe construction practices and shall be responsible for all methods of construction, including proper and adequate bracing to the tower and excavation work during the installation process. Adequately designed temporary support shall be installed before any tower member is removed and replaced. All means and methods of construction, including construction and soil pressure loads, shall be properly calculated and documented by the Contractor.
8. If the construction activities require a rigging plan per the requirements of ANSI/TIA-322 and ANSI/ASSE A10.48, the Contractor shall be responsible for a rigging plan to be developed by a qualified engineer and implemented by a competent rigger. A properly detailed rigging plan shall include, as a minimum, a review of the following:
 - Operational and non-operational construction loads.
 - Equipment used, and Supporting structure
 - Construction sequence and durations
9. Contractor shall also be responsible for all means and methods for the installation of all proposed equipment and tower modifications, including the design, supply, and installation of adequate temporary bracing for structural member replacements.
10. All shop fabrication drawings and material certificates of the successful contractor shall be approved in writing by Stainless prior to fabrication. The approval is to ensure the design requirements and proper fabrication practices are implemented, but does not include fit-up checks which shall be the responsibility of the Contractor.
11. Stainless assumes no responsibility for the structural adequacy of the tower if non-conforming modification materials are supplied and/or installed by others, and shall have no liability whatsoever to Owner or to others for any work performed by any persons other than Stainless in connection with the implementation of any structural changes or modifications not specifically addressed within this design drawing package. Owner acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by owner shall be solely responsible to owner and to others for the quality of work performed by them and that Stainless shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by such rigger, erector or subcontractor.
12. The modification drawings contained herein are based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following.
 - a. Proper alignment and plumbness.
 - b. Correct guy tensions.
 - c. Correct bolt tightness.
 - d. No significant deterioration or damage to any component.

APPLICABLE CODES AND STANDARDS

Use latest editions of the following Codes and Standards unless noted otherwise.

1. ANSI/TIA-222-G 2005 Structural Standards for Antenna Supporting Structures and Antennas including Addenda 1 & 2, dated 2007 and 2009.
2. ANSI/TIA-322, Standard for Loading, Analysis, and Design Criteria Related to Installation, Alteration and Maintenance of Communication Structures..
3. ANSI/ASSE A10.48 Criteria for Safety Practices Related to the Installation, Alteration, and Maintenance of Communication Structures. ANSI/TIA-322 Loading, Analysis and Design Criteria Related to the Installation, Alteration and Maintenance Communication Structures.
4. AISC Manual of Steel Construction.
5. RCSC Specification for Structural Joints Using ASTM A325 or A490 Bolts.
6. ACI 301 Specifications for Structural Concrete.
7. ACI 318 Building Code Requirements for Structural Concrete.
8. ACI 315 Details and Detailing of Concrete Reinforcement.
9. CRSI Manual of Standard Practice.
10. ASTM C260 Standard Specification for Air-Entraining Admixtures for Concrete.
11. ASTM C494 Standard Specification for Chemical Admixtures for Concrete.
12. ASTM A36 Standard Specification for Carbon Structural Steel.
13. ASTM A572 Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
14. ASTM A325 Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
15. ASTM A194 Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both.

16. ASTM F436 Standard Specification for Hardened Steel Washers.
17. ASTM A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and products.
18. ASTM A153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
19. ASTM A780 Standard Practice for Repair of Damage and Uncoated Areas of Hot-Dip Galvanized Coatings.
20. ASTM A615 Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement.

STRUCTURAL STEEL

1. The fabrication and erection of structural steel shall conform to the latest edition of the AISC Manual of Steel Construction.
2. Connections shall be detailed by the steel fabricator in accordance with the AISC Manual of Steel Construction. Connections and connecting elements shall develop the strength capacities as indicated on the design drawings. Some connection details are suggested in the drawings however, Contractor is free to provide any design and details at Contractor's discretion.
3. Hot-dip galvanize all items unless otherwise noted, after fabrication in accordance with ASTM A123 and/or ASTM A153.
4. Repair all damaged or uncoated areas of galvanized coatings in accordance with ASTM A780.
5. Locking ANCO style nuts shall be installed on all proposed and/or replaced bolts.
6. ASTM A325 bolts shall not be reused.
7. All A325 high strength bolts shall be tightened by the "snug tightening" method as specified in the RCSC Specification for Structural Joints Using ASTM A325 or A490 Bolts unless noted otherwise on the design drawings.
8. Material grades shall be as follows, unless noted otherwise:
 - a. Plates and angles - A36
 - b. Bolts - A325X
 - c. U-Bolts - A307 min.

PLUMBING LINES

1. The tower is designed for initial tension as specified in the erection drawings. It is important that the guys be tensioned accurately to assure the stiffness of the tower.
2. Uneven terrain, temperature, plumbness of tower and wind are factors which affect guy tensions. If the tower site is level and anchor distances are equal, the tensions in all three guys at a level will be equal when the tower is plumb. If the terrain of the tower site is uneven, the guys are not perfectly symmetrical and tensions in guys vary in the three directions. For this reason initial guy tensions are specified in one direction only. The tower should be plumbed with the specified tensions in the given guy direction.
3. Wind load on tower and guys changes the tension in all guys; therefore, plumb the tower in calm weather only.
4. The plumbing of a tower or checking alignment of a tower should be performed in accordance with Annex J of ANSI/TIA/EIA 222G.

REINFORCED CONCRETE

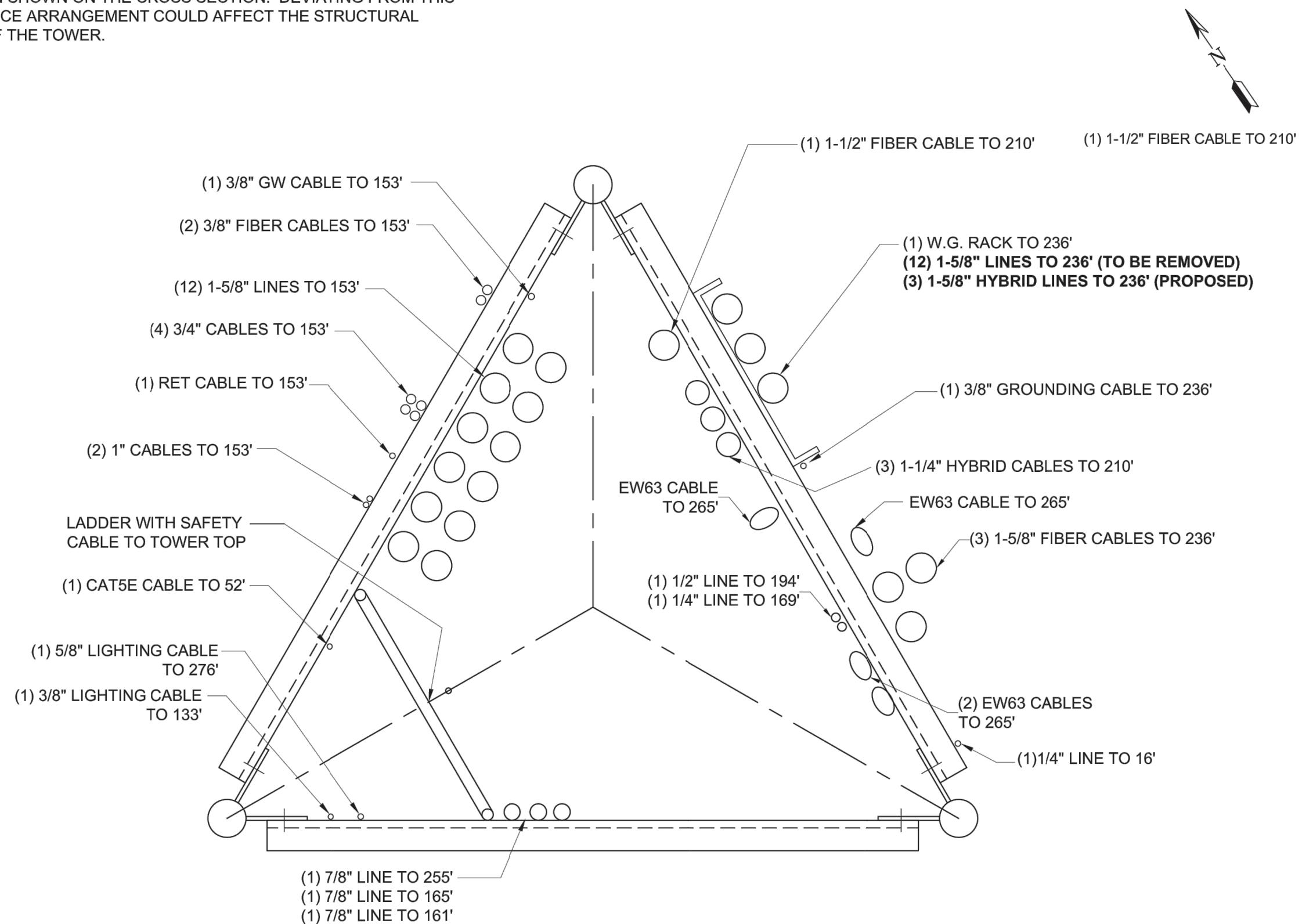
1. All concrete shall be in accordance with ACI 318 and ACI 301 and have a minimum compressive strength of 4000 psi after 28 days.
2. All concrete shall be sampled and tested in accordance with ACI 301. Testing shall be carried out by an independent testing laboratory.
3. Concrete shall not contain calcium chloride or any admixtures that contain chlorides. All admixtures used shall conform to ASTM C260 (air-entraining) and ASTM C494 (water reducing and/or accelerating).
4. All reinforcing bars shall be Grade 60 deformed bars in accordance with ASTM A615, and shall be fabricated and placed in accordance with ASTM 315, ACI 318 and CRSI's Manual of Standard Practice.
5. See page D02.01 for foundation notes.

| | | |
|--|--------|----------------------|
| PREPARED BY | JMR | 3/24/21 |
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | DRAWING NUMBER |
| DATE | DATE | DATE |
| REV BY | DATE | REVISION DESCRIPTION |
| K:\350816\dwg\350816_001.02_General Notes.docx | | |
|  GENERAL NOTES | | WATERBURY, CT |
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NOTE:

NOTE:

1. THE TOWER MODIFICATION IS BASED ON THE LINEAR APPURTENANCES (LADDER, TRANSMISSION LINES, CONDUITS, ETC.) BEING INSTALLED IN THE POSITION SHOWN ON THE CROSS SECTION. DEVIATING FROM THIS APPURTENANCE ARRANGEMENT COULD AFFECT THE STRUCTURAL INTEGRITY OF THE TOWER.

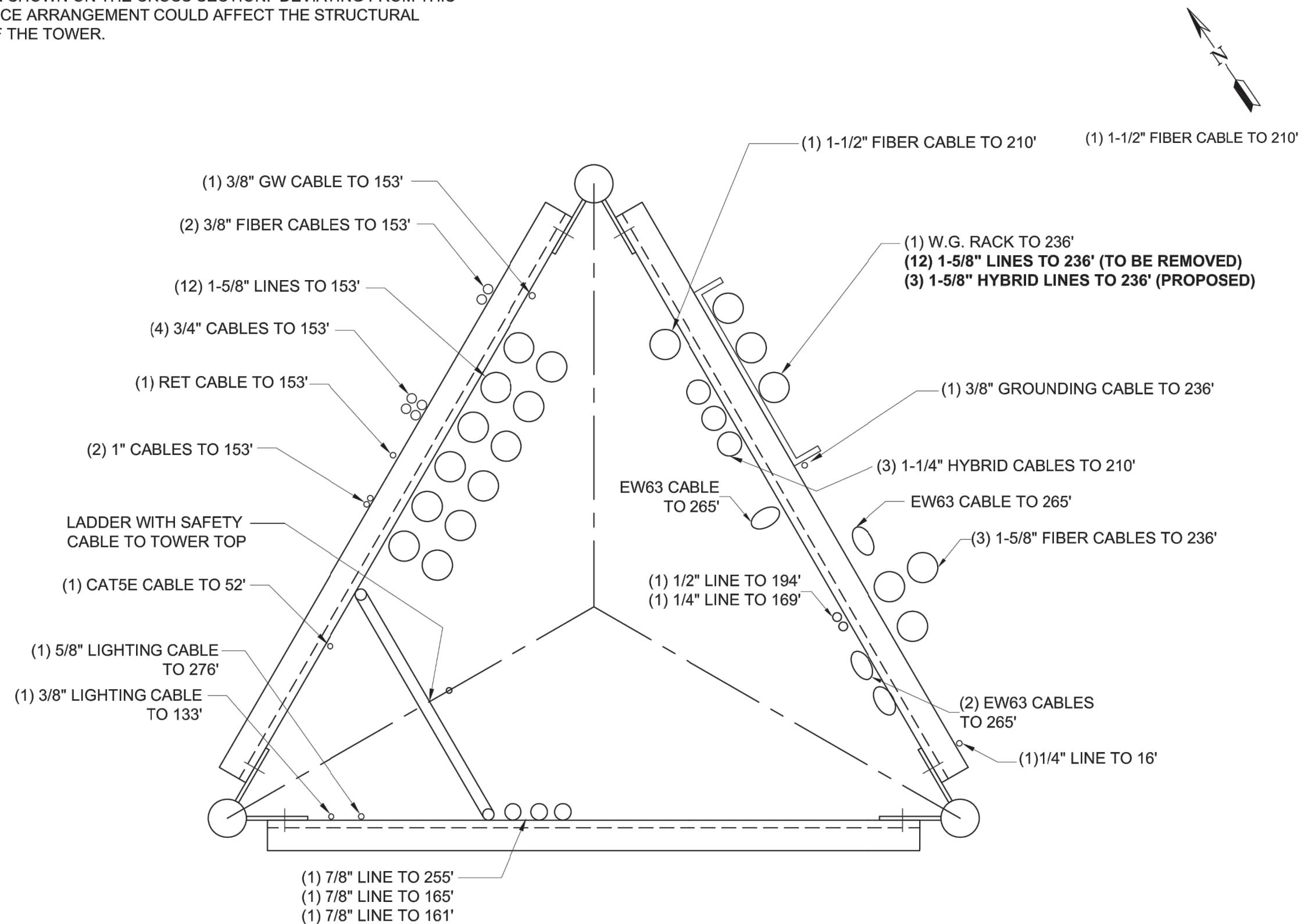


| | |
|--|-------------------------------------|
|  | |
| STAINLESS <small>A BUSINESS OF FDH INFRASTRUCTURE SERVICES 100 West Main Street, Suite 400 Lansdale, PA 19446</small> | |
| LINEAR APPURTENANCES WATERBURY, CT | |
| <small>THIS DRAWING IS THE PROPERTY OF STAINLESS AND TRANSMITTED IN CONFIDENCE AND THE REPRODUCTION, USE OR DISCLOSURE, IN WHOLE OR IN PART, OF THE DESIGN AND DETAILS CONTAINED HEREIN IS PROHIBITED WITHOUT THE PRIOR WRITTEN PERMISSION OF STAINLESS.</small> | |
| <small>REV</small> <small>BY</small> <small>DATE</small> | <small>REVISION DESCRIPTION</small> |
| <small>D.CK</small> <small>DATE</small> <small>E.CK</small> <small>DATE</small> | <small>DRAWING NUMBER</small> |
| 350819 | |
| D05.00 | |

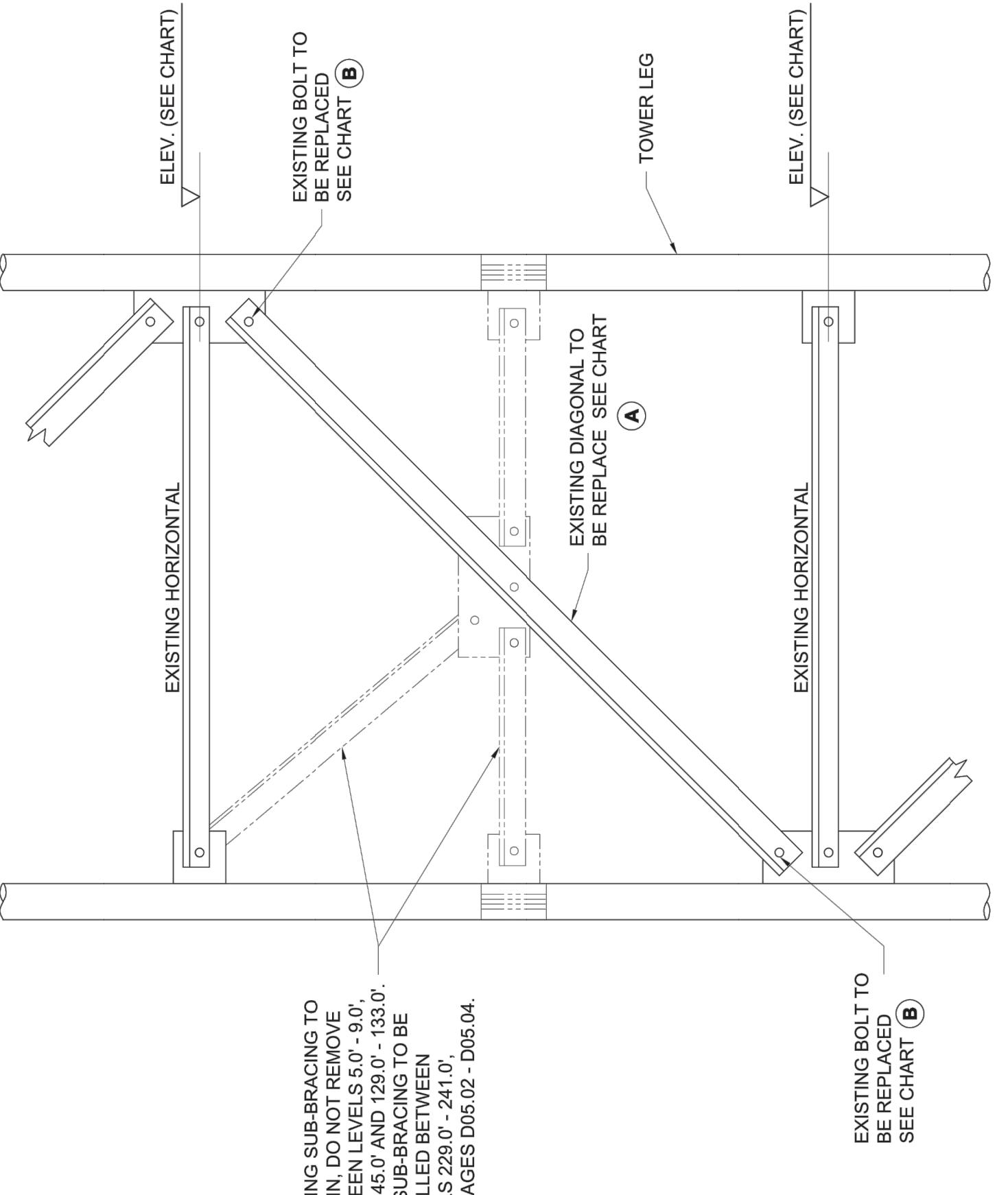
NOTE:

NOTE:

1. THE TOWER MODIFICATION IS BASED ON THE LINEAR APPURTENANCES (LADDER, TRANSMISSION LINES, CONDUITS, ETC.) BEING INSTALLED IN THE POSITION SHOWN ON THE CROSS SECTION. DEVIATING FROM THIS APPURTENANCE ARRANGEMENT COULD AFFECT THE STRUCTURAL INTEGRITY OF THE TOWER.



| | |
|--|--|
|  | |
| STAINLESS <small>A BUSINESS OF FDH INFRASTRUCTURE SERVICES 100 West Main Street, Suite 400 Lansdale, PA 19446</small> | |
| LINEAR APPURTENANCES WATERBURY, CT | |
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| REV BY DATE | REVISION DESCRIPTION |
| D.CK DATE E.CK DATE | DRAWING NUMBER D05.00 |
| 350819 | |
| 4/14/2021 | |
| AV | |
| PROJECT NUMBER | |
| 4/12/21 | |
| GH | |
| CHECKED BY | |
| JMR | |
| 3/24/21 | |



TOWER MUST BE ADEQUATELY BRACED BEFORE REMOVING ANY EXISTING TOWER MEMBERS. IN PARTICULAR CONTRACTOR IS ALERTED TO THE FACT THAT TEMPORARILY REMOVING EXISTING SUB BRACING TO THE LEGS WILL INCREASE THE BUCKLING LENGTH OF THE LEGS, HENCE REDUCING THE COMPRESSION LOAD CARRYING STRENGTH OF THE LEGS. THIS MUST BE CHECKED BY CONTRACTOR AS PART OF HIS 'MEANS AND METHODS' OF CONSTRUCTION.

| ELEVATION | BAYS | DIAGONAL REPLACEMENTS | | MAX. IMPOSED LOAD IN MEMBER |
|-----------------|------|-----------------------------|------------------------|-----------------------------|
| | | (A) | (B) | |
| 5.0' - 9.0' | 1 | L 2 x 2 x 1/4 (A36) | 5/8" DIA. BOLT (A325X) | 4.8 KIPS |
| 37.0' - 45.0' | 2 | L 2 x 2 x 1/4 (A36) | 5/8" DIA. BOLT (A325X) | 4.6 KIPS |
| 129.0' - 141.0' | 3 | L 2 1/2 x 2 1/2 x 3/8 (A36) | 5/8" DIA. BOLT (A325X) | 12.9 KIPS |
| 149.0' - 153.0' | 1 | L 2 1/2 x 2 1/2 x 3/8 (A36) | 5/8" DIA. BOLT (A325X) | 10.0 KIPS |
| 205.0' - 209.0' | 1 | L 2 1/2 x 2 1/2 x 3/8 (A36) | 5/8" DIA. BOLT (A325X) | 9.9 KIPS |
| 221.0' - 225.0' | 1 | L 2 x 2 x 1/4 (A36) | 5/8" DIA. BOLT (A325X) | 4.5 KIPS |

| | | | | | | | | |
|---|--|---|---|---|---|-----------------|--------|----------------------|
|  | STAINLESS A BUSINESS OF FDH INFRASTRUCTURE SERVICES 100 West Main Street, Suite 400 Lansdale, PA 19446 | * | * | * | * | PREPARED BY | JMR | 3/24/21 |
| | | * | * | * | * | CHECKED BY | GH | 4/12/21 |
| | | * | * | * | * | ENGINEER REVIEW | AV | 4/14/2021 |
| | | * | * | * | * | PROJECT NUMBER | 350819 | |
| | | * | * | * | * | DRAWING NUMBER | D05.01 | |
| | | | | | | REV BY | DATE | REVISION DESCRIPTION |
| | | | | | | D.CK | DATE | E.CK DATE |

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K:\350819\dw\350819 D05.01 Diagonal Replacement.dwg



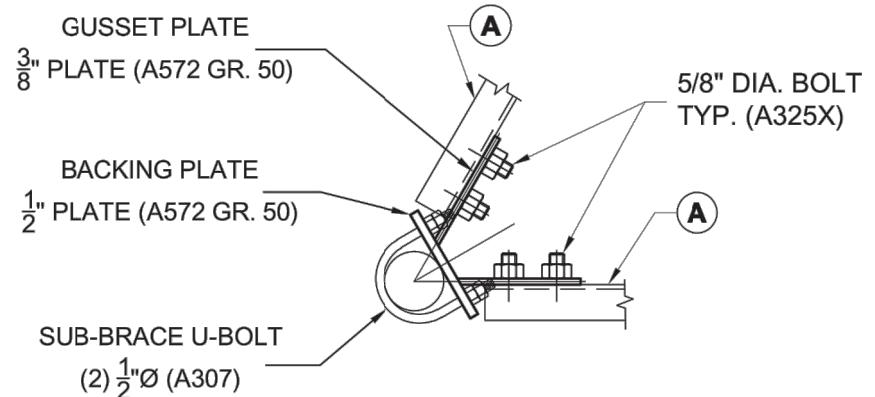
| ELEVATION | BAYS | LEG DIA. | SUB BRACING | | MAX. FACTORED COMPRESSION LEG LOADS |
|-----------------|------|----------|---------------------|---------------------|-------------------------------------|
| | | | (A) | (B) | |
| 229.0' - 241.0' | 3 | 1-3/4" Ø | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) | 86.9 KIPS |

**TOWER MUST BE ADEQUATELY BRACED
BEFORE REMOVING ANY EXISTING
TOWER BOLTS**

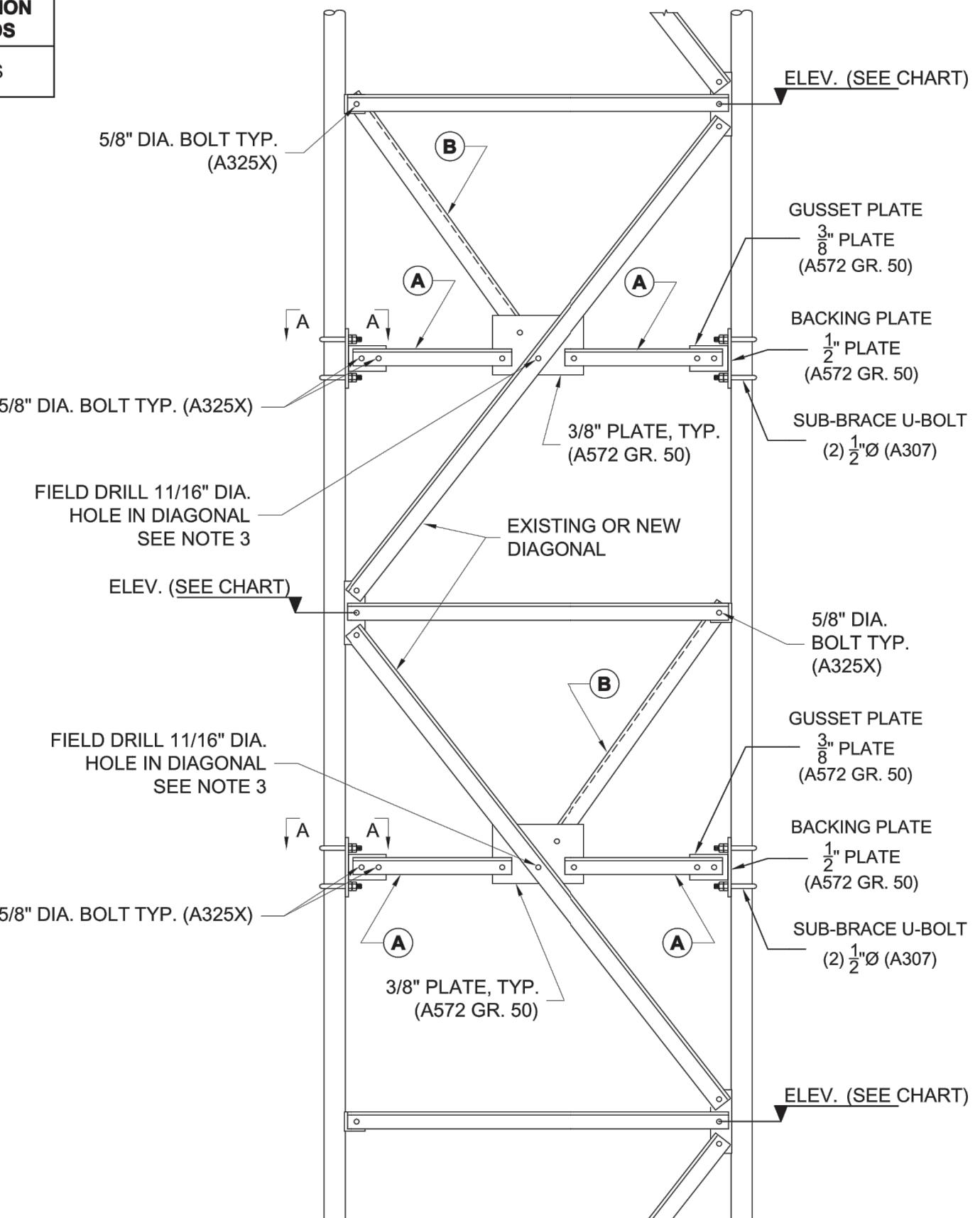
SEE PAGES D05.03 & D05.04 FOR SUB
DIAGONAL CONFIGURATION WHERE SUB
DIAGONAL INTERFERES WITH INSIDE CLIMBING
LADDER ON THE "NW" AND "SW" FACES.

NOTES:

1. CONTRACTOR IS ADVISED TO REMOVE AND REPLACE ONE HORIZONTAL BOLT, AT ONE LEVEL, AND ON ONE FACE, AT A TIME.
2. DESIGN SUB BRACING CONNECTIONS PER ANSI/TIA 222-G BASED UPON THE MAXIMUM COMPRESSION LEG LOADS SHOWN.
3. TOUCH-UP DAMAGED GALVANIZING IN ACCORDANCE WITH ASTM A780.
 - a. SURFACES TO BE PAINTED SHALL BE CLEAN, DRY AND FREE OF OIL, GREASE, PRE-EXISTING PAINT AND CORROSION BY-PRODUCTS.
 - b. APPLY ZINC RICH PAINT IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS IN A SINGLE APPLICATION, EMPLOYING MULTIPLE PASSES TO ACHIEVE A DRY FILM THICKNESS OF NO LESS THAN 6 MILS.



SECTION A - A



EL ELEVATION VIEW "EAST" FACE

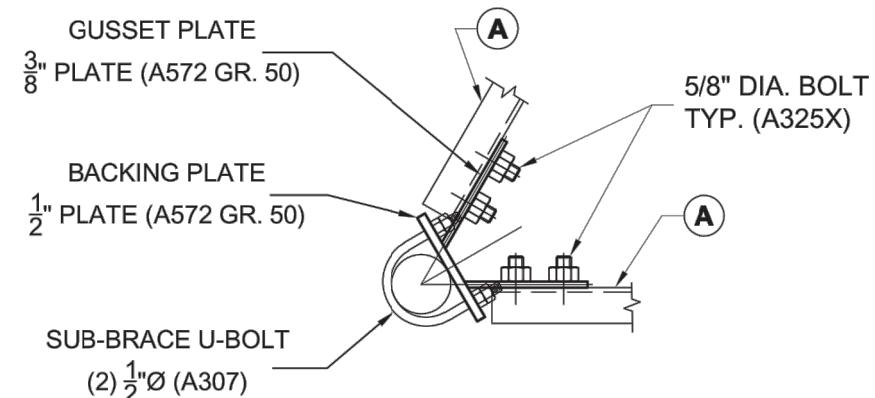


| ELEVATION | BAYS | LEG DIA. | SUB BRACING ON "NW" FACE ONLY | | | MAX. FACTORED COMPRESSION LEG LOADS |
|-----------------|------|----------|-------------------------------|---------------------|--------------------------------|-------------------------------------|
| | | | (A) | (B) | (C) | |
| 229.0' - 241.0' | 3 | 1-3/4" Ø | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) (COPED) | 86.9 KIPS |

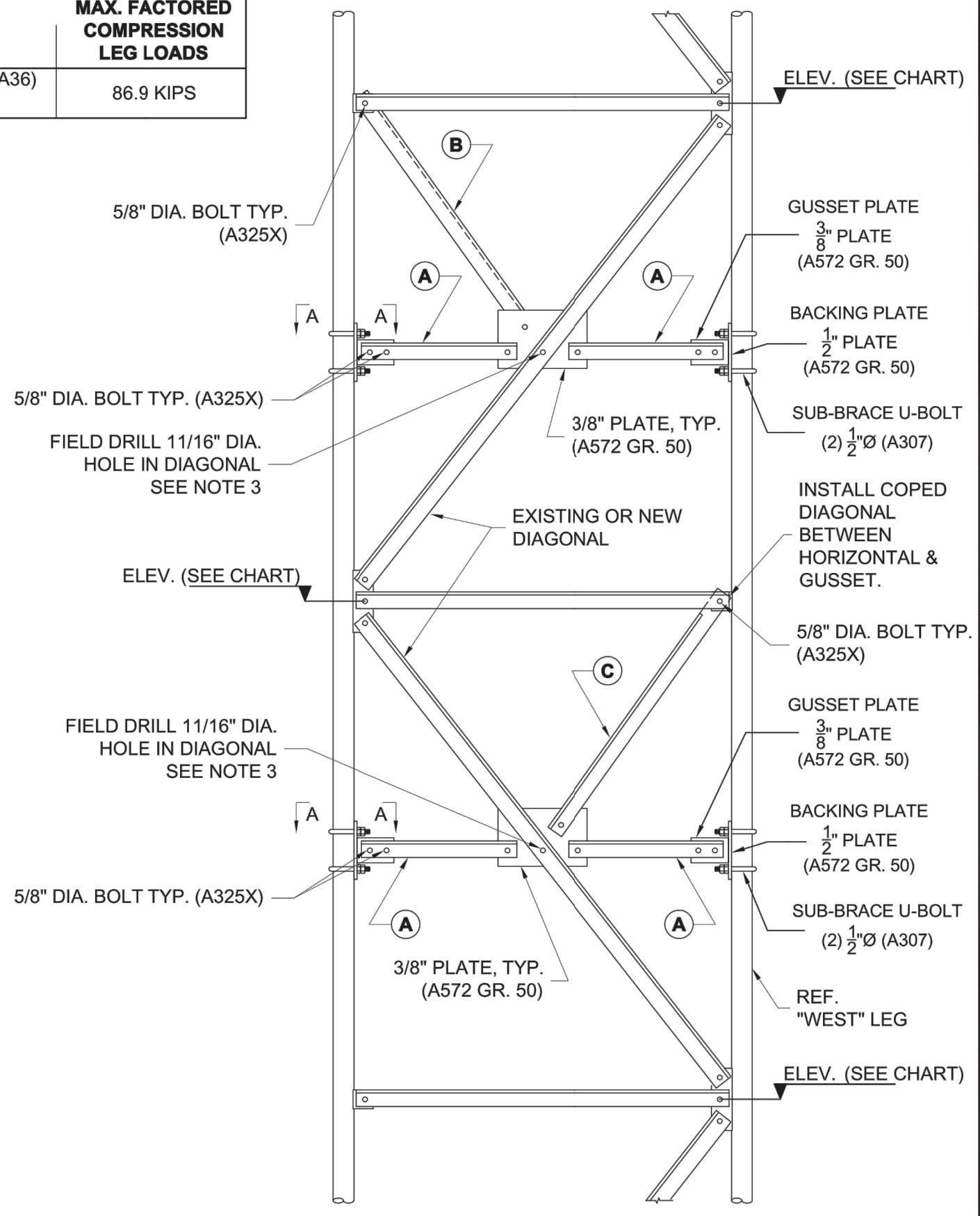
**TOWER MUST BE ADEQUATELY BRACED
BEFORE REMOVING ANY EXISTING
TOWER BOLTS**

NOTES

1. CONTRACTOR IS ADVISED TO REMOVE AND REPLACE ONE HORIZONTAL BOLT, AT ONE LEVEL, AND ON ONE FACE, AT A TIME.
2. DESIGN SUB BRACING CONNECTIONS PER ANSI/TIA 222-G BASED UPON THE MAXIMUM COMPRESSION LEG LOADS SHOWN.
3. TOUCH-UP DAMAGED GALVANIZING IN ACCORDANCE WITH ASTM A780.
 - a. SURFACES TO BE PAINTED SHALL BE CLEAN, DRY AND FREE OF OIL, GREASE, PRE-EXISTING PAINT AND CORROSION BY-PRODUCTS.
 - b. APPLY ZINC RICH PAINT IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS IN A SINGLE APPLICATION, EMPLOYING MULTIPLE PASSES TO ACHIEVE A DRY FILM THICKNESS OF NO LESS THAN 6 MILS.



SECTION A - A



EL E V A T I O N V I E W " N W " F A C E

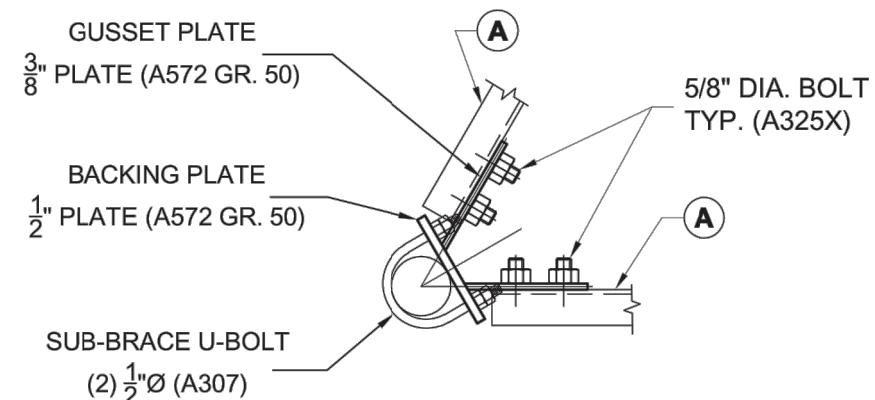


| SUB BRACING ON "SW" FACE ONLY | | | | | | MAX. FACTORED COMPRESSION LEG LOADS |
|--------------------------------------|-------------|---------------------|---------------------|---------------------|--------------------------------|--|
| ELEVATION | BAYS | LEG DIA. | A | B | C | |
| 229.0' - 241.0' | 3 | 1-3/4" Ø | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) (COPED) | 86.9 KIPS |

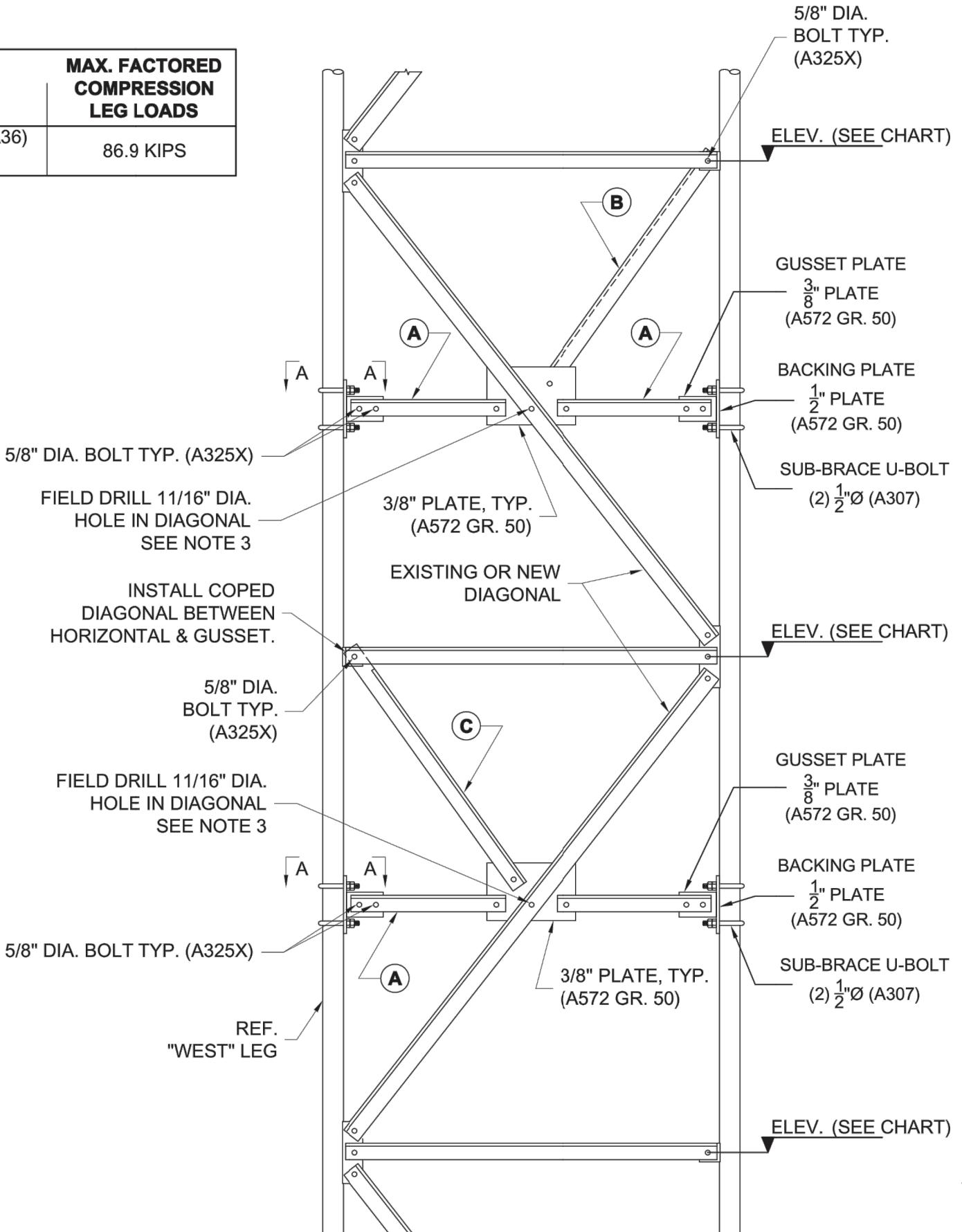
**TOWER MUST BE ADEQUATELY BRACED
BEFORE REMOVING ANY EXISTING
TOWER BOLTS**

NOTES:

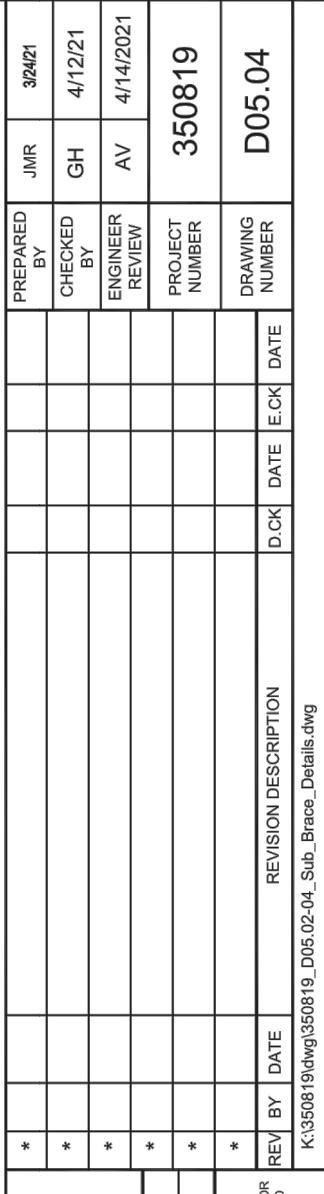
1. CONTRACTOR IS ADVISED TO REMOVE AND REPLACE ONE HORIZONTAL BOLT, AT ONE LEVEL, AND ON ONE FACE, AT A TIME.
2. DESIGN SUB BRACING CONNECTIONS PER ANSI/TIA 222-G BASED UPON THE MAXIMUM COMPRESSION LEG LOADS SHOWN.
3. TOUCH-UP DAMAGED GALVANIZING IN ACCORDANCE WITH ASTM A780.
 - a. SURFACES TO BE PAINTED SHALL BE CLEAN, DRY AND FREE OF OIL, GREASE, PRE-EXISTING PAINT AND CORROSION BY-PRODUCTS.
 - b. APPLY ZINC RICH PAINT IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS IN A SINGLE APPLICATION, EMPLOYING MULTIPLE PASSES TO ACHIEVE A DRY FILM THICKNESS OF NO LESS THAN 6 MILS.



SECTION A - A



LEVEL 1 ELEVATION VIEW "SW" FACE



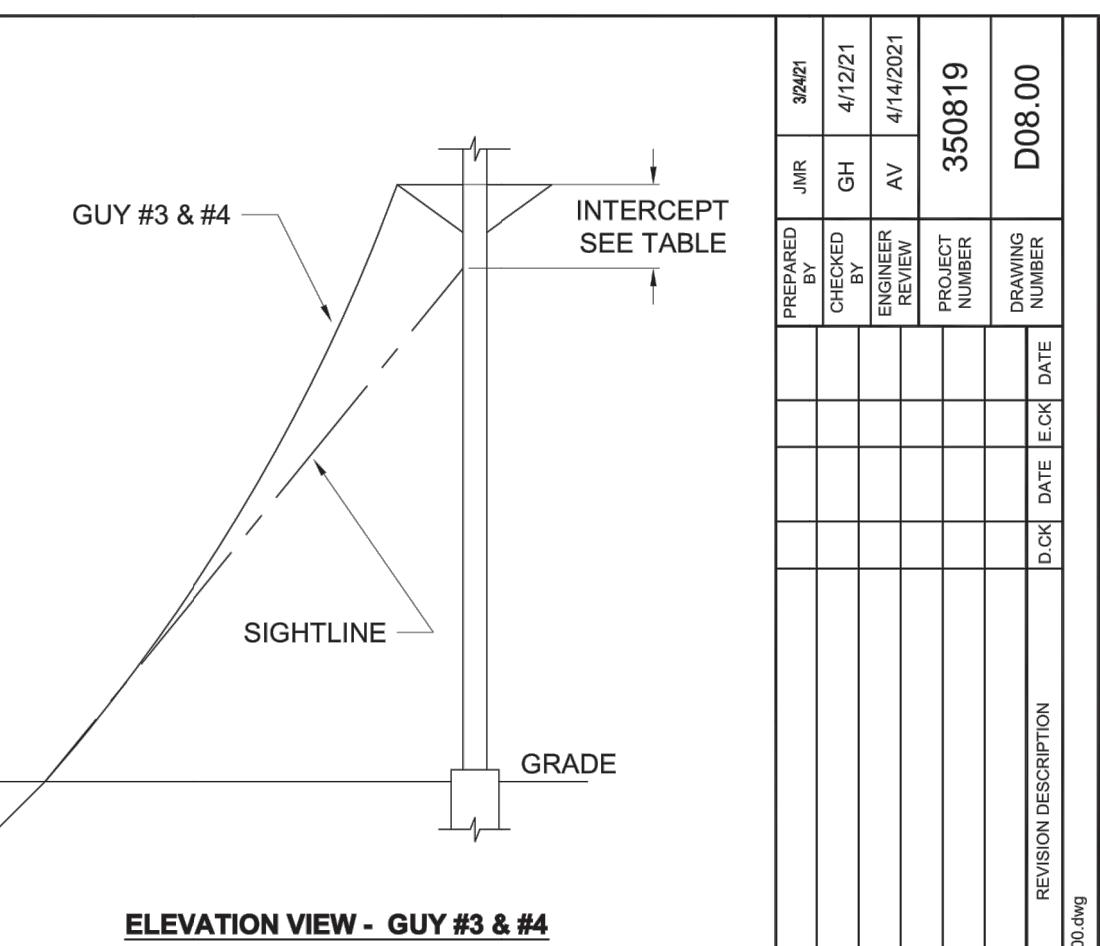
| REVISION DESCRIPTION | DATE | BY |
|----------------------|------------|-------------------------|
| Initial version | 2009/01/01 | Sub. Broom, Details due |

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PART, OF THE DESIGN AND DETAILS CONTAINED HEREIN IS PROHIBITED
WITHOUT THE PRIOR WRITTEN PERMISSION OF STAINLESS.

CONFIDENCE
IN PART, C
WI

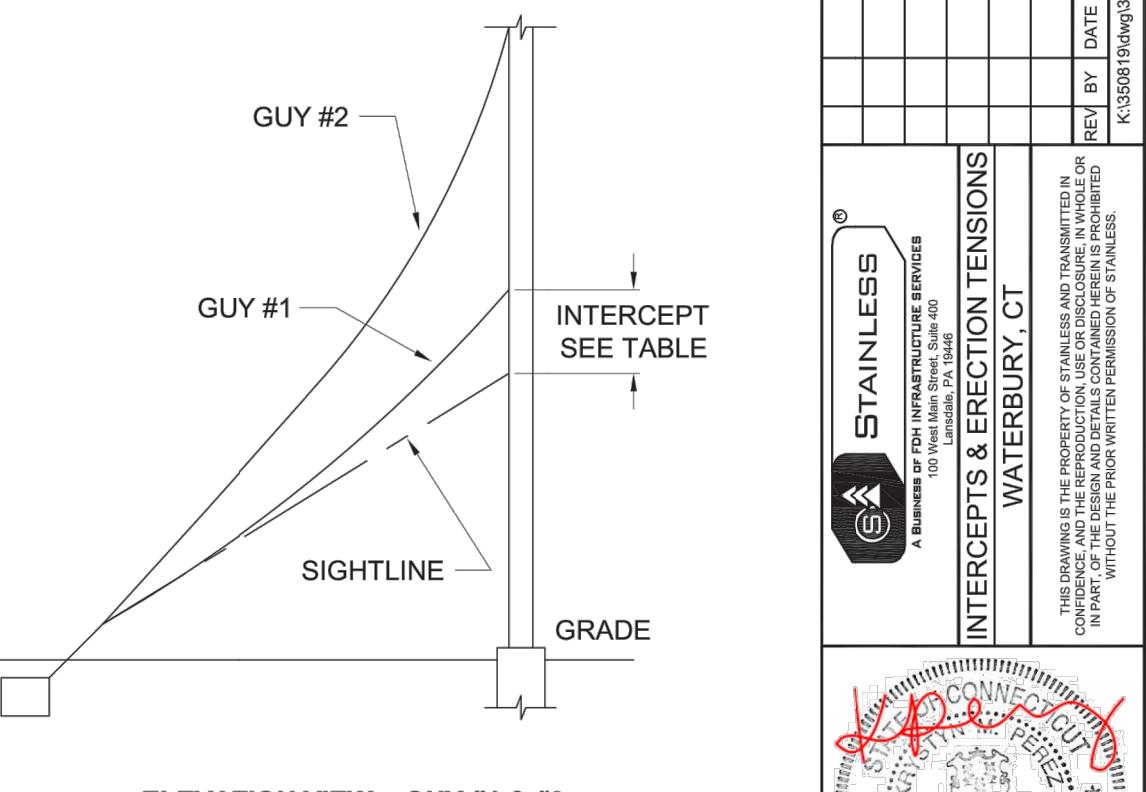
2021

| | 0 DEG. F | | 20 DEG. F | | 40 DEG. F | | 60 DEG. F | | 80 DEG. F | | 100 DEG. F | |
|----|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|
| | ERECT. TENSION (LBS) | INTER- CEPT (FT) |
| 1A | 5875 | 1.4 | 5448 | 1.5 | 5023 | 1.6 | 4600 | 1.8 | 4181 | 2.0 | 3768 | 2.2 |
| 2A | 5674 | 3.8 | 5238 | 4.1 | 4813 | 4.5 | 4400 | 4.9 | 4006 | 5.3 | 3631 | 5.9 |
| 3A | 4901 | 4.2 | 4734 | 4.4 | 4567 | 4.5 | 4400 | 4.7 | 4235 | 4.9 | 4070 | 5.0 |
| 4A | 2810 | 10.5 | 2705 | 10.9 | 2602 | 11.3 | 2500 | 11.7 | 2402 | 12.2 | 2304 | 12.7 |



NOTES:

1. DURING THE INITIAL GUY TENSIONING PROCEDURES AND AT THE TIME OF INSPECTION, THE GUY TENSIONS AND/OR INTERCEPTS SHOULD BE IN ACCORDANCE WITH THE VALUES SHOWN ABOVE. USE THE TEMPERATURE WHICH ACTUALLY EXISTS AT THE TIME THE TENSION IS BEING CHECKED. FOR TEMPERATURES OTHER THAN THOSE SHOWN ABOVE, INTERPOLATE OR EXTRAPOLATE OTHER VALUES.
2. TOWER PLUMBING AND INITIAL TENSIONING OF GUYS SHOULD BE DONE ONLY IN CALM WEATHER AND WITH NO ICE ON GUYS.
3. INTERCEPTS AND TENSIONS ARE SHOWN IN GUY DIRECTION "A" ONLY. ADJUST ALL DIRECTIONS ACCORDINGLY.
4. GUY #1 IS BOTTOM GUY; GUY #2 IS NEXT, ETC.
5. USE SIGHT BAR FOR DETERMINING GUY INTERCEPTS.
6. TENSION AND/OR INTERCEPT TOLERANCES +/- 5%.



| | | |
|--------------------|--------|-----------|
| PREPARED BY | JMR | 3/24/21 |
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | |
| DRAWING NUMBER | D08.00 | |

| | | | | | | |
|-----|----|------|----------------------|------|------|------|
| REV | BY | DATE | REVISION DESCRIPTION | D.CK | DATE | E.CK |
|-----|----|------|----------------------|------|------|------|

K:\350819\dwg\350819_D08.00.dwg



INTERCEPTS & ERECTION TENSIONS

WATERBURY, CT

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Exhibit D



REPORT 350819

DATE: 4/14/2021

RIGOROUS STRUCTURAL ANALYSIS
FOR A 276' G-48 GUYED TOWER
WATERBURY, CT
SITE LOCATION: 41°31'4.7" N, 73°01'6.4" W

Analysis Results

| | | |
|------------------|-------|------------|
| Tower Components | 99.8% | Sufficient |
| Foundations | 91.8% | Sufficient |

PREPARED BY: AV

APPROVED: KP

CHECKED BY: CA



| Date | Pages | Remarks |
|------|-------|---------|
| | | |

| Rev. | Date | Description |
|------|------|-------------|
|------|------|-------------|

| <u>SECTION</u> | <u>PAGE</u> |
|--|-------------|
| A. AUTHORIZATION/PURPOSE | 1 |
| B. TOWER HISTORY | 1 |
| C. CONDITIONS INVESTIGATED | 3 |
| D. LOADS AND STRESSES | 5 |
| E. METHOD OF ANALYSIS | 5 |
| F. RESULTS | 5 |
| G. CONCLUSIONS AND RECOMMENDATIONS | 7 |
| H. PROVISIONS OF ANALYSIS..... | 7 |

APPENDIX

| | |
|------------------------------|-----|
| GENERAL ARRANGEMENT | E-1 |
| LINEAR APPURTENANCES | A-2 |
| DESIGN DRAWINGS 350819 | A-3 |

| Rev. | Date | Description |
|------|------|-------------|
|------|------|-------------|

A. AUTHORIZATION/PURPOSE

As authorized by Sheldon Freinkle of Northeast Site Solutions, a rigorous structural analysis was performed to investigate the adequacy of a 276' G-48 guyed tower in Naugatuck, Connecticut to support specified equipment.

B. TOWER HISTORY

The tower was originally designed and furnished in 1991 by Stainless, Inc. It was designed in accordance with ANSI/EIA-222-D for a basic wind speed of 80 mph with no ice and 69.3 mph with 1/2" of uniform radial ice while supporting the following equipment:

1. Sixty (60) square feet of flat wind area at the 271' level and 20" width of linear wind area to the 276' level.
2. Two (2) Andrew HMD16HD TV antennas, top mounted, fed by one (1) 1-5/8" line to each antenna.
3. Four (4) 8' parabolic antennas with radomes at the 271' level, fed by one (1) EW 77 waveguide to each antenna (future).
4. Two (2) 8' parabolic antennas with radomes at the 221' level, fed by one (1) EW 77 waveguide to each antenna.
5. Two (2) 6' parabolic antennas with radomes at the 216' level, fed by one (1) EW 77 waveguide to each antenna.
6. Two (2) 6' Mark grid dishes at the 121' level, fed by one (1) 7/8" line to each antenna.
7. Two (2) 4' parabolic antennas with radomes at the 106' level, fed by one (1) EW 127 waveguide to each antenna.
8. Two (2) 18" dishes at the 111' level, fed by one (1) RG59 line to each antenna.
9. Two (2) 24" dishes at the 106' level, fed by one (1) RG59 line to each antenna.
10. Four (4) 4' parabolic antennas with radomes at the 101' level, fed by one (1) EW 127 waveguide to each antenna.
11. Two (2) 4' parabolic antennas with radomes at the 96' level, fed by one (1) EW 127 waveguide to each antenna.
12. One (1) inside climbing ladder with cable type safety device for the full height of the tower.

❖ In 2005, the tower was modified by Paul J. Ford and Company. The scope of the modifications was obtained from:

- Dewberry drawing titled 'Modified 276' Guyed Tower, Sheet S-1' dated 06/14/2005.
- Stainless LLC Report No. 350802 dated 11/2005, providing connection assembly material for the Level 3 guy replacement.

The modifications were as follows:

- a. Replaced existing 1/2" EHS guys at Level 3 with new 9/16" EHS guy wires.
- b. Adjusted initial guy tensions in all guy levels.

| Rev. | Date | Description |
|------|------|-------------|
|------|------|-------------|

c. Replaced existing diagonal members with new higher capacity members at the following bays:

| Location | No. of bays |
|-----------------|-------------|
| 141.0' – 193.0' | 13 |

❖ The tower was modified per Stainless LLC Report 350804 dated 04/05/2013, and the modifications were as follows:

- Replaced existing 9/16" EHS guys at Level 2 with new 5/8" EHS guy wires.
- Installed concrete thrust blocks in front of each anchor and connected the blocks to the anchor arms to resist anchor arm bending.
- Adjusted initial guy tensions in all guy levels.

❖ The tower was analyzed per Stainless Report 350806 dated 6/25/2016, and tower modification design drawings prepared per Stainless Design Drawings Report 350812 dated 8/10/2017. The modifications consisted of the following:

- Replace existing guy wires at Levels 1 (bottom) and 2 with new higher capacity guy wires.
- Adjust initial tensions in all guy levels.
- Install additional horizontal sub-bracing members at the midpoints of the following bays:

| Location | No. of bays |
|-----------------|-------------|
| 153.0' – 185.0' | 8 |
| 5.0' – 133.0' | 32 |

- Replace or reinforce existing diagonal braces with new higher capacity members at the following bays:

| Location | No. of bays |
|-----------------|-------------|
| 129.0' – 149.0' | 5 |
| 45.0' – 77.0' | 8 |

❖ Tower and foundation modifications per Stainless Design Drawing package 350819 dated 4/14/2021 were based upon the recommended modifications per Stainless failing analysis Report 350818 dated 3/19/2021. These modifications are assumed to have been correctly installed for the purpose of this analysis. The modifications are as follows:

- Adjust initial guy tensions at all guy levels.
- Install additional horizontal sub-bracing at the midpoints of the following bays:

| Location | No. of bays |
|-------------|-------------|
| 229' – 241' | 3 |

- Replace the existing diagonal members with new, higher capacity members at the following locations:

| Rev. | Date | Description |
|------|------|-------------|
|------|------|-------------|

| Location | No. of bays |
|-------------|-------------|
| 221' – 225' | 1 |
| 205' – 209' | 1 |
| 149' – 153' | 1 |
| 129' – 141' | 3 |
| 37' – 45' | 2 |
| 5' – 9' | 1 |

d. Reinforce the tower base foundation. It is assumed there are no physical obstructions preventing the tower base remediation.

Stainless has no record of any other modifications to the tower or its foundations. If there have been other modifications, Stainless should be notified in order to determine the effect on the structural integrity of the tower.

C. CONDITIONS INVESTIGATED

The analysis was performed for the tower supporting specified equipment based upon the following sources:

- Stainless Proposal P21_350818_001 dated 3/23/2021.
- FDH Infrastructure Services Feedline & Appurtenance Mapping Report dated 7/26/2019
- Stainless Report 350818 dated 3/19/2021.
- CTNH305B_Anchor_4_draft_2021-01-27.pdf
- Loading email from Sheldon Freinle of Northeast Site Solutions dated 3/15/2021.
- Stainless Design Drawing package 350819 dated 4/14/2021

| APPURTENANCE | ELEVATION, ft. | FEED LINES |
|--|----------------|---|
| 5/8" diameter x 4.3' lightning rod | 276 | -- |
| Beacon w/ ice shield | 276 | 5/8" cable |
| (2) 6' x 6' ice shield | 270 | -- |
| (2) 6' diameter MW dishes w/radome | 265 | (4) EW63 |
| Scala grid dish | 255 | 7/8" |
| (3) Andrew DBXNH-6565A-A2M (To Be Removed) | | (12) 1-5/8" lines (To Be Removed) |
| (3) Ericsson RRUS11 B12 (To Be Removed) | 236 | (3) 1-5/8" fiber cable (Existing) |
| (4) RFS ATMA3P4-1A20 (To Be Removed) | | (3) 1-5/8" Hybrid Cable (Proposed) |
| (2) RFS ATMA4P4-1A20 (To Be Removed) | | |

| | Rev. | Date | Description |
|--|--------------------------|------|--|
| (3) T-Arm Mounts (To Be Removed) (3) Ericsson AIR32 KRD901146-1_B66A_B2A (Existing) (3) RFS-APXVAARR24_43-U-NA20 (Proposed) (3) Ericsson AIR6449 B41 (Proposed) (3) Ericsson Radio 4449 B71+B85 (Proposed) (3) Radio 4415 B25 (Proposed) (3) 12.5' Sector Frames [SitePro1 P/N: VFA12-SD-S] (Proposed) | | | |
| (6) Alcatel-Lucent RRH 2x50-800 RRUs (3) RRH 8x20-25-FEU 8T8R RRUs (6) RRH 1900-4x45 RRUs (3) 70"x12"x8" panels (3) Andrew DT465B-2XR-V2 panels (3) Sector mounts | 210 | | (1) 1-1/2" Fiber (3) 1-1/4" hybrid |
| 15' whip antenna w/ (3) elements | 195 | | (1) 1/2" coax |
| 6' x 6' ice shield | 174 | | -- |
| 10' dipole w/(2) elements | 171 | | 7/8" |
| (1) Mark 4' diameter grid dish (1) 9-1/2" x 2-1/2" x 2-1/2" ODU | 169 | | 1/4" coax |
| Diamond D-130N | 164 | | 7/8" |
| (3) Raycap DC6-48-60-18-8C SPDs (6) Ericsson RRUS 32 B30 RRUs (3) Powerwave 7770.00J1 panels (6) Ericsson KRC 161 689/3 RRUs (6) CCI TPX-070821 diplexers (6) Powerwave LGP 21401 TMAs (6) Ericsson KRC 161 472/3 RRUs (3) Kathrein 80010965 panels (3) CCI HPA-65R-BW-H6 panels (3) Quintel QS665122E53617881 panels (3) Ericsson RRUS 11 B12 (3) T-arm mounts | 153 | | (2) 1" cables (1) RET cable (4) 3/4" cables (2) 3/8" fiber cables (12) 1-5/8" coax |
| (3) L-810 side markers | 133 | | 3/8" cable |
| 12" stand off (unused) | 52 | | -- |
| 3-1/2" diameter x 9" Omni | 17 | | 1/4" coax |
| -- | 236 | | 3/8" grounding cable |
| Inside climbing ladder with safety cable | Full height of the tower | | 3/8" |

| Rev. | Date | Description |
|------|------|-------------|
|------|------|-------------|

The locations of the transmission lines have been based upon the cross section from Stainless Report 350818 dated 3/19/2021 and the FDH Infrastructure Services Mapping report dated 7/26/2019 and shown on Page A-2 of this Report. Proposed transmission lines have been located to minimize the wind load on the tower. Deviating from the line arrangement as shown may invalidate the results of this analysis.

D. LOADS AND STRESSES

The analysis was performed using the following design parameters in accordance with the 2018 Connecticut Building Code (referencing the 2015 IBC) and ANSI/TIA-222-G, Structural Standard for Antenna Supporting Structures and Antennas, including Addenda 1 & 2, dated 2007 and 2009 respectively.

- Risk Category II
- 125 mph ultimate 3-second gust wind speed with no ice.
- 50 mph basic design wind speed with 3/4" design ice thickness.
- Exposure Category B
- Topographic Category 5 ($H = 360'$, $2Lh = 2880'$, and $x = 370'$)
- 0.19 earthquake spectral response acceleration at short periods (S_s)
- Earthquake Site Class D

The ultimate design wind speed is converted to a nominal design wind speed for use in ANSI/TIA 222-G based upon the following formula:

$$\begin{aligned}V_{asd} &= V_{ult} * (0.6)^{1/2} \\&= 125 * (0.6)^{1/2} \\&= 97 \text{ mph}\end{aligned}$$

Seismic effects need not be considered as the value of S_s is less than 1.0 per Section 2.7.3 of ANSI/TIA-222-G. Load and resistance factors used to evaluate the adequacy of the structure were in accordance with ANSI/TIA-222-G.

E. METHOD OF ANALYSIS

The analysis was performed using tnxTower, a commercial computer-aided finite element tower program for the non-linear analysis of towers subject to simultaneous lateral and axial loads.

F. RESULTS

The results of the analysis show the following ratings:

| Rev. | Date | Description |
|------|------|-------------|
|------|------|-------------|

| Section No. | Elevations (ft) | Component | Span | Capacity % | Pass/Fail |
|-------------|-----------------|----------------------|------|------------|-----------|
| T1 - T4 | 276 - 261 | Leg | 5 | 14.7 | Pass |
| T5 - T19 | 261 - 201 | Leg | 4 | 99.4 | Pass |
| T20 - T37 | 201 - 129 | Leg | 3 | 98 | Pass |
| T38 - T54 | 129 - 61 | Leg | 2 | 75.8 | Pass |
| T55 - T69 | 61 - 2 | Leg | 1 | 94.2 | Pass |
| T1 - T4 | 276 - 261 | Diagonal | 5 | 44.2 | Pass |
| T5 - T19 | 261 - 201 | Diagonal | 4 | 97.5 | Pass |
| T20 - T37 | 201 - 129 | Diagonal | 3 | 96.3 | Pass |
| T38 - T54 | 129 - 61 | Diagonal | 2 | 80.4 | Pass |
| T55 - T69 | 61 - 2 | Diagonal | 1 | 99.8 | Pass |
| T10 - T12 | 241 - 229 | Secondary Horizontal | 4 | 9.4 | Pass |
| T24 - T37 | 185 - 129 | Secondary Horizontal | 3 | 8.6 | Pass |
| T38 - T54 | 129 - 61 | Secondary Horizontal | 2 | 9.1 | Pass |
| T55 - T68 | 61 - 5 | Secondary Horizontal | 1 | 9.2 | Pass |
| T1 - T4 | 276 - 261 | Top Girt | 5 | 10.5 | Pass |
| T7 - T19 | 253 - 201 | Top Girt | 4 | 22.9 | Pass |
| T22 - T37 | 193 - 129 | Top Girt | 3 | 32.8 | Pass |
| T39 - T54 | 125 - 61 | Top Girt | 2 | 6.2 | Pass |
| T56 - T69 | 57 - 2 | Top Girt | 1 | 5.6 | Pass |
| T5 | 261 - 257 | Guy A@261 | 4 | 71.2 | Pass |
| T20 | 201 - 197 | Guy A@201 | 3 | 95.8 | Pass |
| T38 | 129 - 125 | Guy A@129 | 2 | 88.4 | Pass |
| T55 | 61 - 57 | Guy A@61 | 1 | 68.7 | Pass |
| T5 | 261 - 257 | Guy B@261 | 4 | 69.6 | Pass |
| T20 | 201 - 197 | Guy B@201 | 3 | 95 | Pass |
| T38 | 129 - 125 | Guy B@129 | 2 | 92 | Pass |
| T55 | 61 - 57 | Guy B@61 | 1 | 71.8 | Pass |
| T5 | 261 - 257 | Guy C@261 | 4 | 70.8 | Pass |
| T20 | 201 - 197 | Guy C@201 | 3 | 96.2 | Pass |
| T38 | 129 - 125 | Guy C@129 | 2 | 96.4 | Pass |
| T55 | 61 - 57 | Guy C@61 | 1 | 79.5 | Pass |
| T5 | 261 - 257 | Top Guy Pull-Off@261 | 4 | 32.4 | Pass |
| T20 | 201 - 197 | Top Guy Pull-Off@201 | 3 | 67 | Pass |
| T38 | 129 - 125 | Top Guy Pull-Off@129 | 2 | 44.2 | Pass |
| T55 | 61 - 57 | Top Guy Pull-Off@61 | 1 | 26 | Pass |

| | Rev. | Date | Description | | |
|--|------|------|-------------|--|--|
|--|------|------|-------------|--|--|

| | | | | | |
|-------------|-----------|-------------------------|---|------|------|
| T6 | 257 - 253 | Bottom Guy Pull-Off@261 | 4 | 16.2 | Pass |
| T21 | 197 - 193 | Bottom Guy Pull-Off@201 | 3 | 14.5 | Pass |
| T5 | 261 - 257 | Torque Arm Top@261 | 4 | 12.2 | Pass |
| T20 | 201 - 197 | Torque Arm Top@201 | 3 | 16.9 | Pass |
| T5 | 261 - 257 | Torque Arm Bottom@261 | 4 | 38.4 | Pass |
| T20 | 201 - 197 | Torque Arm Bottom@201 | 3 | 50.4 | Pass |
| Foundations | | Tower base | | 91.8 | Pass |
| Foundations | | Guy anchors | | 90.4 | Pass |

The rating is defined as the percentage of the component design capacity that is used up in supporting itself and the loading from the antennas and transmission lines under the design wind and ice loading conditions. Ratings of up to 100% are considered acceptable based on the state of Connecticut requirements, and the tower has been reviewed based on 100% maximum rating.

G. CONCLUSIONS AND RECOMMENDATIONS

Based on the preceding results, the following conclusions may be drawn:

1. With the modifications per Stainless Design Drawings package 350819 dated 4/14/2021 installed, the tower supporting equipment as specified in Section C of this report is adequate to achieve an ultimate 3-second gust wind speed of 125 mph with no ice and a nominal design wind speed of 50 mph with 3/4" design ice thickness in accordance with the 2018 Connecticut Building Code (referencing the 2015 IBC), and ANSI/TIA-222-G with the analysis parameters of Section D.

H. PROVISIONS OF ANALYSIS

The analysis performed and the conclusions contained herein are based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following:

1. Proper alignment and plumbness.
2. Correct guy tensions.
3. Correct bolt tightness.
4. No significant deterioration or damage to any component.

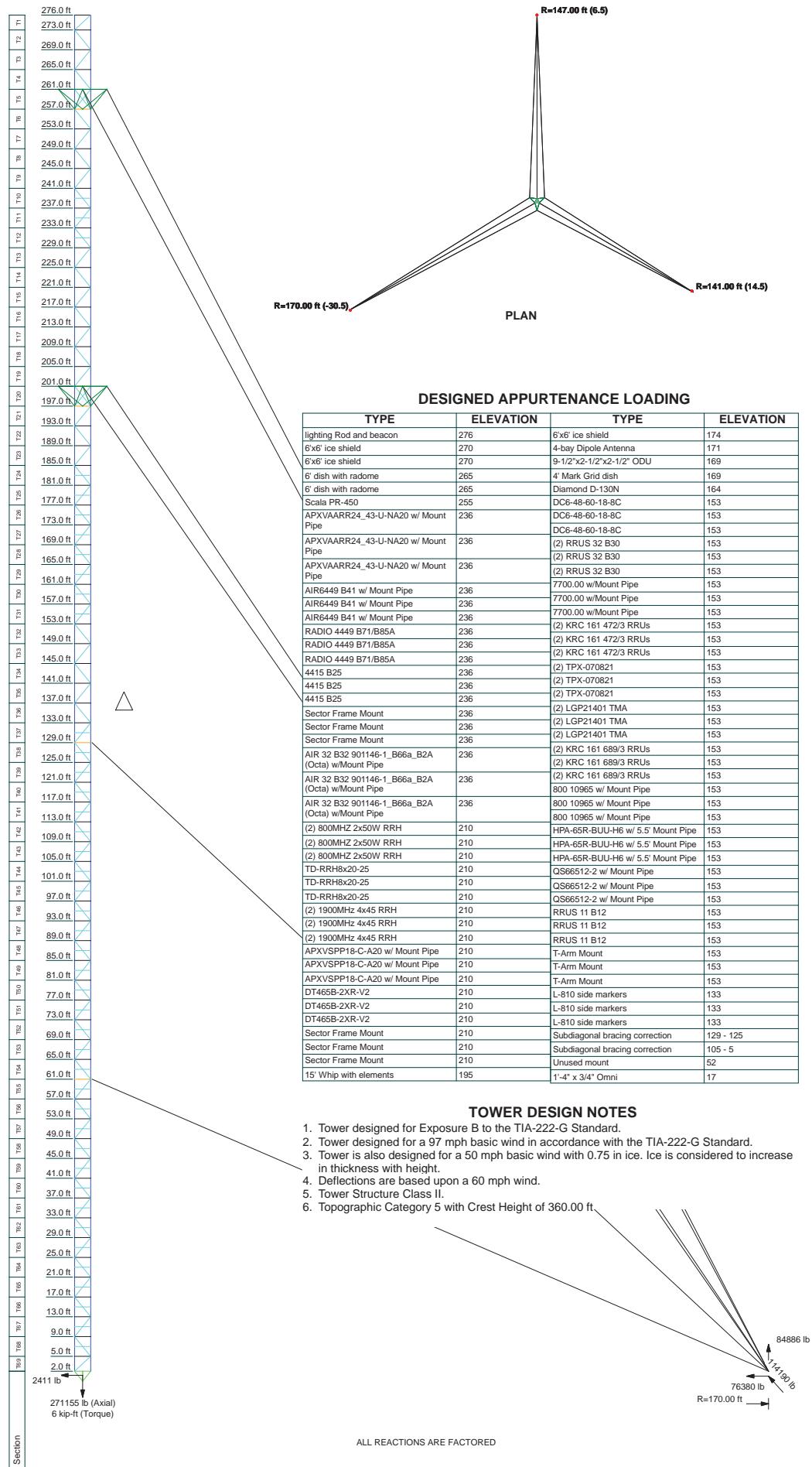
Furthermore, the information and conclusions contained in this Report were determined by application of the current "state-of-the-arts" engineering and analysis procedures and formulae, and Stainless assumes no obligations to revise any of the information or conclusions contained in this Report in the event that such engineering and analysis procedures and formulae are hereafter modified or revised. In addition, under no circumstances will Stainless have any obligation or responsibility whatsoever for or on account of consequential or incidental damages sustained by any person, firm or organization as a result of any information or conclusions

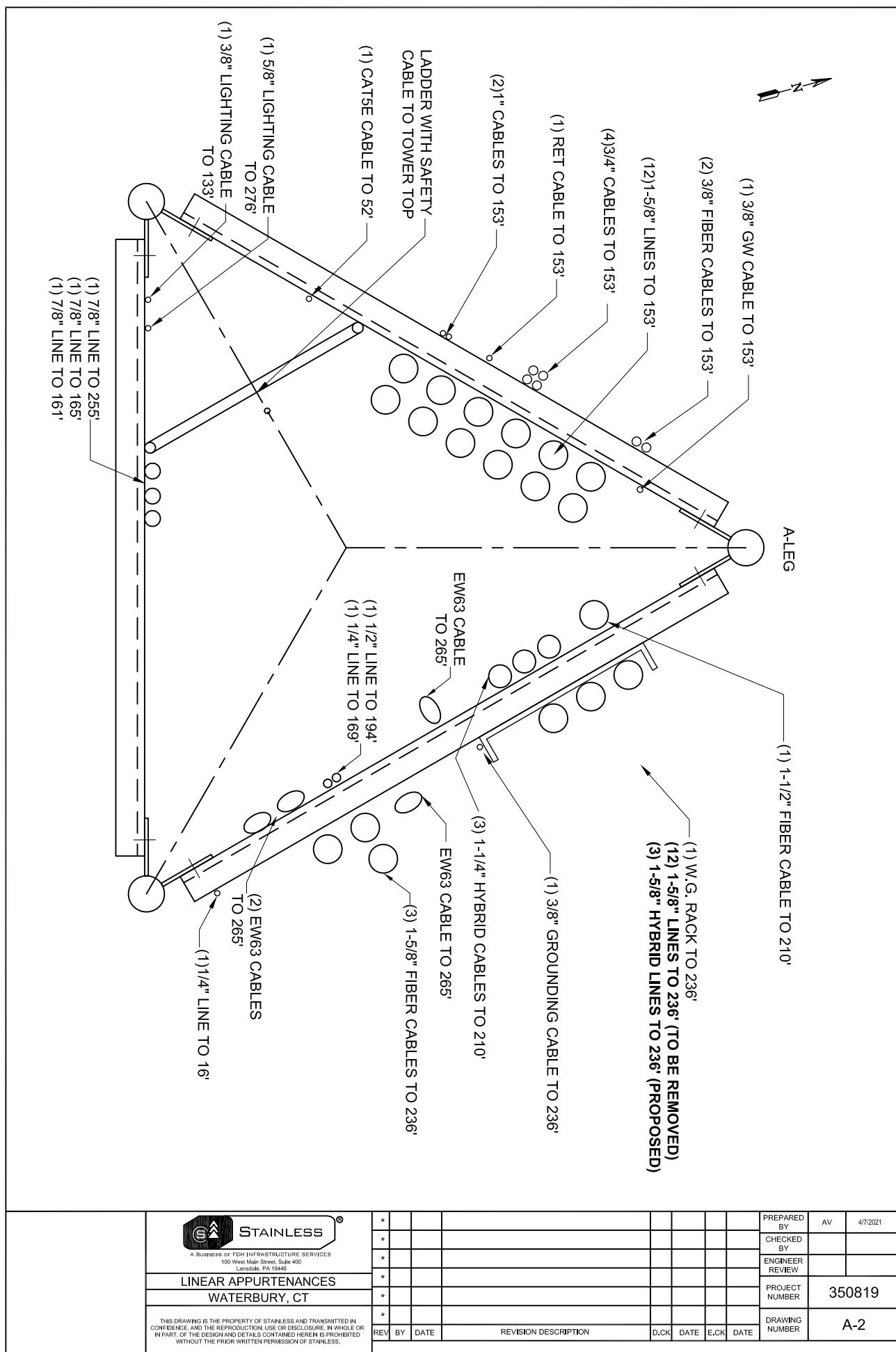
| Rev. | Date | Description |
|------|------|-------------|
|------|------|-------------|

contained in the Report, and the maximum liability of Stainless, if any, pursuant to this Report shall be limited to the total funds actually received by Stainless for preparation of this Report.

Customer has requested Stainless to prepare and submit to Customer an engineering analysis with respect to the Subject Tower and has further requested Stainless to make appropriate recommendations regarding suggested structural modifications and changes to the Subject Tower. In making such request of Stainless, Customer has informed Stainless that Customer will make a determination as to whether or not to implement any of the changes or modifications which may be suggested by Stainless and that Customer will have any such changes or modifications made by riggers, erectors and other subcontractors of Customer's choice.

Customer hereby agrees and acknowledges that Stainless shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than Stainless in connection with the implementation of any structural changes or modifications recommended by Stainless including but not limited to any services rendered for Customer or for others by riggers, erectors or other subcontractors. Customer acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by Customer shall be solely responsible to Customer and to others for the quality of work performed by them and that Stainless shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by any such rigger, erector or subcontractor.





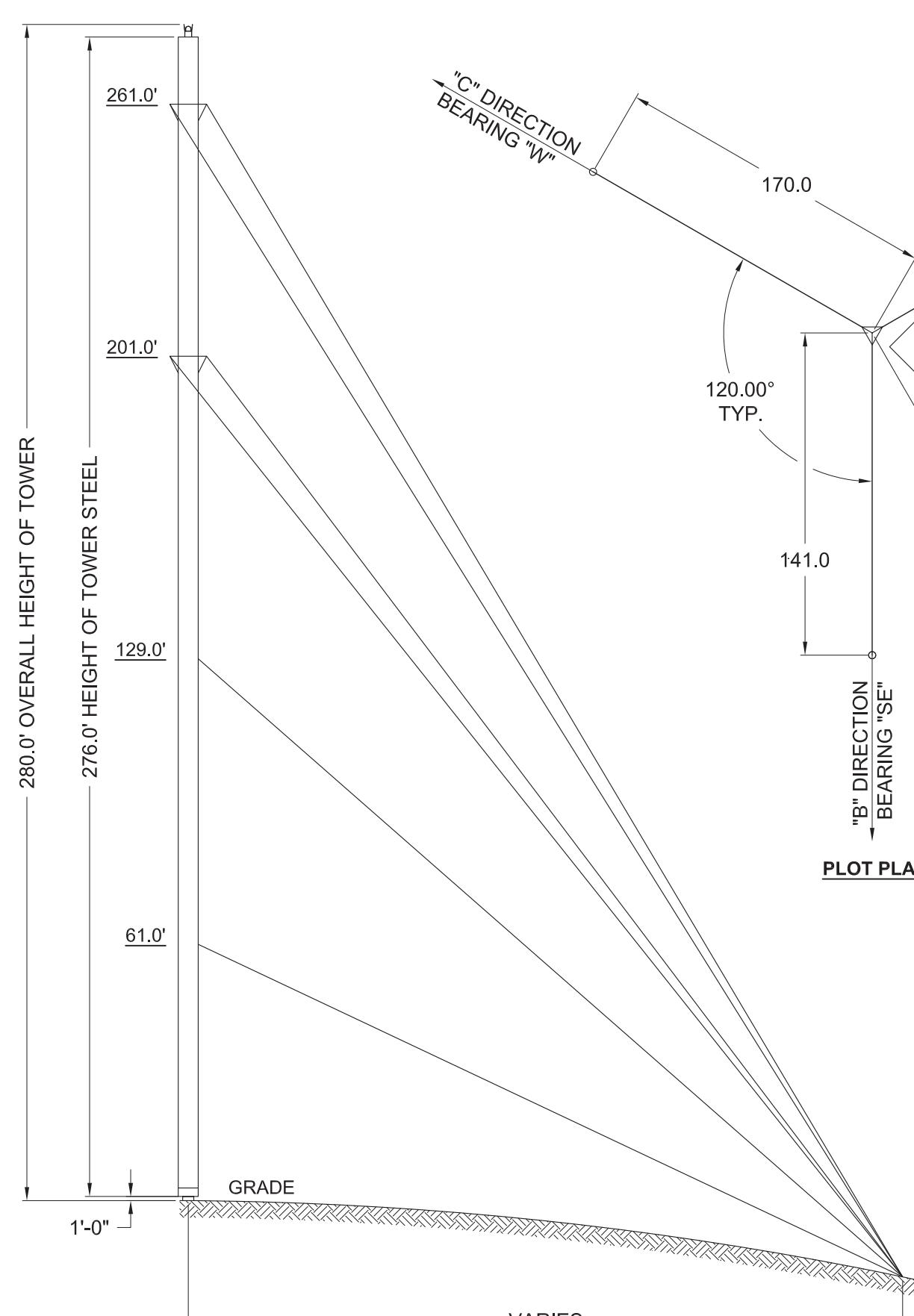
Prepared by: AV
Date: 4/14/2021

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Page No. 9
Report No. 350819

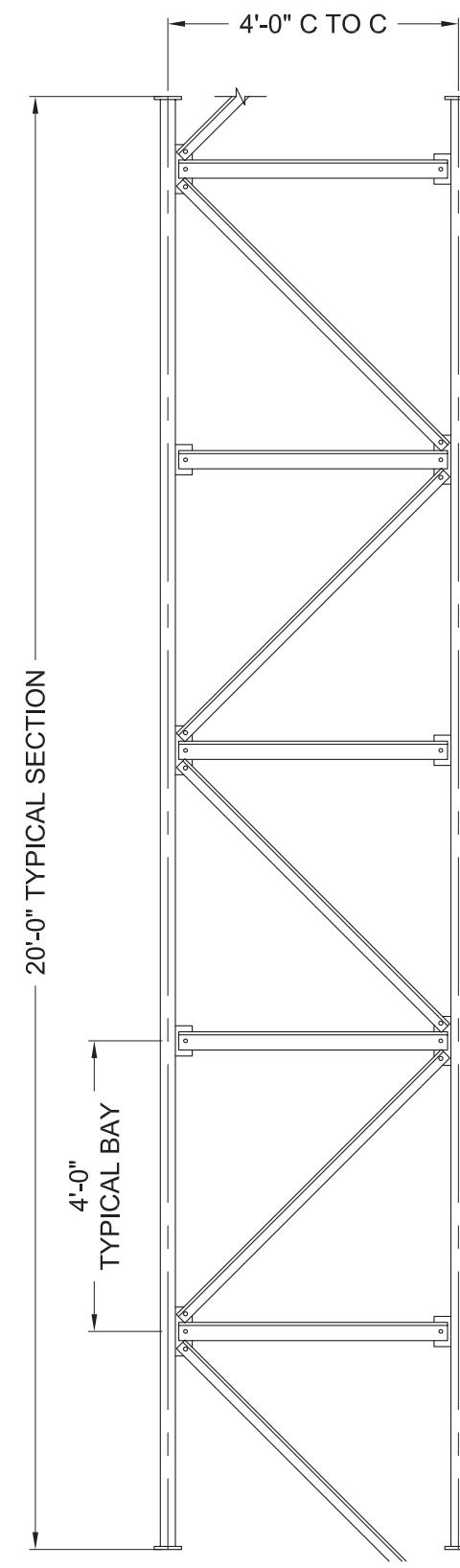
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|------|------|-------------|
| | | |

A-3 DESIGN DRAWINGS 350819



NOTE:

1. SEE SHEETS D01.01 & D01.02 FOR GENERAL NOTES.



TOWER DETAIL

| STAINLESS | * | | | | | | PREPARED BY | JMR | 3/24/21 |
|--|---|--|--|--|--|--|-----------------|--------|-----------|
| A BUSINESS OF FDH INFRASTRUCTURE SERVICES | * | | | | | | CHECKED BY | GH | 4/12/21 |
| 100 West Main Street, Suite 400 | * | | | | | | ENGINEER REVIEW | AV | 4/14/2021 |
| Lansdale, PA 19446 | * | | | | | | PROJECT NUMBER | 350819 | |
| K:350819\dwg\350819_D01.00_General_Arrangement.dwg | * | | | | | | DRAWING NUMBER | D01.00 | |

GENERAL ARRANGEMENT

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WATERBURY, CT

TOWER DETAIL

NOTE:

1. SEE SHEETS D01.01 & D01.02 FOR GENERAL NOTES.

Karen

STATE OF CONNECTICUT
No. 32975
PROFESSIONAL ENGINEER
LICENSING BOARD
4/15/2021

1. The tower is a guyed, triangular, non-insulated, open face structure.
2. The tower was analyzed per Stainless Rigorous Structural Analysis Report 350818 dated 3/19/2021. It was analyzed in accordance with the 2018 Connecticut Building Code, referencing the 2015 IBC and ANSI/TIA-222-G, Structural Standard for Antenna Supporting Structures and Antennas, including addenda 1 and 2 dated 2007 and 2009 for the following parameters to support equipment as listed below:

- Risk Category II
- 125 mph ultimate 3-second gust wind speed with no ice.
- 50 mph nominal design wind speed with 3/4" design ice thickness.
- Exposure Category B
- Topographic Category 5 ($H = 360'$, $2LH = 2880'$, and $x = 370'$)
- 0.19 earthquake spectral response acceleration at short periods (S_s)
- Earthquake Site Class D

| APPURTEINANCE | ELEVATION, FT | FEED LINES |
|--|---------------|---|
| 5/8" diameter x 4.3' lightning rod | 276 | -- |
| Beacon w/ ice shield | 276 | 5/8" cable |
| (2) 6' x 6' ice shield | 270 | -- |
| (2) 6' diameter MW dishes w/radome | 265 | (4) EW63 |
| Scala grid dish | 255 | 7/8" |
| (3) Andrew DBXNH-6565A-A2M (To Be Removed) | | |
| (3) Ericsson RRUS11 B12 (To Be Removed) | | |
| (4) RFS ATMA3P4-1A20 (To Be Removed) | | |
| (2) RFS ATMA4P4-1A20 (To Be Removed) | | |
| (3) T-Arm Mounts (To Be Removed) | | |
| (3) Ericsson AIR32 KRD901146-1_B66A_B2A | 236 | |
| (3) RFS-APXVAARR24_43-U-NA20 (Proposed) | | (3) 1-5/8" fiber cable (Existing) |
| (3) Ericsson AIR6449 B41 (Proposed) | | (3) 1-5/8" Hybrid Cable (Proposed) |
| (3) Ericsson Radio 4449 B71+B85 (Proposed) | | |
| (3) Radio 4415 B25 (Proposed) | | |
| (3) 12.5' Sector Frames [SitePro1 P/N: VFA12-SD-S] (Proposed) | | |
| (6) Alcatel-Lucent RRH 2x50-800 RRUs | | |
| (3) RRH 8x20-25-FEU 8T8R RRUs | 210 | |
| (6) RRH 1900-4x45 RRUs | | (1) 1-1/2" Fiber |
| (3) 70"x12"x8" panels | | (3) 1-1/4" hybrid |
| (3) Andrew DT465B-2XR-V2 panels | | |
| (3) Sector mounts | | |
| 15' whip antenna w/ (3) elements | 195 | (1) 1/2" coax |
| 6' x 6' ice shield | 174 | -- |
| 10' dipole w/(2) elements | 171 | 7/8" |
| (1) Mark 4' diameter grid dish | | |
| (1) 9-1/2" x 2-1/2" x 2-1/2" ODU | 169 | 1/4" coax |
| Diamond D-130N | 164 | 7/8" |
| (3) Raycap DC6-48-60-18-8C SPDs | | |
| (6) Ericsson RRUS 32 B30 RRUs | | |
| (3) Powerwave 7770.00J1 panels | | |
| (6) Ericsson KRC 161 689/3 RRUs | | |
| (6) CCI TPX-070821 diplexers | | |
| (6) Powerwave LGP 21401 TMAs | | |
| (6) Ericsson KRC 161 472/3 RRUs | 153 | |
| (3) Kathrein 80010965 panels | | |
| (3) CCI HPA-65R-BW-H6 panels | | |
| (3) Quintel QS665122E53617881 panels | | |
| (3) Ericsson RRUS 11 B12 | | |
| (3) T-arm mounts | | |

| | | |
|--|--------------------------|----------------------|
| (3) L-810 side markers | 133 | 3/8" cable |
| 12" standoff (unused) | 52 | -- |
| 3-1/2" diameter x 9" Omni | 17 | 1/4" coax |
| -- | 236 | 3/8" grounding cable |
| Inside climbing ladder with safety cable | Full height of the tower | 3/8" |

3. In order to achieve an ultimate 3-second gust wind speed of 125 mph with no ice and a nominal wind speed of 50 mph with 3/4" design ice thickness in accordance with the 2018 Connecticut Building Code (referencing the 2015 IBC) and ANSI/TIA-222-G with the analysis parameters of Section D, the following modifications are required:

1. Reinforce the tower base foundation.

o. Adjust the initial guy tensions to the following values at 60 degrees F:

| Level | Tension (lbs) |
|----------|---------------|
| 1A | 4600 |
| 2A | 4400 |
| 3A | 4400 |
| 4A (Top) | 2500 |

- Install additional horizontal sub-bracing members at the midpoints of the following bays:

| Location | No. of bays |
|-----------------|-------------|
| 229.0' - 241.0' | 3 |

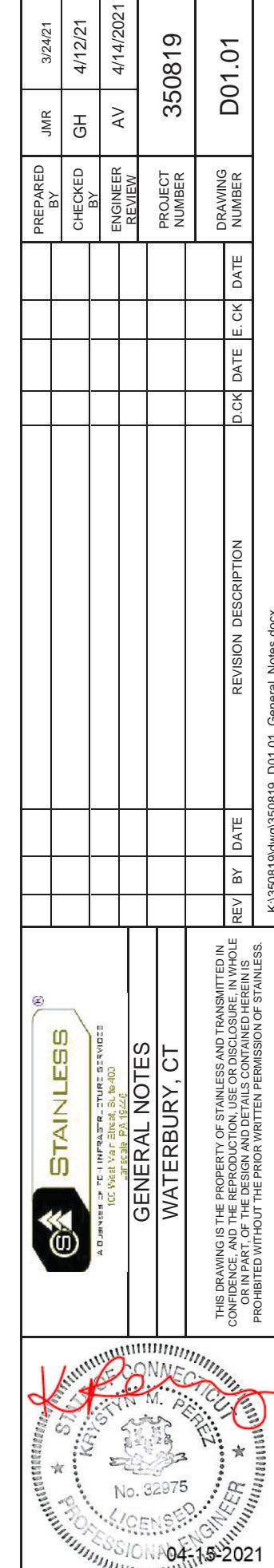
1. Replace existing diagonal braces with new, higher capacity members at the following bays:

| Location | No. of bays |
|-----------------|-------------|
| 5.0' - 9.0' | 1 |
| 37.0' - 45.0' | 2 |
| 129.0' - 141.0' | 3 |
| 149.0' - 153.0' | 1 |
| 205.0' - 209.0' | 1 |
| 221.0' - 225.0' | 1 |

4. The design of the tower modifications above has been based upon Stainless Report 350818 dated 3/19/2021. The details contained within this design drawing package are included for information and are not intended to be used as shop or final fabrication drawings. The Contractor shall field verify all dimensions, elevations and existing site conditions and notify Stainless immediately of any site discrepancies or variances. Contractor shall not scale dimensions from the design drawings.

6. All work shown on this design drawing package shall be performed by qualified contractor (s) with a minimum of 5 years experience in tower and foundation construction.

6. All fabricated elements shall be in accordance with the notes, specifications and drawings. All deviations and substitutions must be approved by a registered Professional Engineer in the state where the work is being done and submitted to Stainless for approval prior to installation. The Contractor shall furnish satisfactory evidence as to the kind and quality of the materials and equipment being substituted. Contractor shall also be responsible for obtaining all necessary permits, licenses and any other requirements for the construction. Submit calculations for connection details based upon the design loads shown on the drawings.



7. Contractor shall observe safe construction practices and shall be responsible for all methods of construction, including proper and adequate bracing to the tower and excavation work during the installation process. Adequately designed temporary support shall be installed before any tower member is removed and replaced. All means and methods of construction, including construction and soil pressure loads, shall be properly calculated and documented by the Contractor.
8. If the construction activities require a rigging plan per the requirements of ANSI/TIA-322 and ANSI/ASSE A10.48, the Contractor shall be responsible for a rigging plan to be developed by a qualified engineer and implemented by a competent rigger. A properly detailed rigging plan shall include, as a minimum, a review of the following:
 - Operational and non-operational construction loads.
 - Equipment used, and Supporting structure
 - Construction sequence and durations
9. Contractor shall also be responsible for all means and methods for the installation of all proposed equipment and tower modifications, including the design, supply, and installation of adequate temporary bracing for structural member replacements.
10. All shop fabrication drawings and material certificates of the successful contractor shall be approved in writing by Stainless prior to fabrication. The approval is to ensure the design requirements and proper fabrication practices are implemented, but does not include fit-up checks which shall be the responsibility of the Contractor.
11. Stainless assumes no responsibility for the structural adequacy of the tower if non-conforming modification materials are supplied and/or installed by others, and shall have no liability whatsoever to Owner or to others for any work performed by any persons other than Stainless in connection with the implementation of any structural changes or modifications not specifically addressed within this design drawing package. Owner acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by owner shall be solely responsible to owner and to others for the quality of work performed by them and that Stainless shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by such rigger, erector or subcontractor.
12. The modification drawings contained herein are based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following.
 - a. Proper alignment and plumbness.
 - b. Correct guy tensions.
 - c. Correct bolt tightness.
 - d. No significant deterioration or damage to any component.

APPLICABLE CODES AND STANDARDS

Use latest editions of the following Codes and Standards unless noted otherwise.

1. ANSI/TIA-222-G 2005 Structural Standards for Antenna Supporting Structures and Antennas including Addenda 1 & 2, dated 2007 and 2009.
2. ANSI/TIA-322, Standard for Loading, Analysis, and Design Criteria Related to Installation, Altercation and Maintenance of Communication Structures..
3. ANSI/ASSE A10.48 Criteria for Safety Practices Related to the Installation, Alteration, and Maintenance of Communication Structures. ANSI/TIA-322 Loading, Analysis and Design Criteria Related to the Installation, Alteration and Maintenance Communication Structures.
4. AISC Manual of Steel Construction.
5. RCSC Specification for Structural Joints Using ASTM A325 or A490 Bolts.
6. ACI 301 Specifications for Structural Concrete.
7. ACI 318 Building Code Requirements for Structural Concrete.
8. ACI 315 Details and Detailing of Concrete Reinforcement.
9. CRSI Manual of Standard Practice.
10. ASTM C260 Standard Specification for Air-Entraining Admixtures for Concrete.
11. ASTM C494 Standard Specification for Chemical Admixtures for Concrete.
12. ASTM A36 Standard Specification for Carbon Structural Steel.
13. ASTM A572 Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
14. ASTM A325 Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
15. ASTM A194 Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both.

16. ASTM F436 Standard Specification for Hardened Steel Washers.
17. ASTM A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and products.
18. ASTM A153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
19. ASTM A780 Standard Practice for Repair of Damage and Uncoated Areas of Hot-Dip Galvanized Coatings.
20. ASTM A615 Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement.

STRUCTURAL STEEL

1. The fabrication and erection of structural steel shall conform to the latest edition of the AISC Manual of Steel Construction.
2. Connections shall be detailed by the steel fabricator in accordance with the AISC Manual of Steel Construction. Connections and connecting elements shall develop the strength capacities as indicated on the design drawings. Some connection details are suggested in the drawings however, Contractor is free to provide any design and details at Contractor's discretion.
3. Hot-dip galvanize all items unless otherwise noted, after fabrication in accordance with ASTM A123 and/or ASTM A153.
4. Repair all damaged or uncoated areas of galvanized coatings in accordance with ASTM A780.
5. Locking ANCO style nuts shall be installed on all proposed and/or replaced bolts.
6. ASTM A325 bolts shall not be reused.
7. All A325 high strength bolts shall be tightened by the "snug tightening" method as specified in the RCSC Specification for Structural Joints Using ASTM A325 or A490 Bolts unless noted otherwise on the design drawings.
8. Material grades shall be as follows, unless noted otherwise:
 - a. Plates and angles - A36
 - b. Bolts - A325X
 - c. U-Bolts - A307 min.

PLUMBING LINES

1. The tower is designed for initial tension as specified in the erection drawings. It is important that the guys be tensioned accurately to assure the stiffness of the tower.
2. Uneven terrain, temperature, plumbness of tower and wind are factors which affect guy tensions. If the tower site is level and anchor distances are equal, the tensions in all three guys at a level will be equal when the tower is plumb. If the terrain of the tower site is uneven, the guys are not perfectly symmetrical and tensions in guys vary in the three directions. For this reason initial guy tensions are specified in one direction only. The tower should be plumbed with the specified tensions in the given guy direction.
3. Wind load on tower and guys changes the tension in all guys; therefore, plumb the tower in calm weather only.
4. The plumbing of a tower or checking alignment of a tower should be performed in accordance with Annex J of ANSI/TIA/EIA 222G.

REINFORCED CONCRETE

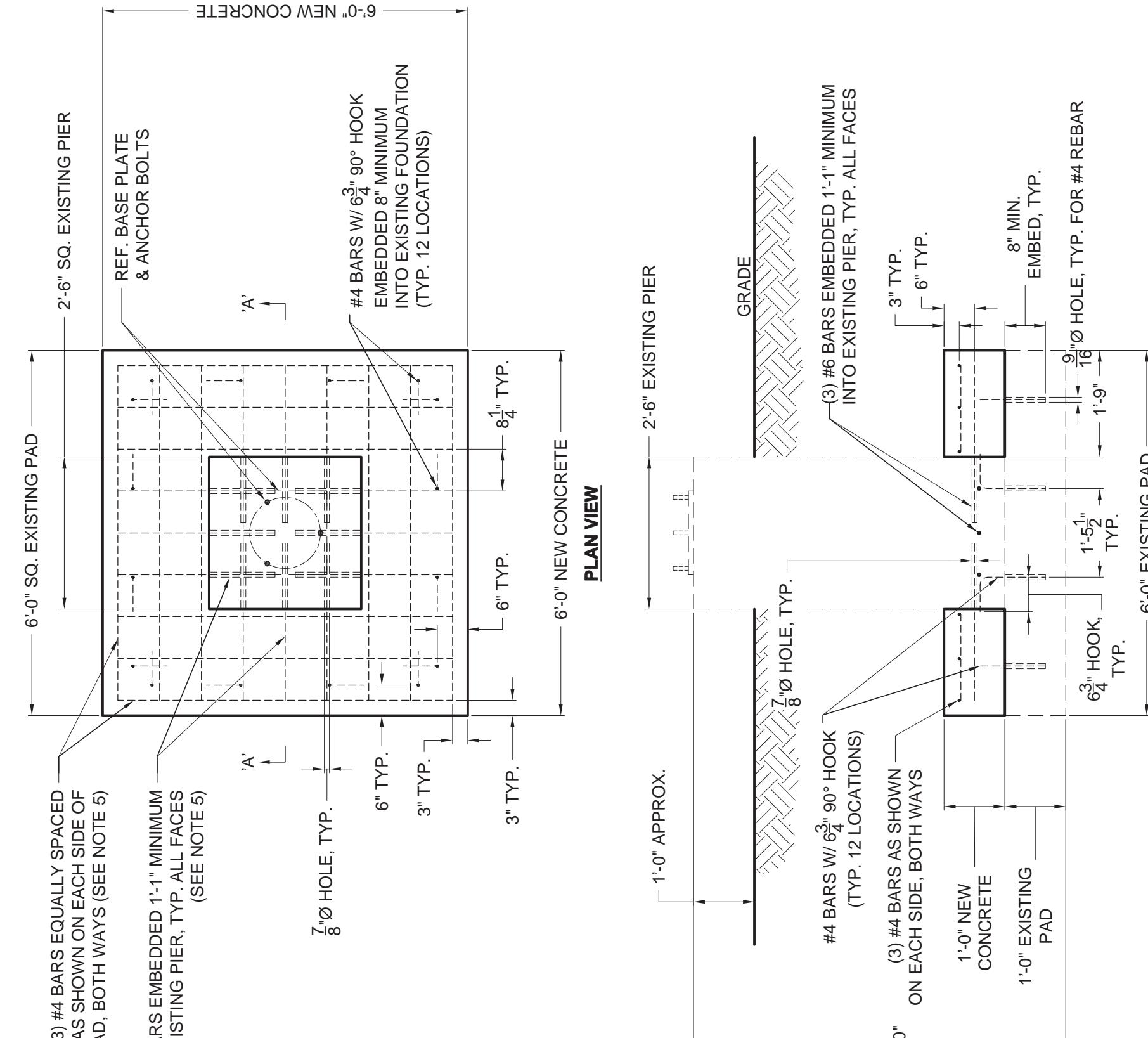
1. All concrete shall be in accordance with ACI 318 and ACI 301 and have a minimum compressive strength of 4000 psi after 28 days.
2. All concrete shall be sampled and tested in accordance with ACI 301. Testing shall be carried out by an independent testing laboratory.
3. Concrete shall not contain calcium chloride or any admixtures that contain chlorides. All admixtures used shall conform to ASTM C260 (air-entraining) and ASTM C494 (water reducing and/or accelerating)
4. All reinforcing bars shall be Grade 60 deformed bars in accordance with ASTM A615, and shall be fabricated and placed in accordance with ASTM 315, ACI 318 and CRSI's Manual of Standard Practice.
5. See page D02.01 for foundation notes.

| | | |
|---|---------------|------------|
| PREPARED BY | JMR | 3/24/21 |
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | |
| DRAWING NUMBER | D01.02 | |
| REVISION DESCRIPTION | DICK | DATE E.C.K |
| REV BY DATE | | |
| REV BY DATE | | |
| GENERAL NOTES | WATERBURY, CT | |
|  <small>A DIVISION OF TC INDUSTRIES, 2701 E 57th Street, Suite 400, Indianapolis, IN 46256</small> <small>ICF, Viega, Farenbach, TEC, and TEC-TECH are registered trademarks of TC Industries, Inc.</small> <small>THIS DRAWING IS THE PROPERTY OF STAINLESS AND TRANSMITTED IN CONFIDENCE, AND THE REPRODUCTION, USE OR DISCLOSURE, IN WHOLE OR IN PART, OF THE DESIGN AND DETAILS CONTAINED HEREIN IS PROHIBITED WITHOUT THE PRIOR WRITTEN PERMISSION OF STAINLESS.</small> | | |
|  <small>KRISTINA M. PEREZ, P.E.</small> <small>PROFESSIONAL ENGINEER</small> <small>No. 32975</small> <small>04/15/2021</small> | | |

| <u>BILL OF MATERIAL</u> | | |
|--------------------------------|---------------------------|---------------------------|
| <u>QTY.</u> | <u>NAME</u> | <u>DESCRIPTION</u> |
| 100 FT. | REINFORCING BARS | #4 - ASTM A615 GRADE 60 |
| 35 FT. | REINFORCING BARS | #6 - ASTM A615 GRADE 60 |
| 1.5 CU. YDS. | CONCRETE | 4000 PSI AFTER 28 DAYS |
| AS REQUIRED | HILTI-HIT-HY 200 ADHESIVE | --- |

NOTES:

- SEE PAGE D02.01 FOR FOUNDATION NOTES.
- EXCAVATE AROUND PERIMETER OF EXISTING BASE PIER.
- CLEAN AND ROUGHEN ALL INTERFACES BETWEEN OLD AND NEW CONCRETE. APPLY BONDING AGENT SIKADUR 32, HI-MOD LPL OR EQUIVALENT BONDING AGENT PRIOR TO NEW CONCRETE PLACEMENT. BONDING AGENT SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER APPLICATION SPECIFICATIONS AND GUIDELINES.
- SECURE DOWELED IN REBAR WITH REBAR ADHESIVE (HILTI-HIT HY 200 INJECTION ADHESIVE OR EQUIVALENT).
- FIELD LOCATE EXISTING REBAR PRIOR TO DRILLING. DO NOT DAMAGE EXISTING REBAR DURING INSTALLATION OF EPOXY DOWELS.
- REINFORCING SHALL BE POSITIONED AS SHOWN AND ADEQUATELY SUPPORTED AGAINST DISPLACEMENT. TACK WELDING IS NOT PERMITTED.
- BEND ALL REINFORCING COLD AND REMOVE ALL SCALE.
- MINIMUM COVER FOR REINFORCING BARS IS 3" UNLESS NOTED OTHERWISE.
- BACKFILL NEAR AND AROUND ALL FOUNDATIONS WITH A REASONABLE WELL GRADED FILL AND COMPACT TO WITHIN 95% OF MAXIMUM DRY UNIT DENSITY.
- FOUNDATION DESIGN IS BASED ON A GROSS ALLOWABLE BEARING PRESSURE OF 8000 PSF.
- BILL OF MATERIAL IS APPROXIMATE AND FOR REFERENCE ONLY.
- CONTRACTOR MUST VERIFY ALL QUANTITIES.

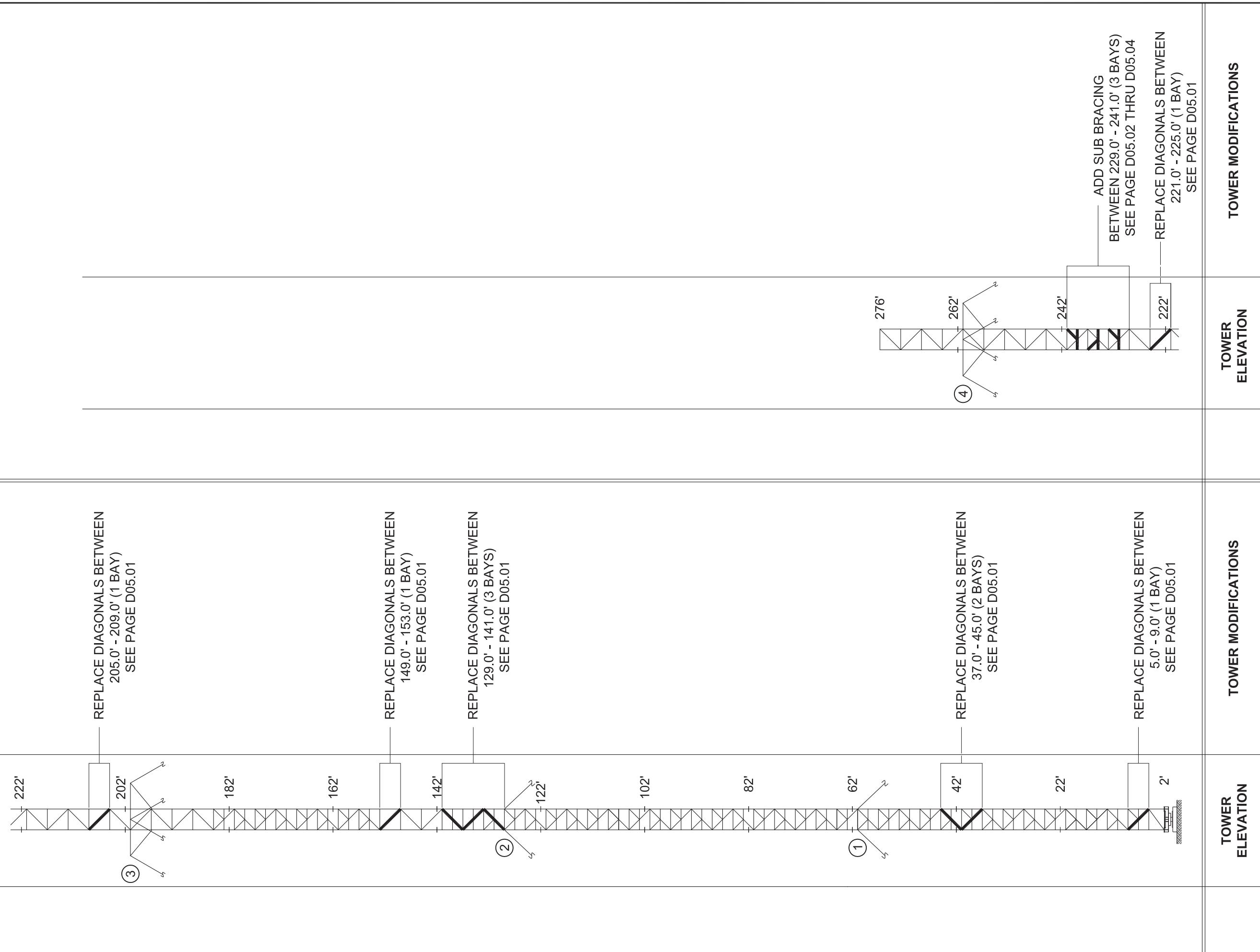


SECTION "A-A"

| | | | | | | | | | |
|---|-----------|---|--|--|--|--|-----------------|--------|-----------|
|  <p>STATE OF CONNECTICUT Kris K. S. K. PERIN LICENCED PROFESSIONAL ENGINEER No. 32975 04-15-2021</p> | STAINLESS | * | | | | | PREPARED BY | JMR | 3/24/21 |
| | | * | | | | | CHECKED BY | GH | 4/12/21 |
| | | * | | | | | ENGINEER REVIEW | AV | 4/14/2021 |
| | | * | | | | | PROJECT NUMBER | 350819 | |
| | | | | | | | DRAWING NUMBER | | D02.00 |

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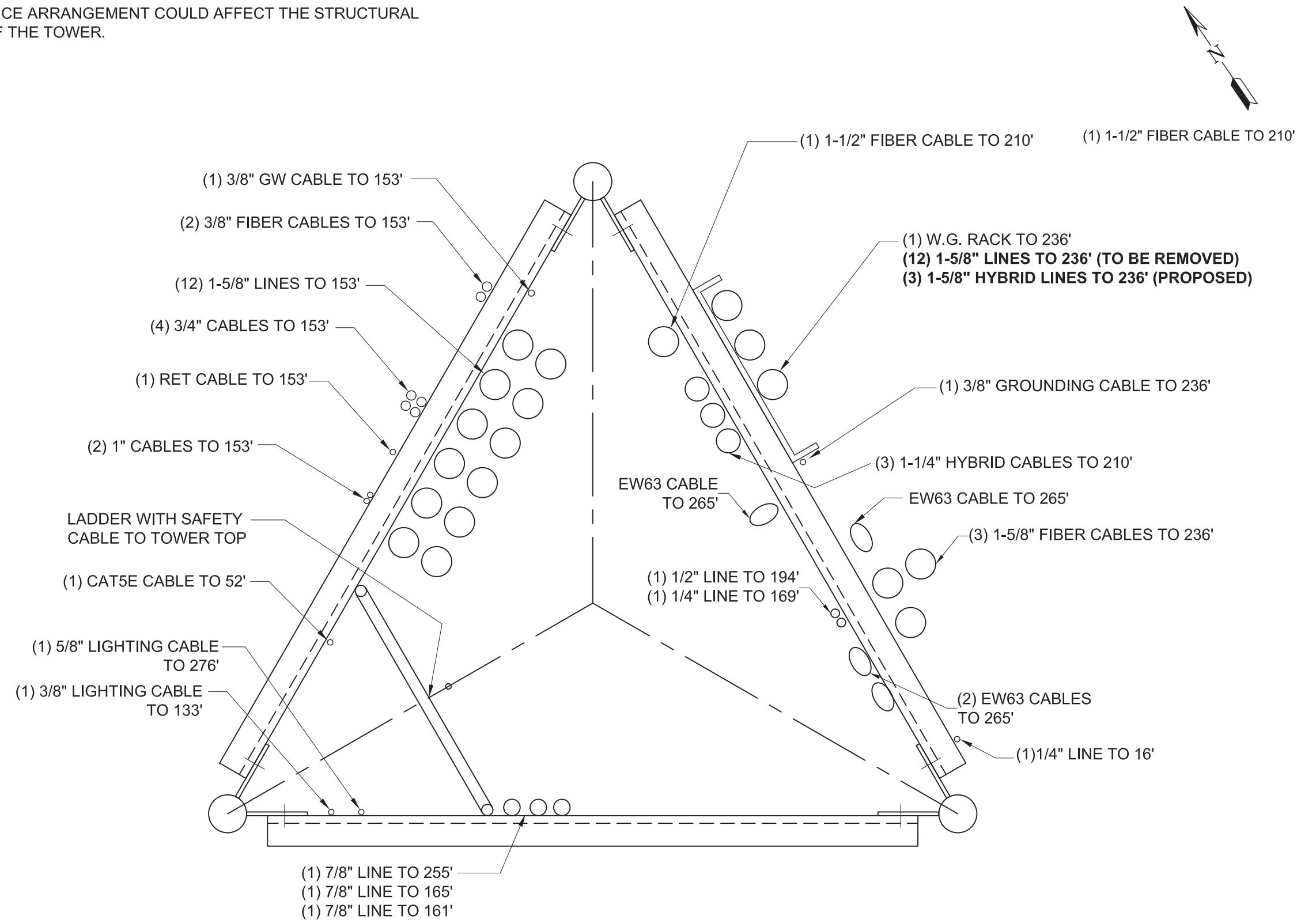
K:\350819\dw\350819 D02.00 Base Foundation Mod.dwg



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NOTE:

1. THE TOWER MODIFICATION IS BASED ON THE LINEAR APPURTEANCES (LADDER, TRANSMISSION LINES, CONDUITS, ETC.) BEING INSTALLED IN THE POSITION SHOWN ON THE CROSS SECTION. DEVIATING FROM THIS APPURTEANCE ARRANGEMENT COULD AFFECT THE STRUCTURAL INTEGRITY OF THE TOWER.



| PREPARED BY | JMR | 3/24/21 |
|-----------------|--------|-----------|
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | |
| DRAWING NUMBER | D05.00 | |

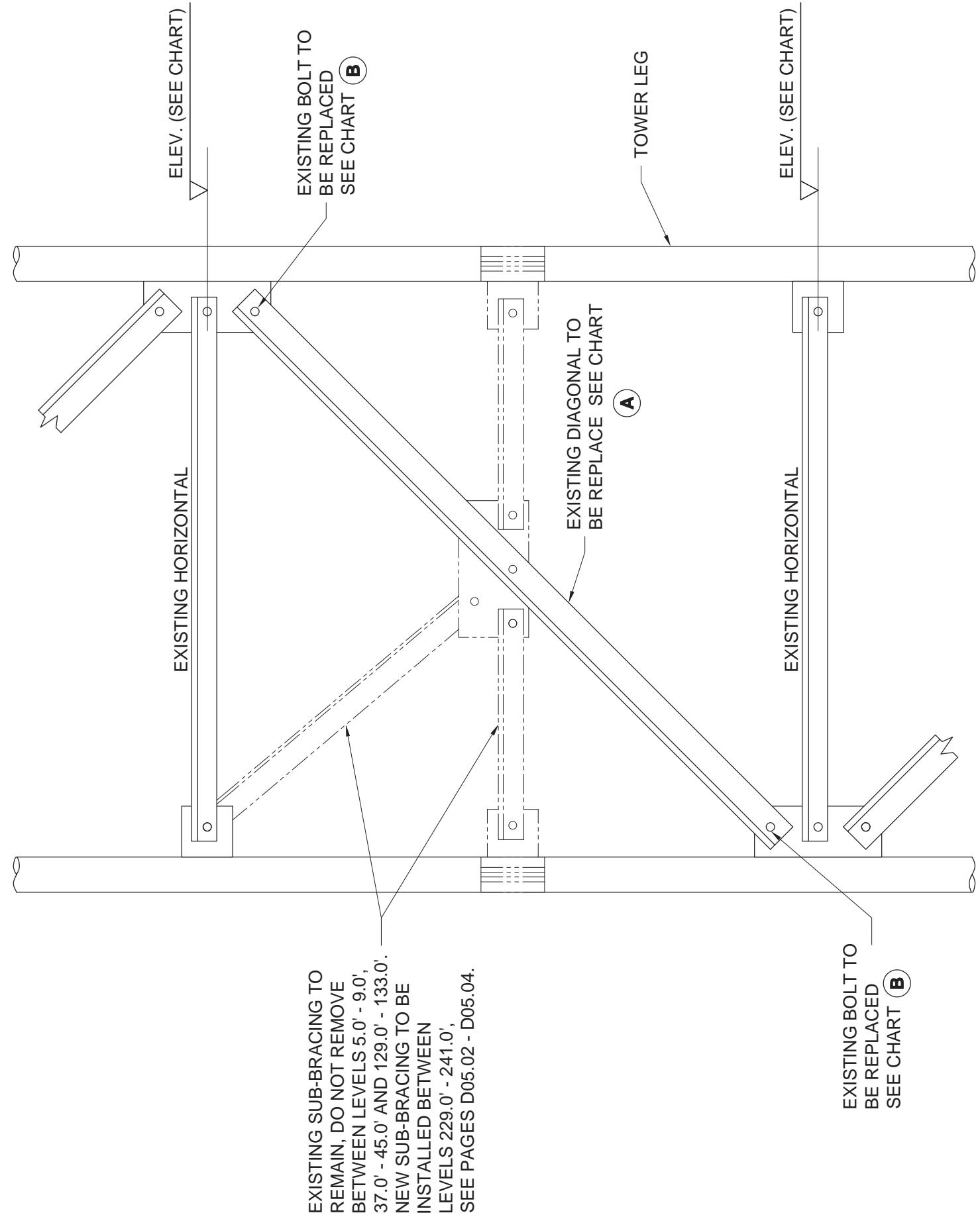
| REV BY | DATE | REVISION DESCRIPTION | D.OK | DATE | E.CK | DATE |
|--------|------|----------------------|------|------|------|------|
| * | * | * | * | * | * | * |

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|--|---------------|
| STAINLESS A BUSINESS OF FDH INFRASTRUCTURE SERVICES 100 West Main Street, Suite 400 Langdale, PA 19446 | WATERBURY, CT |
|--|---------------|

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K:\350819\dwg\350819_D05.00_Linear_Appurtenances.dwg





TOWER MUST BE ADEQUATELY BRACED BEFORE REMOVING ANY EXISTING TOWER MEMBERS. IN PARTICULAR CONTRACTOR IS ALERTED TO THE FACT THAT TEMPORARILY REMOVING EXISTING SUB BRACING TO THE LEGS WILL INCREASE THE BUCKLING LENGTH OF THE LEGS, HENCE REDUCING THE COMPRESSION LOAD CARRYING STRENGTH OF THE LEGS. THIS MUST BE CHECKED BY CONTRACTOR AS PART OF HIS 'MEANS AND METHODS' OF CONSTRUCTION.

| ELEVATION | BAYS | DIAGONAL REPLACEMENTS | | MAX. IMPOSED LOAD IN MEMBER |
|-----------------|------|-----------------------------|------------------------|-----------------------------|
| | | (A) | (B) | |
| 5.0' - 9.0' | 1 | L 2 x 2 x 1/4 (A36) | 5/8" DIA. BOLT (A325X) | 4.8 KIPS |
| 37.0' - 45.0' | 2 | L 2 x 2 x 1/4 (A36) | 5/8" DIA. BOLT (A325X) | 4.6 KIPS |
| 129.0' - 141.0' | 3 | L 2 1/2 x 2 1/2 x 3/8 (A36) | 5/8" DIA. BOLT (A325X) | 12.9 KIPS |
| 149.0' - 153.0' | 1 | L 2 1/2 x 2 1/2 x 3/8 (A36) | 5/8" DIA. BOLT (A325X) | 10.0 KIPS |
| 205.0' - 209.0' | 1 | L 2 1/2 x 2 1/2 x 3/8 (A36) | 5/8" DIA. BOLT (A325X) | 9.9 KIPS |
| 221.0' - 225.0' | 1 | L 2 x 2 x 1/4 (A36) | 5/8" DIA. BOLT (A325X) | 4.5 KIPS |



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| | | REV | BY | DATE | REVISION DESCRIPTION | | D.CK | DATE | E.CK | DATE | | | | | | | | | | | |
| | | K-350819rdw | 350819 | 05/01 | Diagonal Replacement dwa | | | | | | | | | | | | | | | | |
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| ELEVATION | BAYS | LEG DIA. | SUB BRACING | | MAX. FACTORED COMPRESSION LEG LOADS |
|-----------------|------|----------|---------------------|---------------------|-------------------------------------|
| | | | (A) | (B) | |
| 229.0' - 241.0' | 3 | 1-3/4" Ø | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) | 86.9 KIPS |

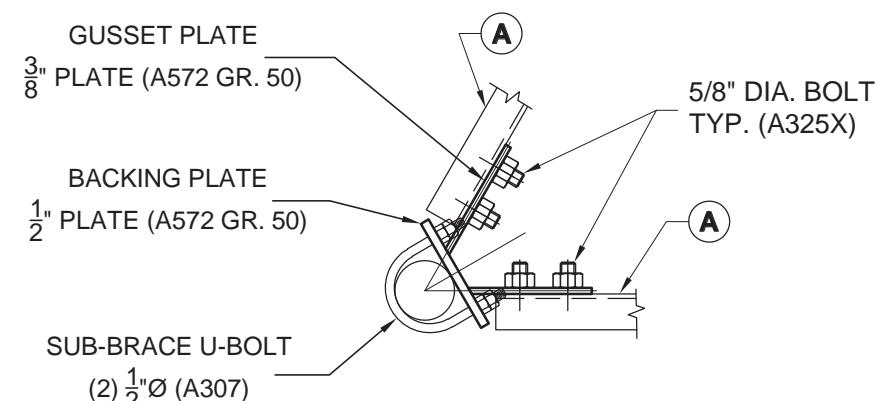
**TOWER MUST BE ADEQUATELY BRACED
BEFORE REMOVING ANY EXISTING
TOWER BOLTS**

**SEE PAGES D05.03 & D05.04 FOR SUB
DIAGONAL CONFIGURATION WHERE SUB
DIAGONAL INTERFERES WITH INSIDE CLIMBING
LADDER ON THE "NW" AND "SW" FACES.**

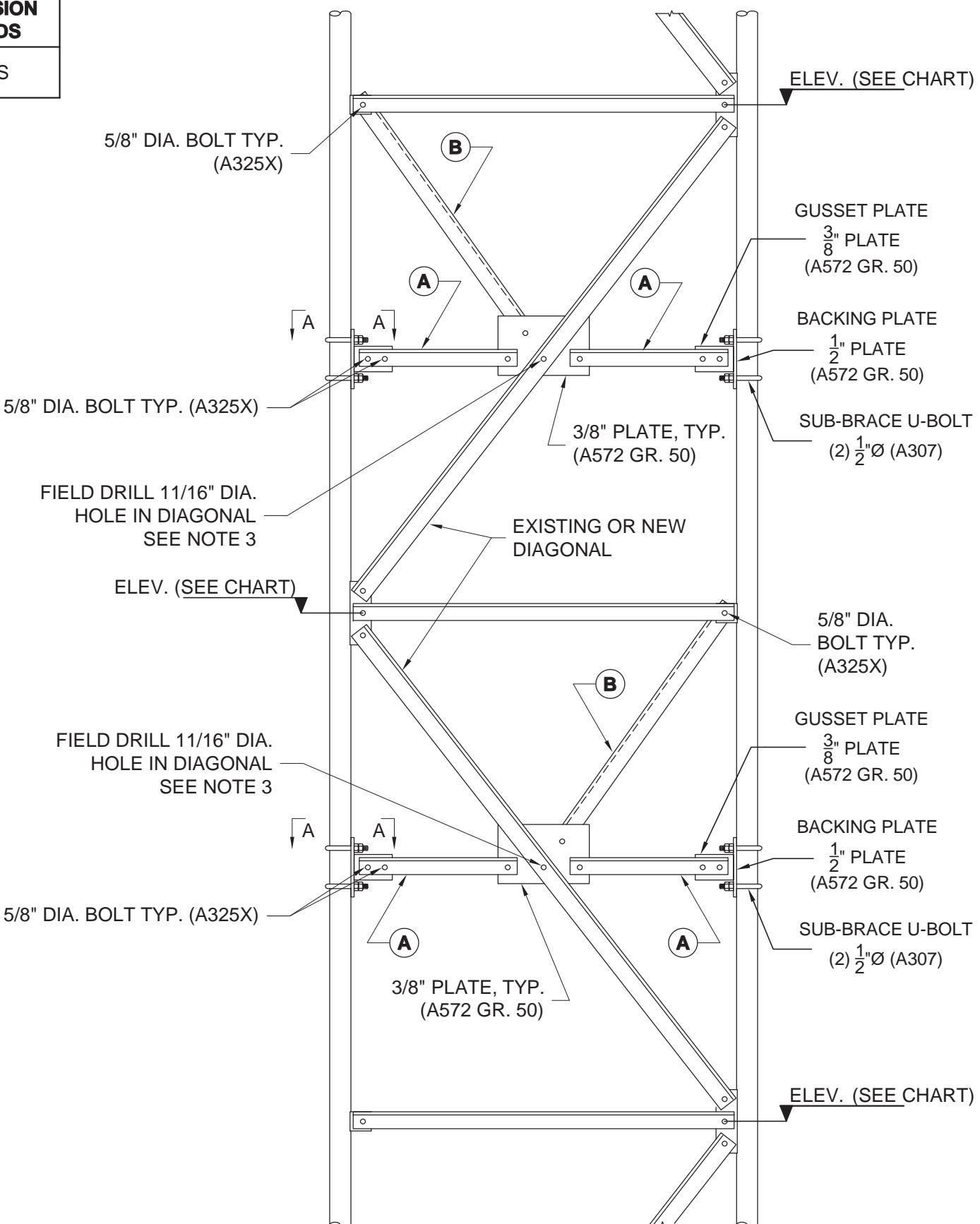
NOTES:

NOTE:

1. CONTRACTOR IS ADVISED TO REMOVE AND REPLACE ONE HORIZONTAL BOLT, AT ONE LEVEL, AND ON ONE FACE, AT A TIME.
2. DESIGN SUB BRACING CONNECTIONS PER ANSI/TIA 222-G BASED UPON THE MAXIMUM COMPRESSION LEG LOADS SHOWN.
3. TOUCH-UP DAMAGED GALVANIZING IN ACCORDANCE WITH ASTM A780.
 - a. SURFACES TO BE PAINTED SHALL BE CLEAN, DRY AND FREE OF OIL, GREASE, PRE-EXISTING PAINT AND CORROSION BY-PRODUCTS.
 - b. APPLY ZINC RICH PAINT IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS IN A SINGLE APPLICATION, EMPLOYING MULTIPLE PASSES TO ACHIEVE A DRY FILM THICKNESS OF NO LESS THAN 6 MILS.



SECTION A - A



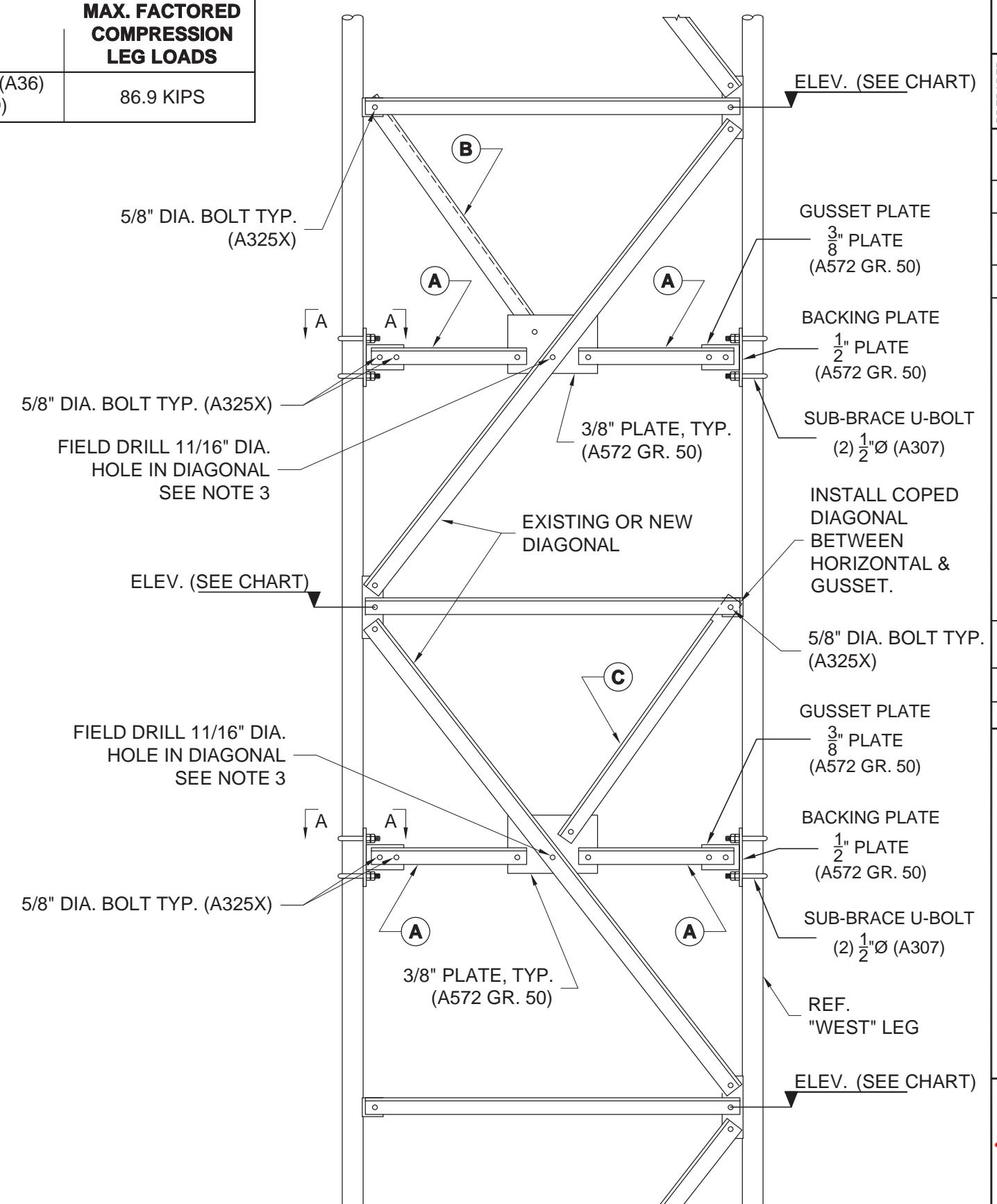
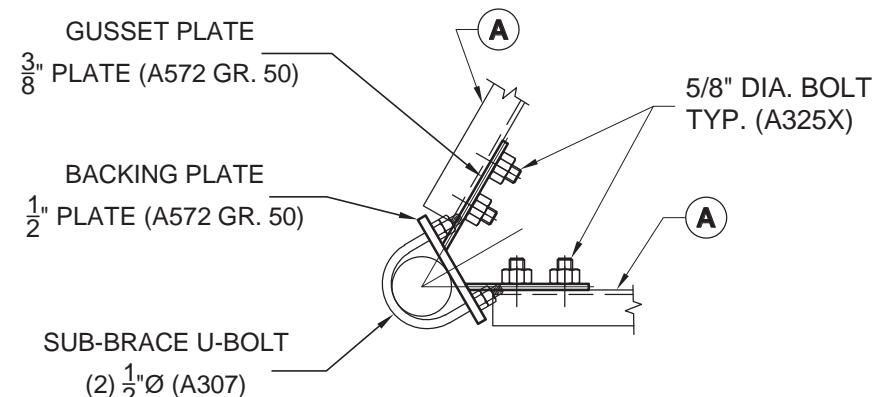
ELEVATION VIEW "EAST" FACE

| SUB BRACING ON "NW" FACE ONLY | | | | | | |
|-------------------------------|------|----------------------|---------------------|---------------------|--------------------------------|-------------------------------------|
| ELEVATION | BAYS | LEG DIA. | A | B | C | MAX. FACTORED COMPRESSION LEG LOADS |
| 229.0' - 241.0' | 3 | 1-3/4" \varnothing | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) (COPED) | 86.9 KIPS |

**TOWER MUST BE ADEQUATELY BRACED
BEFORE REMOVING ANY EXISTING
TOWER BOLTS**

NOTES:

1. CONTRACTOR IS ADVISED TO REMOVE AND REPLACE ONE HORIZONTAL BOLT, AT ONE LEVEL, AND ON ONE FACE, AT A TIME.
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| PREPARED BY | JMR | 3/24/21 |
|----------------------|--------|-----------|
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | |
| DRAWING NUMBER | | D05.03 |
| REV BY DATE | | |
| REVISION DESCRIPTION | | |
| D.CK DATE | | |
| E.CK DATE | | |

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100 West Main Street, Suite 400
Lansdale, PA 19446

SUB BRACE DETAILS "NW" FACE

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WATERBURY, CT

K:350819ndwg/350819_D05.02-04_Sub_Brace_Details.dwg

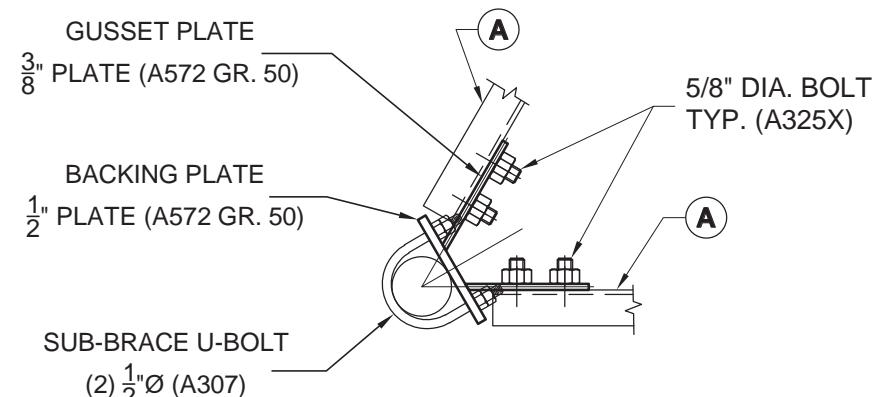
Kyle P. Krystyniuk, PE No. 32975
LICENSED PROFESSIONAL ENGINEER
04-15-2021

| SUB BRACING ON "SW" FACE ONLY | | | | MAX. FACTORED COMPRESSION LEG LOADS | | | |
|-------------------------------|------|----------------------|---------------------|-------------------------------------|--------------------------------|---|-----------|
| ELEVATION | BAYS | LEG DIA. | | A | B | C | |
| 229.0' - 241.0' | 3 | 1-3/4" \varnothing | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) | L 2 x 2 x 1/4 (A36) (COPED) | | 86.9 KIPS |

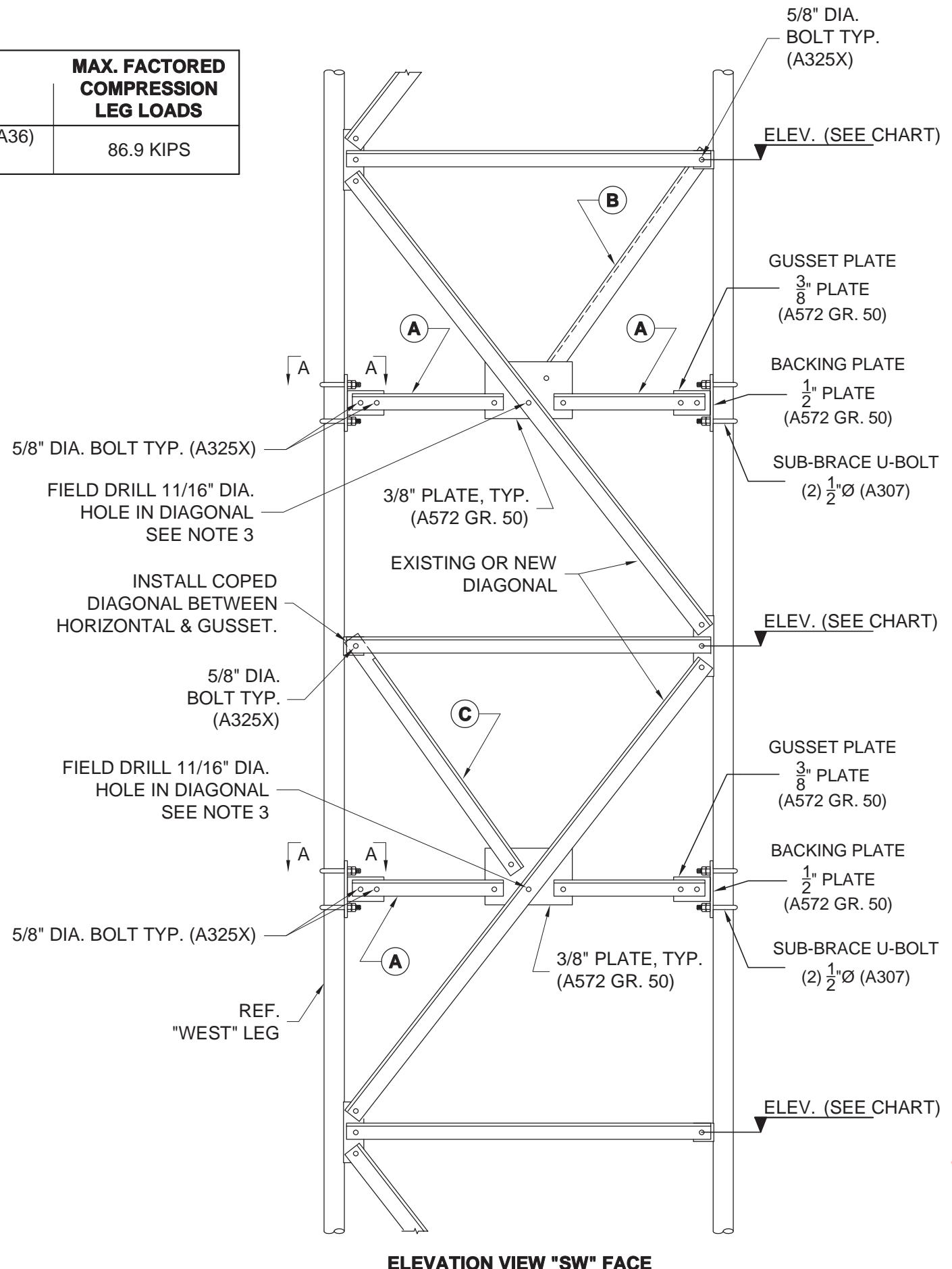
**TOWER MUST BE ADEQUATELY BRACED
BEFORE REMOVING ANY EXISTING
TOWER BOLTS**

NOTES:

1. CONTRACTOR IS ADVISED TO REMOVE AND REPLACE ONE HORIZONTAL BOLT, AT ONE LEVEL, AND ON ONE FACE, AT A TIME.
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SECTION A - A



ELEVATION VIEW "SW" FACE

| PREPARED BY | JMR | 3/24/21 |
|----------------------|--------|-----------|
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | |
| DRAWING NUMBER | D05.04 | |
| REV BY DATE | | |
| REVISION DESCRIPTION | | |
| D.CK DATE | | |
| E.CK DATE | | |

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Lansdale, PA 19446

SUB BRACE DETAILS "SW" FACE

WATERBURY, CT

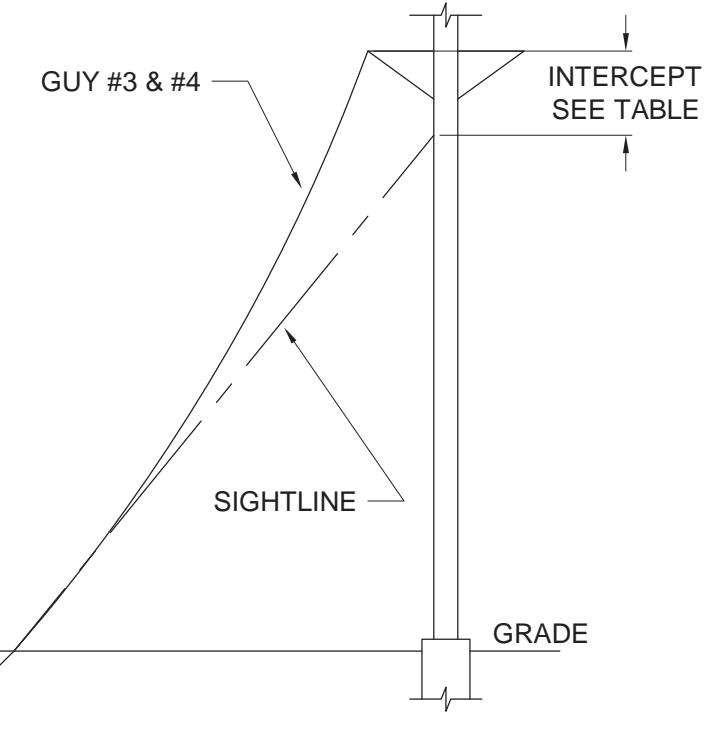
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K:350819ndwg/350819_D05.02-04_Sub_Brace_Details.dwg

Karen

STATE OF CONNECTICUT
KRISTYN M. PERIN
No. 32975
LICENSED PROFESSIONAL ENGINEER
04-15-2021

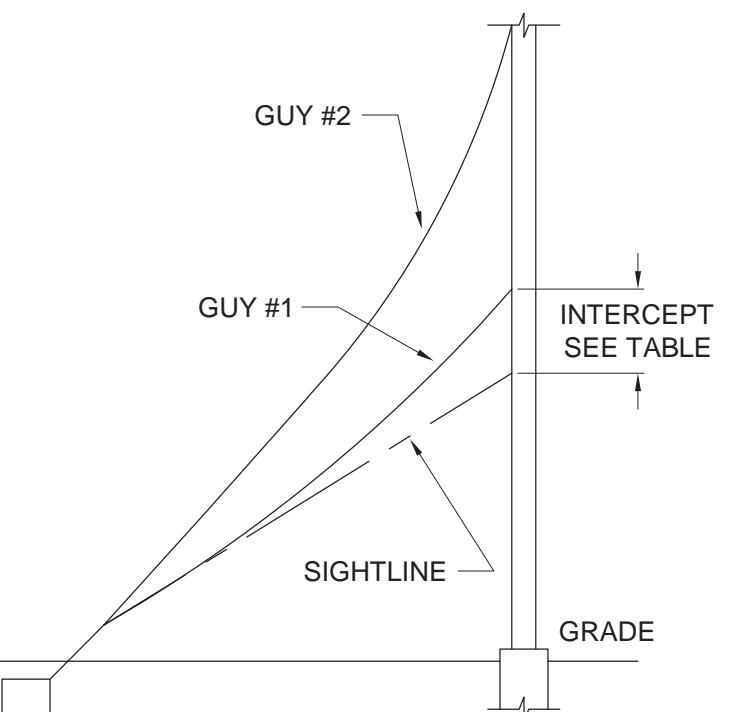
| | 0 DEG. F | | 20 DEG. F | | 40 DEG. F | | 60 DEG. F | | 80 DEG. F | | 100 DEG. F | |
|----|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|
| | ERECT. TENSION (LBS) | INTER- CEPT (FT) |
| 1A | 5875 | 1.4 | 5448 | 1.5 | 5023 | 1.6 | 4600 | 1.8 | 4181 | 2.0 | 3768 | 2.2 |
| 2A | 5674 | 3.8 | 5238 | 4.1 | 4813 | 4.5 | 4400 | 4.9 | 4006 | 5.3 | 3631 | 5.9 |
| 3A | 4901 | 4.2 | 4734 | 4.4 | 4567 | 4.5 | 4400 | 4.7 | 4235 | 4.9 | 4070 | 5.0 |
| 4A | 2810 | 10.5 | 2705 | 10.9 | 2602 | 11.3 | 2500 | 11.7 | 2402 | 12.2 | 2304 | 12.7 |



ELEVATION VIEW - GUY #3 & #4

NOTES:

1. DURING THE INITIAL GUY TENSIONING PROCEDURES AND AT THE TIME OF INSPECTION, THE GUY TENSIONS AND/OR INTERCEPTS SHOULD BE IN ACCORDANCE WITH THE VALUES SHOWN ABOVE. USE THE TEMPERATURE WHICH ACTUALLY EXISTS AT THE TIME THE TENSION IS BEING CHECKED. FOR TEMPERATURES OTHER THAN THOSE SHOWN ABOVE, INTERPOLATE OR EXTRAPOLATE OTHER VALUES.
2. TOWER PLUMBING AND INITIAL TENSIONING OF GUYS SHOULD BE DONE ONLY IN CALM WEATHER AND WITH NO ICE ON GUYS.
3. INTERCEPTS AND TENSIONS ARE SHOWN IN GUY DIRECTION "A" ONLY. ADJUST ALL DIRECTIONS ACCORDINGLY.
4. GUY #1 IS BOTTOM GUY; GUY #2 IS NEXT, ETC.
5. USE SIGHT BAR FOR DETERMINING GUY INTERCEPTS.
6. TENSION AND/OR INTERCEPT TOLERANCES +/- 5%.



ELEVATION VIEW - GUY #1 & #2

| | | |
|-----------------|--------|-----------|
| PREPARED BY | JMR | 3/24/21 |
| CHECKED BY | GH | 4/12/21 |
| ENGINEER REVIEW | AV | 4/14/2021 |
| PROJECT NUMBER | 350819 | |
| DRAWING NUMBER | D08.00 | |

INTERCEPTS & ERECTION TENSIONS

| | | |
|-------------|----------------------|-----------|
| REV BY DATE | REVISION DESCRIPTION | D.CK DATE |
|-------------|----------------------|-----------|

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Lansdale, PA 19446

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CONN. STATE
PROFESSIONAL
ENGINEER
No. 32975
04-15-2021

Exhibit E



Mount Structural Analysis for Northeast Site Solutions

276' Guyed Tower (278' AGL)

Site Name: NH305/Channel 20_ET

Site ID: CTNH305B

Site Address: 103 East Side Blvd, Naugatuck, CT 06706

Site Location: Latitude: 41.51797 Longitude: -73.01846

FDH Infrastructure Services LLC, Project Number PR-005376
Stainless # 350818

Analysis Results

| | | |
|------------------|-------|------------|
| Mount Components | 90.7% | Sufficient |
|------------------|-------|------------|

Prepared By:

Anne E. Vago, EI
Project Engineer

Reviewed By:

Krystyn M. Perez, P.E.
Vice President, Structural Engineering
CT License No. 32975

Stainless
100 W Main St Ste 400
Lansdale PA 19446
(919) 755-1012
Structural@fdh-is.com



March 19, 2021

03-19-2021

Prepared pursuant to ANSI/TIA-222-G Structural Standard for Antenna Supporting Structures and Antennas and the 2018 Connecticut Building Code (2015 IBC)

TABLE OF CONTENTS

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|----------------------------|---|
| EXECUTIVE SUMMARY | 3 |
| Conclusions..... | 3 |
| Recommendation(s)..... | 3 |
| APPURtenANCE LISTING | 4 |
| RESULTS..... | 5 |
| GENERAL COMMENTS | 6 |
| LIMITATIONS..... | 6 |
| APPENDIX | 7 |

EXECUTIVE SUMMARY

At the request of Northeast Site Solutions, Stainless performed a structural analysis of the existing Mount(s) and the proposed loading for T-Mobile at the 276' Guyed Tower located in Naugatuck, CT to determine whether the structure is structurally adequate to support both the existing and proposed loads pursuant to the *Structural Standard for Antenna Supporting Structures and Antennas, ANSI/TIA-222-G* and the *2018 Connecticut Building Code (2015 IBC)*. Information pertaining to the existing/proposed antenna loading, Mount geometry, and member sizes was obtained from:

| Source | Document Type | Reference | Date |
|----------------------------------|-------------------------|--|-----------|
| SitePro1 | Mount Assembly Drawings | Part No. VFA12-SD-S | 7/13/2017 |
| Stainless | Stainless Proposal | P21_3508_001 | 2/19/2021 |
| FDH Infrastructure Services, LLC | Tower Mapping Report | Project No. 19BHC1500 | 7/26/2019 |
| Northeast Site Solutions | RFDS | CTNH305B_Anchor_4_draft_2021-01-27.pdf | 1/27/2021 |
| T-Mobile | Emails | Correspondence with Sheldon Freinle | 3/15/2021 |
| Northeast Site Solutions | | | |

This analysis has been performed in accordance with the *2018 Connecticut State Building Code* based upon an *ultimate 3-second gust wind speed* of 125 mph and a *basic design wind speed* of 50 mph with 3/4" radial ice. This converted to a nominal 3-second gust wind speed of 97 mph per *Section 1609.3 and Appendix N* as required for use in the *TIA-222-G* Standard per *Exception #5 of Section 1609.1.1*. Exposure Category B with a maximum topographic factor, Kzt, of 1.194 at mount elevation and Risk Category II were used in this analysis.

Conclusions

With the existing and proposed antennas from T-Mobile outlined in **Table 1**, we have determined the Mount(s) stress level to be **Sufficient** pursuant to the requirements of the *ANSI/TIA-222-G* standard and the *2018 Connecticut Building Code (2015 IBC)* provided the **Recommendation(s)** listed below are satisfied. For a more detailed description of the analysis of the Mount(s), see the **Results** section of this report.

Our assessment has been made assuming all information provided to Stainless is accurate and that the Mount(s) have been properly erected and maintained.

Recommendation(s)

To ensure the requirements of the current analysis standards are met with the loading in place per **Table 1**, we have the following recommendation(s):

- The existing and proposed equipment may be installed as shown in **Table 1** on the proposed mount(s). The proposed panel antennas should be installed on new 2SCH 40 (2.4" dia. x 0.154" thk.) pipe mounts. A total of (9) 10' long pipe mounts should be installed evenly across the face of the mount, (3) per sector.
- All existing and proposed TMAs and RRHs should be installed behind the existing and proposed panel antennas. This equipment was not shielded when considering wind loads in this analysis.
- We recommend that all bolts be checked for tightness prior to the installation of the proposed loading and that all rusted hardware be replaced with galvanized hardware.

APPURTENANCE LISTING

The antennas and equipment, with their corresponding feed lines, considered for this analysis are shown in **Table 1**. *If the actual layout determined in the field deviates from the layout, Stainless should be contacted to perform a revised analysis.*

Table 1 - Appurtenance Loading

Existing Carrier Mount Loading:

| Antenna Elevation (ft.) | Description | Feed Lines | Carrier | Mount Centerline Elevation (ft.) | Mount Type |
|-------------------------|---|---------------------------------|----------|----------------------------------|------------------|
| 236 | (3) Andrew DBXNH-6565A-A2M (3) Ericsson RRUS11 B12 (4) RFS ATMA3P4-1A20 (2) RFS ATMA4P4-1A202 (3) Ericsson AIR32 KRD901146-1_B66A_B2A | (12) 1-5/8" (3) 1-5/8" Fiber | T-Mobile | 236 | (3) T-arm Mounts |

Proposed Carrier Final Mount Loading:

| Antenna Elevation (ft.) | Description | Feed Lines | Carrier | Mount Centerline Elevation (ft.) | Mount Type |
|-------------------------|--|---------------------------------------|----------|----------------------------------|---|
| 236 | (3) Ericsson AIR32 KRD901146-1_B66A_B2A (3) RFS-APXVAARR24_43-U-NA20 (3) Ericsson AIR6449 B41 (3) Ericsson Radio 4449 B71+B85 (3) Radio 4415 B25 | (3) 1-5/8" Fiber (3) 1-5/8" Hybrid | T-Mobile | 236 | (3) 12.5' Sector Frames [SitePro1 P/N: VFA12-SD-S] |

RESULTS

The following member material grades were utilized in the analysis:

Table 2 - Member Material Grade

| Member Type | Steel Grade |
|-------------------|------------------------------|
| Pipe | A53 Gr. B |
| Rectangular HSS | A500 Gr. B ($F_y = 46$ ksi) |
| Round HSS | A500 Gr. B ($F_y = 42$ ksi) |
| Cold Formed | A570 Gr. 33 |
| U-bolt | J429 Gr. 2 |
| Bolt | A325 |
| Threaded Rods | J429 Gr. 2 |
| All Other Members | Q235 Gr. B |

The following load combinations were used to analyze the Mount(s):

Table 3 – Load Combinations

| Load Case | Factored Combination |
|---|---|
| Dead | 1.4 D |
| Dead + Wind | 1.2 D + 1.6 W ₀ |
| Dead + Dead (ice) + Wind (ice) | 1.2 D + 1.0 D _i + 1.0 W _i |
| Dead + Wind (maintenance) + Man (500 lbs) | 1.2 D + 1.0 W _m + 1.5 L _m |
| Dead + Man (250 lbs) | 1.2 D + 1.5 L _v |

Table 4 displays the summary of the ratio (as a percentage) of force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. *Note:* Capacities of up to 105% are typically considered acceptable based on analysis methods used. Notwithstanding, ratings shall not exceed 100% as stipulated by the tower owner. **Table 5** displays the maximum tilt and twist at maintenance wind speeds (30 mph) relative to tower deflections. Values in this table represent the expected displacements during operations coinciding with maintenance work performed by crew members.

If the assumptions outlined in this report differ from actual field conditions, Stainless should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable tilt and twist requirements for the appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed calculations and modeling information.

Table 4 - Mount Component Stresses vs. Capacity

| Component | Capacity (%) | Pass / Fail |
|---------------------|--------------|-------------|
| Pipe Mount(s) | 66.6 | Pass |
| Horizontal(s) | 90.7 | Pass |
| Standoff(s) | 72.6 | Pass |
| Bracing | 49.3 | Pass |
| Tower Connection(s) | 27.9 | Pass |

Table 5 – Maximum Mount Deflections and Rotations at Maintenance Wind Speeds (30 mph)

| Mount Elevation (ft.) | Vertical Deflection* (in.) | Tilt* (degrees) | Twist* (degrees) |
|--------------------------|-------------------------------|--------------------|---------------------|
| 236 | 0.751 | 0.754 | 0.258 |

* Deflections provided are relative to the deflection of the supporting tower or structure. Allowable deflection and rotation values to be reviewed by the client.

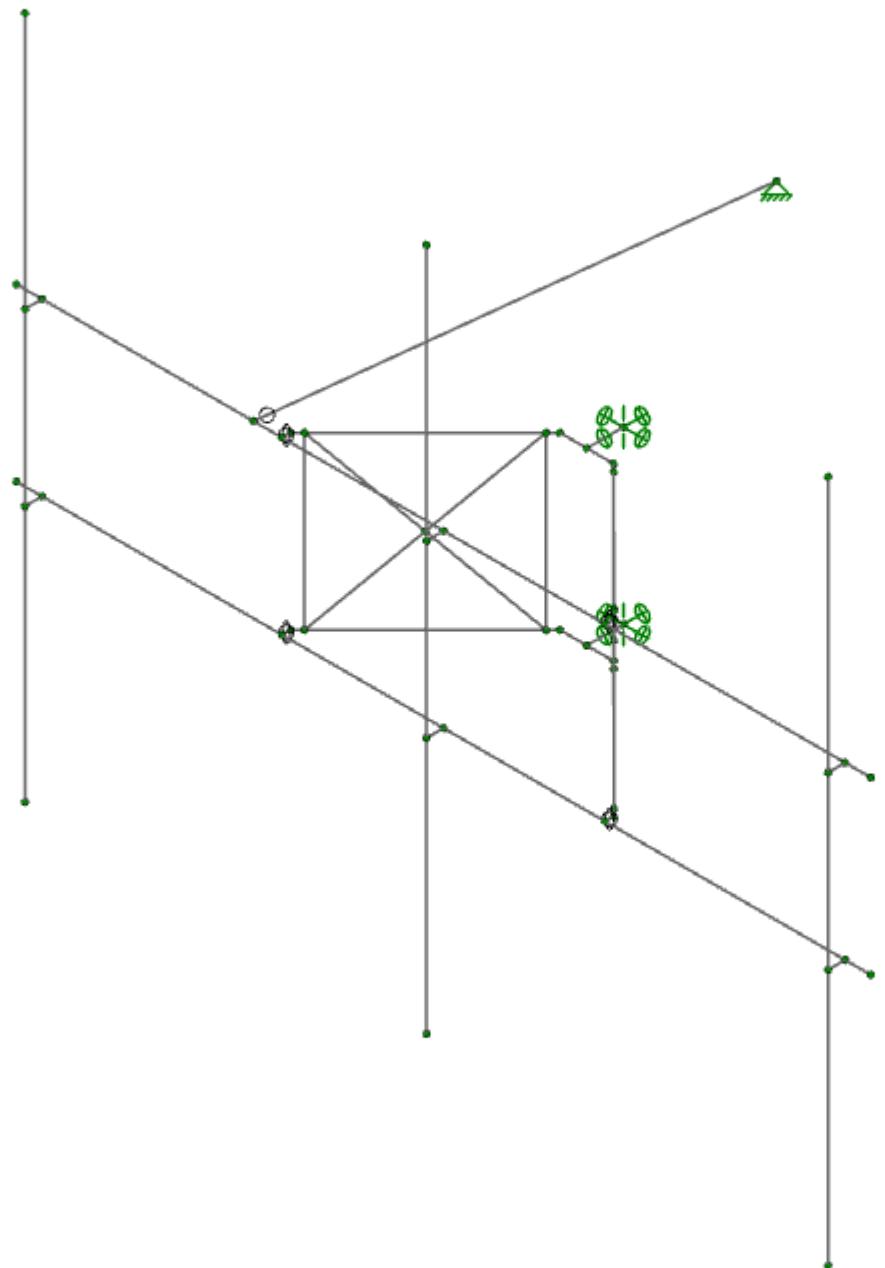
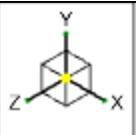
GENERAL COMMENTS

This engineering analysis is based upon the theoretical capacity of the Mount. It is not a condition assessment of the Mount. It is the responsibility of the client to verify that the Mount modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If substantial modifications are to be made or the assumptions made in this analysis are not accurate, Stainless should be notified immediately to perform a revised analysis.

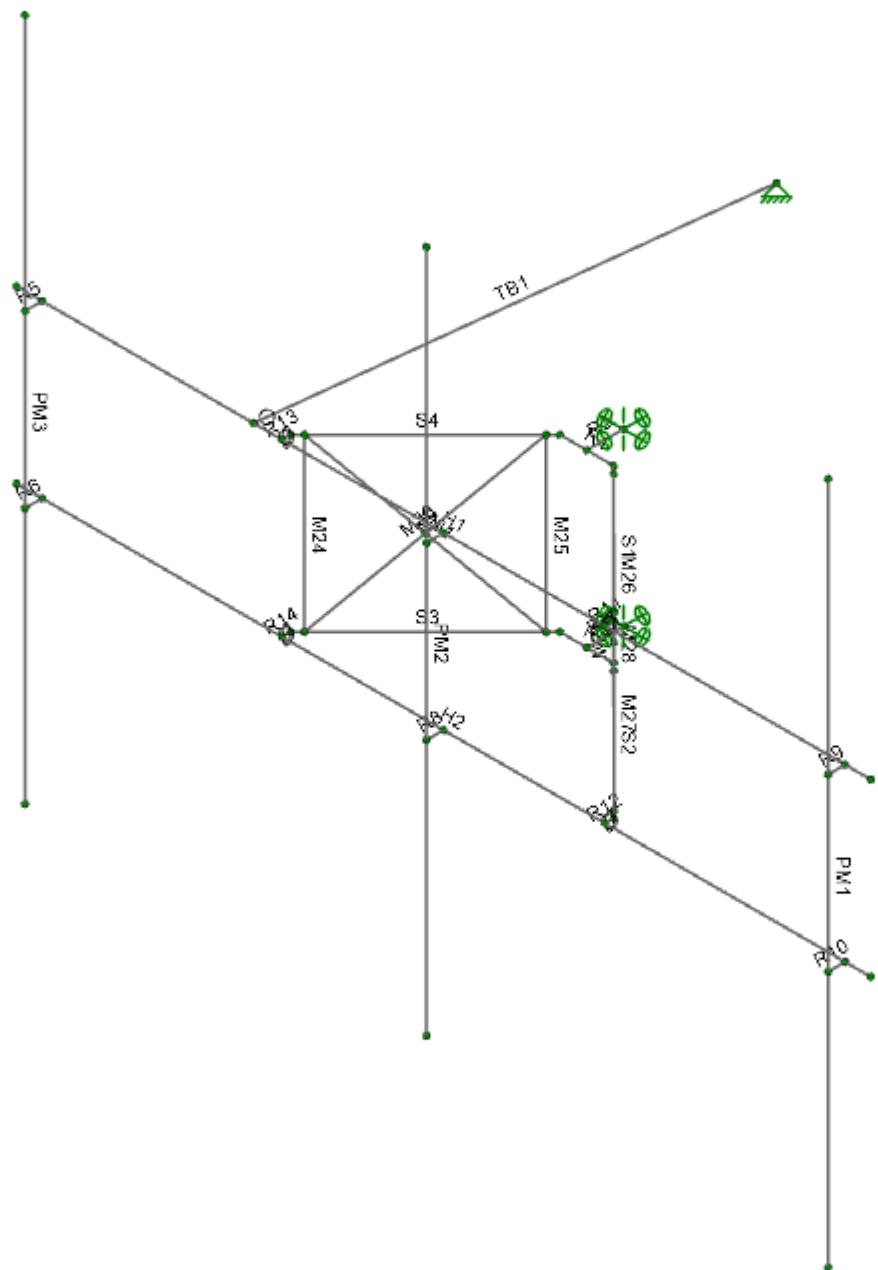
LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of Stainless.

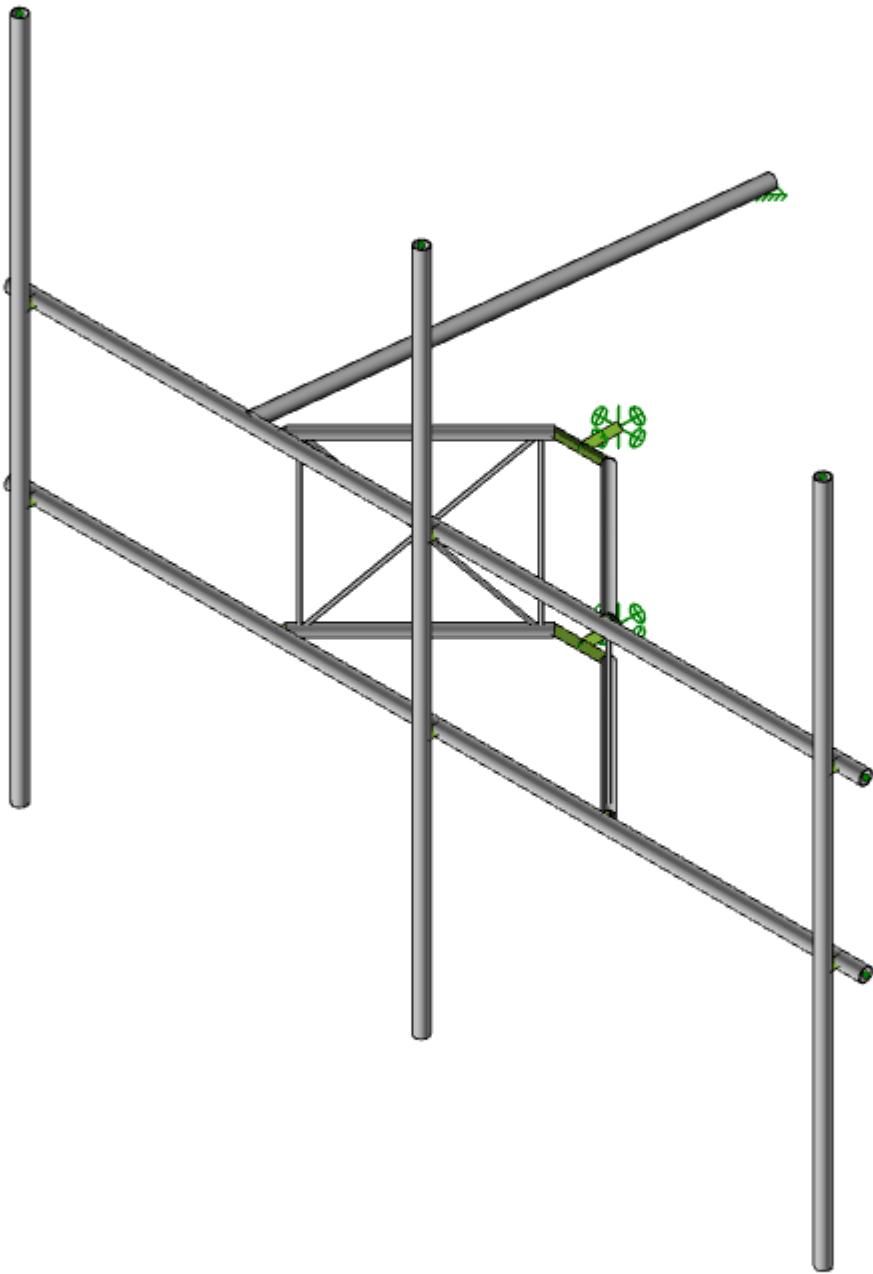
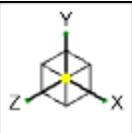
APPENDIX



| | | |
|--------|----------------------|-----------------------------------|
| FDH | 350818_Waterbury, CT | SK-1 |
| AEV | | Mar 17, 2021 |
| 350818 | | 350818_Waterbury, CT (03-17-20... |



| | | |
|--------|----------------------|-----------------------------------|
| FDH | 350818_Waterbury, CT | SK-2 |
| AEV | | Mar 17, 2021 |
| 350818 | | 350818_Waterbury, CT (03-17-20... |



| | | |
|--------|----------------------|-----------------------------------|
| FDH | 350818_Waterbury, CT | SK-3 |
| AEV | | Mar 17, 2021 |
| 350818 | | 350818_Waterbury, CT (03-17-20... |

Mount Analysis

| Project Information | |
|---------------------|----------------------|
| Project Number: | 350818_Waterbury, CT |
| Site Name: | NH305/Channel 20_ET |
| Site Number: | 3508 |

| Analysis Parameters | | | |
|--|-----------------------|--------------|-----|
| Tower Type: | <i>TowerType</i> | Guyed | - |
| Mount Status: | <i>MountStatus</i> | Proposed | - |
| Mount Type: | <i>MountType</i> | Sector Frame | - |
| Analysis Code: | <i>Code</i> | TIA-222-G | - |
| IBC Code: | <i>IbcCode</i> | 2015 IBC | - |
| Max Stress Ratio: | <i>MaxStressRatio</i> | 100% | - |
| Tower Height: | <i>TwrHeight</i> | 276 | ft |
| Effective Mount Centerline Height: | <i>MntHeight</i> | 236 | ft |
| RISA Y-Coordinate of Mount CL: | <i>MountY</i> | 0 | in |
| Basic/Nominal Wind Speed: | <i>WindSpeed</i> | 97 | mph |
| Maintenance Wind Speed: | <i>MaintWind</i> | 30 | mph |
| Design Ice Wind Speed: | <i>IceWind</i> | 50 | mph |
| Nominal Ice Thickness: | <i>IceThickness</i> | 0.75 | in |
| Risk Category: | <i>RiskCat</i> | II | - |
| Exposure Category: | <i>Exposure</i> | B | - |
| Topographic Factor K_{zt} : | <i>Kzt</i> | 1.194 | - |
| S_s : | <i>Ss</i> | | - |
| S_1 : | <i>S_1</i> | | - |
| Site Class: | <i>SiteClass</i> | | - |
| Ground Elevation at Base of Structure: | <i>zs</i> | | ft |
| Roof Speed Up Factor: | <i>Ks</i> | | - |

| Wind Parameters | | | |
|---|-------|-------|-----|
| Wind Speed: | | | |
| Sheilding Factor K_a : | Ka | 1.00 | - |
| Gust Factor G_H : | Gh | 1.00 | - |
| Velocity Pressure Factor K_z : | Kz | 1.26 | - |
| Wind Importance Factor I : | I | 1.00 | - |
| Exist. Structure Reduction Factor F_w : | Fw | - | - |
| Direction Probability Factor K_d : | Kd | 0.95 | - |
| Wind Pressure q_z : | qz | 34.51 | psf |
| Maint. Wind Pressure q_{mz} : | qmz | 3.30 | psf |
| Ice Wind Speed: | | | |
| Design Ice Thickness t_{iz} : | tiz | 1.94 | in |
| Ice Height Escalation Factor K_{iz} : | Kiz | 1.22 | - |
| Ice Importance Factor I : | I | 1.00 | - |

- Load Combinations
- 1.2D + 1.6Wo
- 1.2D + 1.0Di + 1.0Wi
- 1.4D
- 1.2D + 1.5Lm + 1.0Wm
- 1.2D + 1.5Lv

Considered Wind Directions

| Maintenance Loads | |
|---------------------------|-----|
| Pipe Mounts, L_M (lbs): | 500 |
| Horizontals, L_V (lbs): | 250 |

| Maximum Deflections | | |
|---------------------|---------------|----------------|
| Vertical (in) | Tilt (deg) | Twist (deg) |
| 0.751 | 0.754 | 0.258 |

| Tie-Back End Reactions | | |
|------------------------|-------------------|-----------------|
| Member Label | Joint Label at BC | Resultant (lbs) |
| TB1 | TJ1 | 1963.9 |
| | | |

| Overall Max Stress Ratio |
|--------------------------|
| 90.7% Pass |

| Connection Summary | | | | | | | | | | |
|--------------------|---------------|--------------------|--------------|-----------------------|------------------------|-----------------------|------------------------|----------------|--------------|-----------|
| Node Label | Bolt Quantity | Bolt Diameter (in) | Bolt Type | T _u (kips) | ΦT _n (kips) | V _u (kips) | ΦV _n (kips) | Controlling LC | Stress Ratio | Pass/Fail |
| N6 | 4 | 0.5 | Threaded Rod | 4.18 | 74.00 | 1.07 | 3.84 | 31 | 27.9% | Pass |

Site Specific Appurtenances:

| | Include Loading (Yes/No) | Manufacturer | Model | Member Label | Type | # | Absolute Azimuth (deg) | Centerline Elevation (ft) | Height (in) | Width (in) | Depth (in) | Weight (lbs) | Ice Weight (lbs) | CaAa Front No Ice (ft ²) | CaAa Front Ice (ft ²) | CaAa Side No Ice (ft ²) | CaAa Side Ice (ft ²) |
|---|--------------------------|--------------|-------------------------------------|--------------|---------|---|------------------------|---------------------------|-------------|------------|------------|--------------|------------------|--------------------------------------|-----------------------------------|-------------------------------------|----------------------------------|
| 1 | Yes | ericsson | AIR 32 B32 901146-1_B66a_B2A (Octa) | PM3 | Antenna | 1 | 0.00 | 236.00 | 58.1 | 15.7 | 9.4 | 132.0 | 377.511 | 7.939 | 9.479 | 5.172 | 6.552 |
| 2 | Yes | ericsson | Air 6449 B41 | PM2 | Antenna | 1 | 0.00 | 236.00 | 33.1 | 20.5 | 8.3 | 103.0 | 277.178 | 5.655 | 6.869 | 2.416 | 3.304 |
| 3 | Yes | rfs celwave | APXVAARR24_43-U-NA20 | PM1 | Antenna | 1 | 0.00 | 236.00 | 95.9 | 24.0 | 8.7 | 153.3 | 640.331 | 14.670 | 17.719 | 5.320 | 8.000 |
| 4 | Yes | ericsson | RADIO 4449 B71/B85A | PM1 | Other | 1 | 0.00 | 236.00 | 15.0 | 13.2 | 10.5 | 75.0 | 158.220 | 1.644 | 2.309 | 1.310 | 1.917 |
| 5 | Yes | ericsson | 4415 B25 | PM1 | Other | 1 | 0.00 | 236.00 | 18.1 | 13.4 | 8.3 | 59.4 | 144.598 | 2.021 | 2.758 | 1.252 | 1.879 |

Member Primary Data

| Label | I Node | J Node | Rotate(deg) | Section/Shape | Type | Design List | Material | Design Rule | |
|-------|--------|--------|-------------|------------------|--------|-------------|------------|-------------|---------|
| 1 | M28 | N59C | N56A | Diagonals | VBrace | BAR | Q235 Gr. B | Typical | |
| 2 | M29 | N55A | N60A | Diagonals | VBrace | BAR | Q235 Gr. B | Typical | |
| 3 | M30 | N62A | N57A | Diagonals | VBrace | BAR | Q235 Gr. B | Typical | |
| 4 | M31 | N58B | N61A | Diagonals | VBrace | BAR | Q235 Gr. B | Typical | |
| 5 | H1 | N11 | N14 | Horizontals | Beam | Pipe | A53 Gr.B | Typical | |
| 6 | H2 | N18 | N15 | Horizontals | Beam | Pipe | A53 Gr.B | Typical | |
| 7 | PM1 | N54 | N55 | Pipe Mount | Column | Pipe | A53 Gr.B | Typical | |
| 8 | PM2 | N46 | N48A | Pipe Mount | Column | Pipe | A53 Gr.B | Typical | |
| 9 | PM3 | N47 | N49A | Pipe Mount | Column | Pipe | A53 Gr.B | Typical | |
| 10 | R1 | N9 | N2 | RIGID | None | None | RIGID | Typical | |
| 11 | R2 | N3 | N8 | RIGID | None | None | RIGID | Typical | |
| 12 | R3 | N58A | N6 | RIGID | None | None | RIGID | Typical | |
| 13 | R4 | N59A | N5 | RIGID | None | None | RIGID | Typical | |
| 14 | R5 | N48 | N44 | RIGID | None | None | RIGID | Typical | |
| 15 | R6 | N49 | N45 | RIGID | None | None | RIGID | Typical | |
| 16 | R7 | N58 | N42 | RIGID | None | None | RIGID | Typical | |
| 17 | R8 | N59 | N43 | RIGID | None | None | RIGID | Typical | |
| 18 | R9 | N50 | N52 | RIGID | None | None | RIGID | Typical | |
| 19 | R10 | N51 | N53 | RIGID | None | None | RIGID | Typical | |
| 20 | S1 | N60 | N9 | Standoffs | Beam | Pipe | A53 Gr.B | Typical | |
| 21 | S2 | N61 | N8 | Standoffs | Beam | Pipe | A53 Gr.B | Typical | |
| 22 | S3 | N62 | N3 | Standoffs | Beam | Pipe | A53 Gr.B | Typical | |
| 23 | S4 | N59B | N2 | Standoffs | Beam | Pipe | A53 Gr.B | Typical | |
| 24 | TB1 | TJ1 | | Tie-back | Beam | Pipe | A53 Gr.B | Typical | |
| 25 | M24 | N58B | N57A | Vertical Bracing | VBrace | BAR | Q235 Gr. B | Typical | |
| 26 | M25 | N62A | N61A | Vertical Bracing | VBrace | BAR | Q235 Gr. B | Typical | |
| 27 | M26 | N59C | N60A | Vertical Bracing | VBrace | BAR | Q235 Gr. B | Typical | |
| 28 | M27 | N55A | N56A | Vertical Bracing | VBrace | BAR | Q235 Gr. B | Typical | |
| 29 | R11 | N13 | N60 | 90 | RIGID | None | None | RIGID | Typical |
| 30 | R12 | N16 | N61 | 90 | RIGID | None | None | RIGID | Typical |
| 31 | R13 | N12 | N59B | 90 | RIGID | None | None | RIGID | Typical |
| 32 | R14 | N17 | N62 | 90 | RIGID | None | None | RIGID | Typical |

Member Advanced Data

| Label | I Release | T/C Only | Physical | Deflection Ratio Options | Seismic DR |
|-------|-----------|----------|--------------|--------------------------|------------|
| 1 | M28 | | Yes | ** NA ** | None |
| 2 | M29 | | Tension Only | Yes | ** NA ** |
| 3 | M30 | | | Yes | ** NA ** |
| 4 | M31 | | Tension Only | Yes | ** NA ** |
| 5 | H1 | | | Yes | Default |
| 6 | H2 | | | Yes | Default |
| 7 | PM1 | | | Yes | ** NA ** |
| 8 | PM2 | | | Yes | ** NA ** |
| 9 | PM3 | | | Yes | ** NA ** |
| 10 | R1 | | | Yes | ** NA ** |
| 11 | R2 | | | Yes | ** NA ** |
| 12 | R3 | | | Yes | ** NA ** |
| 13 | R4 | | | Yes | ** NA ** |
| 14 | R5 | | | Yes | ** NA ** |
| 15 | R6 | | | Yes | ** NA ** |
| 16 | R7 | | | Yes | ** NA ** |
| 17 | R8 | | | Yes | ** NA ** |
| 18 | R9 | | | Yes | ** NA ** |
| 19 | R10 | | | Yes | ** NA ** |
| 20 | S1 | | | Yes | None |
| 21 | S2 | | | Yes | None |
| 22 | S3 | | | Yes | None |
| 23 | S4 | | | Yes | None |

Member Advanced Data (Continued)

| Label | I Release | T/C Only | Physical | Deflection Ratio Options | Seismic DR |
|--------|-----------|----------|----------|--------------------------|------------|
| 24 TB1 | BenPIN | | Yes | Default | None |
| 25 M24 | | | Yes | ** NA ** | None |
| 26 M25 | | | Yes | ** NA ** | None |
| 27 M26 | | | Yes | ** NA ** | None |
| 28 M27 | | | Yes | ** NA ** | None |
| 29 R11 | OOOXXO | | Yes | ** NA ** | None |
| 30 R12 | OOOXXO | | Yes | ** NA ** | None |
| 31 R13 | OOOXXO | | Yes | ** NA ** | None |
| 32 R14 | OOOXXO | | Yes | ** NA ** | None |

Hot Rolled Steel Design Parameters

| Label | Shape | Length [in] | Lb y-y [in] | Lb z-z [in] | Lcomp top [in] | L-Torque [in] | K y-y | K z-z | Function |
|--------|------------------|-------------|-------------|-------------|----------------|---------------|-------|-------|----------|
| 1 M28 | Diagonals | 42.426 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 2 M29 | Diagonals | 42.426 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 3 M30 | Diagonals | 42.426 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 4 M31 | Diagonals | 42.426 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 5 H1 | Horizontals | 150 | | 56.74 | Lbyy | 56.74 | | | Lateral |
| 6 H2 | Horizontals | 150 | | 56.74 | Lbyy | 56.74 | | | Lateral |
| 7 PM1 | Pipe Mount | 120 | 45 | 45 | Lbyy | | | | Lateral |
| 8 PM2 | Pipe Mount | 120 | 45 | 45 | Lbyy | | | | Lateral |
| 9 PM3 | Pipe Mount | 120 | 45 | 45 | Lbyy | | | | Lateral |
| 10 S1 | Standoffs | 33.432 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 11 S2 | Standoffs | 33.432 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 12 S3 | Standoffs | 33.432 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 13 S4 | Standoffs | 33.432 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 14 TB1 | Tie-back | 82.961 | | | Lbyy | | | | Lateral |
| 15 M24 | Vertical Bracing | 30 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 16 M25 | Vertical Bracing | 30 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 17 M26 | Vertical Bracing | 30 | | | Lbyy | | 0.65 | 0.65 | Lateral |
| 18 M27 | Vertical Bracing | 30 | | | Lbyy | | 0.65 | 0.65 | Lateral |

Material Take-Off

| Material | Size | Pieces | Length[in] | Weight[K] |
|--------------------|--------------|--------|------------|-----------|
| 1 General Members | | | | |
| 2 RIGID | | 14 | 55.8 | 0 |
| 3 Total General | | 14 | 55.8 | 0 |
| 4 | | | | |
| 5 Hot Rolled Steel | | | | |
| 6 A53 Gr.B | Pipe_1.5 STD | 4 | 133.7 | 0.03 |
| 7 A53 Gr.B | Pipe_2.0 STD | 6 | 743 | 0.227 |
| 8 Q235 Gr. B | SR 5/8 | 8 | 289.7 | 0.025 |
| 9 Total HR Steel | | 18 | 1166.4 | 0.282 |

Basic Load Cases

| | BLC Description | Category | Y Gravity | Point | Distributed |
|----|-----------------------|----------|-----------|-------|-------------|
| 1 | Wind 0 Deg - No Ice | None | | 8 | 21 |
| 2 | Wind 30 Deg - No Ice | None | | 16 | 36 |
| 3 | Wind 60 Deg - No Ice | None | | 16 | 36 |
| 4 | Wind 90 Deg - No Ice | None | | 8 | 18 |
| 5 | Wind 120 Deg - No Ice | None | | 16 | 36 |
| 6 | Wind 150 Deg - No Ice | None | | 16 | 36 |
| 7 | Wind 180 Deg - No Ice | None | | 8 | 21 |
| 8 | Wind 210 Deg - No Ice | None | | 16 | 36 |
| 9 | Wind 240 Deg - No Ice | None | | 16 | 36 |
| 10 | Wind 270 Deg - No Ice | None | | 8 | 18 |
| 11 | Wind 300 Deg - No Ice | None | | 16 | 36 |
| 12 | Wind 330 Deg - No Ice | None | | 16 | 36 |

Basic Load Cases (Continued)

| | BLC Description | Category | Y Gravity | Point | Distributed |
|----|----------------------------|----------|-----------|-------|-------------|
| 13 | Wind 0 Deg - Ice | None | | 8 | 21 |
| 14 | Wind 30 Deg - Ice | None | | 16 | 36 |
| 15 | Wind 60 Deg - Ice | None | | 16 | 36 |
| 16 | Wind 90 Deg - Ice | None | | 8 | 18 |
| 17 | Wind 120 Deg - Ice | None | | 16 | 36 |
| 18 | Wind 150 Deg - Ice | None | | 16 | 36 |
| 19 | Wind 180 Deg - Ice | None | | 8 | 21 |
| 20 | Wind 210 Deg - Ice | None | | 16 | 36 |
| 21 | Wind 240 Deg - Ice | None | | 16 | 36 |
| 22 | Wind 270 Deg - Ice | None | | 8 | 18 |
| 23 | Wind 300 Deg - Ice | None | | 16 | 36 |
| 24 | Wind 330 Deg - Ice | None | | 16 | 36 |
| 25 | Wind 0 Deg - Maintenance | None | | 8 | 21 |
| 26 | Wind 30 Deg - Maintenance | None | | 16 | 36 |
| 27 | Wind 60 Deg - Maintenance | None | | 16 | 36 |
| 28 | Wind 90 Deg - Maintenance | None | | 8 | 18 |
| 29 | Wind 120 Deg - Maintenance | None | | 16 | 36 |
| 30 | Wind 150 Deg - Maintenance | None | | 16 | 36 |
| 31 | Wind 180 Deg - Maintenance | None | | 8 | 21 |
| 32 | Wind 210 Deg - Maintenance | None | | 16 | 36 |
| 33 | Wind 240 Deg - Maintenance | None | | 16 | 36 |
| 34 | Wind 270 Deg - Maintenance | None | | 8 | 18 |
| 35 | Wind 300 Deg - Maintenance | None | | 16 | 36 |
| 36 | Wind 330 Deg - Maintenance | None | | 16 | 36 |
| 37 | Dead | None | -1 | 8 | |
| 38 | Dead - Ice | None | | 8 | 18 |
| 39 | Maint. Pipe Load 1 | None | | 1 | |
| 40 | Maint. Pipe Load 2 | None | | 1 | |
| 41 | Maint. Pipe Load 3 | None | | 1 | |
| 42 | Maint. Horz. Load 1 | None | | 1 | |
| 43 | Maint. Horz. Load 2 | None | | 1 | |
| 44 | Maint. Horz. Load 3 | None | | 1 | |
| 45 | Maint. Horz. Load 4 | None | | 1 | |
| 46 | Maint. Horz. Load 5 | None | | 1 | |
| 47 | Maint. Horz. Load 6 | None | | 1 | |
| 48 | Maint. Horz. Load 7 | None | | 1 | |
| 49 | Maint. Horz. Load 8 | None | | 1 | |
| 50 | Maint. Horz. Load 9 | None | | 1 | |
| 51 | Maint. Horz. Load 10 | None | | 1 | |
| 52 | Maint. Horz. Load 11 | None | | 1 | |
| 53 | Maint. Horz. Load 12 | None | | 1 | |
| 54 | Maint. Horz. Load 13 | None | | 1 | |
| 55 | Maint. Horz. Load 14 | None | | 1 | |
| 56 | Maint. Horz. Load 15 | None | | 1 | |
| 57 | Maint. Horz. Load 16 | None | | 1 | |
| 58 | Maint. Horz. Load 17 | None | | 1 | |
| 59 | Maint. Horz. Load 18 | None | | 1 | |

Node Boundary Conditions

| | Node Label | X [k/in] | Y [k/in] | Z [k/in] | X Rot [k-ft/rad] | Z Rot [k-ft/rad] |
|---|------------|----------|----------|----------|------------------|------------------|
| 1 | N6 | Reaction | Reaction | Reaction | Reaction | Reaction |
| 2 | N5 | Reaction | Reaction | Reaction | Reaction | Reaction |
| 3 | TJ1 | Reaction | Reaction | Reaction | | |

Node Coordinates

| Label | X [in] | Y [in] | Z [in] | Detach From Diaphragm |
|---------|------------|--------|------------|-----------------------|
| 1 N2 | -4.73 | 15 | 6.42 | |
| 2 N3 | -4.73 | -15 | 6.42 | |
| 3 N5 | 0 | -15 | 0 | |
| 4 N6 | 0 | 15 | 0 | |
| 5 N8 | 4.73 | -15 | 6.42 | |
| 6 N9 | 4.73 | 15 | 6.42 | |
| 7 N11 | -75 | 15 | 31.56 | |
| 8 N12 | -28.375 | 15 | 31.56 | |
| 9 N13 | 28.375 | 15 | 31.56 | |
| 10 N14 | 75 | 15 | 31.56 | |
| 11 N15 | 75 | -15 | 31.56 | |
| 12 N16 | 28.375 | -15 | 31.56 | |
| 13 N17 | -28.375 | -15 | 31.56 | |
| 14 N18 | -75 | -15 | 31.56 | |
| 15 N23 | 26.76197 | 15 | 28.442328 | |
| 16 N58 | 0 | 15 | 31.56 | |
| 17 N59 | 0 | -15 | 31.56 | |
| 18 N48 | -70.5 | 15 | 31.56 | |
| 19 N49 | -70.5 | -15 | 31.56 | |
| 20 N42 | 0 | 15 | 34.56 | |
| 21 N43 | 0 | -15 | 34.56 | |
| 22 N44 | -70.5 | 15 | 34.56 | |
| 23 N45 | -70.5 | -15 | 34.56 | |
| 24 N46 | 0 | 60 | 34.56 | |
| 25 N47 | -70.5 | 60 | 34.56 | |
| 26 N48A | 0 | -60 | 34.56 | |
| 27 N49A | -70.5 | -60 | 34.56 | |
| 28 N50 | 70.5 | 15 | 31.56 | |
| 29 N51 | 70.5 | -15 | 31.56 | |
| 30 N52 | 70.5 | 15 | 34.56 | |
| 31 N53 | 70.5 | -15 | 34.56 | |
| 32 N54 | 70.5 | 60 | 34.56 | |
| 33 N55 | 70.5 | -60 | 34.56 | |
| 34 TJ1 | -24 | 15 | -50.869219 | |
| 35 TI1 | -33.375 | 15 | 31.56 | |
| 36 N58A | 0 | 15 | 6.42 | |
| 37 N59A | 0 | -15 | 6.42 | |
| 38 N59B | -28.375 | 15 | 30.054652 | |
| 39 N60 | 28.375 | 15 | 30.054652 | |
| 40 N61 | 28.375 | -15 | 30.054652 | |
| 41 N62 | -28.375 | -15 | 30.054652 | |
| 42 N55A | 27.161339 | 15 | 28.841522 | |
| 43 N56A | 27.161339 | -15 | 28.841522 | |
| 44 N57A | -27.161339 | -15 | 28.841522 | |
| 45 N58B | -27.161339 | 15 | 28.841522 | |
| 46 N59C | 5.943493 | 15 | 7.632962 | |
| 47 N60A | 5.943493 | -15 | 7.632962 | |
| 48 N61A | -5.943493 | -15 | 7.632962 | |
| 49 N62A | -5.943493 | 15 | 7.632962 | |
| 50 N50A | 16.552416 | 0 | 18.237242 | |
| 51 N51A | -16.552416 | 0 | 18.237242 | |

Hot Rolled Steel Properties

| Label | E [ksi] | G [ksi] | Nu | Therm. Coeff. [1e ⁵ °F ⁻¹] | Density [k/ft ³] | Yield [ksi] | Ry | Fu [ksi] | Rt |
|-----------------|---------|---------|-----|---|------------------------------|-------------|-----|----------|-----|
| 1 A36 Gr.36 | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 36 | 1.5 | 58 | 1.2 |
| 2 A572 Gr.50 | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 50 | 1.1 | 65 | 1.1 |
| 3 A992 | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 50 | 1.1 | 65 | 1.1 |
| 4 A500 Gr.B RND | 29000 | 11154 | 0.3 | 0.65 | 0.527 | 42 | 1.4 | 58 | 1.3 |

Hot Rolled Steel Properties (Continued)

| Label | E [ksi] | G [ksi] | Nu | Therm. Coeff. [1e ⁵ °F ⁻¹] | Density [k/ft ³] | Yield [ksi] | Ry | Fu [ksi] | Rt | |
|-------|----------------|---------|-------|---|------------------------------|-------------|----|----------|----|-----|
| 5 | A500 Gr.B Rect | 29000 | 11154 | 0.3 | 0.65 | 0.527 | 46 | 1.4 | 58 | 1.3 |
| 6 | A53 Gr.B | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 35 | 1.6 | 58 | 1.2 |
| 7 | A1085 | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 50 | 1.4 | 65 | 1.3 |
| 8 | A500 Gr.42 | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 42 | 1.3 | 58 | 1.1 |
| 9 | A500 Gr.46 | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 46 | 1.2 | 58 | 1.1 |
| 10 | Q235 Gr. B | 29000 | 11154 | 0.3 | 0.65 | 0.49 | 35 | 1.5 | 55 | 1.2 |

Hot Rolled Steel Section Sets

| Label | Shape | Type | Design List | Material | Design Rule | Area [in ²] | Iyy [in ⁴] | Izz [in ⁴] | J [in ⁴] | |
|-------|------------------|--------------|-------------|----------|-------------|-------------------------|------------------------|------------------------|----------------------|-------|
| 1 | Pipe Mount | Pipe_2.0 STD | Column | Pipe | A53 Gr.B | Typical | 1.077 | 0.67 | 0.67 | 1.34 |
| 2 | Horizontals | Pipe_2.0 STD | Beam | Pipe | A53 Gr.B | Typical | 1.077 | 0.67 | 0.67 | 1.34 |
| 3 | Standoffs | Pipe_1.5 STD | Beam | Pipe | A53 Gr.B | Typical | 0.799 | 0.31 | 0.31 | 0.62 |
| 4 | Vertical Bracing | SR 5/8 | VBrace | BAR | Q235 Gr. B | Typical | 0.307 | 0.007 | 0.007 | 0.015 |
| 5 | Diagonals | SR 5/8 | VBrace | BAR | Q235 Gr. B | Typical | 0.307 | 0.007 | 0.007 | 0.015 |
| 6 | Tie-back | Pipe_2.0 STD | Beam | Pipe | A53 Gr.B | Typical | 1.077 | 0.67 | 0.67 | 1.34 |

Load Combinations

| | Description | Solve | PDelta | BLC | Factor | BLC | Factor | BLC | Factor |
|----|---|-------|--------|-----|--------|-----|--------|-----|--------|
| 1 | 1.2 Dead + 1.6 Wind 0 deg | Yes | Y | 37 | 1.2 | 1 | 1.6 | | |
| 2 | 1.2 Dead + 1.6 Wind 30 deg | Yes | Y | 37 | 1.2 | 2 | 1.6 | | |
| 3 | 1.2 Dead + 1.6 Wind 60 deg | Yes | Y | 37 | 1.2 | 3 | 1.6 | | |
| 4 | 1.2 Dead + 1.6 Wind 90 deg | Yes | Y | 37 | 1.2 | 4 | 1.6 | | |
| 5 | 1.2 Dead + 1.6 Wind 120 deg | Yes | Y | 37 | 1.2 | 5 | 1.6 | | |
| 6 | 1.2 Dead + 1.6 Wind 150 deg | Yes | Y | 37 | 1.2 | 6 | 1.6 | | |
| 7 | 1.2 Dead + 1.6 Wind 180 deg | Yes | Y | 37 | 1.2 | 7 | 1.6 | | |
| 8 | 1.2 Dead + 1.6 Wind 210 deg | Yes | Y | 37 | 1.2 | 8 | 1.6 | | |
| 9 | 1.2 Dead + 1.6 Wind 240 deg | Yes | Y | 37 | 1.2 | 9 | 1.6 | | |
| 10 | 1.2 Dead + 1.6 Wind 270 deg | Yes | Y | 37 | 1.2 | 10 | 1.6 | | |
| 11 | 1.2 Dead + 1.6 Wind 300 deg | Yes | Y | 37 | 1.2 | 11 | 1.6 | | |
| 12 | 1.2 Dead + 1.6 Wind 330 deg | Yes | Y | 37 | 1.2 | 12 | 1.6 | | |
| 13 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 0 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 13 | 1 |
| 14 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 30 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 14 | 1 |
| 15 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 60 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 15 | 1 |
| 16 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 90 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 16 | 1 |
| 17 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 120 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 17 | 1 |
| 18 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 150 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 18 | 1 |
| 19 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 180 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 19 | 1 |
| 20 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 210 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 20 | 1 |
| 21 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 240 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 21 | 1 |
| 22 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 270 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 22 | 1 |
| 23 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 300 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 23 | 1 |
| 24 | 1.2 Dead + 1.0 Ice + 1.0 Ice Wind 330 deg | Yes | Y | 37 | 1.2 | 38 | 1 | 24 | 1 |
| 25 | 1.4 Dead Only | Yes | Y | 37 | 1.4 | | | | |
| 26 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 0 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 25 | 1 |
| 27 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 30 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 26 | 1 |
| 28 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 60 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 27 | 1 |
| 29 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 90 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 28 | 1 |
| 30 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 120 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 29 | 1 |
| 31 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 150 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 30 | 1 |
| 32 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 180 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 31 | 1 |
| 33 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 210 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 32 | 1 |
| 34 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 240 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 33 | 1 |
| 35 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 270 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 34 | 1 |
| 36 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 300 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 35 | 1 |
| 37 | 1.2 Dead + 1.5 Maint. Pipe Load 1 + 1.0 Maint. Wind 330 deg | Yes | Y | 37 | 1.2 | 39 | 1.5 | 36 | 1 |
| 38 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 0 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 25 | 1 |
| 39 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 30 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 26 | 1 |

Load Combinations (Continued)

| | Description | Solve | PDelta | BLC | Factor | BLC | Factor | BLC | Factor |
|----|---|-------|--------|-----|--------|-----|--------|-----|--------|
| 40 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 60 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 27 | 1 |
| 41 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 90 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 28 | 1 |
| 42 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 120 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 29 | 1 |
| 43 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 150 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 30 | 1 |
| 44 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 180 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 31 | 1 |
| 45 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 210 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 32 | 1 |
| 46 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 240 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 33 | 1 |
| 47 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 270 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 34 | 1 |
| 48 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 300 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 35 | 1 |
| 49 | 1.2 Dead + 1.5 Maint. Pipe Load 2 + 1.0 Maint. Wind 330 deg | Yes | Y | 37 | 1.2 | 40 | 1.5 | 36 | 1 |
| 50 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 0 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 25 | 1 |
| 51 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 30 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 26 | 1 |
| 52 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 60 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 27 | 1 |
| 53 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 90 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 28 | 1 |
| 54 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 120 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 29 | 1 |
| 55 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 150 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 30 | 1 |
| 56 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 180 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 31 | 1 |
| 57 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 210 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 32 | 1 |
| 58 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 240 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 33 | 1 |
| 59 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 270 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 34 | 1 |
| 60 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 300 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 35 | 1 |
| 61 | 1.2 Dead + 1.5 Maint. Pipe Load 3 + 1.0 Maint. Wind 330 deg | Yes | Y | 37 | 1.2 | 41 | 1.5 | 36 | 1 |
| 62 | 1.2 Dead + 1.5 Maint. Horz. Load 1 | Yes | Y | 37 | 1.2 | 42 | 1.5 | | |
| 63 | 1.2 Dead + 1.5 Maint. Horz. Load 2 | Yes | Y | 37 | 1.2 | 43 | 1.5 | | |
| 64 | 1.2 Dead + 1.5 Maint. Horz. Load 3 | Yes | Y | 37 | 1.2 | 44 | 1.5 | | |
| 65 | 1.2 Dead + 1.5 Maint. Horz. Load 4 | Yes | Y | 37 | 1.2 | 45 | 1.5 | | |
| 66 | 1.2 Dead + 1.5 Maint. Horz. Load 5 | Yes | Y | 37 | 1.2 | 46 | 1.5 | | |
| 67 | 1.2 Dead + 1.5 Maint. Horz. Load 6 | Yes | Y | 37 | 1.2 | 47 | 1.5 | | |
| 68 | 1.2 Dead + 1.5 Maint. Horz. Load 7 | Yes | Y | 37 | 1.2 | 48 | 1.5 | | |
| 69 | 1.2 Dead + 1.5 Maint. Horz. Load 8 | Yes | Y | 37 | 1.2 | 49 | 1.5 | | |
| 70 | 1.2 Dead + 1.5 Maint. Horz. Load 9 | Yes | Y | 37 | 1.2 | 50 | 1.5 | | |
| 71 | 1.2 Dead + 1.5 Maint. Horz. Load 10 | Yes | Y | 37 | 1.2 | 51 | 1.5 | | |
| 72 | 1.2 Dead + 1.5 Maint. Horz. Load 11 | Yes | Y | 37 | 1.2 | 52 | 1.5 | | |
| 73 | 1.2 Dead + 1.5 Maint. Horz. Load 12 | Yes | Y | 37 | 1.2 | 53 | 1.5 | | |
| 74 | 1.2 Dead + 1.5 Maint. Horz. Load 13 | Yes | Y | 37 | 1.2 | 54 | 1.5 | | |
| 75 | 1.2 Dead + 1.5 Maint. Horz. Load 14 | Yes | Y | 37 | 1.2 | 55 | 1.5 | | |
| 76 | 1.2 Dead + 1.5 Maint. Horz. Load 15 | Yes | Y | 37 | 1.2 | 56 | 1.5 | | |
| 77 | 1.2 Dead + 1.5 Maint. Horz. Load 16 | Yes | Y | 37 | 1.2 | 57 | 1.5 | | |
| 78 | 1.2 Dead + 1.5 Maint. Horz. Load 17 | Yes | Y | 37 | 1.2 | 58 | 1.5 | | |
| 79 | 1.2 Dead + 1.5 Maint. Horz. Load 18 | Yes | Y | 37 | 1.2 | 59 | 1.5 | | |

Exhibit F



RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CTNH305B

NH305/Channel 20_ET
103 East Side Blvd aka Clark Hill Road
Naugatuck, Connecticut 06712

April 23, 2021

EBI Project Number: 6221001946

| Site Compliance Summary | |
|---|------------------|
| Compliance Status: | COMPLIANT |
| Site total MPE% of FCC general population allowable limit: | 7.18% |



April 23, 2021

T-Mobile
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTNH305B - NH305/Channel 20_ET

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **103 East Side Blvd aka Clark Hill Road in Naugatuck, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu\text{W}/\text{cm}^2$ and 467 $\mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 103 East Side Blvd aka Clark Hill Road in Naugatuck, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.



- 6) 4 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 7) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 8) 1 LTE channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 9) 1 NR channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 10) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 11) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 12) The antennas used in this modeling are the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative



estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 13) The antenna mounting height centerline of the proposed antennas is 236 feet above ground level (AGL).
- 14) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 15) All calculations were done with respect to uncontrolled / general population threshold limits.



T-Mobile Site Inventory and Power Data

| Sector: | A | Sector: | B | Sector: | C |
|---------------------|---|---------------------|---|---------------------|---|
| Antenna #: | I | Antenna #: | I | Antenna #: | I |
| Make / Model: | RFS APXVAARR24_43-U-NA20 | Make / Model: | RFS APXVAARR24_43-U-NA20 | Make / Model: | RFS APXVAARR24_43-U-NA20 |
| Frequency Bands: | 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz | Frequency Bands: | 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz | Frequency Bands: | 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz |
| Gain: | 12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd | Gain: | 12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd | Gain: | 12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd |
| Height (AGL): | 236 feet | Height (AGL): | 236 feet | Height (AGL): | 236 feet |
| Channel Count: | 9 | Channel Count: | 9 | Channel Count: | 9 |
| Total TX Power (W): | 380 Watts | Total TX Power (W): | 380 Watts | Total TX Power (W): | 380 Watts |
| ERP (W): | 10,670.10 | ERP (W): | 10,670.10 | ERP (W): | 10,670.10 |
| Antenna A1 MPE %: | 1.11% | Antenna B1 MPE %: | 1.11% | Antenna C1 MPE %: | 1.11% |
| Antenna #: | 2 | Antenna #: | 2 | Antenna #: | 2 |
| Make / Model: | Ericsson AIR 6449 | Make / Model: | Ericsson AIR 6449 | Make / Model: | Ericsson AIR 6449 |
| Frequency Bands: | 2500 MHz / 2500 MHz | Frequency Bands: | 2500 MHz / 2500 MHz | Frequency Bands: | 2500 MHz / 2500 MHz |
| Gain: | 17.3 dBd / 17.3 dBd | Gain: | 17.3 dBd / 17.3 dBd | Gain: | 17.3 dBd / 17.3 dBd |
| Height (AGL): | 236 feet | Height (AGL): | 236 feet | Height (AGL): | 236 feet |
| Channel Count: | 2 | Channel Count: | 2 | Channel Count: | 2 |
| Total TX Power (W): | 240 Watts | Total TX Power (W): | 240 Watts | Total TX Power (W): | 240 Watts |
| ERP (W): | 12,888.76 | ERP (W): | 12,888.76 | ERP (W): | 12,888.76 |
| Antenna A2 MPE %: | 0.88% | Antenna B2 MPE %: | 0.88% | Antenna C2 MPE %: | 0.88% |
| Antenna #: | 3 | Antenna #: | 3 | Antenna #: | 3 |
| Make / Model: | Ericsson AIR 32 | Make / Model: | Ericsson AIR 32 | Make / Model: | Ericsson AIR 32 |
| Frequency Bands: | 1900 MHz / 1900 MHz / 2100 MHz | Frequency Bands: | 1900 MHz / 1900 MHz / 2100 MHz | Frequency Bands: | 1900 MHz / 1900 MHz / 2100 MHz |
| Gain: | 15.35 dBd / 15.35 dBd / 15.85 dBd | Gain: | 15.35 dBd / 15.35 dBd / 15.85 dBd | Gain: | 15.35 dBd / 15.35 dBd / 15.85 dBd |
| Height (AGL): | 236 feet | Height (AGL): | 236 feet | Height (AGL): | 236 feet |
| Channel Count: | 10 | Channel Count: | 10 | Channel Count: | 10 |
| Total TX Power (W): | 480 Watts | Total TX Power (W): | 480 Watts | Total TX Power (W): | 480 Watts |
| ERP (W): | 16,954.74 | ERP (W): | 16,954.74 | ERP (W): | 16,954.74 |
| Antenna A3 MPE %: | 1.15% | Antenna B3 MPE %: | 1.15% | Antenna C3 MPE %: | 1.15% |



| Site Composite MPE % | |
|-----------------------------|--------------|
| Carrier | MPE % |
| T-Mobile (Max at Sector A): | 3.14% |
| Prospect Police | 0.03% |
| AT&T | 2.81% |
| Sprint | 1.2% |
| Site Total MPE % : | 7.18% |

| T-Mobile MPE % Per Sector | |
|---------------------------|--------------|
| T-Mobile Sector A Total: | 3.14% |
| T-Mobile Sector B Total: | 3.14% |
| T-Mobile Sector C Total: | 3.14% |
| | |
| Site Total MPE % : | 7.18% |

| T-Mobile Maximum MPE Power Values (Sector A) | | | | | | | |
|---|------------|-------------------------|---------------|---|-----------------|---|------------------|
| T-Mobile Frequency Band / Technology (Sector A) | # Channels | Watts ERP (Per Channel) | Height (feet) | Total Power Density ($\mu\text{W}/\text{cm}^2$) | Frequency (MHz) | Allowable MPE ($\mu\text{W}/\text{cm}^2$) | Calculated % MPE |
| T-Mobile 600 MHz LTE | 2 | 591.73 | 236.0 | 0.80 | 600 MHz LTE | 400 | 0.20% |
| T-Mobile 600 MHz NR | 1 | 1577.94 | 236.0 | 1.07 | 600 MHz NR | 400 | 0.27% |
| T-Mobile 700 MHz LTE | 2 | 648.82 | 236.0 | 0.88 | 700 MHz LTE | 467 | 0.19% |
| T-Mobile 1900 MHz UMTS | 2 | 1101.85 | 236.0 | 1.50 | 1900 MHz UMTS | 1000 | 0.15% |
| T-Mobile 1900 MHz LTE | 2 | 2203.69 | 236.0 | 3.00 | 1900 MHz LTE | 1000 | 0.30% |
| T-Mobile 2500 MHz LTE | 1 | 6444.38 | 236.0 | 4.38 | 2500 MHz LTE | 1000 | 0.44% |
| T-Mobile 2500 MHz NR | 1 | 6444.38 | 236.0 | 4.38 | 2500 MHz NR | 1000 | 0.44% |
| T-Mobile 1900 MHz GSM | 4 | 1028.30 | 236.0 | 2.80 | 1900 MHz GSM | 1000 | 0.28% |
| T-Mobile 1900 MHz LTE | 4 | 2056.61 | 236.0 | 5.59 | 1900 MHz LTE | 1000 | 0.56% |
| T-Mobile 2100 MHz LTE | 2 | 2307.55 | 236.0 | 3.14 | 2100 MHz LTE | 1000 | 0.31% |
| Total: | | | | | | 3.14% | |

- NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

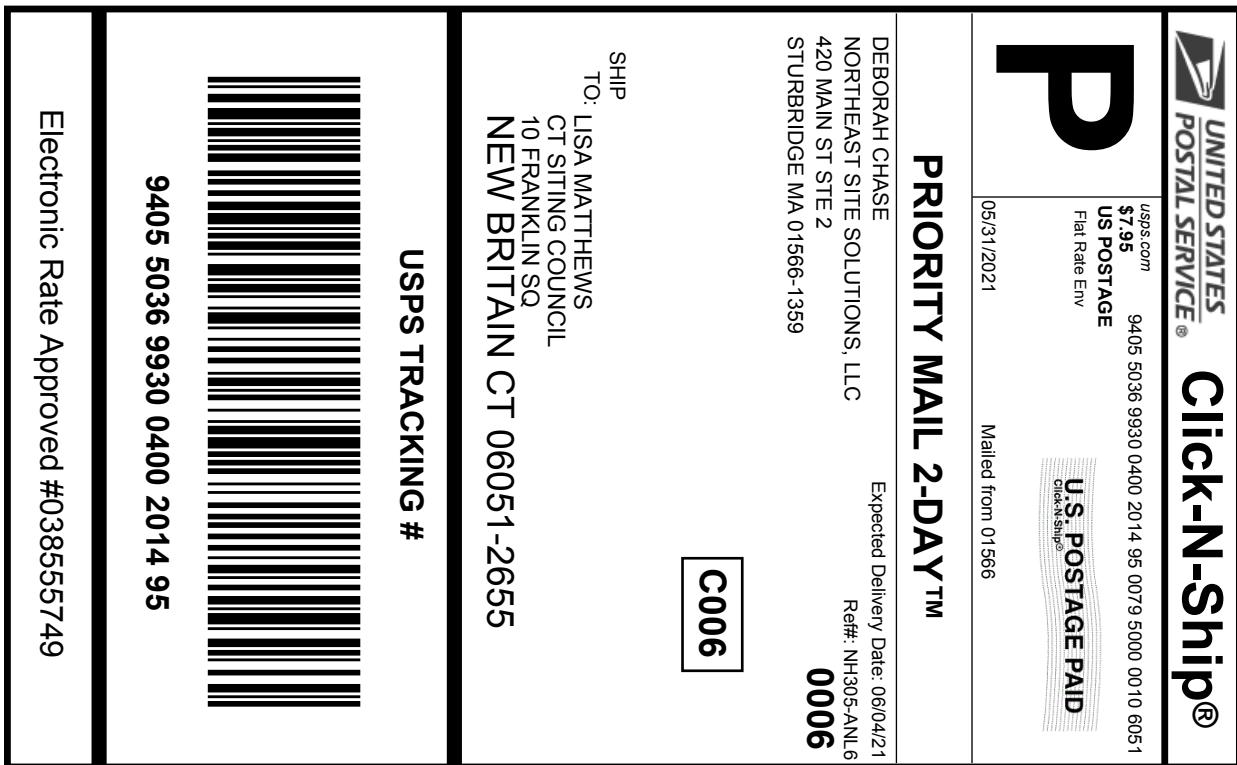
The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

| T-Mobile Sector | Power Density Value (%) |
|------------------------------------|-------------------------|
| Sector A: | 3.14% |
| Sector B: | 3.14% |
| Sector C: | 3.14% |
| T-Mobile Maximum MPE % (Sector A): | 3.14% |
| Site Total: | 7.18% |
| Site Compliance Status: | COMPLIANT |

The anticipated composite MPE value for this site assuming all carriers present is **7.18%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Exhibit G



—X— *Cut on dotted line.*

Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING #:
9405 5036 9930 0400 2014 95

| | | | |
|----------------|------------|-------------------------|---------------|
| Trans. #: | 534755570 | Priority Mail® Postage: | \$7.95 |
| Print Date: | 05/28/2021 | Total: | \$7.95 |
| Ship Date: | 05/31/2021 | | |
| Expected | | | |
| Delivery Date: | 06/04/2021 | | |

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS, LLC
420 MAIN ST STE 2
STURBRIDGE MA 01566-1359

To: LISA MATTHEWS
CT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN CT 06051-2655

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!

Check the status of your shipment on the USPS Tracking® page at usps.com

Electronic Rate Approved #038555749

9405 5036 9930 0400 2014 95

Exhibit H

Deborah Chase

From: Deborah Chase
Sent: Friday, May 28, 2021 3:20 PM
To: 'NWhess@naugatuck-ct.gov'
Subject: 103 EAST BLVD. AKA CLARK HILL ROAD NAUGATUCK CT 06777 T-MOBILE EM APPLICATION (CTNH305B_ANCHOR-L600)
Attachments: 103 EAST BLVD. AKA CLARK HILL ROAD, NAUGATUCK, CT 06770 T-MOBILE EM APPLICATION (CTNH305B-ANCHOR-L600).pdf

Dar Mayor Hess

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council today, May 28, 2021 for the above referenced address.

In light of the present circumstances with Covid-19, the Council has advised that electronic notification of this filing is acceptable.

If you could kindly confirm receipt.

Thank you very much

Deborah Chase

Senior Project Coordinator & Analyst

Mobile: 860-490-8839



 Save a tree. Refuse. Reduce. Reuse. Recycle.

Deborah Chase

From: Deborah Chase
Sent: Friday, May 28, 2021 3:23 PM
To: 'Cialfi, Nando'
Subject: 103 EAST BLVD. AKA CLARK HILL ROAD NAUGATUCK CT 06770 T-MOBILE EM APPLICATION (CTNH305B_ANCHOR-L600)
Attachments: 103 EAST BLVD. AKA CLARK HILL ROAD, NAUGATUCK, CT 06770 T-MOBILE EM APPLICATION (CTNH305B-ANCHOR-L600).pdf

Dear Mr. Cialfi,

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council today, May 28, 2021 for the above referenced address.

In light of the present circumstances with Covid-19, the Council has advised that electronic notification of this filing is acceptable.

If you could kindly confirm receipt.

Thank you very much

Deborah Chase

Senior Project Coordinator & Analyst
Mobile: 860-490-8839



 Save a tree. Refuse. Reduce. Reuse. Recycle.